City of Louisville
COLORADO • SINCE 1878

City Council

Agenda

Tuesday, July 8, 2025
Council Chambers
749 Main Street
5:00 PM

Members of the public are welcome to attend and give comments remotely; however, the in-person meeting may continue even if technology issues prevent remote participation.

- *You can call in to +1 719 359 4580 or 877 853 5247 (toll free)*
  Webinar ID #876 9127 0986.
- *You can log in via your computer. Please visit the City's website here to link to the meeting: www.louisvilleco.gov/council*

The Council will accommodate public comments during the meeting. Anyone may also email comments to the Council prior to the meeting at Council@LouisvilleCO.gov.

1. CALL TO ORDER & ROLL CALL

2. PLEDGE OF ALLEGIANCE

3. EXECUTIVE SESSION

A. PENDING LITIGATION

(Louisville Charter, Section 5-2(d) and C.R.S. 24-6-402(4)(b))

The City Attorney is Requesting the City Council Convene an Executive Session for the Purpose of Consultation with Respect to Pending Litigation.

Citizen Information

If you wish to speak at the City Council meeting in person, please fill out a sign-up card and present it to the City Clerk at the meeting; if you are attending remotely, please use the "raise hand" icon to show you wish to speak in public comments.

Persons planning to attend the meeting who need sign language interpretation, translation services, assisted listening systems, Braille, taped material, or special transportation, should contact the City Clerk's Office (303.335.4574) or ClerksOffice@LouisvilleCO.gov. A forty-eight-hour notice is requested.

Si requiere una copia en español de esta publicación o necesita un intérprete durante la reunión del Consejo, por favor llame a la Ciudad al 303.335.4574 o email ClerksOffice@LouisvilleCO.gov.

B. REAL PROPERTY ACQUISITIONS AND DISPOSITIONS

(Louisville Charter Section 5-2(c) and C.R.S. 24-6-402(4)(a))

The City Manager is Requesting the City Council Convene an Executive Session for the Purpose of Real Property Acquisitions Concerning Properties in Louisville Only as to Appraisals and Other Value Estimates and Strategy

- **Request for Executive Session**
- **City Clerk Statement**
- **City Attorney Statement of Authority**
- **City Council Action on Motion for Executive Session**
- **Council Convenes Executive Session**
- **Council Reconvenes in Open Meeting**

4. REPORT – DISCUSSION / DIRECTION / ACTION

THE FOLLOWING MEETING ITEMS WILL START NO EARLIER THAN 6 PM

5. APPROVAL OF AGENDA

6. PUBLIC COMMENTS ON ITEMS NOT ON THE AGENDA AND ITEMS ON THE CONSENT AGENDA

Public comments are limited to 3 minutes per speaker. When several people wish to speak on the same position on a given item, Council requests they select a spokesperson to state that position.

7. CONSENT AGENDA

The following items on the City Council Agenda are considered routine by the City Manager and shall be approved, adopted, accepted, etc., by motion of the City Council and voice vote unless the Mayor or a City Council person specifically requests an item be considered under "Regular Business." In such an event the item shall be removed from the "Consent Agenda" and Council action taken separately on said item in the order appearing on the Agenda. Those items so approved under the heading "Consent Agenda" will appear in the Council Minutes in their proper order.

A. Resolution No. 42, Series 2025 – A Resolution Approving a Fourth Amended and Restated Cooperation Agreement with the Louisville Revitalization Commission

B. Resolution No. 43, Series 2025 – A Resolution Approving an Agreement for the 2025 Water Main Replacement and Sanitary Sewer Backwater Prevention Project

C. Water Treatment Plant Chlorine Dioxide Replacement

i. Resolution No. 44, Series 2025 – A Resolution Approving an Agreement with Barnard Structures, Inc.

ii. Resolution No. 45, Series 2025 – A Resolution Approving a Proposal and Purchase Agreement with PureLine Treatment Systems

iii. Resolution No. 46, Series 2025 – A Resolution Approving an Agreement with JVA, Inc. for Construction Management Services

8. COUNCIL INFORMATIONAL COMMENTS AND COMMITTEE REPORTS

9. CITY MANAGER'S REPORT

10. REGULAR BUSINESS

A. PARKS AND RECREATION MONTH PROCLAMATION

B. ORDINANCE NO. 1898, SERIES 2025 – AN ORDINANCE APPROVING THE GRANT OF A CABLE FRANCHISE TO COMCAST OF CALIFORNIA / COLORADO / FLORIDA / OREGON, INC., AND APPROVING A CABLE FRANCHISE AGREEMENT BETWEEN COMCAST OF CALIFORNIA / COLORADO / FLORIDA / OREGON, INC. AND THE CITY OF LOUISVILLE, COLORADO

- Introduction
- Staff Presentation
- Action-Set Public Hearing

C. ORDINANCE NO. 1899, SERIES 2025 – AN ORDINANCE AMENDING TITLES 4 AND 14 OF THE LOUISVILLE MUNICIPAL CODE TO ESTABLISH A MAXIMUM SPEED LIMIT FOR BICYCLES ON BIKEPATHS AND TRAILS WITHIN THE CITY – 1ST READING, SET PUBLIC HEARING

- Introduction
- Staff Presentation
- Action-Set Public Hearing

D. RESOLUTION NO. 47, SERIES 2025 – A RESOLUTION APPROVING THE LOUISVILLE CORPORATE CAMPUS AT CTC PLANNED UNIT DEVELOPMENT AMENDMENT #2

- Mayor Opens the Public Hearing
- Staff Presentation
- Applicant Presentation (if applicable)
- Council Questions

- Public Comments (Please limit to three minutes each)
- Council Discussion
- Mayor Closes the Public Hearing
- Action

E. ORDINANCE NO. 1896, SERIES 2025 – AN ORDINANCE AMENDING LOUISVILLE MUNICIPAL CODE SECTION 17.72.190 REGARDING YARD & BULK REQUIREMENTS FOR GENERAL DEVELOPMENT PLANS – 2ND READING PUBLIC HEARING (advertised City of Louisville Website 06/16/2025)

- Mayor Opens the Public Hearing
- Staff Presentation
- Applicant Presentation (if applicable)
- Public Comments (Please limit to three minutes each)
- Council Questions
- Public Comments (Please limit to three minutes each)
- Council Discussion
- Mayor Closes the Public Hearing
- Action

F. ORDINANCE NO. 1897, SERIES 2025 – AN ORDINANCE AMENDING TITLE 17 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING PARKING MINIMUMS FOR MULTIFAMILY AND ADAPTIVE REUSE DEVELOPMENT – 2ND READING PUBLIC HEARING (advertised City of Louisville website 06/16/2025)

- Mayor Opens the Public Hearing
- Staff Presentation
- Applicant Presentation (if applicable)
- Public Comments (Please limit to three minutes each)
- Council Questions
- Public Comments (Please limit to three minutes each)
- Council Discussion
- Mayor Closes the Public Hearing
- Action

11. CITY ATTORNEY'S REPORT

12. IDENTIFICATION OF FUTURE AGENDA ITEMS

13. ADJOURN

ITEMS TENTATIVELY SCHEDULED FOR REGULAR MEETING 07/22/2025

This list is not inclusive; items are subject to change; additional items may be added.

- Comcast Franchise Agreement – 2nd Reading
- Police / Municipal Court Roof Replacement
- Emergency Sodium Hypochlorite Generator Repair
- 1155 Pine Street Concept Plan
- Comp Plan Update – *tentative*
- WWTP Expansion Construction Contract

City of Louisville
COLORADO • SINCE 1878

CITY COUNCIL COMMUNICATION
AGENDA ITEM 7A

SUBJECT: **RESOLUTION NO. 42, SERIES 2025 – A RESOLUTION APPROVING A FOURTH AMENDED AND RESTATED COOPERATION AGREEMENT WITH THE LOUISVILLE REVITALIZATION COMMISSION**

DATE: **JULY 8, 2025**

PREPARED BY: **COREY HOFFMANN, LRC ATTORNEY**
KATHLEEN KELLY, CITY ATTORNEY

PRESENTED BY: **KATHLEEN KELLY, CITY ATTORNEY**

SUMMARY:
The City and the LRC have had a longstanding cooperation agreement addressing the functions of the LRC and providing for support and oversight by the City. Amendments to the cooperation agreement were discussed by the City Council and LRC on March 11, 2025, which are intended to streamline the LRC's ability to conduct its business, particularly with contracts and adoption of its annual budget.

BACKGROUND / PRIOR DISCUSSIONS:
The amendments proposed are consistent with the discussions at the joint meeting of the City Council and LRC on March 11, 2025.

ANALYSIS:
The existing cooperation agreement represents a greater level of oversight by the City Council of LRC matters than is set forth in the state statutes. The amendments to the cooperation agreement are intended to more closely follow the structure and functionality of an urban renewal authority under state law.

2025 COUNCIL WORK PLAN:
This agreement is not identified in the *2025 Council Work Plan.* With regard to EDI and Environmental Sustainability, revitalization and elimination of blight within the urban renewal areas of the City generally supports both of these City policies.

FISCAL IMPACT:
Budgeted?: **Not Applicable**

ALTERNATIVE(S):
City Council could take no action on the proposed Fourth Amended and Restated Cooperation Agreement, in which case the Third Amended and Restated Cooperation Agreement will continue to control the activities of the LRC as set forth in the agreement.

RECOMMENDATION:
Staff recommends City Council adopt Resolution No. 42, Series 2025 Approving a Fourth Amended and Restated Cooperation Agreement

ATTACHMENT(S):
1. Resolution No. 42, Series 2025
2. Redline of Fourth Amended and Restated Cooperation Agreement
3. Clean version of Fourth Amended and Restated Cooperation Agreement

RESOLUTION NO. 42
SERIES 2025

A RESOLUTION APPROVING A FOURTH AMENDED AND RESTATED COOPERATION AGREEMENT WITH THE LOUISVILLE REVITALIZATION COMMISSION

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO:

Section 1. The City Council hereby approves the Fourth Amended and Restated Cooperation Agreement between the City and the Louisville Revitalization Commission (the "Agreement") in substantially the same form as the copy of such Agreement accompanying this Resolution.

Section 2. The Mayor and City Clerk are hereby authorized to execute the Agreement on behalf of the City, and the Mayor is hereby further authorized to negotiate and approve such revisions to the Agreement as the Mayor determines are necessary or desirable for the protection of the City, so long as the essential terms and conditions of the Agreement are not altered.

PASSED AND ADOPTED this ____ day of _____ 2025.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Genny Kline, Interim City Clerk

FOURTH AMENDED AND RESTATED COOPERATION AGREEMENT

This Fourth Amended and Restated Cooperation Agreement (the Fourth Amended and Restated Cooperation Agreement) is made as of _____, ~~2023~~ 2025, by and between the CITY OF LOUISVILLE, COLORADO (the City) and the LOUISVILLE REVITALIZATION COMMISSION (the LRC). The City and the LRC are sometimes referred to herein individually as a Party and collectively as the Parties.

RECITALS

A. The City is a home-rule city and municipal corporation duly organized and existing under and pursuant to Article XX of the Colorado Constitution and Charter of the City (the Charter).

B. The LRC is a public body corporate and politic authorized to transact business and exercise its powers as an urban renewal authority under and pursuant to the Colorado Urban Renewal Law, Part 1 of Article 25 of Title 31, C.R.S. (the ~~Act~~ Urban Renewal Law).

C. The City and the LRC entered into that Cooperation Agreement dated December 5, 2006 (the "Original Cooperation Agreement").

D. The City and the LRC thereafter entered into that Amended and Restated Cooperation Agreement dated April 5, 2011 (the "First Amended and Restated Cooperation Agreement").

E. The City and the LRC subsequently entered into another Amended and Restated Cooperation Agreement dated November 17, 2015 (the "Second Amended and Restated Cooperation Agreement").

F. The City and the LRC subsequently entered into that Amended and Restated Cooperation Agreement dated May 16, 2023 (the "Third Amended and Restated Cooperation Agreement").

G. The City and the LRC now desire to enter into this Fourth Amended and Restated Cooperation Agreement (the "Fourth Amended and Restated Cooperation Agreement") to memorialize all updated aspects of the relationship between the City and the LRC.

~~C~~H. The Act and Section 18, Article XIV of the Colorado Constitution authorize the Parties to enter into cooperation agreements, and the Parties desire to enter into this Fourth Amended and Restated Cooperation Agreement respecting operating funds, support services, and general oversight of the LRC to be provided by the City to the LRC and related matters.

AGREEMENT

NOW THEREFORE, in consideration of the foregoing and the following terms and conditions, the Parties agree as follows:

1. Advance of Operating Funds by the City. The City may annually advance to the LRC an amount of operating funds (Operating Funds) to be determined by appropriation by the City Council of the City. Operating Funds shall be used by the LRC for operating, administrative, consulting and other costs incurred by the LRC in accordance with the Act, including, without limitation, the costs and expenses of Support Services described in Section 2, below. Operating Funds shall be paid directly to the LRC to be used in accordance with the Act, this Fourth Amended and Restated Cooperation Agreement and the ~~City approved~~ LRC budget.

2. Support Services. The City agrees to provide administrative and legal support services (Support Services) to the LRC in connection with its operations. The City Manager shall serve as Director of the LRC as provided in the Act and shall have discretion to employ those City staff members as may be required to carry out the duties and operations of the LRC. Support Services may include, without limitation, planning, financing and accounting, engineering, legal, and administrative and outside consulting services.

3. LRC Budget. By December 31 of each year, the LRC shall adopt a budget (the LRC Budget) for the ensuing fiscal year (which shall be the calendar year), which LRC Budget shall be submitted to the City for review ~~and approval~~ prior to LRC adoption, and no later than November 1 of each calendar year. The City shall provide any comments to the LRC by December 1 of each year to allow the LRC to timely adopt the LRC Budget in accordance with the Local Government Budget Law of Colorado, C.R.S. §§ 29-1-101, *et seq.* The LRC Budget shall contain a statement of sources and uses of all funds that are available or that the LRC reasonably expects to become available to LRC to finance its activities, undertakings, and obligations for each budget year. It is the intention of the Parties that the LRC shall use its reasonable best efforts to use other sources of revenue available under the Act as the primary source of its Operating Funds and payment for Support Services as such revenue becomes available to the LRC. Such revenue shall include, without limitation, tax allocation or tax increment revenues that may become available pursuant to any urban renewal plan approved by the City Council of the City.

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4. Reimbursement for Operating Funds and Support Services. The Parties shall establish a procedure for documenting the reasonable costs and expenses (the Costs and Expenses) related to the Operating Funds and Support Services provided by the City. The Costs and Expenses shall constitute an indebtedness of the LRC to be repaid to the City from sources of revenue available under the Act as such revenue becomes available to the LRC. Such revenue shall include, without limitation, tax allocation or tax increment revenues that may become available pursuant to an urban renewal plan approved by the City Council of the City.

~~a. It is agreed that the Costs and Expenses incurred by the City up to and including expenses on December 31, 2014 total $9,894.00 . At the election of the City, such amount may be evidenced by a note approved by the Parties and executed by LRC.~~

a~~b~~. Upon request of the LRC, the City agrees to give reasonable consideration to subordinating its right to repayment of Costs and Expenses to any bonds, loans, advances, indebtedness, or other obligation of the LRC.

~~c~~b. ~~Notwithstanding the foregoing, the Parties agree that all Costs and Expenses related to the 550 S. McCaslin Urban Renewal Plan shall be paid by the City.~~

5. Approval of ~~Certain Contracts;~~ Bonds and Other Obligations of the LRC. The Parties agree that the City Council of the City shall provide direction to LRC and oversight of LRC activities as follows:

~~a. Any proposed expenditure by the LRC which has not been previously approved as part of the LRC budget shall be subject to the prior review and approval of the City Council.~~

a~~b~~. Except as provided in Section 6 hereunder, ~~P~~prior to issuing bonds ~~or any other capital financial obligations or financial obligations~~ extending beyond the end of the current fiscal year of the LRC, the LRC shall notify the City Council in writing of its intention to do so, and shall promptly furnish to the City Council such information and documents relating to such bonds ~~or other capital or long-term financial obligations~~ as the City Council may request. Such bonds shall be subject to the prior review and approval of the City Council ~~The LRC shall not commit to or proceed with any such bonds or other capital or long-term financial obligations unless a majority of the City Council has adopted a resolution determining that the City's interests in connection with such bonds or other obligations are adequately protected.~~

b~~c~~. Allocation of any municipal sales tax increment shall occur only upon City Council approval. For any such requested approval, the LRC shall submit a financing plan outlining the proposed amounts and purpose for which the municipal sales tax increments are proposed to be used. City Council may approve or deny such request in its discretion.

~~d. Except as provided in subsection (e), the LRC shall provide to the City Council for review and approval any redevelopment agreement or other contract contemplated to carry to out the purposes of any urban renewal plan or to apply to property in any urban renewal area, prior to the LRC's final approval thereof. Any such approval shall be by City Council resolution.~~

~~e. The LRC shall submit to the City for review and approval any LRC Program. For purposes of this subsection, "LRC Program" means a comprehensive initiative, in furtherance of the purposes of the Act and the Highway 42 Revitalization Area Urban Renewal Plan, aimed at addressing one or more characteristics of blight within the Highway 42 Revitalization Area on a large scale (e.g., downtown business façade improvement), which is not specific to any particular piece of property or development, and is offered to multiple properties of a certain type or types within the Highway 42 Revitalization Area. The LRC's request for approval of an LRC Program shall be accompanied with: (i) a detailed description of the LRC~~

~~Program objectives and application process; (ii) a proposed LRC Program budget; (iii) a statement of the LRC Program's potential impacts on City staff departments, other City boards and commissions, and the City Council; (iv) a proposed application form; and (v) a proposed standard contract for execution between the LRC and LRC program awardees. Following Council approval of the LRC Program, the LRC shall not be required to seek further Council approval to: (1) utilize City staff, boards and commissions, and City Council time as necessary to carry out the objectives of the LRC Program; (2) approve LRC Program applications and enter into contracts with program awardees in substantially the same form as the standard contract; or (3) provide funds to program awardees, subject to the LRC Program budget. Each LRC Program budget shall be submitted annually for City Council approval.~~

~~f~~c. The LRC shall comply with applicable City codes, rules, and regulations related to any other urban renewal activities of the LRC. The City Council shall be informed of the activities, functions, operations, and financial condition of the LRC in the form of reports to the City Council not less than quarterly, and at any other time as requested by the City Council.

d~~g~~. The City agrees that it will make reasonable efforts to act within thirty days of a request for review of any document, agreement, obligation, or action required by this Fourth Amended and Restated Cooperation Agreement. Unless otherwise required by law or provided herein, any approval or other action of the City Council shall be by motion or resolution.

6. Independent Authority of the LRC. Consistent with the Urban Renewal Law, the LRC shall have the authority, without prior approval of the City Council, to enter into redevelopment agreements that implement the urban renewal plans of the City by allocating available property tax increment received by the LRC in the special fund of the LRC in accordance with C.R.S. § 31-25-107(9) to those undertakings and activities that are consistent with the urban renewal plans of the City. The Parties acknowledge and agree that such undertakings and activities are "other obligations" of the LRC within the meaning of C.R.S. § 31-25-103(3), but nothing in this Section 6 shall authorize the LRC to issue general or special obligation bonds (including refunding bonds) and temporary bonds pursuant to C.R.S. § 31-25-109 without City Council approval.

7. Other Powers of the LRC. The Parties acknowledge and agree that as an urban renewal authority created under the Urban Renewal Law, the LRC has the enumerated powers set forth in C.R.S. § 31-25-105. The City specifically directs through this Fourth Amended and Restated Cooperation Agreement that the LRC is empowered to advise the City Council on matters related to the Urban Renewal Law, specifically including advising the City Council regarding potential new urban renewal plan areas pursuant to C.R.S. § 31-25-105(1)(i).

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8. Continuing Cooperation; Additional Agreements. The Parties shall cooperate to carry out and complete the urban renewal plans approved by the City Council. It is contemplated that additional agreements may be required to plan and carry out urban renewal projects in accordance with the provisions of any such urban renewal plan and the Act. The Parties agree to cooperate and give timely consideration to any additional agreements or amendments to this Fourth Amended and Restated Cooperation Agreement that may be necessary or convenient in connection with such activities and undertakings; provided, however, nothing in this Fourth Amended and Restated Cooperation Agreement shall preclude or require the commitment of additional revenue, financing, or services by either Party in connection with such activities and undertakings.

~~9~~7. Obligations Subject to Act, Charter, and Constitution. The covenants, duties and actions required of the Parties under this Fourth Amended and Restated Cooperation Agreement shall be subject to and performed in accordance with the provisions and procedures required and permitted by the Charter, the Act, any other applicable provision of law, and the Colorado Constitution.

~~8~~10. Enforced Delay. Neither Party shall be considered in breach of, or in default in, its obligations with respect to this Fourth Amended and Restated Cooperation Agreement in the event of delay in the performance of such obligations due to causes beyond its control and without its fault, it being the purpose and intent of this provision that if such delay occurs, the time or times for performance by either Party affected by such delay shall be extended for the period of the delay.

~~9~~11. No Third Party Beneficiaries. Neither the City nor the LRC shall be obligated or liable under the terms of this Fourth Amended and Restated Cooperation Agreement to any person or entity not a party hereto.

~~10~~12. Severability. In case any one or more of the provisions contained in this Fourth Amended and Restated Cooperation Agreement or any application thereof, shall be invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions of this Fourth Amended and Restated Cooperation Agreement, or any other application thereof, shall not in any way be affected or impaired thereby.

~~11~~13. Binding Effect. Subject to compliance with Section ~~13~~ 15, below, this Fourth Amended and Restated Cooperation Agreement shall be binding upon and inure to the benefit of the Parties, their successors, legal representatives, and assigns.

~~12~~14. City and LRC Separate. Nothing in this Fourth Amended and Restated Cooperation Agreement shall be interpreted in any manner as constituting the City or its officials, representatives, consultants, or employees as the agents of the LRC, or the LRC or its officials, representatives, consultants, or employees as the agents of the City. Each entity shall remain a separate legal entity pursuant to applicable law. Neither of the Parties hereto shall be deemed to hereby assume the debts, obligations, or liabilities of the other. The LRC shall be responsible for carrying out its duties and functions in accordance with the Act and other applicable laws and

regulations, and nothing herein shall be construed to compel either Party to take any action in violation of law.

~~13~~15. Assignment. This Fourth Amended and Restated Cooperation Agreement shall not be assigned in whole or in part by either Party without the prior written approval of the other Party.

~~14~~16. Governing Law. This Fourth Amended and Restated Cooperation Agreement shall be governed by, and construed in accordance with, the laws of the State of Colorado.

~~15~~17. Headings. Section headings in this Fourth Amended and Restated Cooperation Agreement are for convenience of reference only and shall not constitute a part of this Fourth Amended and Restated Cooperation Agreement for any other purpose.

~~16~~18. Additional or Supplemental Agreements; Organizational Matters. The Parties mutually covenant and agree that they will execute, deliver and furnish such other instruments, documents, materials, and information as may be reasonably required to carry out the Fourth Amended and Restated Cooperation Agreement. The LRC's organizational documents shall provide, as permitted by C.R.S. § 31-25-104, that one City Councilmember shall be a member of the LRC. ~~The LRC as an entity will not formally or legally oppose or object to any measure that may be proposed pursuant to C.R.S. § 31-25-115 to transfer the existing authority to the City Council.~~

~~17~~19. Entire Agreement; Amendment. This Fourth Amended and Restated Cooperation Agreement constitutes the entire agreement between the Parties pertaining to the subject matter hereof. No addition to or modification of the Fourth Amended and Restated Cooperation Agreement shall be effective, except by written agreement authorized and executed by the Parties.

~~18~~20. Supersede. This Fourth Amended and Restated Cooperation Agreement supersedes and replaces in its entirety ~~that~~ those prior ~~certain~~ Cooperation Agreements ~~Amended and Restated Cooperation Agreement, made as of November 17, 2015,~~ by and between the City and the LRC~~, as of the date of this Agreement.~~ dated December 5, 2006, April 5, 2011, November 17, 2015, and May 16, 2023.

IN WITNESS WHEREOF, the Parties have caused this Fourth Amended and Restated Cooperation Agreement to be duly executed and delivered by their respective officers as of the date first above written.

CITY OF LOUISVILLE,
a Colorado municipal corporation

Attest:

_____
Mayor

_____

City Clerk

LOUISVILLE REVITALIZATION COMMISSION

Attest:

_____
Chair

_____
Secretary

FOURTH AMENDED AND RESTATED COOPERATION AGREEMENT

This Fourth Amended and Restated Cooperation Agreement (the Fourth Amended and Restated Cooperation Agreement) is made as of _____, 2025, by and between the CITY OF LOUISVILLE, COLORADO (the City) and the LOUISVILLE REVITALIZATION COMMISSION (the LRC). The City and the LRC are sometimes referred to herein individually as a Party and collectively as the Parties.

RECITALS

A. The City is a home-rule city and municipal corporation duly organized and existing under and pursuant to Article XX of the Colorado Constitution and Charter of the City (the Charter).

B. The LRC is a public body corporate and politic authorized to transact business and exercise its powers as an urban renewal authority under and pursuant to the Colorado Urban Renewal Law, Part 1 of Article 25 of Title 31, C.R.S. (the Urban Renewal Law).

C. The City and the LRC entered into that Cooperation Agreement dated December 5, 2006 (the "Original Cooperation Agreement").

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E. The City and the LRC subsequently entered into another Amended and Restated Cooperation Agreement dated November 17, 2015 (the "Second Amended and Restated Cooperation Agreement").

F. The City and the LRC subsequently entered into that Amended and Restated Cooperation Agreement dated May 16, 2023 (the "Third Amended and Restated Cooperation Agreement").

G. The City and the LRC now desire to enter into this Fourth Amended and Restated Cooperation Agreement (the "Fourth Amended and Restated Cooperation Agreement") to memorialize all updated aspects of the relationship between the City and the LRC.

H. The Act and Section 18, Article XIV of the Colorado Constitution authorize the Parties to enter into cooperation agreements, and the Parties desire to enter into this Fourth Amended and Restated Cooperation Agreement respecting operating funds, support services, and general oversight of the LRC to be provided by the City to the LRC and related matters.

AGREEMENT

NOW THEREFORE, in consideration of the foregoing and the following terms and conditions, the Parties agree as follows:

1. Advance of Operating Funds by the City. The City may annually advance to the LRC an amount of operating funds (Operating Funds) to be determined by appropriation by the City Council of the City. Operating Funds shall be used by the LRC for operating, administrative, consulting and other costs incurred by the LRC in accordance with the Act, including, without limitation, the costs and expenses of Support Services described in Section 2, below. Operating Funds shall be paid directly to the LRC to be used in accordance with the Act, this Fourth Amended and Restated Cooperation Agreement and the LRC budget.

2. Support Services. The City agrees to provide administrative and legal support services (Support Services) to the LRC in connection with its operations. The City Manager shall serve as Director of the LRC as provided in the Act and shall have discretion to employ those City staff members as may be required to carry out the duties and operations of the LRC. Support Services may include, without limitation, planning, financing and accounting, engineering, legal, and administrative and outside consulting services.

3. LRC Budget. By December 31 of each year, the LRC shall adopt a budget (the LRC Budget) for the ensuing fiscal year (which shall be the calendar year), which LRC Budget shall be submitted to the City for review prior to LRC adoption, and no later than November 1 of each calendar year. The City shall provide any comments to the LRC by December 1 of each year to allow the LRC to timely adopt the LRC Budget in accordance with the Local Government Budget Law of Colorado, C.R.S. §§ 29-1-101, *et seq.* The LRC Budget shall contain a statement of sources and uses of all funds that are available or that the LRC reasonably expects to become available to LRC to finance its activities, undertakings, and obligations for each budget year. It is the intention of the Parties that the LRC shall use its reasonable best efforts to use other sources of revenue available under the Act as the primary source of its Operating Funds and payment for Support Services as such revenue becomes available to the LRC. Such revenue shall include, without limitation, tax allocation or tax increment revenues that may become available pursuant to any urban renewal plan approved by the City Council of the City.

4. Reimbursement for Operating Funds and Support Services. The Parties shall establish a procedure for documenting the reasonable costs and expenses (the Costs and Expenses) related to the Operating Funds and Support Services provided by the City. The Costs and Expenses shall constitute an indebtedness of the LRC to be repaid to the City from sources of revenue available under the Act as such revenue becomes available to the LRC. Such revenue shall include, without limitation, tax

allocation or tax increment revenues that may become available pursuant to an urban renewal plan approved by the City Council of the City. Upon request of the LRC, the City agrees to give reasonable consideration to subordinating its right to repayment of Costs and Expenses to any bonds, loans, advances, indebtedness, or other obligation of the LRC.

5. Approval of Bonds and Other Obligations of the LRC. The Parties agree that the City Council of the City shall provide direction to LRC and oversight of LRC activities as follows:

a. Except as provided in Section 6 hereunder, prior to issuing bonds extending beyond the end of the current fiscal year of the LRC, the LRC shall notify the City Council in writing of its intention to do so, and shall promptly furnish to the City Council such information and documents relating to such bonds as the City Council may request. Such bonds shall be subject to the prior review and approval of the City Council

b. Allocation of any municipal sales tax increment shall occur only upon City Council approval. For any such requested approval, the LRC shall submit a financing plan outlining the proposed amounts and purpose for which the municipal sales tax increments are proposed to be used. City Council may approve or deny such request in its discretion.

c. The LRC shall comply with applicable City codes, rules, and regulations related to any other urban renewal activities of the LRC. The City Council shall be informed of the activities, functions, operations, and financial condition of the LRC in the form of reports to the City Council not less than quarterly, and at any other time as requested by the City Council.

d. The City agrees that it will make reasonable efforts to act within thirty days of a request for review of any document, agreement, obligation, or action required by this Fourth Amended and Restated Cooperation Agreement. Unless otherwise required by law or provided herein, any approval or other action of the City Council shall be by motion or resolution.

6. Independent Authority of the LRC. Consistent with the Urban Renewal Law, the LRC shall have the authority, without prior approval of the City Council, to enter into redevelopment agreements that implement the urban renewal plans of the City by allocating available property tax increment received by the LRC in the special fund of the LRC in accordance with C.R.S. § 31-25-107(9) to those undertakings and activities that are consistent with the urban renewal plans of the City. The Parties acknowledge and agree that such undertakings and activities are "other obligations" of the LRC within the meaning of C.R.S. § 31-25-103(3), but nothing in this Section 6 shall authorize the LRC to issue general or special obligation bonds (including refunding bonds) and temporary bonds pursuant to C.R.S. § 31-25-109 without City Council approval.

7. Other Powers of the LRC. The Parties acknowledge and agree that as an urban renewal authority created under the Urban Renewal Law, the LRC has the enumerated powers set forth in C.R.S. § 31-25-105. The City specifically directs through this Fourth Amended and Restated Cooperation Agreement that the LRC is empowered to advise the City Council on matters related to the Urban Renewal Law, specifically including advising the City Council regarding potential new urban renewal plan areas pursuant to C.R.S. § 31-25-105(1)(i).

8. Continuing Cooperation; Additional Agreements. The Parties shall cooperate to carry out and complete the urban renewal plans approved by the City Council. It is contemplated that additional agreements may be required to plan and carry out urban renewal projects in accordance with the provisions of any such urban renewal plan and the Act. The Parties agree to cooperate and give timely consideration to any additional agreements or amendments to this Fourth Amended and Restated Cooperation Agreement that may be necessary or convenient in connection with such activities and undertakings; provided, however, nothing in this Fourth Amended and Restated Cooperation Agreement shall preclude or require the commitment of additional revenue, financing, or services by either Party in connection with such activities and undertakings.

9. Obligations Subject to Act, Charter, and Constitution. The covenants, duties and actions required of the Parties under this Fourth Amended and Restated Cooperation Agreement shall be subject to and performed in accordance with the provisions and procedures required and permitted by the Charter, the Act, any other applicable provision of law, and the Colorado Constitution.

10. Enforced Delay. Neither Party shall be considered in breach of, or in default in, its obligations with respect to this Fourth Amended and Restated Cooperation Agreement in the event of delay in the performance of such obligations due to causes beyond its control and without its fault, it being the purpose and intent of this provision that if such delay occurs, the time or times for performance by either Party affected by such delay shall be extended for the period of the delay.

11. No Third Party Beneficiaries. Neither the City nor the LRC shall be obligated or liable under the terms of this Fourth Amended and Restated Cooperation Agreement to any person or entity not a party hereto.

12. Severability. In case any one or more of the provisions contained in this Fourth Amended and Restated Cooperation Agreement or any application thereof, shall be invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions of this Fourth Amended and Restated Cooperation Agreement, or any other application thereof, shall not in any way be affected or impaired thereby.

13. Binding Effect. Subject to compliance with Section 15, below, this Fourth Amended and Restated Cooperation Agreement shall be binding upon and inure to the benefit of the Parties, their successors, legal representatives, and assigns.

14. City and LRC Separate. Nothing in this Fourth Amended and Restated Cooperation Agreement shall be interpreted in any manner as constituting the City or its officials, representatives, consultants, or employees as the agents of the LRC, or the LRC or its officials, representatives, consultants, or employees as the agents of the City. Each entity shall remain a separate legal entity pursuant to applicable law. Neither of the Parties hereto shall be deemed to hereby assume the debts, obligations, or liabilities of the other. The LRC shall be responsible for carrying out its duties and functions in accordance with the Act and other applicable laws and regulations, and nothing herein shall be construed to compel either Party to take any action in violation of law.

15. Assignment. This Fourth Amended and Restated Cooperation Agreement shall not be assigned in whole or in part by either Party without the prior written approval of the other Party.

16. Governing Law. This Fourth Amended and Restated Cooperation Agreement shall be governed by, and construed in accordance with, the laws of the State of Colorado.

17. Headings. Section headings in this Fourth Amended and Restated Cooperation Agreement are for convenience of reference only and shall not constitute a part of this Fourth Amended and Restated Cooperation Agreement for any other purpose.

18. Additional or Supplemental Agreements; Organizational Matters. The Parties mutually covenant and agree that they will execute, deliver and furnish such other instruments, documents, materials, and information as may be reasonably required to carry out the Fourth Amended and Restated Cooperation Agreement. The LRC's organizational documents shall provide, as permitted by C.R.S. § 31-25-104, that one City Councilmember shall be a member of the LRC.

19. Entire Agreement; Amendment. This Fourth Amended and Restated Cooperation Agreement constitutes the entire agreement between the Parties pertaining to the subject matter hereof. No addition to or modification of the Fourth Amended and Restated Cooperation Agreement shall be effective, except by written agreement authorized and executed by the Parties.

20. Supersede. This Fourth Amended and Restated Cooperation Agreement supersedes and replaces in its entirety those prior Cooperation Agreements by and between the City and the LRC dated December 5, 2006, April 5, 2011, November 17, 2015, and May 16, 2023.

IN WITNESS WHEREOF, the Parties have caused this Fourth Amended and Restated Cooperation Agreement to be duly executed and delivered by their respective officers as of the date first above written.

CITY OF LOUISVILLE,
a Colorado municipal corporation

Attest:

_____
Mayor

_____
City Clerk

LOUISVILLE REVITALIZATION COMMISSION

Attest:

_____
Chair

_____
Secretary

SUBJECT: **RESOLUTION NO. 43, SERIES 2025 – A RESOLUTION APPROVING AN AGREEMENT FOR THE 2025 WATER MAIN REPLACEMENT AND SANITARY SEWER BACKWATER PREVENTION PROJECT**

DATE: **JULY 8, 2025**

PREPARED BY: **TYLER TROJAN, CIVIL ENGINEER III**

PRESENTED BY: **KURT KOWAR, PUBLIC WORKS DEPARTMENT**

SUMMARY:
Staff recommends approval of the 2025 Water Main Replacement and Sanitary Sewer Backwater Preventer Valve Project contract with Brannan Construction Company for the base bid in the amount of $1,073,913 plus a 10% contingency in the amount of $107,392.

BACKGROUND / PRIOR DISCUSSIONS:
Public Works performs annual replacements on the water distribution system to proactively replace old and deteriorating pipes. Staff advertised the 2025 Water Main Replacement and Sanitary Sewer Backwater Preventer Valve Project on April 23rd, and April 30th, 2025. Bids were received on May 13th, 2025. Bids received are as follows:

Contractor	Base Bid
Brannan Construction Company	$1,073,913.00
Timberwolf Excavating	$1,526,475.00
Bear Excavating	$1,198,590.00
Northern Colorado Constructors	$1,617,453.25
SMH West	$1,855,573.00
BT Construction	$1,931,650.00

Staff recommends Brannan Construction Company as the lowest responsive bidder based upon staff review of bid line items, adherence to bid requirements, and contractor reference checks.

Please refer to the attached map for locations included with the base bid.

This year's water main replacement project will address undersized and outdated infrastructure. The selected segments include some of the last remaining 4-inch

Asbestos Concrete (AC) water mains in the City. These lines will be replaced with the City's standard 8-inch PVC water main used in residential areas.
This upgrade will significantly improve water flow capacity and system reliability, while also extending the service life of the infrastructure. Once complete, the likelihood of main breaks in the area will be substantially reduced.

Work will take place in the following areas:

- Aline St.
- Barbara St.
- Rose St.
- Louis Dr.

In addition to replacing water mains this year, operations have identified several residents that experience backwater issues with their sewer system during sewer main line cleaning and jetting. The City has elected to install backwater prevention valves at these residences (with the approval of the homeowners) to mitigate the backwater issue. Due to the Water Main Replacement being the only pipe replacement project requiring excavation this year, Sanitary Sewer Backwater Preventers will also be installed with this project. The Sanitary Sewer Backwater Preventers will be installed at the following addresses:

- 317 Roosevelt Ave.
- 732 Mead St.
- 721 Mead St.
- 1101 Spruce St.

ANALYSIS:
Staff is requesting Council's approval of this contract as required by the City's purchasing policy for contracts in excess of $100,000.

2025 COUNCIL WORK PLAN:
While this project is not specifically listed in the 2025 Council Work Plan, it does align with the Council priority of providing core services. Maintenance of the water distribution system is critical to the goal of providing water service to the residents of Louisville.

FISCAL IMPACT:
The costs of the 2025 Water Main Replacement and Sanitary Sewer Backwater Preventer Valve Project are included in the budget and divided between the following funds:

Projected Funding

Description	Account	Budget Amount
Waterline Replacement	501498-660181	$1,698,000
Sewer Service Lateral Backflow Valves	502499-640159	$130,000

Projected Expenses (Waterline Replacement) 501498-660181

Description	Amount
Waterline Replacement	($980,504.00)
Waterline Replacement - Contingency	($98,050)
Total Expenses:	**($1,078,554.00)**
Remaining Funds	**$619,446.00**

Projected Expenses (Sewer Service Lateral Backflow Valves) 502499-640159

Description	Amount
Sanitary Sewer Backwater Preventer Valves	($93,409.00)
Sewer Service Lateral Backflow Valves – Contingency	($9,342)
Total Expenses:	**($102,751)**
Remaining Funds	**$27,249.00**

Total Contract Summary

Description	Account	Amount
Waterline Replacement	501498-660181	$980,504.00
Waterline Replacement - Contingency	501498-660181	$98,050
Sewer Service Lateral Backflow Valves	502499-640159	$93,409
Sewer Service Lateral Backflow Valves – Contingency	502499-640159	$9,342
Total Contract:		**$1,181,305**

ALTERNATIVES:

The alternative is to not perform water main replacement in 2025. If maintenance is not performed, it is possible that the City will have more frequent water main breaks in these areas leading to more costly emergency repairs. Maintenance of the system is recommended to eliminate more costly repairs in the future.

RECOMMENDATION:

Staff recommends approval and award of the 2025 Water Main Replacement and Sanitary Sewer Backwater Preventer Valve Project contract with Brannan Construction Company for $1,073,913 plus a 10% contingency in the amount of $107,392 for a total authorized amount of $1,181,305 and to authorize the Mayor, City Manager, Public Works Director, and City Clerk to sign and execute contract documents on behalf of the City.

ATTACHMENT(S):

1. Resolution No. 43, Series 2025
2. 2025 Water Main Replacement Construction Agreement
3. Map of Project

RESOLUTION NO. 43
SERIES 2025

A RESOLUTION APPROVING AN AGREEMENT FOR THE 2025 WATER MAIN REPLACEMENT AND SANITARY SEWER BACKWATER PREVENTION PROJECT

WHEREAS, an Agreement has been proposed between the City and Brannan Construction Company for the 2025 Water Main Replacement Project and Sanitary Sewer Backwater Preventer Valve Project (the "Project"); and

WHEREAS, by this resolution the City Council desires to approve the Agreement and to authorize additional contingency for the Project.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO:

Section 1. The City Council hereby approves the Agreement by and between the City of Louisville and Brannan Construction Company for the Project (the "Agreement") in substantially the same form as the copy of such Agreement accompanying this Resolution.

Section 2. The City Council hereby approves an additional ten percent (10%) contingency in the amount of $107,392 for the Project for a total not-to-exceed amount of $1,181,305. The City Manager and/or Public Works Director are authorized to execute change orders to the Agreement in a total amount not to exceed $107,392 if deemed necessary for the Project.

Section 3. The Mayor and City Clerk are hereby authorized to execute the Agreement on behalf of the City, and the Mayor is hereby further authorized to negotiate and approve such revisions to the Agreement as the Mayor determines are necessary or desirable for the protection of the City, so long as the essential terms and conditions of the Agreement are not altered.

PASSED AND ADOPTED this 8th day of July, 2025.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Genny Kline, Interim City Clerk

Agreement

THIS AGREEMENT is made and entered into this 3rd day of June in the year 2025 by and between:

CITY OF LOUISVILLE, COLORADO
(hereinafter called OWNER)

and

Brannan Construction Company
(hereinafter called CONTRACTOR)

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows.

Article 1. Work

CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

PROJECT: 2025 WATER MAIN REPLACEMENT PROJECT AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT
PROJECT NUMBER: 501498-660181

Article 2. Contract Times

2.1. The CONTRACTOR shall substantially complete all work within **102 Contract Days** from the date when the Contract Time commences to run as identified in the Notice to Proceed. The Work shall be completed and ready for final payment in accordance with paragraph 14.13 of the General Conditions.

2.2. LIQUIDATED DAMAGES. The OWNER and the CONTRACTOR agree and recognize that time is of the essence in this contract and that the OWNER will suffer financial loss if the Work is not substantially complete by the date specified in paragraph 2.1 above, plus any extensions thereof allowed in accordance with the Article 12 of the General Conditions. OWNER and CONTRACTOR also agree that such damages are uncertain in amount and difficult to measure accurately. Accordingly, the OWNER and CONTRACTOR agree that as liquidated damages, and not as a penalty, for delay in performance the CONTRACTOR shall pay the OWNER **ONE THOUSAND DOLLARS ($1,000)** for each and every **Contract Day** and portion thereof that expires after the time specified above for substantial completion of the Work until the same is finally complete and ready for final payment. The liquidated damages herein specified shall only apply to the CONTRACTOR's delay in performance, and shall not include litigation or attorneys' fees incurred by the OWNER, or other incidental or consequential damages suffered by the OWNER due to the CONTRACTOR's performance. If the OWNER charges liquidated damages to the CONTRACTOR, this shall not preclude the OWNER from commencing an action against the CONTRACTOR for other actual harm resulting from the CONTRACTOR's performance, which is not due to the CONTRACTOR's delay in performance.

Article 3. Contract Price

3.1. The OWNER shall pay in current funds, and the CONTRACTOR agrees to accept in full payment for performance of the Work, subject to additions and deductions from extra and/or omitted work and determinations of actual quantities as provided in the Contract Documents, the Contract Price of One Million, Seventy Three Thousand, Nine Hundred, and Thirteen Dollars , $ 1,073,913.00 set forth in the Bid Form of the CONTRACTOR dated May 13, 2025.

As provided in paragraph 11.9 of the General Conditions estimated quantities are not guaranteed, and determinations of actual quantities and classification are to be made by ENGINEER as provided in paragraph 9.10 of the General Conditions. Unit prices have been computed as provided in paragraph 11.9 of the General Conditions.

Article 4. Payment Procedures

CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by OWNER as provided in the General Conditions.

4.1 PROGRESS PAYMENTS. OWNER shall make progress payments on the basis of CONTRACTOR's Applications for Payment as recommended by ENGINEER, on or about the third Wednesday of each month during construction as provided below. All progress payments will be on the basis of the progress of the Unit Price Work based on the number of units completed as provided in the General Conditions.

4.1.1.1 Prior to final completion and acceptance, progress payments will be made in the amount equal to 95 percent of the calculated value of completed Work, and/or 95 percent of materials and equipment not incorporated in the Work (but delivered, suitably stored and accompanied by documentation satisfactory to OWNER as provided in 14.2 of the General Conditions), but in each case, less the aggregate of payments previously made and such less amounts as ENGINEER shall determine, or OWNER may withhold, in accordance with paragraph 14.7 of the General Conditions.
If OWNER finds that satisfactory progress is being made in any phase of the Work, it may, in its discretion and upon written request by the CONTRACTOR, authorize final payment from the withheld percentage to the CONTRACTOR or subcontractors who have completed their work in a manner finally acceptable to the OWNER. Before any such payment may be made, the OWNER must, in an exercise of its discretion, determine that satisfactory and substantial reasons exist for the payment and there must be provided to the OWNER written approval from any surety furnishing bonds for the Work.

Nothing contained in this provision shall preclude the OWNER and CONTRACTOR from making other arrangements consistent with C.R.S. 24-91-105 prior to contract award.

4.2 FINAL PAYMENT. Upon final completion and acceptance of the Work in accordance with paragraph 14.13 of the General Conditions, OWNER shall pay the remainder of the Contract Price as provided in said paragraph 14.13 of the General Conditions.

Article 5. Contractor's Representations

In order to induce OWNER to enter into this Agreement CONTRACTOR makes the following representations:

5.1. CONTRACTOR has examined and carefully studied the Contract Documents, (including the Addenda listed in paragraph 6.10) and the other related data identified in the Bidding Documents including "technical".

5.2. CONTRACTOR has inspected the site and become familiar with and is satisfied as to the general, local and site conditions that may affect cost, progress, performance or furnishing of the Work.

5.3. CONTRACTOR is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress and furnishing of the Work.

5.4. CONTRACTOR has carefully studied all reports of exploration and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions relating to surface or subsurface structures at or contiguous to the site (Except Underground facilities) which have been identified in the General Conditions as provided in paragraph 4.2.1 of the General Conditions. CONTRACTOR accepts the determination set forth in paragraph 4.2 of the General Conditions. CONTRACTOR acknowledges that such reports and drawings are not Contract Documents and may not be complete for CONTRACTOR's purposes. CONTRACTOR acknowledges that OWNER and ENGINEER do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Contract Documents with respect to such reports, drawings or to Underground Facilities at or contiguous to the site. CONTRACTOR has conducted, obtained and carefully studied (or assume responsibility for having done so) all necessary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences and procedures of construction to be employed by CONTRACTOR and safety precautions and programs incident thereto. CONTRACTOR does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary for the performance and furnishing of the Work at the Contract Price, within the Contract Times and in accordance with the other terms and conditions of the Contract Documents.

5.5. CONTRACTOR has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities. No additional examinations, investigations, explorations, tests, reports, studies or similar information or data in respect of said Underground Facilities are or will be required by CONTRACTOR in order to perform and furnish the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 4.3 of the General Conditions.

5.6. CONTRACTOR is aware of the general nature of work to be performed by OWNER and others at the site that relates to the Work as indicated in the Contract Documents.

5.7. CONTRACTOR has correlated the information known to CONTRACTOR, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests studies and data with the Contract Documents.

5.8. CONTRACTOR has given ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that CONTRACTOR has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing the Work.

Article 6. Contract Documents

The Contract Documents, which constitute the entire agreement between OWNER and CONTRACTOR concerning the Work, are all written documents, which define the Work and the obligations of the Contractor

in performing the Work and the OWNER in providing compensation for the Work. The Contract Documents include the following:

6.1. Invitation to Bid.
6.2. Instruction to Bidders.
6.3. Bid Form.
6.4. This Agreement.
6.5. General Conditions.
6.6. Supplementary Conditions.
6.7. General Requirements.
6.8. Technical Specifications.
6.9. Change Orders, Addenda and other documents which may be required or specified including:
- 6.10.1. Addenda No. _0_ to _2_ exclusive
- 6.10.2. Documentation submitted by CONTRACTOR prior to Notice of Award
- 6.10.3. Schedule of Subcontractors
- 6.10.4. Anti-Collusion Affidavit
- 6.10.5. Certification of EEO Compliance
- 6.10.6. Notice of Award
- 6.10.7. Performance Bond
- 6.10.8. Labor and Material Payment Bond
- 6.10.9. Certificates of Insurance
- 6.10.10. Notice to Proceed
- 6.10.11. Contractor's Proposal Request
- 6.10.12. Contractor's Overtime Request
- 6.10.13. Field Order
- 6.10.14. Work Change Directive
- 6.10.15. Change Order
- 6.10.16. Application for Payment
- 6.10.17. Certificate of Substantial Completion
- 6.10.18. Claim Release
- 6.10.19. Final Inspection Report
- 6.10.20. Certificate of Final Completion
- 6.10.21. Guarantee Period Inspection Report

6.10. The following which may be delivered or issued after the Effective Date of the Agreement and are attached hereto: All Written Amendments and other documents amending, modifying, or supplementing the Contract Documents pursuant to paragraphs 3.5 and 3.6 of the General Conditions.

6.11. In the event of conflict between the above documents, the prevailing document shall be as follows:
1. Permits from other agencies as may be required.
2. Special Provisions and Detail Drawings.
3. Technical Specifications and Drawings. Drawings and Technical Specifications are intended to be complementary. Anything shown or called for in one and omitted in another is binding as if called for or shown by both.
4. Supplementary Conditions.
5. General Conditions.
6. City of Louisville Design and Construction Standards.
7. Reference Specifications.

In case of conflict between prevailing references above, the one having the more stringent requirements shall govern.

There are no Contract Documents other than those listed above in this Article 6. The Contract Documents may only be amended, modified, or supplemented as provided in paragraphs 3.5 and 3.6 of the General Conditions.

Article 7. Miscellaneous

7.1. Terms used in this Agreement, which are defined in Article 1 of the General Conditions, shall have the meanings indicated in the General Conditions.

7.2. No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment no assignment will release or discharge that assignor from any duty or responsibility under the Contract Documents.

7.3. OWNER and CONTRACTOR each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect to all covenants, agreements and obligations contained in the Contract Documents.

7.4. OWNER AND CONTRACTOR consent to the use of electronic signatures on the Contract Documents. This Agreement, and any other Contract Documents requiring a signature hereunder, may be signed electronically by the Parties in the manner specified under the Uniform Electronic Transactions Act, Title 24, Article 71.3, Part 1, C.R.S.; provided that, electronic records of, and electronic signatures on, any required bonds, including required Performance, Labor and Material Payment, and Warranty Bonds, must be acceptable to the Contractor's selected surety. The Parties agree not to deny the legal effect or enforceability of a Contract Document solely because the document is in electronic form or because an electronic record was used in its formation. The Parties agree not to object to the admissibility of a Contract Document in the form of an electronic record, or a paper copy of an electronic document, or a paper copy or electronic record of a document bearing an electronic signature, on the ground that it is an electronic record or electronic signature or that it is not in its original form or is not an original.

Article 8. Other Provisions

IN WITNESS WHEREOF, OWNER, and CONTRACTOR have signed this Agreement in duplicate. One counterpart each has been delivered to OWNER and CONTRACTOR. All portions of the Contract Documents have been signed, initialed, or identified by OWNER and CONTRACTOR.

This Agreement will be effective on June 3, 2025.

OWNER: CITY OF LOUISVILLE, COLORADO

By: _____
Christopher M. Leh, Mayor

(CORPORATE SEAL)

Attest: _____
Genny Kline, Interm City Clerk

Address for giving notices:

749 Main Street
Louisville, Colorado
80027

Attention: City Engineer

CONTRACTOR: Brannan Construction Company

By: _____
J. C. Marvel, Jr.; President

(CORPORATE SEAL)

Attest: _____
Ann VanPortfliet-Secretary/Treasurer

Address for giving notices:

2500 East Brannan Way

Denver, CO 80229

Attention: Cheryl Cheney

BASE BID

ESTIMATED UNITS/ UNIT PRICE				Brannan Construction Company	
Bid Item No.	Bid Item	Unit	Quantity	Unit Price	Total Cost
1	12'' PVC WATER MAIN CLASS 235 DR 18	LF	102	$ 184.00	$18,768.00
2	8'' PVC WATER MAIN CLASS 235 DR 18	LF	2497	$ 90.00	$224,730.00
3	REMOVE FIRE HYDRANT ASSEMBLY	EA	3	$ 1,584.00	$4,752.00
4	FIRE HYDRANT ASSEMBLY	EA	6	$ 11,608.00	$69,648.00
5	FIRE HYDRANT EXTENSION (6")	EA	6	$ 2,989.00	$17,934.00
6	FIRE HYDRANT EXTENSION (12")	EA	6	$ 3,173.00	$19,038.00
7	12" 45 DEGREE BEND	EA	2	$ 1,996.00	$3,992.00
8	12"-8" REDUCER	EA	1	$ 1,252.00	$1,252.00
9	12" SOLID SLEEVE	EA	1	$ 2,073.00	$2,073.00
10	12"CAP	EA	1	$ 1,594.00	$1,594.00
11	GATE VALVE AND BOX (8")	EA	11	$ 3,229.00	$35,519.00
12	8" x 8" x 8" SWIVEL TEE	EA	6	$ 1,581.00	$9,486.00
13	8" x 6" x 8" SWIVEL TEE	EA	6	$ 1,471.00	$8,826.00
14	8'' SOLID X SWIVEL ADAPTER	EA	8	$ 1,302.00	$10,416.00
15	8" 11 1/4 DEGREE BEND	EA	8	$ 1,240.00	$9,920.00
16	8'' SOLID SLEEVE	EA	13	$ 1,309.00	$17,017.00
17	4" CAP	EA	9	$ 836.00	$7,524.00
18	8" CAP	EA	5	$ 975.00	$4,875.00
19	ABANDON EXISTING VALVE AND BOX	EA	8	$ 802.00	$6,416.00
20	WATER SERVICE CONNECTION 3/4'' SHORT	EA	32	$ 1,692.00	$54,144.00
21	WATER SERVICE CONNECTION 3/4'' LONG	EA	24	$ 2,146.00	$51,504.00
22	REMOVE AND REPLACE 3/4" WATER SERVICE	EA	8	$ 2,615.00	$20,920.00
23	REMOVE AND REPLACE 3/4" CURB STOP AND BOX	EA	8	$ 634.00	$5,072.00
24	STRUCTURE BACKFILL (COMPLETE IN PLACE)	TN	225	$ 61.00	$13,725.00
25	POTHOLING	EA	93	$ 625.00	$58,125.00
26	24" VERTICAL CURB AND GUTTER	LF	29	$ 147.00	$4,263.00
27	4" CONCRETE	SF	140	$ 19.00	$2,660.00
28	6'-0" x 6" CURBWALK	LF	20	$ 23.00	$460.00
29	8" CONCRETE WITH FIBERMESH	SF	610	$ 25.00	$15,250.00
30	FLOW FILL	CY	61	$ 375.00	$22,875.00
31	HOT ASPHALT PATCH GRADE SX (6'')	SY	2000	$ 86.00	$172,000.00
32	HOT ASPHALT PATCH GRADE SX (9'')	SY	122	$ 133.00	$16,226.00
33	CONSTRUCTION ZONE TRAFFIC CONTROL	LS	1	$ 69,500.00	$69,500.00
					$ 980,504.00

SANITARY SEWER BACKWATER PREVENTER VALVE

ESTIMATED UNITS/CONTRACT UNIT PRICE				Brannan Construction Company	
Bid Item No.	Bid Item	Unit	Quantity	Unit Price	Total Cost
34	4" BACKWATER VALVE KIT	EA	4	$ 1,331.00	$5,324.00
35	SCHEDULE 40 PVC PIPE (4")	LF	40	$ 143.00	$5,720.00
36	SCHEDULE 40 PVC PIPE (6")	LF	40	$ 173.00	$6,920.00
37	SANITARY SEWER SERVICE PIPE SDR 35 (4")	LF	20	$ 885.00	$17,700.00
38	STRONG BACK COUPLING (4")	EA	16	$ 253.00	$4,048.00
39	FITTINGS SDR 35 (4")	EA	15	$ 838.00	$12,570.00
40	24" VERTICAL CURB AND GUTTER	LF	20	$ 147.00	$2,940.00
41	4" CONCRETE	SF	40	$ 19.00	$760.00
42	COVER	EA	2	$ 1,816.00	$3,632.00
43	LANDSCAPE RESTORATION	LS	1	$ 19,035.00	$19,035.00
44	HOT ASPHALT PATCH GRADE SX (6")	SY	10	$ 86.00	$860.00
45	CONTROL	LS	1	$ 13,900.00	$13,900.00
					$ 93,409.00

Total Base Bids: $ 1,073,913.00

City of Louisville

COLORADO • SINCE 1878

2025 WATER MAIN REPLACEMENT PROJECT
AND
SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT

PREPARED BY:
CITY OF LOUISVILLE

April 2025

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Invitation to Bid

Sealed Bids will be received by the

CITY OF LOUISVILLE, STATE OF COLORADO

Hereinafter referred to as OWNER, at 749 Main Street, Louisville, Colorado 80027, until **10:00 a.m.**, MDT, **May 13, 2025** for the

2025 WATER MAIN REPLACEMENT PROJECT AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT

At said place and time, all Bids that have been duly received will be publicly opened and read aloud. Bids received after said closing time of 10:00 a.m. MDT will not be accepted and be returned unopened. Bids shall be in a sealed envelope plainly marked with the Project Name and Date and addressed to:

City of Louisville
Office of City Engineer
749 Main Street
Louisville, Colorado 80027

The Work for which the Bid is requested consists of but is not limited to demolition, water main replacement and water service line replacement, sanitary sewer backwater preventer valve installation, concrete replacement, asphalt patching, traffic control, incidentals and work appurtenant thereto.

Digital copies of the Bidding Documents will be available after May 30, 2025, online through Rocky Mountain Bid System located at https://www.bidnetdirect.com/ and also viewable via the City of Louisville's website https://www.louisvilleco.gov/doing-business/bidding-opportunities-requests-for-proposals.

Bids will only be accepted from BIDDERS who are prequalified as a General Contractor by the City of Louisville City Engineer, and who are recorded by Rocky Mountain Bid System and by the City Engineer as having received the Bidding Documents. City Engineer will verify with Rocky Mountain Bid System for Plan Holder list. City of Louisville Pre-qualification forms must be received at the office of the City Engineer by close of business (5:00 p.m.) May 9, 2025. Pre-qualification forms received after this date and time are not guaranteed to be approved by the required date.

Bids will be received on a unit and lump sum price basis as described in the Bidding Documents.

When a BIDDER submits a Bid, that Bid shall include the Schedule of Subcontractors, which shall identify each element of the Work to be subcontracted. Traffic control subcontractors shall be prequalified by the City of Louisville. Other subcontractors whose subcontract exceeds five percent of the Total Bid Price shall be prequalified by the City of Louisville, City Engineer for their specific portion of the Work.

Each Bid shall contain evidence of BIDDER'S qualification to do business in the state of Colorado or covenant to obtain such qualification.

Each Bid must be accompanied by a Bid security consisting of a properly Certified Check, Cashier's Check, or Bid Bond, in the amount of five (5) percent of BIDDER'S Total Bid Price, without conditions, payable to the City of Louisville. Bid security will be retained by the City until the seventh day after the Effective Date of the Agreement whereupon Bid security furnished by such Bidder's will be returned. Bid security with Bids, which are not competitive, will be returned within fourteen days after the Bid opening. No Bid will be considered unless accompanied by such Bid security.

The successful BIDDER will be required to furnish a performance bond and a labor and material payment bond to the City of Louisville guaranteeing faithful performance and the payment of all bills and obligations arising from the performance of the Contract.

No Bid may be withdrawn within a period of sixty (60) days after the date fixed for opening Bids.

The City of Louisville reserves the right to award the contract by sections, to reject any or all Bids, and to waive any informalities and irregularities therein.

The City of Louisville assumes no responsibility for payment of any expenses incurred by any respondent to this Invitation to Bid.

Preference is hereby given to materials, supplies, and provisions produced, manufactured, or grown in Colorado, quality and price being equal to articles offered by competitors outside of the State.

A mandatory pre-bid conference with representatives of prospective BIDDERS will be held at **9:00 a.m.**, MDT, on **May 6, 2025.** This meeting will be held virtually. Representatives of the City will be present to discuss the Project. Prospective BIDDERS are invited to attend and present their questions relative to this Bid at this conference.

Microsoft Teams Need help?
Join the meeting now
https://teams.microsoft.com/l/meetup-join/19%3ameeting_NzI4OGFjNTYtYWYzYy00OTg0LWJlYWEtMGMwNzNhODY0NjVi%40thread.v2/0?context=%7b%22Tid%22%3a%22bdcd34c2-e919-4b54-b6ba-01080ac35832%22%2c%22Oid%22%3a%2216a4a3f8-b918-48c6-8741-5ee11eac376a%22%7d
Meeting ID: 271 144 851 738 2
Passcode: QT9hb2pq

Dial in by phone
+1 321-430-0794,,556468096# United States, Orlando
Find a local number
Phone conference ID: 556 468 096#
For organizers: Meeting options | Reset dial-in PIN

The City of Louisville is an Equal Opportunity Employer.

City of Louisville, Colorado
City Engineer

1st Publication: April 23, 2025
2nd Publication: April 30, 2025

Instructions to Bidders

1. Defined Terms

Terms used in these Instructions to BIDDERS, which are defined in the General Conditions of this Manual have the meanings assigned to them in the General Conditions.

Certain additional terms used in these Instructions to Bidders have the meanings indicated below which are applicable to both the singular and plural thereof.

1.1 The term "BIDDER" means one who submits a Bid directly to OWNER, as distinct from a sub-bidder, who submits a bid to a BIDDER.

1.2 The term "ISSUING OFFICE" means the office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.

1.3 The term "SUCCESSFUL BIDDER" means the lowest, qualified, responsible, and responsive BIDDER to whom OWNER (on the basis of OWNER's evaluation as hereinafter provided) makes an award.

1.4 The term "Bidding Documents" includes the Invitation to Bid, Instructions to Bidders, the Bid Form, and the Contract Documents (including all Addenda issued prior to receipt of Bids).

2. Copies of Bidding Documents

2.1 Complete sets of Bidding Documents stated in the Invitation to Bid may be obtained from the Issuing Office. No partial sets will be issued. The Bidding Documents may be examined at the locations identified in the Invitation to Bid.

2.2 Complete sets of Bidding Documents shall be used in preparing Bids; neither OWNER nor ENGINEER assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.3 OWNER and ENGINEER in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

3. Qualification of Bidders

3.1 **Bids will only be accepted from qualified BIDDERs who are prequalified as a General contractor by the City of Louisville, City Engineer, and who are recorded by the City Engineer as having received the Bidding Documents. City of Louisville Prequalification forms must be received at the office of the City Engineer by close of business (5:00 p.m.) on May 9, 2025. Prequalification forms received after this date and time are not guaranteed to be approved by the required date.**

3.2 Each Bid shall contain evidence of BIDDER's qualification to do business in the state of Colorado or covenant to obtain such qualification.

3.3 The apparent low BIDDER shall be required to show that he has handled former work of similar type and that no just claims are pending against such work. No Bid will be awarded to a BIDDER who is engaged in any other work, which would impair his ability to perform or finance this Work.

4. Examination of Contract Documents and Site

4.1 It is the responsibility of each BIDDER before submitting a Bid:

4.1.1 To examine thoroughly the Contract Documents and related data identified in the Bidding Documents;

4.1.2 To visit the site to become familiar with and satisfy BIDDER as to the general, local and site conditions that may affect cost, progress, performance or furnishing of the Work;

4.1.3 To consider federal, state and local Laws and Regulations that may affect cost, progress, performance or furnishing of the Work;

4.1.4 To study and carefully correlate BIDDER's knowledge and observations with the Contract Documents and other related data; and

4.1.5 **To promptly notify ENGINEER of all conflicts, errors, ambiguities or discrepancies, which Bidder has discovered in or between the Contract Documents and such other related documents.**

4.2 BIDDERS are responsible for examining and determining for themselves the location and nature of the proposed Work, the amount and character of the labor and materials required therefor, and the difficulties, which may be encountered. BIDDERS may not rely on oral or written representations made by the OWNER, including any reports and drawings identified pursuant to paragraph 4.2.1 and subparagraphs thereof of the General Conditions, unless the OWNER has guaranteed in writing that such representation is factually accurate, and by submitting a Bid, each Bidder waives all liability for any error in any representation made by the OWNER to the BIDDER. BIDDERS shall, at BIDDER'S own expense, inspect the site and its surroundings and conduct such supplementary examinations, investigations, and tests concerning conditions at or contiguous to the site (including surface, and subsurface) which may affect cost, progress, performance, or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences, or procedures of construction to be employed by BIDDER and safety precautions and programs incident thereto for performing the Work in accordance with the Contract Documents. By failing to make such an inspection, the BIDDER waives all rights to claim extra payment or time extensions due to unexpected conditions, which could have been determined had the site been reasonably inspected. If concealed or unknown conditions differ materially from those ordinarily encountered and generally recognized as inherent in the Work or differ materially from the conditions indicated in the Contract Documents, then an equitable adjustment in the Contract Price or in the Contract Time will be allowed by change order as provided in Article 11 or Article 12 respectively of the General Conditions. By submitting a Bid, the BIDDER represents that the BIDDER'S observations at the site are not inconsistent with the requirements of the proposed Contract Documents, unless otherwise noted by the BIDDER.

Refer to General Conditions for identification of those reports of explorations and tests of subsurface conditions at or contiguous to the site, which have been utilized by ENGINEER in preparation of the Contract Documents. BIDDER may not rely upon the general accuracy of the "technical data" contained in such reports or upon non-technical data, interpretations, opinions or information contained in such reports or otherwise relating to the subsurface conditions at the site, nor upon the completeness thereof for the purposes of bidding or construction unless OWNER has guaranteed in writing that such data or representations are accurate.

4.2.1 Refer to General Conditions for identification of those drawings of physical conditions in or relating to existing surface and subsurface conditions (except Underground Facilities) which are at or contiguous to the site that have been utilized by ENGINEER in preparation of the Contract Documents. BIDDER may not rely upon the general accuracy of the "technical data" contained in such drawings or upon other data, interpretations, opinions or information shown or indicated in such drawings or otherwise relating to such structures, nor upon the completeness thereof for the purposes of bidding or construction unless OWNER has guaranteed in writing that such data or representations are accurate.

Copies of such reports and drawings will be made available by OWNER to any BIDDER on request. Those reports and drawings are not part of the Contract Documents, but the technical data contained therein, upon which BIDDER is entitled to rely upon as factually accurate as provided in Paragraphs 4.2.1 of the General Conditions. BIDDER is responsible for any interpretation or conclusion drawn from any "technical data" or any such data, interpretations, opinions, or information.

4.3 Information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site is based upon information and data furnished to OWNER by OWNERS of such Underground Facilities or others, and OWNER and ENGINEER do not assume responsibility for the accuracy or completeness thereof.

4.4 On request in advance, OWNER will provide each BIDDER access to the site to conduct such examinations, investigations, explorations, tests, and studies as each BIDDER deems necessary for submission of a Bid. BIDDER shall fill all holes, clean up and restore the site to its former conditions upon completion of such explorations, investigations, tests, and studies.

4.5 Reference is made to the General Conditions for the identification of the general nature of work that is to be performed at the site by OWNER or others (such as utilities and other prime contractors) that relates to work for which a Bid is to be submitted. On request, OWNER will provide to each BIDDER for examination access to or copies of Contract Documents (other than portions thereof related to price) for such work.

4.6 The submission of a Bid will constitute an incontrovertible representation by BIDDER that BIDDER has complied with every requirement of this Article 4, that the BIDDER warrants that it is familiar with all provisions of the Contract Documents, that without exception the Bid is premised upon performing and furnishing the Work required by the Contract Documents and applying the specific means, methods, techniques, sequences or procedures of construction that may be shown or indicated in or expressly required by the Contract Documents, **that BIDDER has given ENGINEER written notice of all conflicts, errors, ambiguities and discrepancies that BIDDER has discovered in the Contract Documents and the written**

resolutions thereof by ENGINEER is acceptable to BIDDER, and that the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing of the Work.

4.7 The provisions of 4.1 through 4.7 of this section, inclusive, do not apply to Asbestos, Polychlorinated biphenyls (PCBs), Petroleum, Hazardous Waste, or Radioactive Material covered by paragraph 4.5 of the General Conditions.

5. Availability of Lands for Work, Etc.

5.1 The lands upon which the Work is to be performed will be in the confines of street rights-of-way and public property. All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be obtained and paid for by CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by OWNER unless otherwise provided in the Contract Documents.

6. Interpretations and Addenda

6.1 All questions about the meaning or intent of the Bidding Documents are to be submitted in writing to the ENGINEER. Interpretation or clarifications considered necessary by ENGINEER in response to such questions will be issued only by Addenda mailed or delivered to all parties recorded by ENGINEER as having received Bidding Documents. Questions received less than ten days prior to the date for opening of Bids may not be answered. Only questions answered by formal written Addenda will be binding. **Oral and other interpretations or clarifications will be without legal effect.**

6.2 Addenda may also be issued to modify the Bidding Documents as deemed advisable by ENGINEER.

7. Bid Security

7.1 Each Bid must be accompanied by a Bid Security consisting of a properly Certified Check, Cashier's Check, or Bid Bond on the form enclosed herewith, in the amount of five (5) percent of BIDDER's Total Bid Price, without conditions, payable to the City of Louisville, Colorado. The Bid Bond must be executed by a surety meeting the requirements of Paragraph 5.3 of the General Conditions. The cost of the Bid Security shall be included in the bid. The submission of the Bid and Bid Security is a pledge by the BIDDER that he will enter into an Agreement with the Owner on the terms stated in his Bid and will, if required, furnish required insurance certificates and bonds, covering the faithful performance of the Agreement and the payment of all obligations arising thereunder.

7.2 The Bid Security of the Successful BIDDER will be retained until such BIDDER has executed the Agreement, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid Security will be returned. If the successful BIDDER fails to execute, enter into or deliver an Agreement in accordance with an accepted bid proposal, or fails to furnish the required bonds or certificates, within ten (10) days from the mailing of the Notice of Award, or if the BIDDER has been guilty of collusion with other BIDDERS in submitting the Bid, the OWNER may annul the Notice of Award and the Bid Security shall be forfeited to

and retained by the OWNER as liquidated damages and not as a penalty. By submitting the Bid security with the bid proposal, the BIDDER agrees to liquidated damages in the event the BIDDER fails to enter into the Agreement with the OWNER. The OWNER shall not have to prove actual damages suffered in order to retain the Bid Security as liquidated damages. The OWNER and the BIDDER agree that liquidated damages are appropriate because the anticipated actual damages are uncertain in amount and difficult to forecast accurately. The OWNER and the BIDDER agree that the amount of the Bid Security is a reasonable estimate of damages and not disproportionate to the anticipated loss or injury. The Bid Security of other BIDDER'S whom OWNER believes to have a reasonable chance of receiving the award may be retained by OWNER until the seventh day after the Effective Date of the Agreement whereupon Bid Security furnished by such BIDDER'S will be returned. Bid Security with Bids that are not competitive will be returned within fourteen days after the Bid opening.

8. Contract Time

8.1 The number of days within which, or the dates by which, the Work is to be completed (the Contract Time) is set forth in the Agreement.

9. Liquidated Damages

9.1 Provisions for liquidated damages, if any, are set forth in the Agreement and General Conditions.

10. Substitute and "Or Equal" Items

10.1 The Contract, if awarded, will be on the basis of materials and equipment described on the Drawings or specified in the Specifications without consideration of possible substitute or "or equal" items. Whenever it is indicated on the Drawings or specified in the Specifications that a substitute or "or - equal" item of material or equipment may be furnished or used by CONTRACTOR if acceptable to ENGINEER, application for such acceptance will not be considered by ENGINEER until after the Effective Date of the Agreement. The procedure for submission of any such application by CONTRACTOR and consideration by ENGINEER is set forth in paragraphs 6.7.1, 6.7.2, and 6.7.3 of the General Conditions and may be supplemented in the General Requirements.

11. Subcontractors, Suppliers, and Others

11.1 **When a BIDDER submits a Bid, that Bid shall include the Schedule of Subcontractors, which shall identify each element of the Work to be subcontracted. Traffic control subcontractors shall be prequalified and other Subcontractors whose subcontract exceeds five percent of the Total Bid Price shall be prequalified by the City of Louisville, City Engineer for their specific portion of the Work.**

11.2 If OWNER, who after due investigation has reasonable objection to any proposed Subcontractor, other person or organization, may before the Notice of Award is given, request the apparent Successful BIDDER to submit a substitute Subcontractor acceptable to the City without an increase in Bid price. If the apparent Successful BIDDER declines to make any such substitution, OWNER may award the contract to the next lowest BIDDER that proposes to use acceptable Subcontractors and other persons and organizations. The declining to make

requested substitutions will not constitute grounds for sacrificing the Bid security of any BIDDER. Any Subcontractor or other person or organization listed and to whom OWNER does not make written objection prior to the giving of the Notice of Award will be deemed acceptable to OWNER subject to revocation of such acceptance after the Effective Date of the Agreement as provided in Paragraph 6.8.2. of the General Conditions.

11.3 CONTRACTOR shall not be required to employ any Subcontractor, Supplier, other person, or organization against whom CONTRACTOR has reasonable objection.

11.4 The Contract Documents will take precedence over any nonconforming data submitted. Any Bid specifically conditioned upon furnishing equipment or materials, which are not responsive to the Contract Documents, will not be considered.

12. Bid Form

12.1 The Bid Form is included in the Contract Documents. A spreadsheet is available upon request, but a hard copy must be submitted with the sealed bids.

12.2 All blanks on the Bid Form must be completed by printing in ink or by typewriter. All unit prices including lump sums in the unit price schedule are to be expressed in numerals only.

12.3 Bids by corporations must be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal shall be affixed and attested by the secretary or an assistant secretary. The state of incorporation shall be shown below the corporate name.

12.4 Bids by partnerships must be executed in the partnership name and signed by a duly authorized general partner, whose title must appear under the signature and the official address of the partnership must be shown below the signature. A partnership shall give the full names and addresses of all partners and their interest and role in the partnership business.

12.5 All names must be typed or printed in ink below the signature.

12.6 The Bid shall contain an acknowledgment of receipt of all Addenda (the numbers of which must be filled in on the Bid Form).

12.7 The BIDDER's business address and telephone number for communications regarding the Bid must be shown.

12.8 Each Bid shall contain evidence of BIDDER's qualification to do business in the state of Colorado or covenant to obtain such qualification.

12.9 No alterations in Bids, or in the printed forms therefor, by erasures, interpolations, or otherwise will be accepted unless each such alteration is signed or initialed by the BIDDER; if initialed, OWNER may require the BIDDER to identify any alteration so initialed.

12.10 Bids will be based on a combination of unit price and lump sum schedules including alternatives. Unit price schedules shall be bid as provided in Paragraph 12.10.1 below. Lump sum schedules shall be bid as provided in paragraph 12.10.2 below.

12.10.1 Bids for unit price schedules shall be based on a unit price basis. The Total Bid Price will be determined as the sum of the products of the estimated quantity of each item and the unit price set forth in the Schedule of Unit Prices. The final Contract Price will be subject to adjustment according to final measured, used, or delivered quantities as provided in the Specifications and the unit prices in the Bid Form will apply to such final quantities except that unit prices may be subject to change by Change Order if quantities vary more than 25 percent.

12.10.2 Bids for lump sum schedules shall be based on a lump sum basis for each lump sum item.

13. Submission of Bids

13.1 Bids shall be submitted at the time and place indicated in the Advertisement of Invitation to Bid and shall be enclosed in an opaque sealed envelope, marked with the Project Title (and, if applicable, the designated portion of the Project for which the Bid is submitted) and name and address of the BIDDER, and addressed to the City of Louisville as indicated in the Advertisement of Invitation to Bid accompanied by the Bid Security and other required documents. If the Bid is sent through the mail or other delivery system the sealed Bid shall be enclosed in a separate envelope with the notation "BID ENCLOSED" on the face of the separate sealed envelope.

13.2 Bids shall be deposited at the designated location prior to the time and date for receipt of Bids indicated in the Invitation to Bid, or any extension thereof made by Addendum. Bids received after the time and date for receipt of Bids will be returned unopened. BIDDER shall assume full responsibility for timely delivery at the location designated for receipt of Bids.

13.3 Oral, telephonic, or telegraphic Bids are invalid and will not receive consideration.

13.4 No BIDDER may submit more than one Bid. Multiple Bids under different names will not be accepted from one firm or association.

14. Modification and Withdrawal of Bids

14.1 Bids may be modified or withdrawn by an appropriate document duly executed (in a manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.

14.2 Bids may also be modified or withdrawn in person by the BIDDER or an authorized representative provided he can prove his identity and authority.

14.3 Withdrawn Bids may be resubmitted up to the time designated for the receipt of Bids provided that they are then fully in conformance with these Instructions to BIDDERS.

14.4 If, within twenty-four hours after Bids are opened, any BIDDER files a duly signed, written notice with OWNER and promptly thereafter demonstrates to the reasonable satisfaction of OWNER that there was a material and substantial mistake in the preparation of its Bid, that

BIDDER may withdraw its Bid and the Bid security will be returned. Thereafter, that BIDDER will be disqualified from further bidding on the Work to be provided under the Contract Documents.

15. Opening of Bids

15.1 Bids will be opened and (unless obviously non-responsive) read aloud publicly as indicated in the Invitation to Bid. An abstract of the amounts of the base Bids and major alternates (if any) will be made available to BIDDERS.

16. Bids to Remain Open Subject to Acceptance

16.1 All Bids shall remain open for sixty (60) days after the day of the Bid opening, but OWNER may, in its sole discretion, release any Bid and return the Bid Security prior to that date.

17. Award of Contract

17.1 OWNER reserves the right to reject any or all Bids, including without limitation the rights to reject any or all irregular, nonconforming, nonresponsive, unbalanced or conditional Bids and to reject the Bid of any BIDDER if OWNER believes that it would not be in the best interest of the Project to make an award to that BIDDER, whether because the Bid is not responsive or the BIDDER is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by OWNER. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

17.2 In evaluating Bids, OWNER will consider the qualifications of the BIDDERS, whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.

17.3 OWNER will consider the qualifications and experience of Subcontractors and other persons and organizations proposed for those portions of the Work as to which the identity of Subcontractors and other persons and organizations must be submitted. OWNER also will consider the operating costs, maintenance requirements, performance data and guarantees of major items of materials and equipment proposed for incorporation in the Work when such data is required to be submitted prior to the Notice of Award.

17.4 OWNER may conduct such investigations as OWNER deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of the BIDDER, proposed Subcontractors and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to OWNER's satisfaction within the prescribed time.

17.5 If the contract is to be awarded, it will be awarded to the lowest responsible BIDDER based on the combination of Bid Schedules as determined by OWNER and whose evaluation by OWNER indicates to OWNER that the award will be in the best interest of the Project.

17.6 If the contract is to be awarded, OWNER will accept the Bid within sixty days after the Bid

opening and will give the Successful BIDDER a Notice of Award within sixty-five days after the day of the Bid opening. The OWNER's acceptance of the Bid proposal shall bind the successful BIDDER to sign the Contract Documents within ten (10) days after the date of the receipt by the BIDDER of the Notice of Award. The rights and obligations set forth in the Contract Documents shall become effective only with the signature of the **MAYOR** on behalf of the City.

17.7 It is the OWNER's intention to award the entire contract as bid. The OWNER reserves the right to award a contract that is in the best interest of the OWNER and within the amount budgeted. The OWNER has or will have prior to award appropriated monies at least equal to the contract amount. The Total Bid Price, subject to the other considerations herein, shall be the basis of award. Quantities may be reduced in order to reach budget amount, in that case the unit prices shall govern to determine the lowest Total Bid Price, which shall then determine the basis of award. If quantity reductions are required, quantities may be reduced from any item. Bid may be awarded by adding (or subtracting) the base bid plus any add alternatives, at the OWNER's sole discretion.

The BIDDER acknowledges that the OWNER has the right to delete any item of the Schedule of Unit Prices or change quantities and locations in any item at OWNER's sole discretion without affecting the contract prices of any item of the Contract so long as the deletion or change does not exceed twenty-five percent (25%) of the Total Bid Price. Notwithstanding the foregoing, if a reduction is made in Unit Price items or quantities, the lump sum cost for traffic control shall be reduced by the same percentage as the percentage change made from the original unit price cost/quantity to the reduced original unit price cost/quantity.

Quantities listed in the Schedule of Unit Prices are approximate and are for the purpose of comparing bids. These quantities have been estimated and are for the general information of the BIDDER. Quantities are not guaranteed.

17.8 In addition to Paragraph 17.1 of the Instructions to Bidders, in evaluating Bids, the OWNER will consider Bids irregular, and intends to reject Bids, for any of the following substantial reasons:

17.8.1 Unsigned Bid Form;

17.8.2 Bid Forms which have items omitted by the BIDDER;

17.8.3 Altering a Bid as to specified time of commencement of completion of Work;

17.8.4 Bid Forms not accompanied by a Bid Security of character indicated or of an amount less than indicated;

17.8.5 If the Bid Form is on a form other than that provided in Contract Documents, or if the Bid Form is altered;

17.8.6 If there are unauthorized additions, conditional or alternate Bids, or discrepancies of any nature that make the Bid Form incomplete, indefinite, or ambiguous as to its meaning;

17.8.7 If the BIDDER adds any provisions reserving the right to accept or reject an award, or to enter into a Contract pursuant to an award;

17.8.8 If the Schedule of Unit Prices in the Bid Form does not contain a unit price for each item number listed; or

17.8.9 Submitting more than one Bid, where there is evidence that any BIDDER has an interest in more than one Bid for the same work, or where there is evidence of collusion or other illegal activities between BIDDERS. In addition to any other remedies the OWNER may have, the OWNER may retain as liquidated damages for the disruption of the bidding process the Bid Security of all bidders involved in collusion or other illegal activities. The BIDDER and the OWNER agree that the amount of the Bid Security is a reasonable estimate of damages for collusion and other illegal activities on the part of the BIDDER and not disproportionate to the anticipated loss or injury. A person or entity, which has quoted prices to a BIDDER, is not hereby disqualified from quoting prices to other BIDDERS or from submitting a direct bid on its own behalf.

17.8.10 In evaluating Bids, the OWNER may consider Bids informal, and may, in its sole discretion, elect to waive informalities for the following minor reasons:

17.8.11 Omission of dates when signed, or title of person signing;

17.8.12 Failure to acknowledge an addendum, which does not affect quantity, quality, time, or price;

17.8.13 Submission of a Bid in an unsealed envelope;

17.8.14 Unit price Bids which include reconcilable arithmetic errors may be corrected if it does not change the unit price; or

17.8.15 Unit price Bids which include reconcilable arithmetic errors may be corrected, if it does not change the amount on which the award will be based.

18. Contract Security

18.1 Paragraph 5.1 of the General Conditions set forth OWNER's requirements as to performance and payment Bonds. When the Successful BIDDER delivers the executed Agreement to OWNER it shall be accompanied by the required performance and payment Bonds.

19. Signing of Agreement

19.1 When OWNER gives a Notice of Award to the Successful BIDDER, it will be accompanied by the required number of unsigned counterparts of the Agreement with all other written Contract Documents attached. Within ten (10) days after CONTRACTOR's receipt of the Notice of Award, CONTRACTOR shall sign and have notarized the required number of counterparts of the Agreement and attached documents and return them to the OWNER along with the required Bonds, insurance certificates and power of attorney authorizations.

20. Special Legal Requirements

20.1 OWNER's Finances. OWNER has made adequate financial arrangements for the completion of

all Work required by the Contract Documents and welcomes inquiries from prospective BIDDERS on the prime contract.

21. Sales and Use Taxes

21.1 OWNER is exempt from Colorado State Sales and Use Taxes on materials and equipment to be incorporated in the Work. Said taxes shall not be included in the Contract Price. Refer to General Conditions 6.15 for additional information.

22. Retainage

22.1 Provisions concerning retainage and CONTRACTORS' rights to deposit securities in lieu of retainage are set forth in the Agreement.

23. Mistakes in Bidding Instructions

23.1 If the OWNER makes a mistake in drafting the Instructions to Bidders or any other Contract Documents, the OWNER reserves the right to reject any or all Bids, or to require that BIDDERS submit an alternate bid proposal with adjustments made to correct the error(s). Such errors will be set forth in an addendum. If the CONTRACTOR has already been selected and has started performing work under the contract, and the OWNER then discovers a mistake in the Contract Documents for which the OWNER is responsible, the OWNER may opt to reform the contract. If the mistake causes the Contractor to receive compensation for materials not used in the Work or for labor, which would not be required for the Work, the Contract Price shall be decreased proportionally. If the mistake causes the CONTRACTOR to fail to bid on work, which must be performed in order to properly complete the contract, the OWNER may increase the Contract Price to equal the proportionate increase in the cost of required materials and labor caused to the CONTRACTOR. In the alternative, the OWNER may solicit bids for such additional work, or the OWNER may reassign such additional work to another CONTRACTOR, as the OWNER deems appropriate. Nothing in this provision shall apply to mistakes made by the CONTRACTOR in completing the Bid Form or in performing the contract.

Bid Form

PROJECT: 2025 WATER MAIN REPLACEMENT PROJECT AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT
PROJECT NUMBER: 501498-660181
OWNER: CITY OF LOUISVILLE, COLORADO

THIS BID IS SUBMITTED TO: CITY OF LOUISVILLE, COLORADO

1. The undersigned BIDDER proposes and agrees, if this Bid is accepted, to enter into an Agreement with OWNER in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Contract Price and within the Contract Time indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.

2. BIDDER accepts all of the terms and conditions of the Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid Security. This Bid will remain subject to acceptance for sixty days after the day of Bid opening. BIDDER will sign and submit the Agreement with the Bonds and other documents required by the Bidding Requirements within ten days after the date of OWNER's Notice of Award.

3. In submitting this Bid, BIDDER represents, as more fully set forth in the Agreement, that:

   (a) BIDDER has examined copies of all the Bidding Documents and of the following Addenda receipt of all which is hereby acknowledged: (List Addenda by Addendum Number and Date):

Date	Number
_____	_____
_____	_____

   (b) BIDDER has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance or furnishing of the Work.

   (c) BIDDER has studied carefully all reports and drawings of subsurface conditions and drawings of physical conditions which are identified in the General Conditions as provided in paragraph 4.2, and accepts the determination set forth in paragraph 4.2 of the General Conditions. BIDDER has inspected the site and has obtained conducted and carefully studied (or assumes responsibility for obtaining and carefully studying) all examinations, investigations, explorations, tests and studies which pertain to the subsurface or physical conditions at the site or otherwise may affect the cost, progress, performance or furnishing of the Work as BIDDER considers necessary for the performance or furnishing of the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 4.2 of the General Conditions; and no additional examinations, investigations, explorations, tests, reports, or similar information or data are or will be required by BIDDER for such purpose.(d) BIDDER has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities. No additional examinations, investigations, explorations, tests, reports or similar information or data in respect of said Underground Facilities are or will be required by BIDDER in order to perform and furnish the

Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of Contract Documents, including specifically the provisions of paragraph 4.3 of the General Conditions.

(e) BIDDER has correlated the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.

(f) BIDDER has given ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that BIDDER has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to BIDDER, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which this Bid is submitted.

(g) This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; BIDDER has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; BIDDER has not solicited or induced any person, firm or corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for himself any advantage over any other Bidder or over OWNER.

4. BIDDER will complete the Work in accordance with Contract Documents for the following price(s):

SCHEDULE OF UNIT PRICES

PROJECT: 2025 WATER MAIN REPLACEMENT PROJECT AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT
PROJECT NUMBER: 501498-660181
OWNER: CITY OF LOUISVILLE, COLORADO

Base Bid:

WATER BID ITEMS:

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
1	12'' PVC WATER MAIN CLASS 235 DR 18	LF	102		$0.00
2	8'' PVC WATER MAIN CLASS 235 DR 18	LF	2497		$0.00
3	REMOVE FIRE HYDRANT ASSEMBLY	EA	3		$0.00
4	FIRE HYDRANT ASSEMBLY	EA	6		$0.00
5	FIRE HYDRANT EXTENSION (6")	EA	6		$0.00
6	FIRE HYDRANT EXTENSION (12")	EA	6		$0.00
7	12" 45 DEGREE BEND	EA	2		$0.00
8	12”-8” REDUCER	EA	1		$0.00
9	12" SOLID SLEEVE	EA	1		$0.00
10	12"CAP	EA	1		$0.00
11	GATE VALVE AND BOX (8”)	EA	11		$0.00
12	8” x 8” x 8” SWIVEL TEE	EA	6		$0.00
13	8” x 6” x 8” SWIVEL TEE	EA	6		$0.00
14	8'' SOLID X SWIVEL ADAPTER	EA	8		$0.00
15	8" 11 1/4 DEGREE BEND	EA	8		$0.00
16	8'' SOLID SLEEVE	EA	13		$0.00
17	4" CAP	EA	9		$0.00
18	8" CAP	EA	5		$0.00
19	ABANDON EXISTING VALVE AND BOX	EA	8		$0.00
20	WATER SERVICE CONNECTION 3/4'' SHORT	EA	32		$0.00
21	WATER SERVICE CONNECTION 3/4'' LONG	EA	24		$0.00
22	REMOVE AND REPLACE 3/4" WATER SERVICE	EA	8		$0.00

23	REMOVE AND REPLACE 3/4" CURB STOP AND BOX	EA	8		$0.00
24	STRUCTURE BACKFILL (COMPLETE IN PLACE)	TN	225		$0.00
25	POTHOLING	EA	93		$0.00
26	24" VERTICAL CURB AND GUTTER	LF	29		$0.00
27	4” CONCRETE	SF	140		$0.00
28	6’-0" x 6" CURBWALK	LF	20		$0.00
29	8” CONCRETE WITH FIBERMESH	SF	610		$0.00
30	FLOW FILL	CY	61		$0.00
31	HOT ASPHALT PATCH GRADE SX (6'')	SY	2000		$0.00
32	HOT ASPHALT PATCH GRADE SX (9'')	SY	122		$0.00
33	CONSTRUCTION ZONE TRAFFIC CONTROL	LS	1		$0.00
TOTAL WATER BID PRICE				**$0.00**	

SEWER BID ITEMS:

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
34	4" BACKWATER VALVE KIT	EA	4	$	$
35	SCHEDULE 40 PVC PIPE (4")	LF	40	$	$
36	SCHEDULE 40 PVC PIPE (6")	LF	40	$	$
37	SANITARY SEWER SERVICE PIPE SDR 35 (4")	LF	20	$	$
38	STRONG BACK COUPLING (4")	EA	16	$	$
39	FITTINGS SDR 35 (4")	EA	15	$	$
40	24" VERTICAL CURB AND GUTTER	LF	20	$	$
41	4" CONCRETE	SF	40	$	$
42	HOT ASPHALT PATCH GRADE SX (6")	SY	10	$	$
43	CAST IRON CLEAN OUT BOX AND COVER	EA	2	$	$
44	LANDSCAPE RESTORATION	LS	1	$	$
45	CONSTRUCTION ZONE TRAFFIC CONTROL	LS	1	$	$
TOTAL SEWER BID PRICE				**$0.00**	

THE BASIS OF AWARD SHALL BE THE BASE BID TOTAL PRICE.

BID SUMMARY:

BASE BID WATER ITEMS: $_____

SEWER BID ITEMS: $_____

BASE BID TOTAL (WATER + SEWER ITEMS): **$_____**

Prices have been computed in accordance with paragraph 11.9.2 of the General Conditions.

BIDDER acknowledges that quantities are not guaranteed, and final payment will be based on actual quantities determined as provided in the Contract Documents.

5. BIDDER agrees that the Work;

   Will be substantially complete and completed and ready for final payment in accordance with paragraph 14.13 of the General Conditions on or before the dates or within the number of Contract Days indicated in the Agreement.

   BIDDER accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified in the Agreement.

6. The following documents are attached to and made a condition of this Bid:

   (a) Required Bid Security;

   (b) A list of Subcontractors and other persons and organizations proposed to perform the Work are required to be identified on the Schedule of Subcontractors and submitted in this Bid;

   (c) Anti-Collusion Affidavit; and

   (d) If BIDDER is a partnership, a list of all partners, their addresses, and their interest and role in the partnership business.

7. Communications concerning this Bid shall be addressed to:
   The address of BIDDER indicated below.

   _____

   _____

   _____

8. Terms used in this Bid, which are defined in the General Conditions of the Construction Contract included as part of the Contract Documents, have the meanings assigned to them in the General Conditions.

SUBMITTED on _____, 2025.

If BIDDER is:

An Individual

By _____
(Individual's Name)

(SEAL)

doing business as _____

Business address: _____

_____

_____

Phone No.: _____

A Partnership

By _____
(Firm Name)

(SEAL)

_____
(General Partner)

Business address: _____

_____

_____

Phone No.: _____

A Corporation

By _____
(Corporation Name)

_____
(State of incorporation)

By _____
(Name of person authorized to sign)

_____
(Title)

(CORPORATE SEAL)

Attest _____
(Secretary)

Business address: _____

_____

_____

Phone No.: _____

Date of Qualification to do business: _____

A Joint Venture

By _____
(Name)

_____
(Address)

By _____
(Name)

_____
(Address)

Phone Number and Address for receipt of official communications

_____

_____

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

Bid Bond

BIDDER (Name and Address):

_____
_____
_____

SURETY (Name and Address of Principal Place of Business):

_____
_____
_____

OWNER (Name and Address):

_____
_____
_____

BID:

BID DUE DATE: _____
PROJECT (Brief Description Including Location):

_____
_____
_____

BOND:

BOND NUMBER: _____
DATE: (Not later than Bid Due Date):_____
PENAL SUM: _____

IN WITNESS WHEREOF, Surety and Bidder, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Bid Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

BIDDER	**SURETY**
_____(Seal)	_____(Seal)
Bidder's Name and Corporate Seal	Surety's Name and Corporate Seal
By: _____	By: _____
Signature and Title	Signature and Title (Attach Power of Attorney)
Attest: _____	Attest: _____
Signature and Title	Signature and Title

Note: (1) Above addresses are to be used for giving requiring notice.
(2) Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents the properly executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents and Contract Documents.

3. This obligation shall be null and void if:

   3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents and Contract Documents, or

   3.2. All bids are rejected by Owner, or

   3.3. Owner fails to issue a notice of award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by paragraph 5 hereof).

4. Payment under this Bond will be due and payable upon default of Bidder and within thirty (30) calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

5. Surety waives notice of and any and all defenses based on or arising out of any time extension to issue notice of award agreed to in writing by Owner and Bidder, provided that the time for issuing notice of award including extensions shall not in the aggregate exceed 120 days from Bid Due Date without Surety's written consent.

6. No suit or action shall be commenced under this Bond prior to thirty (30) calendar days after the notice of default required in paragraph 4 above is received by Bidder and Surety, and in no case later than one year after Bid Due Date.

7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.

8. Notice required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.

9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent or representative who executed this Bond on behalf of Surety to execute, seal and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirements of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of the Bond conflicts with any applicable provision of any applicable statute, then the provision of said statue shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "bid" as used herein includes a bid, offer or proposal as applicable.

Schedule of Subcontractors

PROJECT: 2025 WATER MAIN REPLACEMENT PROJECT AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT
PROJECT NUMBER: 501498-660181
OWNER: CITY OF LOUISVILLE, COLORADO

This Bid is based on subcontracting certain portions of the work to subcontractors as listed below.

Name:_____ _ Telephone No. _____
Address: _____ _____ _____
City: _____ State: _____ Zip Code: _____
Services/equipment to be provided:_____
_____
_____

Name:_____ _ Telephone No. _____
Address: _____ _____ _____
City: _____ State: _____ Zip Code: _____
Services/equipment to be provided:_____
_____
_____

Name:_____ _ Telephone No. _____
Address: _____ _____ _____
City: _____ State: _____ Zip Code: _____
Services/equipment to be provided:_____
_____
_____

Name:_____ _ Telephone No. _____
Address: _____ _____ _____
City: _____ State: _____ Zip Code: _____
Services/equipment to be provided:_____
_____
_____

Name:_____ _ Telephone No. _____
Address: _____ _____ _____
City: _____ State: _____ Zip Code: _____
Services/equipment to be provided:_____
_____
_____

Name:_____ _ Telephone No. _____
Address: _____ _____ _____
City: _____ State: _____ Zip Code: _____
Services/equipment to be provided:_____
_____

Anti-Collusion Affidavit

PROJECT: 2025 WATER MAIN REPLACEMENT PROJECT AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT
PROJECT NUMBER: 501498-660181
OWNER: CITY OF LOUISVILLE, COLORADO

I hereby attest that I am the person responsible within my firm for the final decision as to the price(s) and amount of this Bid or, if not, that I have written authorization, enclosed herewith, from that person to make the statements set out below on his or her behalf of my firm.

I further attest that:

1. The price(s) and amount of this bid have been arrived at independently, without consultation, communication, or agreement for the purpose or with the effect of restricting competition with any other firm or person who is a BIDDER or potential prime BIDDER.
2A. Neither the price(s) nor the amount of this Bid have been disclosed to any other firm or person who is a BIDDER or potential prime BIDDER on this project and will not be so disclosed prior to bid opening.
2B. Neither the prices nor the amount of the Bid of any other firm or person who is a BIDDER or potential prime BIDDER on this project have been disclosed to me or my firm.
3A. No attempt has been made to solicit, cause, or induce any firm or person who is BIDDER or potential prime BIDDER to refrain from bidding on this project, or to submit a Bid higher than the Bid of this firm, or any intentionally high or noncompetitive Bid or other form of complementary Bid.
3B. No agreement has been promised or solicited for any other firm or person who is a BIDDER or potential prime BIDDER on this project to submit an intentionally high, noncompetitive, or other form of complementary bid on this project.
4. The Bid of my firm is made in good faith and not pursuant to any consultation, communication, agreement, or discussion with, or inducement or solicitation by or from any firm or person to submit any intentionally high, noncompetitive, or other form of complementary bid.
5. My firm has not offered or entered into a subcontract or agreement regarding the purchase or sale of materials or services from any firm or person, or offered, promised, or paid cash or anything of value to any firm or person, whether in connection with this or any other project, in consideration for an agreement or promise by any firm or person to refrain from bidding or to submit any intentionally high, noncompetitive, or other form of complementary bid or agreeing or promising to do so on this project.
6. My firm has not accepted or been promised any subcontract or agreement regarding the sale of materials or services to any firm or person, and has not been promised or paid cash or anything of value by any firm or person, whether in connection with this or any other project, in consideration for my firm's submitting any intentionally high, noncompetitive or other form of complementary bid, or agreeing or promising to do so, on this project.
7. I have made a diligent inquiry of all members, officers, employees, and agents of my firm with responsibilities relating to the preparation, approval or submission of my firm's bid on this project and have been advised by each of them that he or she has not participated in any communication, consultation, discussion, agreement, collusion, or other conduct inconsistent with any of the statements and representations made in this affidavit.
8. I understand and my firm understands that any misstatement in this affidavit is and shall be treated as a fraudulent concealment from the OWNER of the true facts relating to submission of bids for this contract.

I DECLARE UNDER PENALTY OF PERJURY IN THE SECOND DEGREE, AND ANY OTHER APPLICABLE STATE OR FEDERAL LAWS THAT THE STATEMENTS MADE ON THIS DOCUMENT ARE TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

CONTRACTOR'S FIRM OR COMPANY NAME	SECOND CONTRACTOR'S FIRM OR COMPANY NAME (IF JOINT VENTURE)
BY: _____	BY: _____
TITLE: _____	TITLE: _____
DATE: _____	DATE: _____

SWORN BEFORE ME THIS _____ DAY OF, _____, 2025

NOTARY PUBLIC: _____ MY COMMISSION EXPIRES: _____

Certification of EEO Compliance

PROJECT: 2025 WATER MAIN REPLACEMENT PROJECT AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT
PROJECT NUMBER: 501498-660181
OWNER: CITY OF LOUISVILLE, COLORADO

Instructions: BIDDERs and Subcontractors must complete and submit this form with the Bid Form. This is required by the Equal Employment Opportunity Regulations 41 CFR 1.7 (b) (1).

1. ___ Yes ___ No	I have developed and have on file at each establishment an affirmative action program as required by 41 CFR Chapter 60, Part 60-2.
2. ___ Yes ___ No	I have participated in a previous contract/subcontract subject to the equal opportunity clause.
3. ___ Yes ___ No	I have filed with the Joint Reporting Committee, the Director, or the Equal Employment Opportunity Commission all reports due under the applicable filing requirements.

I declare under penalty of perjury in the second degree and any other applicable state or federal laws that the statements made in this document are true and complete to the best of my knowledge.

CONTRACTOR
___ BIDDER **___ PROPOSED SUBCONTRACTOR**

BY: _____

TITLE: _____

DATE: _____

City of Louisville Public Services Contract Addendum

Prohibition Against Employing Workers Without Authorization

PROJECT: 2025 WATER MAIN REPLACEMENT PROJECT AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT
PROJECT NUMBER: 501498-660181
OWNER: CITY OF LOUISVILLE, COLORADO

Prohibition Against Employing Workers Without Authorization. Contractor shall not knowingly employ or contract with a worker without authorization to perform work under this contract. Contractor shall not enter into a contract with a subcontractor that fails to certify to the Contractor that the subcontractor shall not knowingly employ or contract with a worker without authorization to perform work under this contract.

Contractor will participate in either the E-verify program or the Department program, as defined in C.R.S. § § 8-17.5-101(3.3) and 8-17.5-101(3.7), respectively, in order to confirm the employment eligibility of all employees who are newly hired for employment to perform work under the public contract for services. Contractor is prohibited from using the E-verify program or the Department program procedures to undertake pre-employment screening of job applicants while this contract is being performed.

If Contractor obtains actual knowledge that a subcontractor performing work under this contract for services knowingly employs or contracts with a worker without authorization, Contractor shall:

a. Notify the subcontractor and the City within three days that the Contractor has actual knowledge that the subcontractor is employing or contracting with a worker without authorization; and

b. Terminate the subcontract with the subcontractor if within three days of receiving the notice required pursuant to this paragraph the subcontractor does not stop employing or contracting with the worker without authorization; except that the Contractor shall not terminate the contract with the subcontractor if during such three days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with a worker without authorization.

Contractor shall comply with any reasonable request by the Department of Labor and Employment made in the course of an investigation that the Department is undertaking pursuant to the authority established in C.R.S. § 8-17.5-102(5).

If Contractor violates a provision of this Contract required pursuant to C.R.S. § 8-17.5-102, City may terminate the contract for breach of contract. If the contract is so terminated, the Contractor shall be liable for actual and consequential damages to the City.

Contractor's Pre-Contract Certification

Regarding Employing Workers Without Authorization

PROJECT: 2025 WATER MAIN REPLACEMENT PROJECT AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT
PROJECT NUMBER: 501498-660181
OWNER: CITY OF LOUISVILLE, COLORADO

The proposer of public services to the City of Louisville identified below (hereafter "the Proposer"), hereby certifies as follows:

That at the time of providing this certification, Proposer does not knowingly employ or contract with an illegal alien; and that Proposer has participated in or attempted to participate in the Basic Pilot Program administered by the United States Department of Homeland Security in order to verify that it does not employ any illegal aliens.

Dated this _____ day of _____, 20____.

Proposer: _____

By: _____

Title: _____

Agreement

THIS AGREEMENT is made and entered into this 3rd day of June in the year 2025 by and between:

CITY OF LOUISVILLE, COLORADO
(hereinafter called OWNER)

and

Brannan Construction Company
(hereinafter called CONTRACTOR)

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows.

Article 1. Work

CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

PROJECT: 2025 WATER MAIN REPLACEMENT PROJECT AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT
PROJECT NUMBER: 501498-660181

Article 2. Contract Times

2.1. The CONTRACTOR shall substantially complete all work within **102 Contract Days** from the date when the Contract Time commences to run as identified in the Notice to Proceed. The Work shall be completed and ready for final payment in accordance with paragraph 14.13 of the General Conditions.

2.2. LIQUIDATED DAMAGES. The OWNER and the CONTRACTOR agree and recognize that time is of the essence in this contract and that the OWNER will suffer financial loss if the Work is not substantially complete by the date specified in paragraph 2.1 above, plus any extensions thereof allowed in accordance with the Article 12 of the General Conditions. OWNER and CONTRACTOR also agree that such damages are uncertain in amount and difficult to measure accurately. Accordingly, the OWNER and CONTRACTOR agree that as liquidated damages, and not as a penalty, for delay in performance the CONTRACTOR shall pay the OWNER **ONE THOUSAND DOLLARS ($1,000)** for each and every **Contract Day** and portion thereof that expires after the time specified above for substantial completion of the Work until the same is finally complete and ready for final payment. The liquidated damages herein specified shall only apply to the CONTRACTOR's delay in performance, and shall not include litigation or attorneys' fees incurred by the OWNER, or other incidental or consequential damages suffered by the OWNER due to the CONTRACTOR's performance. If the OWNER charges liquidated damages to the CONTRACTOR, this shall not preclude the OWNER from commencing an action against the CONTRACTOR for other actual harm resulting from the CONTRACTOR's performance, which is not due to the CONTRACTOR's delay in performance.

Article 3. Contract Price

3.1. The OWNER shall pay in current funds, and the CONTRACTOR agrees to accept in full payment for performance of the Work, subject to additions and deductions from extra and/or omitted work and determinations of actual quantities as provided in the Contract Documents, the Contract Price of One Million, Seventy Three Thousand, Nine Hundred, and Thirteen Dollars , $ 1,073,913.00 set forth in the Bid Form of the CONTRACTOR dated May 13, 2025.

As provided in paragraph 11.9 of the General Conditions estimated quantities are not guaranteed, and determinations of actual quantities and classification are to be made by ENGINEER as provided in paragraph 9.10 of the General Conditions. Unit prices have been computed as provided in paragraph 11.9 of the General Conditions.

Article 4. Payment Procedures

CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by OWNER as provided in the General Conditions.

4.1 PROGRESS PAYMENTS. OWNER shall make progress payments on the basis of CONTRACTOR's Applications for Payment as recommended by ENGINEER, on or about the third Wednesday of each month during construction as provided below. All progress payments will be on the basis of the progress of the Unit Price Work based on the number of units completed as provided in the General Conditions.

4.1.1.1 Prior to final completion and acceptance, progress payments will be made in the amount equal to 95 percent of the calculated value of completed Work, and/or 95 percent of materials and equipment not incorporated in the Work (but delivered, suitably stored and accompanied by documentation satisfactory to OWNER as provided in 14.2 of the General Conditions), but in each case, less the aggregate of payments previously made and such less amounts as ENGINEER shall determine, or OWNER may withhold, in accordance with paragraph 14.7 of the General Conditions.

If OWNER finds that satisfactory progress is being made in any phase of the Work, it may, in its discretion and upon written request by the CONTRACTOR, authorize final payment from the withheld percentage to the CONTRACTOR or subcontractors who have completed their work in a manner finally acceptable to the OWNER. Before any such payment may be made, the OWNER must, in an exercise of its discretion, determine that satisfactory and substantial reasons exist for the payment and there must be provided to the OWNER written approval from any surety furnishing bonds for the Work.

Nothing contained in this provision shall preclude the OWNER and CONTRACTOR from making other arrangements consistent with C.R.S. 24-91-105 prior to contract award.

4.2 FINAL PAYMENT. Upon final completion and acceptance of the Work in accordance with paragraph 14.13 of the General Conditions, OWNER shall pay the remainder of the Contract Price as provided in said paragraph 14.13 of the General Conditions.

Article 5. Contractor's Representations

In order to induce OWNER to enter into this Agreement CONTRACTOR makes the following representations:

5.1. CONTRACTOR has examined and carefully studied the Contract Documents, (including the Addenda listed in paragraph 6.10) and the other related data identified in the Bidding Documents including "technical".

5.2. CONTRACTOR has inspected the site and become familiar with and is satisfied as to the general, local and site conditions that may affect cost, progress, performance or furnishing of the Work.

5.3. CONTRACTOR is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress and furnishing of the Work.

5.4. CONTRACTOR has carefully studied all reports of exploration and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions relating to surface or subsurface structures at or contiguous to the site (Except Underground facilities) which have been identified in the General Conditions as provided in paragraph 4.2.1 of the General Conditions. CONTRACTOR accepts the determination set forth in paragraph 4.2 of the General Conditions. CONTRACTOR acknowledges that such reports and drawings are not Contract Documents and may not be complete for CONTRACTOR's purposes. CONTRACTOR acknowledges that OWNER and ENGINEER do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Contract Documents with respect to such reports, drawings or to Underground Facilities at or contiguous to the site. CONTRACTOR has conducted, obtained and carefully studied (or assume responsibility for having done so) all necessary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences and procedures of construction to be employed by CONTRACTOR and safety precautions and programs incident thereto. CONTRACTOR does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary for the performance and furnishing of the Work at the Contract Price, within the Contract Times and in accordance with the other terms and conditions of the Contract Documents.

5.5. CONTRACTOR has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities. No additional examinations, investigations, explorations, tests, reports, studies or similar information or data in respect of said Underground Facilities are or will be required by CONTRACTOR in order to perform and furnish the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 4.3 of the General Conditions.

5.6. CONTRACTOR is aware of the general nature of work to be performed by OWNER and others at the site that relates to the Work as indicated in the Contract Documents.

5.7. CONTRACTOR has correlated the information known to CONTRACTOR, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests studies and data with the Contract Documents.

5.8. CONTRACTOR has given ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that CONTRACTOR has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing the Work.

Article 6. Contract Documents

The Contract Documents, which constitute the entire agreement between OWNER and CONTRACTOR concerning the Work, are all written documents, which define the Work and the obligations of the Contractor

in performing the Work and the OWNER in providing compensation for the Work. The Contract Documents include the following:

6.1. Invitation to Bid.
6.2. Instruction to Bidders.
6.3. Bid Form.
6.4. This Agreement.
6.5. General Conditions.
6.6. Supplementary Conditions.
6.7. General Requirements.
6.8. Technical Specifications.
6.9. Change Orders, Addenda and other documents which may be required or specified including:
  6.10.1. Addenda No. 0 to 2 exclusive
  6.10.2. Documentation submitted by CONTRACTOR prior to Notice of Award
  6.10.3. Schedule of Subcontractors
  6.10.4. Anti-Collusion Affidavit
  6.10.5. Certification of EEO Compliance
  6.10.6. Notice of Award
  6.10.7. Performance Bond
  6.10.8. Labor and Material Payment Bond
  6.10.9. Certificates of Insurance
  6.10.10. Notice to Proceed
  6.10.11. Contractor's Proposal Request
  6.10.12. Contractor's Overtime Request
  6.10.13. Field Order
  6.10.14. Work Change Directive
  6.10.15. Change Order
  6.10.16. Application for Payment
  6.10.17. Certificate of Substantial Completion
  6.10.18. Claim Release
  6.10.19. Final Inspection Report
  6.10.20. Certificate of Final Completion
  6.10.21. Guarantee Period Inspection Report

6.10. The following which may be delivered or issued after the Effective Date of the Agreement and are attached hereto: All Written Amendments and other documents amending, modifying, or supplementing the Contract Documents pursuant to paragraphs 3.5 and 3.6 of the General Conditions.

6.11. In the event of conflict between the above documents, the prevailing document shall be as follows:
  1. Permits from other agencies as may be required.
  2. Special Provisions and Detail Drawings.
  3. Technical Specifications and Drawings. Drawings and Technical Specifications are intended to be complementary. Anything shown or called for in one and omitted in another is binding as if called for or shown by both.
  4. Supplementary Conditions.
  5. General Conditions.
  6. City of Louisville Design and Construction Standards.
  7. Reference Specifications.

In case of conflict between prevailing references above, the one having the more stringent requirements shall govern.

There are no Contract Documents other than those listed above in this Article 6. The Contract Documents may only be amended, modified, or supplemented as provided in paragraphs 3.5 and 3.6 of the General Conditions.

Article 7. Miscellaneous

7.1. Terms used in this Agreement, which are defined in Article 1 of the General Conditions, shall have the meanings indicated in the General Conditions.

7.2. No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment no assignment will release or discharge that assignor from any duty or responsibility under the Contract Documents.

7.3. OWNER and CONTRACTOR each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect to all covenants, agreements and obligations contained in the Contract Documents.

7.4. OWNER AND CONTRACTOR consent to the use of electronic signatures on the Contract Documents. This Agreement, and any other Contract Documents requiring a signature hereunder, may be signed electronically by the Parties in the manner specified under the Uniform Electronic Transactions Act, Title 24, Article 71.3, Part 1, C.R.S.; provided that, electronic records of, and electronic signatures on, any required bonds, including required Performance, Labor and Material Payment, and Warranty Bonds, must be acceptable to the Contractor's selected surety. The Parties agree not to deny the legal effect or enforceability of a Contract Document solely because the document is in electronic form or because an electronic record was used in its formation. The Parties agree not to object to the admissibility of a Contract Document in the form of an electronic record, or a paper copy of an electronic document, or a paper copy or electronic record of a document bearing an electronic signature, on the ground that it is an electronic record or electronic signature or that it is not in its original form or is not an original.

Article 8. Other Provisions

IN WITNESS WHEREOF, OWNER, and CONTRACTOR have signed this Agreement in duplicate. One counterpart each has been delivered to OWNER and CONTRACTOR. All portions of the Contract Documents have been signed, initialed, or identified by OWNER and CONTRACTOR.

This Agreement will be effective on June 3, 2025.

OWNER: CITY OF LOUISVILLE, COLORADO

By: _____
Christopher M. Leh, Mayor

(CORPORATE SEAL)

Attest: _____
Genny Kline, Interm City Clerk

Address for giving notices:

749 Main Street
Louisville, Colorado
80027

Attention: City Engineer

CONTRACTOR: Brannan Construction Company

By: _____

(CORPORATE SEAL)

Attest: _____

Address for giving notices:

2500 East Brannan Way

Denver, CO 80229

Attention: Cheryl Cheney

Performance Bond

_____, as Principal, hereinafter called the Contractor, and

_____ , as Surety, with general offices in

_____
a Corporation organized under the laws of the State of _____, and authorized to transact business in the State of Colorado, are hereby bound unto the City of Louisville, Colorado, as Obligee, hereinafter called the City, in the penal sum of _____ ($_____) in the United States currency, for the payment of which sum the Contractor and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally.

WHEREAS, the Contractor has entered into a written contract with the City dated _____, 2025, for _____ in accordance with plans and specifications contained in the Contract, a copy of which Contract is attached hereto and made a part hereof and is hereinafter referred to as the Contract;

NOW, THEREFORE, the conditions of this performance bond are such that, if the Contractor shall satisfactorily perform the Contract, then this bond shall be null and void; otherwise, the Surety shall promptly remedy the default, or shall promptly 1) Complete the Contract in accordance with its terms and conditions, or 2) Obtain a Bid or Bids for completing the contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, or if the City elects, upon determination by the City and the Surety jointly of the lowest responsible bidder, arrange for a Contract between such Bidder and the City, and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the costs of completion plus liquidated damages additional costs pursuant to Section 12.2 of the General Conditions of the Contract less the balance of the contract price, but not exceeding the amount set forth in the first paragraph hereof. The term "balance of the contract price", as used in this paragraph, shall mean the total amount payable by the City to the Contractor under the Contract and any amendments thereto, less the amount paid by the City to Contractor.

In addition, if the Contractor or a subcontractor shall fail to duly pay for any labor, materials, team hire, sustenance, provisions, provender, or other supplies used or consumed by such Contractor or subcontractor in performance of the Contract, or shall fail to duly pay any person who supplies rental machinery, tools, or equipment, all amounts due as the result of the use of such machinery, tools or equipment in the prosecution of the Work, then the Surety shall pay the same in the amount not exceeding the sum specified in the bond together with interest at a rate of eight percent per annum.

In addition to the other conditions hereof, this bond shall include all provisions set forth in Section 38-26-106, C.R.S.

THE UNDERSIGNED SURETY for value received hereby agrees that no extension of time, change in, addition to, or other modification of the terms of the Contract of Work to be performed thereunder or the specifications of the Contract Documents shall in any way affect its obligation on this bond and the Surety does hereby waive notice of any such extension of time, change, addition, or modifications.

SIGNED AND SEALED this day of _____ , 20____.

_____	_____
(Contractor)	**(Surety Company)**
By: _____	Address: _____
(President)	
_____	By: _____
(Attest)	(Attorney-in-fact)

Labor and Material Payment Bond

BOND NUMBER:

KNOW ALL MEN BY THESE PRESENCES: that

(Firm) _____
(Address) _____
(an Individual), (a Partnership), (a Corporation), hereinafter referred to as "the Principal", and

(Firm) _____
(Address) _____
hereinafter referred to as "the Surety", are held and firmly bound unto the
CITY OF LOUISVILLE, 749 MAIN STREET, LOUISVILLE, COLORADO a Municipal Corporation, hereinafter referred to as "the Owner", in the penal sum of
_____ Dollars
($_____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITIONS OF THIS OBLIGATION are such that whereas the Principal entered into a certain Agreement with the Owner, dated the _____ day of _____, 2025, a copy of which is hereto attached and made a part hereof for the performance of

---

NOW, THEREFORE, if the Principal shall make payment to all persons, firms, subcontractors, and corporations furnishing materials for or performing labor in the prosecution of the Work provided for in such Agreement, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, repairs on machinery, equipment and tools, consumed, rented or used in connection with the construction of such work, and all insurance premiums on said Work, and for all labor, performed in such Work whether by Subcontractor or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement or to the Work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this Bond; and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Agreement or to the Work or to the Specifications.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.
In addition to the other conditions hereof, this bond shall include all provisions set forth in Section 38-26-105, C.R.S.

IN WITNESS WHEREOF, this instrument is executed in (3) counterparts, each one of which shall be deemed an original, this _____ day of _____, 20____.

IN THE PRESENCE OF:

PRINCIPAL

_____

_____

PRINCIPAL:

BY: _____

_____
(Title)

(Corporate Seal)

Address:

_____

_____

_____

IN THE PRESENCE OF:

_____

_____

OTHER PARTNERS:

By: _____

By: _____

IN THE PRESENCE OF:

_____

_____

SURETY:

By: _____
(Attorney-in fact)

(Surety Seal)

Address:

_____

_____

NOTE: Date of Bond must <u>not</u> be prior to date of Agreement.
If Contractor is a Partnership, all partners must execute Bond.

IMPORTANT: Surety Company must be authorized to transact business in the state of Colorado and be acceptable to the Owner.

Notice of Award

DATED: _____

TO: _____
_____
_____

PROJECT: 2025 WATER MAIN REPLACEMENT PROJECT AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT
PROJECT NUMBER: 501498-660181
OWNER: CITY OF LOUISVILLE, COLORADO

Please be advised that on _____, the City of Louisville, Colorado City Council awarded the 2025 WATER MAIN REPLACEMENT PROJECT & SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT to your company in the amount of $_____ per your low unit price bid. In accordance with the Contract Documents, you are required to execute two copies of the Agreement and return both copies with the required bonds and certificates of insurance within **10 days** of the date of this Notice of Award by _____.

Failure to comply with these conditions within the time specified will entitle OWNER to consider your bid abandoned, to annul this Notice of Award and to declare your Bid Security forfeited.

CITY OF LOUISVILLE, COLORADO	ACCEPTANCE OF NOTICE
By: _____ Tyler Trojan, P.E.	By: _____
Title: Civil Engineer III _____	Title: _____

Notice to Proceed

DATED: _____

TO: _____
_____
_____

PROJECT: 2025 WATER MAIN REPLACEMENT PROJECT AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT
PROJECT NUMBER: 501498-660181
OWNER: CITY OF LOUISVILLE, COLORADO

You are hereby notified that the Contract Time under the above Contract will commence to run on _____. On that date, you are to begin performing the Work in accordance with the Contract Documents and you are to complete the Work within _____ **Contract Days** thereafter. The date of substantial completion of all Work is therefore _____**.**

CITY OF LOUISVILLE, COLORADO

By: _____
Tyler Trojan, P.E.

Title: Civil Engineer III

ACKNOWLEDGEMENT

Receipt of the above Notice to Proceed is hereby acknowledged.

CONTRACTOR: _____

By: _____

Title: _____

Date: _____

Change Order Form

CHANGE ORDER NO. _____

DATED: _____

PROJECT: 2025 WATER MAIN REPLACEMENT PROJECT AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT AGREEMENT DATE: _____

PROJECT NUMBER: 501498-660181 **OWNER: CITY OF LOUISVILLE, COLORADO**

The following changes are hereby made to the Contract Documents:
Description: _____

			Unit S	$ COST
	TOTAL			

Attachments: _____

ADJUSTMENT TO CONTRACT PRICE:

Original contract price $ _____
Set change previous Change Orders No. 0 to 0 $ _____
Contract price prior to this Change Order $ _____
Net adjustment resulting from this Change Order (+/-) $ _____
Current contract price including this Change Order $ _____

ADJUSTMENT TO CONTRACT TIME:

Original contract time (days or date) _____
Net change previous Change Orders No. __ to __ (days) _____
Contract time prior to this Change Order (days or date) _____
Net Adjustment Resulting from this Change Order (days) _____
Current contract time including this Change Order (days or date) _____

The Contractor's signature below indicates acceptance of full settlement for the work described, both direct and indirect costs. Any claims for additional costs associated with this Change Order will not be considered.

Recommended:	Approved:	Accepted:
_____	CITY OF LOUISVILLE, COLORADO _____	_____
ENGINEER	OWNER	CONTRACTOR
By: _____	By: _____	By: _____
Date: _____	Date: _____	Date: _____

Field Order Form

FIELD ORDER NO. _____

TO: _____

PROJECT: 2025 WATER MAIN REPLACEMENT PROJECT AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT
PROJECT NUMBER: 501498-660181
OWNER: CITY OF LOUISVILLE, COLORADO

DATE ISSUED: _____

You are hereby directed and instructed to execute promptly minor variations in the Work by this Field Order as follows:

Attachments:

This form shall be used to authorize minor variations in the Work from the requirements of the Contract Documents, which do not include an adjustment in the Contract Price or the Contract Times.

CITY OF LOUISVILLE		**ACCEPTED BY CONTRACTOR**	
BY:	_____	BY:	_____
TITLE:	_____	TITLE:	_____
DATE:	_____	DATE:	_____

Work Change Directive Instructions

A. GENERAL INFORMATION

This document was developed for use in situations involving changes in the Work that, if not processed expeditiously, might delay the Project. These changes are often initiated in the field and may affect the Contract Price or the Contract Times. This is not a Change Order, but only a directive to proceed with Work that may be included in a subsequent Change Order.

For supplemental instructions and minor changes not involving a possible change in the Contract Price or the contract Times a Field Order may be used.

B. COMPLETING THE WORK CHANGE DIRECTIVE FORM

Engineer initiates the form, including a description of the items involved and attachments.

Based on conversations between Engineer and Contractor, Engineer completes the following:

METHOD OF DETERMINING CHANGE, IF ANY, IN CONTRACT PRICE. Mark the method to be used in determining the final cost of Work involved and the estimated net effect on the Contract Price. If the change involves an increase in the Contract Price and the estimated amount is approached before the additional or changed Work is completed, another Work Change Directive must be issued to change the estimated price or Contractor may stop the changed Work when the estimated price is reached. If the Work Change Directive is not likely to change the Contract Price, the space for estimated increase (decrease) should be marked “Not Applicable”.

METHOD OF DETERMINING CHANGE, IF ANY, IN CONTRACT TIMES: Mark the method to be used in determining the change in Contract Times and the estimated increase or decrease in Contract Times. If the change involves an increase in the Contract Times and the estimated times are approached before the additional or changed Work is completed, another Work Change Directive must be issued to change the times or Contractor may stop the changed Work when the estimated times are reached. If the Work Change Directive is not likely to change the Contract Times, the space for estimated increase (decrease) should be marked “Not Applicable”.

Once authorized by Engineer a copy will be sent to Contractor. Price and Times may only be changed by Change Order signed by Owner and Contractor.

Once the Work covered by this directive is completed or final cost and times are determined, Contractor should submit documentation for inclusion in a Change Order.

THIS IS A DIRECTIVE TO PROCEED WITH A CHANGE THAT MAY AFFECT THE CONTRACT PRICE OR THE CONTRACT TIMES. A CHANGE ORDER, IF ANY, SHOULD BE CONSIDERED PROMPTLY.

Work Change Directive Form

WORK CHANGE DIRECTIVE NO. _____

PROJECT: 2025 WATER MAIN REPLACEMENT PROJECT AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT
PROJECT NUMBER: 501498-660181
OWNER: CITY OF LOUISVILLE, COLORADO

DATE ISSUED: _____ EFFECTIVE DATE: _____

You are directed to proceed promptly with the following change(s):

Description:

_____
_____
_____

Purpose of Work Change Directive:

_____
_____
_____

Attachments (List documents supporting change):

_____
_____
_____

If a claim is made that the above change(s) have affected Contract Price of Contract Times any claim for a Change Order based thereon will involve one or more of the following methods of determining the effect of the change(s).

Method of determining change in Contract Price:

____ Unit Prices
____ Lump Sum
____ Other _____
_____
_____

Method of determining change in Contract Times:

____ Contractor's Records
____ Engineer's Records
____ Other _____
_____
_____

Estimated increase (decrease) in Contract Price:
$_____
If the change involves an increase, the estimated amount is not to be exceeded without further authorization.

Estimated increase (decrease) in Contract Times
Substantial Completion: _____days;
Ready for final payment: _____days.
If the change involves an increase, the estimated times are not to be exceeded without further authorization.

RECOMMENDED:

_____
ENGINEER

BY: _____

ACCEPTED:

_____
CONTRACTOR

BY: _____

Pay Estimate #

Date

Project Name
Project Number

AREA DESCRIPTION

ESTIMATED UNITS/CONTRACT UNIT PRICE						WORK COMPLETED					
Bid Item No.	Bid Item	Unit	Quantity	Unit Price	Total Cost	Prior Units	Current Units	Total Units	Previous Cost	Current Cost	Cost to Date
0	0	0	0	$ -	$0.00	0		0.0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0.0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0.0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
0	0	0	0	$ -	$0.00	0		0	$ -	$ -	$ -
					$ -				$ -	$ -	$ -

Base Bid Contract Amount: $ -
Alternate 1. Contract Amount: $ -
Total MCR Amount: $ -
Total Change Order Amount: $ -
Project Total: $ -

Payment Summary					Project Cost Summary	
Payment #	Date (mo./yr.)	Payment Amount	Total Payment to Date	Project Completion		
1		$ -	$ -		Total Earned to Date:	$ -
2			$ -			
3			$ -		Contract Retainage:	$ -
4			$ -			
5			$ -		Previous Payments:	$ -
6			$ -			
7			$ -		**TOTAL DUE:**	$ -
8			$ -			

OWNER:
CITY OF LOUISVILLE
APPROVED FOR PAYMENT BY

NAME:

DATE:

TITLE:

CONTRACTOR:
CONTRACTOR NAME:
TOTAL AMOUNT ACCEPTED FOR COMPLETED WORK DESCRIBED ABOVE.

NAME:

DATE:

TITLE:

Contractor's Proposal Request Form

(Not a Change Order)

Date Submitted: _____ No. _____

TO: _____

PROJECT: 2025 WATER MAIN REPLACEMENT PROJECT AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT
PROJECT NUMBER: 501498-660181
OWNER: CITY OF LOUISVILLE, COLORADO

We hereby request the cost of the following proposed change in the Contract. A breakdown of the proposed cost is attached.

Description of the proposed change:

_____

_____

_____

_____

_____

_____

_____

All work shall be in accordance with the terms, stipulations, and conditions of the Contract Documents. If the Work herein requested is approved by Change Order, the time of completion will be (increased), (decreased), (unchanged) by _____ calendar days.

New Substantial Completion Date: _____, 2025.

This change will:

____ Increase the Contract by $ _____
____ Decrease the Contract by $ _____
____ No change in the Contract

SUBMITTED BY CONTRACTOR

BY: _____

DATE: _____

DATE: _____

CITY OF LOUISVILLE

___ Contractor's Proposal Request Accepted

___ Contractor's Proposal Request Not Accepted

BY: _____

DATE: _____

TITLE: _____

Contractor's Overtime Request Form

Date Submitted: _____, 2025

TO: _____

PROJECT: 2025 WATER MAIN REPLACEMENT PROJECT AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT
PROJECT NUMBER: 501498-660181
OWNER: CITY OF LOUISVILLE, COLORADO

We hereby request to perform work on overtime in accordance with the terms, stipulations, and conditions of the Contract Documents.

Requested date of overtime work: _____, 2025

Requested hours of overtime work: _____ (a. m./p. m.) to _____ (a. m./p. m.)

Description of proposed overtime work:

_____

_____

_____

No extra payment will be paid to the CONTRACTOR by the OWNER due to labor overtime or other increased costs of performing the Work on Friday afternoons, Saturdays, or at night. Should the CONTRACTOR desire to work on Friday afternoons or at night between the hours of 5:00 p.m. and 8:00 p.m., Monday-Thursday, or from 3:30 p.m. to 8:00 p.m. Friday, the CONTRACTOR shall submit a written request to the ENGINEER 24 hours prior. If approval is given by ENGINEER to CONTRACTOR for authorized overtime work, ENGINEER and ENGINEER's authorized personnel will charge overtime and other incidental administrative expenses necessary for performing inspections on Friday afternoons, or at night between the hours of 5:00 p.m. and 8:00 p.m., Monday-Thursday and 3:30 p.m. to 8:00 p.m. Friday, the CONTRACTOR will be responsible to pay for all such rates and charges, and shall not be granted a Contract Price increase for such charges.

Hours of overtime work shall only be allowed from 5:00 p.m. to 8:00 p.m. Monday thru Thursday, and from 3:30 p.m. to 8:00 p.m. Friday.

SUBMITTED BY CONTRACTOR

BY: _____

TITLE: _____

DATE: _____

CITY OF LOUISVILLE

_____ Contractors Proposal Request Accepted

_____ Contractors Proposal Request Not Accepted

BY: _____

DATE: _____

TITLE: _____

Certificate of Substantial Completion Form

TO: _____

PROJECT: 2025 WATER MAIN REPLACEMENT PROJECT AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT
PROJECT NUMBER: 501498-660181
OWNER: CITY OF LOUISVILLE, COLORADO

This Certificate of Substantial Completion applies to all Work under the Contract Documents or to the following specified parts thereof:

_____

_____

_____

The Work to which this Certificate applies has been inspected by authorized representatives of OWNER, and that Work is hereby declared to be substantially complete in accordance with the Contract Documents on

_____
DATE OF SUBSTANTIAL COMPLETION

A tentative list of items to be completed or corrected is attached hereto. This list may not be all-inclusive, and the failure to include an item in the list does not alter the responsibility of CONTRACTOR to complete all the Work in accordance with the Contract Documents. The items in the tentative list shall be completed or corrected by CONTRACTOR within **twenty (20)** days of the issuance of this Certificate of Substantial Completion.

CONTRACTOR shall maintain all contractual responsibilities until Final Acceptance.

The following documents are attached to and made a part of this Certificate of Substantial Completion:

Attachments:

_____

_____

_____

(For items to be attached see definition of Substantial Completion as supplemented and other specifically noted conditions precedent to achieving Substantial Completion as required by the Contract Documents.)

This certificate does not constitute an acceptance of Work or start of the guarantee period nor its release of CONTRACTOR's obligation to complete the Work in accordance with the Contract Documents. Issuance of Substantial Completion does not commence the guarantee period with this certificate.

CITY OF LOUISVILLE, COLORADO		**ACCEPTED BY CONTRACTOR**	
BY:	_____	BY:	_____
TITLE:	_____	TITLE:	_____
DATE:	_____	DATE:	_____

Final Inspection Report Form

DATE: _____, 2025

TO: _____

PROJECT: 2025 WATER MAIN REPLACEMENT PROJECT AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT
PROJECT NUMBER: 501498-660181
OWNER: CITY OF LOUISVILLE, COLORADO

The ENGINEER has performed final inspection of the Work, and accepts the Work subject to the Contractor's performance and completion of the following repairs, corrections and/or replacements:

_____

_____

_____

_____

_____

_____

_____

The ENGINEER does / does not (circle) hereby finally accept the work, and hereby certifies that the Contractor is eligible to receive final payment of the Work.

CITY OF LOUISVILLE, COLORADO	**CONTRACTOR**
BY: _____	BY: _____
TITLE: _____	TITLE: _____
DATE: _____	DATE: _____

Certificate of Final Completion Form

DATE: _____, 2025

TO: _____

PROJECT: 2025 WATER MAIN REPLACEMENT PROJECT AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT
PROJECT NUMBER: 501498-660181
OWNER: CITY OF LOUISVILLE, COLORADO

This Certificate of Final Completion applies to all Work under the Contract Documents, or to the following specified parts thereof:

(specify) _____

_____

_____

The Work to which this Certificate applies has been inspected by authorized representatives of the ENGINEER and the Work is hereby declared to be complete in accordance with the Contract Documents on

_____
DATE OF FINAL COMPLETION

In consideration therefor, the OWNER agrees to make Final Payment to Contractor of all amounts retained by OWNER, except such amounts that are subject to verified claims pursuant to Section 38-26-107, C.R.S, if any.

CITY OF LOUISVILLE, COLORADO	**CONTRACTOR**
BY: _____	BY: _____
TITLE: _____	TITLE: _____
DATE: _____	DATE: _____

Guarantee Period Inspection Report Form

DATE: _____, 2025

TO: _____

PROJECT: 2025 WATER MAIN REPLACEMENT PROJECT AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT
PROJECT NUMBER: 501498-660181
OWNER: CITY OF LOUISVILLE, COLORADO

The ENGINEER's authorized representative performed the guarantee period inspection on _____, 20 ___, which guarantee was originally due to expire on _____, 20___.

The ENGINEER hereby determines that the project has ___/ has not ___ satisfactorily met the conditions required to pass the guarantee period inspection.

The identified following items of Work are defective and must be repaired, corrected, and/or replaced:

_____

_____

_____

_____

_____

The guarantee period shall be extended for the items listed above until the following date:

_____, 2025

CITY OF LOUISVILLE, COLORADO	**CONTRACTOR**
BY: _____	BY: _____
TITLE: _____	TITLE: _____
DATE: _____	DATE: _____

Final Claim Release & Acceptance Form

PROJECT: 2025 WATER MAIN REPLACEMENT PROJECT AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT
PROJECT NUMBER: 501498-660181
OWNER: CITY OF LOUISVILLE, COLORADO

Application for Payment Number: _____
Application for Payment Amount: _____
Application for Payment Date: _____

For valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the undersigned hereby releases the City of Louisville, Colorado, and waives all rights of the undersigned to file a claim for material, equipment, tools, machinery, or services heretofore furnished for use in and for labor heretofore performed upon the construction, alteration, addition to or repair of the structure or improvements described in the Contract Documents as:

Project: 2025 WATER MAIN REPLACEMENT PROJECT AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT

Description of Property: VARIOUS LOCATIONS, CITY OF LOUISVILLE

Owner: CITY OF LOUISVILLE, COLORADO

We acknowledge that the foregoing is an adequate description of the real property and improvements to which this Claim Release pertains inasmuch as the foregoing description is the description given in the Contract Documents, which govern the performance of the Work for which consideration has been received.

In executing this release, we certify that all claims for labor or materials, or both, furnished or performed by the undersigned or on our behalf by our material suppliers or subcontractors have been paid or that satisfactory arrangements for payment have been made and we hereby waive and release any and all rights, claims and liens which the undersigned may now or hereafter have, claim or assert against the project, the Owner, or any funds in Owner's possession or control concerning the project, or against all land and any improvements and appurtenances to the land improved by the project.

In consideration of the final payment made or to be made to the undersigned and to induce said payment, we hereby further release and forever discharge the City of Louisville, its officers and employees, from any and all liability, actions, causes of action, claims, demands, damages, costs, loss of services, loss of properties, expenses, compensation and any and all consequential damages or injuries, which the undersigned may now or hereafter have, claim or assert on account of, relating to, or in any way arising out of the above described project.

In further consideration of the payment made or to be made to the undersigned and to induce said payment, we agree to defend and indemnify the City of Louisville, its officers and employees from any claim or claims on the part of our material suppliers, laborers, employees, servants, and agents, or subcontractors arising from our work on this project, and we further agree to fully satisfy any such claim brought against the City of Louisville and reimburse the City of Louisville for any and all costs, including reasonable attorney fees, which it may incur as a result of such claims.

FINAL CLAIM RELEASE & ACCEPTANCE CONTINUED

As contactor on the above described project, we further accept the pay quantities and final payment indicated on the final payment application as correct. The above noted final payment of $_____ results in total cumulative payment of $_____ for this project. By accepting this final payment, we accept that the final payment application is full and complete, that no other or further amounts are due to the undersigned, and we hereby waive and release all rights, claims, and liens arising from the completion of work under the Contract Documents.

The undersigned representative certifies to have full authority to execute this instrument and to bind the contractor to all statement and provisions herein contained.

PRIME CONTRACTOR

By: _____

President

Date: _____

Claim Release – Subcontractor/Supplier

PROJECT: 2025 WATER MAIN REPLACEMENT PROJECT AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT
PROJECT NUMBER: 501498-660181
OWNER: CITY OF LOUISVILLE, COLORADO

For valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the undersigned hereby releases the City of Louisville, Colorado, and waives all rights of the undersigned to file a claim for material, equipment, tools, machinery, or services heretofore furnished for use in and for labor heretofore performed upon the construction, alteration, addition to or repair of the structure or improvements described in the Contract Documents as:

Project: 2025 WATER MAIN REPLACEMENT PROJECT & SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT

Description of Property: VARIOUS LOCATIONS, CITY OF LOUISVILLE

Owner: CITY OF LOUISVILLE, COLORADO

We acknowledge that the foregoing is an adequate description of the real property and improvements to which this Claim Release pertains inasmuch as the foregoing description is the description given in the Contract Documents, which govern the performance of the Work for which consideration has been received.

In executing this release, we certify that all claims for labor or materials, or both, furnished or performed by the undersigned or on our behalf by our material suppliers or subcontractors have been paid or that satisfactory arrangements for payment have been made, and we hereby waive and release any and all rights, claims and liens which the undersigned may now or hereafter have, claim or assert against the project, the Owner, or any funds in Owner's possession or control concerning the project, or against all land and any improvements and appurtenances to the land improved by the project.

In consideration of the final payment made or to be made to the undersigned and to induce said payment, we hereby further release and forever discharge the City of Louisville, its officers and employees, from any and all liability, actions, causes of action, claims, demands, damages, costs, loss of services, loss of properties, expenses, compensation and any and all consequential damages or injuries, which the undersigned may now or hereafter have, claim or assert on account of, relating to, or in any way arising out of the above described project.

In further consideration of the payment made or to be made to the undersigned and to induce said payment, we agree to defend and indemnify the City of Louisville, its officers and employees from any claim or claims on the part of our material suppliers, laborers, employees, servants, and agents, or subcontractors arising from our work on this project, and we further agree to fully satisfy any such claim brought against the City of Louisville and reimburse the City of Louisville for any and all costs, including reasonable attorney fees, which it may incur as a result of such claims.

SUPPLIER OR SUBCONTRACTOR	**PRIME CONTRACTOR**
By: _____	By: _____
President	President
Date: _____	Date: _____

General Conditions

Article 1. Definitions

Wherever used in these General Conditions or in the other Contract Documents the following terms have the meanings indicated which are applicable to both the singular and plural thereof:

1.0 **Abnormal Weather** - Snowfall, rainfall, freezing temperatures, or wind conditions, in excess of those encountered in the project area of Boulder County during the past 10 years that necessitates cessation of Work and causes consequence to the project.

1.1 **Addenda** - Written or graphic instruments issued prior to the opening of Bids, which clarify, correct or change the Bidding Requirements or the Contract Documents.

1.2 **Agreement** - The written contract between OWNER and CONTRACTOR covering the Work to be performed; other Contract Documents are attached to the Agreement and made a part thereof as provided therein.

1.3 **Application for Payment** - The form accepted by ENGINEER which is to be used by CONTRACTOR in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

1.4 **Asbestos** - Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

1.5 **Bid** - The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

1.6 **Bidding Documents** - The advertisement or invitation to Bid, instructions to Bidders, the Bid form, and the proposed Contract Documents (including all Addenda issued prior to receipt of Bids).

1.7 **Bidding Requirements** - The advertisement or invitation to Bid, instructions to bidders, and the Bid form.

1.8 **Bonds** - Performance and Payment bonds and other instruments of security.

1.9 **Change Order** - A document recommended by ENGINEER, which is signed by CONTRACTOR and OWNER and authorizes an addition, deletion, or revision in the Work, or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

1.10 **Contract Day** - A Contract Day specifies that construction will be completed Monday through Sunday, excluding OWNER-observed holidays and Abnormal Weather days.

1.11 **Contract Documents** - The Agreement, Addenda (which pertain to the Contract Documents), CONTRACTOR's Bid (including documentation accompanying the Bid and any post Bid documentation submitted prior to the Notice Award) when attached as an exhibit to the Agreement, the Notice to Proceed, the Bonds, these General Conditions, the Supplementary Conditions, the Specifications and the Drawings as the same are more specifically identified in the Agreement, together with all Written Amendments, Change Orders, Work Change Directives, Field Orders, and ENGINEER's written interpretations and clarifications issued pursuant to paragraphs 3.5, 3.6.1, and 3.6.3 on or after the Effective Date of the Agreement. Shop Drawing submittals approved pursuant to paragraphs 6.26 and 6.27 and the reports and drawings referred to in paragraphs 4.2.1.1 and 4.2.2.2 are not Contract Documents.

1.12 **Contract Price** - The monies payable by OWNER to CONTRACTOR for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of paragraph 11.9.1 in the case of Unit Price Work).

1.13 **Contract Times** - The numbers of days or the dates stated in the Agreement: (i) to achieve Substantial Completion, and (ii) to complete the Work so that it is ready for final payment as evidenced by ENGINEER's written recommendation of final payment in accordance with paragraph 14.13.

1.14 **CONTRACTOR** - The person, firm, or corporation with whom OWNER has entered into the Agreement.

1.15 **Defective** - An adjective which when modifying the work refers to Work that is unsatisfactory, faulty or deficient, in that it does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents, or has been damaged prior to ENGINEER's recommendation of final payment (unless responsibility for the protection thereof has been assumed by OWNER at Substantial Completion in accordance with paragraph 14.8 or 14.10).

1.16 **Drawings** - The drawings that show the scope, extent, and character of the Work to be furnished and performed by CONTRACTOR and which have been prepared or approved by ENGINEER and are referred to in the Contract Documents. Shop drawings are not Drawings as so defined.

1.17 **Effective Date of the Agreement** - The date indicated in the Agreement on which it becomes effective, but if no such date is indicated it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

1.18 **ENGINEER** - The word "ENGINEER" refers to the City of Louisville, Director of Public Works or his authorized representative, designated by the OWNER as its Engineering representative.

1.19 **OWNER's Consultant** - A person, firm, or corporation having a contract with OWNER to furnish services as OWNER's independent professional associate or consultant with respect to the Project and who is identified as such in the Supplementary Conditions.

1.20 **Field Order** - A written order issued by ENGINEER which orders minor changes in the Work in accordance with paragraph 9.5 but which does not involve a change in the Contract Price or the Contract Times.

1.21 **General Requirements** - Sections of Division 1 of the Specifications.

1.22 **Hazardous Waste** - The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

1.23 **Laws and Regulation: Laws or Regulations** - Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

1.24 **Liens** - Liens, charges, security interests, or encumbrances upon real property or personal property.

1.25 **Milestone** - A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

1.26 **Notice of Award** - The written notice by OWNER to the apparent successful bidder stating that upon compliance by the apparent successful bidder with the conditions precedent enumerated therein, within the time specified, OWNER will sign and deliver the Agreement.

1.27 **Notice to Proceed** - A written notice given by OWNER to CONTRACTOR (with a copy to ENGINEER) fixing the date on which the Contract Times will commence to run and on which CONTRACTOR shall start to perform CONTRACTOR's obligations under the Contract Documents.

1.28 **OWNER** - The public body or authority, corporation, association, firm, or person with whom CONTRACTOR has entered into the Agreement and for whom the Work is to be provided.

1.29 **Partial Utilization** - Use by OWNER of a substantially completed part of the Work for the purpose for which it is intended (or a related purpose) prior to Substantial Completion of all the Work.

1.30 **PCBs** - Polychlorinated biphenyls.

1.31 **Petroleum** - Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Wastes and crude oils.

1.32 **Plans** - The term plans as used in these Contract Documents shall have the same meaning as Drawings.

1.33 **Product** - Includes materials, equipment, and systems.

1.34 **Project** - The total construction of which the Work to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.

1.35 **Provide** - Furnish and install specified materials and equipment unless the context requires otherwise.

1.36 **Radioactive Material** - Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

1.37 **Resident Project Representative** - The authorized representative of ENGINEER who may be assigned to the site or any part thereof.

1.38 **Samples** - Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

1.39 **Shop Drawings** - All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for CONTRACTOR and submitted by CONTRACTOR to illustrate some portion of the Work.

1.40 **Specifications** - Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards, and workmanship as applied to the Work and certain administrative details applicable thereto.

1.41 **Subcontractor** - An individual, firm, or corporation having a contract with CONTRACTOR or with any other Subcontractor for the performance of a part of the Work at the site.

1.42 **Substantial Completion** - The Work (or a specified part thereof) has progressed to the point where, in the opinion of ENGINEER as evidenced by ENGINEER's definitive certificate of Substantial Completion, it is sufficiently complete, in accordance with the Contract Documents, so that the Work (or specified part) can be utilized for the purposes for which it is intended; or if no such certificate is issued, when the Work is complete and ready for final payment as evidenced by ENGINEER's written recommendation of final payment in accordance with paragraph 14.13. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

1.43 **Supplementary Conditions** - The part of the Contract Documents which amends or supplements these General Conditions.

1.44 **Supplier** - A manufacturer, fabricator, supplier, distributor, material man, or vendor having a direct contract with CONTRACTOR or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by CONTRACTOR or any Subcontractor.

1.45 **Underground Facilities** - All pipeline, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems, or water.

1.46 **Unit Price Work** - Work to be paid for on the basis of unit prices.

1.47 **Work** - The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work includes and is the result of performing or furnishing labor and furnishing and incorporating materials and equipment into the construction, and performing or furnishing services and furnishing documents, all as required by

the Contract Documents.

1.48 **Work Change Directive** - A written directive to CONTRACTOR, issued on or after the Effective Date of the Agreement and signed by OWNER and recommended by ENGINEER, ordering an addition, deletion or revision in the Work, or responding to differing or unforeseen physical conditions under which the Work is to be performed as provided in paragraph 4.2 or 4.3 or emergencies under paragraph 6.23. A Work Change Directive will not change the Contract Price or the Contract Times, but is evidence that the parties expect that the change directed or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times as provided in paragraph 10.2.

1.49 **Written Amendment** - A written amendment of the Contract Documents, signed by OWNER and CONTRACTOR on or after the Effective Date of the Agreement and normally dealing with the non-engineering or non-technical rather than strictly construction-related aspects of the Contract Documents.

Article 2. Preliminary Matters

Delivery of Bonds

2.1 When CONTRACTOR delivers the executed Agreement to OWNER, CONTRACTOR shall also deliver to OWNER such Bonds and Certificates of Insurance as CONTRACTOR may be required to furnish in accordance with Article 5.

Copies of Documents

2.2 OWNER shall furnish to CONTRACTOR up to four copies of the contract documents for the execution of the Work. Additional copies will be furnished, upon request, at the cost of reproduction.

Commencement of Contract Times; Notice to Proceed

2.3 The Contract Times will commence to run on the day indicated in the Notice to Proceed. Timing and completion of the **2025 WATER MAIN REPLACEMENT PROJECT AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT** is based on 102 contract days, assuming a notice to proceed issued on March 29, 2025. The OWNER has set the proposed project schedule and plans to implement the following schedule for this project. The CONTRACTOR shall be required to start construction on or before the start date listed below:

Proposed Project Schedule

Advertisement…… .....April 23 & April 30, 2025
Pre-Bid Conference ..... May 6, 2025
Deadline for Questions…….....May 8, 2025
Prequalification Deadline…….... May 9, 2025
Bid Opening..... May 13, 2025

Contract Award by City Council ..... June 3, 2025
Notice of Award Issued ..... June 4, 2025
Pre-Construction Conference ..... June 10, 2025
Bonds & Insurance Certificates due ..... June 16, 2025
Contract Agreement Executed ..... June 17, 2025
Notice to Proceed Issued ..... June 18, 2025
Contract Time Commences to run ..... June 23, 2025
Substantial Completion ..... October 3, 2025

Starting the Work

2.4 CONTRACTOR shall start to perform the Work on the date when the Contract Times commence to run, but no Work shall be done at the site prior to the date on which the Contract Times commence to run.

Before Starting Construction

2.5 Before undertaking each part of the Work, CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. CONTRACTOR shall promptly report in writing to ENGINEER any conflict, error, ambiguity or discrepancy which CONTRACTOR may discover and shall obtain a written interpretation or clarification from ENGINEER before proceeding with any Work affected thereby; however, CONTRACTOR shall not be liable to OWNER or ENGINEER for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents, unless CONTRACTOR knew or reasonably should have known thereof.

2.6 Within ten days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), CONTRACTOR shall submit to ENGINEER for review:

2.6.1 A preliminary progress schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestone specified in the Contract Documents;

2.6.2 A preliminary schedule of Shop Drawing and Sample submittals which will list each required submittal and the times for submitting, reviewing and processing such submittal.

Preconstruction Conference

2.7 Before any Work at the site is started, a conference attended by CONTRACTOR, ENGINEER, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in paragraph 2.6, procedures for handling Shop Drawings and other submittal(s), processing Applications for Payment, and maintaining required records.

Initially Acceptable Schedules

2.8 Unless otherwise provided in the Contract Documents, at least ten days before submission of the first Application for Payment a conference attended by CONTRACTOR, ENGINEER, and others as appropriate will be held to review the Application for Payment for acceptability to ENGINEER. No progress payment shall be made to CONTRACTOR until the schedules are submitted to and acceptable to ENGINEER as provided below. The progress schedule will be acceptable to ENGINEER as providing an orderly progression of the Work to completion within any specified Milestones and the Contract Times, but such acceptance will neither impose on ENGINEER responsibility for the sequencing, scheduling, or progress of the Work nor interfere with or relieve CONTRACTOR from CONTRACTOR's full responsibility therefor. CONTRACTOR's schedule of Shop Drawing and Sample submissions will be acceptable to ENGINEER as providing a workable arrangement for reviewing and processing the required submittals.

Article 3. Contract Documents: Intent, Amending, Reuse

Intent

3.1 The Contract Documents comprise the entire agreement OWNER and CONTRACTOR concerning the Work. The Contract Documents are complementary; what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the law of the place of the Project.

3.2 It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any Work, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be furnished and performed whether or not specifically called for. When words or phrases, which have a well-known technical or construction industry or trade meaning, are used to describe Work, materials or equipment, such words or phrases shall be interpreted in accordance with that meaning. Clarifications and interpretations of the Contract Documents shall be issued by ENGINEER as provided in paragraph 9.4.

Reference to Standards & Specifications of Technical Societies; Reporting and Resolving Discrepancies

3.3

3.3.1. Reference to standards, specifications, manuals, or codes of any technical society, organization or association, or to the Laws or Regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

3.3.2 If, during the performance of the Work, CONTRACTOR discovers any conflict, error ambiguity or discrepancy within the Contract Documents or between the Contract Documents and any provision of any such Law or Regulation applicable to the performance of the Work or of any such standard, specification, manual or code or of any instruction of any Supplier referred to in paragraph 6.5,

CONTRACTOR shall report it to ENGINEER in writing at once, and, CONTRACTOR shall not proceed with the Work affected thereby (except in an emergency as authorized by paragraph 6.23) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in paragraph 3.5 or 3.6; provided, however, that CONTRACTOR shall not be liable to OWNER or ENGINEER for failure to report any such conflict, error, ambiguity or discrepancy unless CONTRACTOR knew or reasonably should have known thereof. Upon notification to the ENGINEER, the CONTRACTOR shall proceed with other parts of the Work not affected by the conflict, error, ambiguity, or discrepancy.

3.3.3 Except as otherwise specifically stated in the Contract Documents or as may be provided by amendment or supplement thereto issued by one of the methods indicated in paragraph 3.5 or 3.6, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity or discrepancy between the provisions of the Contract Documents and:

3.3.3.1 The provisions of any such standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or

3.3.3.2 The provisions of any such Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

No provision of any such standard, specification, manual, code, or instruction shall be effective to change the duties and responsibilities of OWNER, CONTRACTOR, or ENGINEER, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents, nor shall it be effective to assign to OWNER, ENGINEER, or any of ENGINEER's Consultants, agents or employees any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of paragraph 9.13 or any other provision of the Contract Documents.

3.4 Whenever in the Contract Documents the terms "as ordered", "as directed", "as required", "as allowed", "as approved", or terms of like effect or import are used, or the adjectives "reasonable", "suitable", "acceptable", "proper", or "satisfactory" or adjectives of like effect or import are used to describe a requirement, direction, review, or judgment of ENGINEER as to the Work, it is intended that such requirement, direction, review, or judgment will be solely to evaluate, in general, the completed Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be effective to assign to ENGINEER any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 9.13 or any other provision of the Contract Documents.

Amending and Supplementing Contract Documents

3.5 The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways:

3.5.1 a formal Written Amendment,

3.5.2 a Change Order (pursuant to paragraph 10.4), or

3.5.3 a Work Change Directive (pursuant to paragraph 10.1).

3.6 In addition, the requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, in one or more of the following ways:

3.6.1 a Field Order (pursuant to paragraph 9.5),

3.6.2 ENGINEER's approval of a Shop Drawing or Sample (pursuant to paragraphs 6.26 and 6.27), or

3.6.3 ENGINEER's written interpretation or clarification (pursuant to paragraph 9.4).

Reuse of Documents

3.7 CONTRACTOR, and any Subcontractor or Supplier or other person or organization performing or furnishing any of the Work under a direct or indirect contract with OWNER (i) shall not have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or Engineer's Consultant, and (ii) shall not reuse any of such Drawings, Specifications, other documents or copies on extensions of the Project or any other project without written consent of OWNER and ENGINEER and specific written verification or adaption by ENGINEER.

Article 4. Availability of Lands; Subsurface and Physical Conditions, Reference Points

Availability of Lands

4.1 OWNER shall furnish, as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and such other lands which are designated for the use of CONTRACTOR. OWNER shall identify any encumbrances or restrictions not of general application but specifically related to use of lands so furnished with which CONTRACTOR will have to comply in performing the Work. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by OWNER, unless otherwise provided in the Contract Documents. If CONTRACTOR and OWNER are unable to agree on entitlement to or the amount or extent of any adjustments in the Contract Price or the Contract Times as a result of any delay in OWNER's furnishing these lands, rights-of-way or easements, CONTRACTOR may make a claim therefor as provided in Articles 11 and 12. CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

Subsurface and Physical Conditions

4.2 BIDDERs are responsible for examining and determining for themselves the location and nature of the proposed Work, the amount and character of the labor and materials required therefor, and the difficulties, which may be encountered. BIDDERs may not rely on oral or written representations made by the OWNER, including reports and drawings identified pursuant to 4.2.1 and subparagraphs thereof, unless the OWNER has guaranteed in writing that such representation is factually accurate, and by submitting a Bid, each BIDDER waives all liability for any error in any representation made by the OWNER to the BIDDER. BIDDERs shall inspect the site and its surroundings and conduct such supplementary examinations, investigations, and tests concerning conditions at or contiguous to the site (including surface, and subsurface) which may affect cost, progress, performance, or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences, or procedures of construction to be employed by BIDDER and safety precautions and programs incident thereto for performing the Work in accordance with the Contract Documents. By failing to make such an inspection, the BIDDER waives all rights to claim extra payment or time extensions due to unexpected conditions, which could have been determined had the site been reasonably inspected. If concealed or unknown conditions differ materially from those ordinarily encountered and generally recognized as inherent in the Work, or differ materially from the conditions indicated in the Contract Documents, then an equitable adjustment in the Contract Price or in the Contract Time will be allowed by change order as provided in Article 11 or Article 12 respectively. By submitting a Bid, the BIDDER represents that the BIDDER's observations at the site are not inconsistent with the requirements of the proposed Contract Documents, unless otherwise noted by the BIDDER.

Reports and Drawings

4.2.1 Reference is made to the Supplementary Conditions for identification of:

The following reports of explorations and tests of subsurface conditions at the site of the Work:

Subsurface Conditions

4.2.1.1 Those reports of explorations and tests of subsurface conditions at or contiguous to the site that have been utilized by ENGINEER in preparing the Contract Documents; and

Report dated **N/A**, prepared by **N/A** entitled: **N/A**. The technical data contained in such report upon which CONTRACTOR may rely is **N/A**.

Copies of these reports that are not included with Bidding Documents may be examined at ENGINEER's office during regular business hours. Please call for appointment. Copies of such reports are not available for distribution. These reports and drawings are not part of the Contract Documents, but the technical data contained therein upon which CONTRACTOR is entitled to rely as provided in GC-4.2 and as identified and established above are incorporated therein by reference.

Physical Conditions

4.2.1.2 Those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except Underground Facilities) that have been utilized by ENGINEER in preparing the Contract Documents.

Limited Reliance by CONTRACTOR authorized; Technical Data

4.2.2 Reports and drawings identified pursuant to paragraph 4.2 are not Contract Documents. Unless otherwise set forth in the Contract Documents or OWNER has otherwise guaranteed in writing that such representation is factually accurate, CONTRACTOR may not rely upon or make any claim against the OWNER, ENGINEER, or ENGINEER's consultants with respect to the accuracy of any "technical data" contained in reports and drawings and CONTRACTOR may not rely upon or make any claim against the OWNER, ENGINEER, or ENGINEER's consultants with respect to:

4.2.2.1 The completeness of such reports and drawings for CONTRACTOR's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by CONTRACTOR and safety precautions and programs incident thereto, or

4.2.2.2 other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings, or

4.2.2.3 any CONTRACTOR interpretation of or conclusion drawn from any "technical data" or any such data, interpretations, opinions, or information.

4.2.3 CONTRACTOR shall not be entitled to any adjustment in the Contract Price or Times if:

4.2.3.1 CONTRACTOR knew of the existence of such conditions at the time CONTRACTOR made a final commitment to OWNER in respect of Contract Price and Contract Times by the submission of a bid or becoming bound under a negotiated contract; or

4.2.3.2 the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for CONTRACTOR prior to CONTRACTORs making such final commitment.

If OWNER and CONTRACTOR are unable to agree on entitlement to or as to the amount or length of any such equitable adjustment in the Contract Price or Contract Times, a claim may be made therefor as provided in Articles 11 and 12. However, OWNER, ENGINEER, and ENGINEER's Consultants shall not be

liable to CONTRACTOR for any claims, costs, losses, or damages sustained by CONTRACTOR on or in connection with any other project or anticipated project.

Physical Conditions - Underground Facilities

4.3

Shown or Indicated

4.3.1 The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site is based on information and data furnished to OWNER or ENGINEER by the owners of such Underground Facilities or by others.

4.3.1.1 OWNER and ENGINEER shall not be responsible for the accuracy or completeness of any such information or data; and

4.3.1.2 The cost of all of the following will be included in the Contract Price and CONTRACTOR shall have full responsibility for: (i) reviewing and checking all such information and data, (ii) locating all Underground Facilities shown or indicated in the Contract Documents, (iii) coordination of the Work with the owners of such Underground Facilities during construction, and (iv) the safety and protection of all such Underground Facilities as provided in paragraph 6.20 and repairing any damage thereto resulting from the Work.

Not Shown or Indicated

4.3.2 If an Underground Facility is uncovered or revealed at or contiguous to the site which was not shown or indicated in the Contract Documents, CONTRACTOR shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by paragraph 6.23), identify the owner of such Underground Facility and give written notice to that owner and to OWNER and ENGINEER. CONTRACTOR shall be responsible for the safety and protection of such Underground Facility as provided in paragraph 6.20. CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, to the extent that they are attributable to the existence of any Underground Facility that was not shown or indicated in the Contract Documents and that CONTRACTOR did not know of and could not reasonably have been expected to be aware of or to have anticipated. If OWNER and CONTRACTOR are unable to agree on entitlement to or the amount or length of any such adjustment in Contract Price or Contract Times, CONTRACTOR may make a claim therefor as provided in Articles 11 and 12. However, OWNER, ENGINEER, and ENGINEER's Consultants shall not be liable to CONTRACTOR for any claims, costs, losses, or damages incurred or sustained by CONTRACTOR on or in connection with any other project or anticipated project.

Reference Points

4.4 OWNER shall provide engineering surveys to establish baseline and benchmarks for construction, which in ENGINEER's judgment are necessary to enable CONTRACTOR to proceed with the Work. CONTRACTOR shall be responsible for laying out the Work, shall protect and preserve the established reference points, and shall make no changes or relocations without the prior written approval of OWNER. CONTRACTOR shall report to ENGINEER whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations and shall be responsible for the accurate replacement or relocation of such reference points by professionally qualified personnel.

OWNER shall provide survey reference points, construction stakes, lines and grades required for the completion of the work specified in the specifications, on the plans, or in the Special Conditions. Additional staking requested by the Contractor will be at the CONTRACTOR's expense. When the CONTRACTOR requires staking, he shall notify the OWNER of his requirements in writing a reasonable length of time in advance of starting work that require construction staking. Under no circumstances shall a notice of less than 2 contract days be considered a reasonable length of time. Failure of the CONTRACTOR to provide 2 contract days written notice to the OWNER of his staking requests shall relieve the OWNER from any responsibility for additional costs or delays caused by such failure. The CONTRACTOR shall carefully preserve stakes set by the OWNER. When stakes are destroyed or damaged, the CONTRACTOR will be charged for the cost of necessary replacement or restoration of stakes. The charge for replacement and restoration of stakes will be deducted from any moneys due or to become due the CONTRACTOR.

Asbestos, PCBs Petroleum, Hazardous Waste, or Radioactive Material

4.5

4.5.1 OWNER shall be responsible for any Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material uncovered or revealed at the site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work and which may present a substantial danger to persons or property exposed thereto in connection with the Work at the site. OWNER shall not be responsible for any such materials brought to the site by CONTRACTOR, Subcontractor, Suppliers, or anyone else for whom CONTRACTOR is responsible.

4.5.2 CONTRACTOR shall immediately: (i) stop all Work in connection with such hazardous condition and in any area affected thereby (except in an emergency as required by paragraph 6.23), and (ii) notify OWNER and ENGINEER (and thereafter confirm such notice in writing). OWNER shall promptly consult with ENGINEER concerning the necessity for OWNER to retain a qualified expert to evaluate such hazardous condition or take corrective action, if any. CONTRACTOR shall not be required to resume Work in connection with such hazardous condition or in any such affected area until after OWNER has obtained any required permits related thereto and delivered to CONTRACTOR special written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (ii) specifying any special conditions under which such Work may be resumed safely. If OWNER and CONTRACTOR cannot agree as to entitlement to or the amount or extent of an adjustment, if any, in Contract Price or Contract Times as a result of such Work stoppage or such

special conditions under which Work is agreed by CONTRACTOR to be resumed, either party may make a claim therefor as provided Articles 11 and 12.

4.5.3 If after receipt of such special written notice CONTRACTOR does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then OWNER may order such portion of the Work that is in connection with such hazardous condition or in such affected area to be deleted from the Work. If OWNER and CONTRACTOR cannot agree as to entitlement to or the amount or extent of an adjustment, if any, in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a claim therefor as provided in Articles 11 and 12. OWNER may have such deleted portion of the Work performed by OWNER's own forces or others in accordance with Article 7.

4.5.4 The provisions of paragraphs 4.2 and 4.3 are not intended to apply to Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material uncovered or revealed at the site.

Article 5. Bonds and Insurance

Performance, Payment, and Other Bonds

5.1 CONTRACTOR shall furnish Performance and Payment Bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all CONTRACTOR's obligations under the Contract Documents. These Bonds shall remain in effect at least until one year after the date when final payment becomes due, except as provided otherwise by Laws or Regulations or by the Contract Documents. CONTRACTOR shall also furnish such other Bonds as are required by the Supplementary Conditions. All Bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff, Bureau of Government Financial Operations, U.S. Treasury Department. All Bonds signed by an agent must be accompanied by a certified copy of such agent's authority to act. The CONTRACTOR shall furnish the performance and payment bond in the form provided in the Contract Documents or approved by the OWNER; the earlier of ten (10) days after the OWNER has issued the notice of award or delivery of the executed Agreement. The OWNER reserves the right to exclude any Surety Company on any ground it deems appropriate. The cost of the bonds shall be included in the bid.

5.2 If the surety on any Bond furnished by CONTRACTOR is declared a bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of paragraph 5.1, CONTRACTOR shall within ten days thereafter substitute another Bond and surety, both of which must be acceptable to OWNER.

Licensed Sureties and Insurers; Certificates of Insurance

5.3

5.3.1 All Bonds and insurance required by the Contract Documents to be purchased and maintained by CONTRACTOR shall be obtained from surety or insurance companies acceptable to OWNER that are duly licensed to transact business in the State of Colorado and to issue Bonds or insurance policies for the limits and coverage so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.3.2 CONTRACTOR shall deliver to OWNER, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by OWNER or any other additional insured) which CONTRACTOR is required to purchase and maintain accordance with paragraph 5.4. The certificates shall be reviewed and approved by OWNER prior to execution of the Agreement. The OWNER shall have the right to request and obtain copies of any insurance policies required under paragraph 5.4 of the General Conditions. The completed certificates of insurance shall be sent to: City of Louisville, 749 Main Street, Louisville, Colorado 80027, ATTN: City Engineer.

CONTRACTOR's Liability Insurance

5.4 (a) The CONTRACTOR agrees to procure and maintain, at its own cost, a policy or policies of insurance sufficient to insure against all liability, claims, demands, and other obligations assumed by the CONTRACTOR pursuant to paragraphs 6.12, 6.16, 6.31, 6.32 and 6.33, and 6.5 in addition to any other insurance requirements imposed by the Contract Documents or by law. The CONTRACTOR shall not be relieved of any liability, claims, demands, or other obligations assumed pursuant to paragraphs 6.12, 6.16, 6.31, and 6.33 by reason of its failure to procure or maintain insurance, or by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types.

(b) CONTRACTOR shall procure and maintain, and shall cause any Subcontractor or Supplier of the CONTRACTOR to procure and maintain or insure the activity of his Subcontractors and Suppliers in his own policy, the minimum insurance coverages listed below. Such coverages shall be procured and maintained with forms and insurers acceptable to the OWNER. All coverages shall be continuously maintained from the date of commencement of the Work to cover all liability, claims, demands, and other obligations assumed by the CONTRACTOR pursuant to paragraphs 6.31 and 6.33. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage.

(1) Workers' Compensation insurance to cover obligations imposed by the Workers' Compensation Act of Colorado and any other applicable laws for any employee engaged in the performance of Work under this contract, and Employers' Liability insurance with minimum limits of FIVE HUNDRED THOUSAND DOLLARS ($500,000) each accident, FIVE HUNDRED THOUSAND DOLLARS ($500,000) disease - policy limit, and FIVE HUNDRED THOUSAND DOLLARS ($500,000) disease - each employee. Evidence of qualified self-insured status may be substituted for the Workers' Compensation requirements of this paragraph.

(2) Comprehensive General Liability insurance with minimum combined single limits of ONE MILLION DOLLARS ($1,000,000) each occurrence and TWO MILLION DOLLARS ($2,000,000) aggregate. The policy shall be applicable to all premises and operations. The policy shall include coverage for bodily injury, broad form property damage (including completed operations), personal injury (including coverage for contractual and employee acts), blanket contractual, independent contractors, products, and completed operations. The policy shall include coverage for explosion, collapse, and underground hazards. The policy shall contain a severability of interests' provision.

(3) Comprehensive Automobile Liability insurance with minimum combined single limits for bodily injury and property damage of not less than ONE MILLION DOLLARS ($1,000,000) each occurrence and ONE MILLION DOLLARS ($1,000,000) aggregate with respect to each of CONTRACTOR's owned, hired or non-owned vehicles assigned to or used in performance of the services. The policy shall contain a severability of interests' provision.

(4) The CONTRACTOR shall provide and maintain builder's risk insurance upon the entire project equal to one hundred percent (100%) of the insurable value thereof. Such insurance shall cover any and all physical damage including, without limitation, damage caused by fire, vandalism, malicious mischief, blasting, excessive surface runoff or storm water, high winds, and other occurrences covered in a standard extended coverage endorsement. The policy shall remain in effect until the Work is accepted as substantially complete.

(c) The policy required by paragraph (2) above, by paragraph (3) and by (4) above shall be endorsed to include the OWNER, the ENGINEER and its consultants, and each of their officers, agents, and employees as additional insureds. Every policy required above shall be primary insurance, and any insurance carried by the OWNER, its officers, or its employees, shall be excess and not contributory insurance to that provided by CONTRACTOR. No additional insured endorsement to the policy required by paragraph (1) above shall contain any exclusion for bodily injury or property damage arising from completed operations. The CONTRACTOR shall be solely responsible for any deductible losses under any policy required above.

(d) The certificate of insurance provided to OWNER shall be completed by the CONTRACTOR's insurance agent as evidence that policies providing the required coverages, conditions, and minimum limits are in full force and effect, and shall be reviewed and approved by the OWNER prior to commencement of the contract.

(e) Failure on the part of the CONTRACTOR to procure or maintain policies providing the required coverages, conditions, and minimum limits shall constitute a material breach of contract upon which the OWNER may immediately terminate this contract, or at its discretion may procure or renew any such policy or any extended reporting period thereto and may pay any and all premiums in connection therewith, and all monies so paid by the OWNER shall be repaid by CONTRACTOR to the OWNER upon demand, or the OWNER may offset the cost of the premiums against any monies due to CONTRACTOR from the Owner.

(f) The OWNER reserves the right to request and receive a certified copy of any policy and any endorsement thereto.

(g) The parties hereto understand and agree that the OWNER, the City of Louisville, is relying on, and does not waive or intend to waive by any provision of this contract, the monetary limitations (presently $150,000 per person and $600,000 per occurrence) or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, § 24-10-101 et seq., 10 C.R.S., as from time to time amended, or otherwise available to the City of Louisville, its officers, or its employees.

(h)

OWNER's Liability Insurance

5.5 In addition to the insurance required to be provided by CONTRACTOR under paragraph 5.4, OWNER, at OWNER's option, may purchase and maintain at OWNER's expense OWNER's own liability insurance as will protect OWNER against claims which may arise from operations under the Contract Documents.

Property Insurance

5.6 The OWNER shall be responsible for maintaining its own property insurance and, at its option, may maintain such insurance as will protect it against claims which may arise from operations under the Contract Documents.

Article 6. CONTRACTOR's Responsibilities

Supervision and Superintendence

6.1 CONTRACTOR shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction, but CONTRACTOR shall not be responsible for the negligence of others in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents. CONTRACTOR shall be responsible to see that the completed Work complies accurately with the Contract Documents.

6.2 CONTRACTOR shall keep on the Work at all times during its progress a competent resident superintendent, who shall not be replaced without written notice to OWNER and ENGINEER except under extraordinary circumstances. The superintendent will be CONTRACTOR's representative at the site and shall have authority to act on behalf of CONTRACTOR. All communications to the superintendent shall be as binding as if given to CONTRACTOR.

Labor, Materials, and Equipment

6.3 CONTRACTOR shall provide competent, suitably qualified personnel to survey, layout, and construct the Work as required by the Contract Documents. CONTRACTOR shall at all times maintain good discipline and order at the site. Except as otherwise required for the safety or

protection of persons or the Work or property at the site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Work at the site shall be performed during regular working hours and CONTRACTOR will not permit overtime work or the performance of Work on Saturday, Sunday or any legal holiday without OWNER's written consent given after prior written notice to ENGINEER. No extra payment will be paid to the CONTRACTOR by the OWNER due to labor overtime or other increased costs of performing the Work on Saturdays, Sundays, OWNER-observed holidays, or at night. Should the CONTRACTOR desire to work on Saturdays, Sundays, OWNER-observed holidays, or at night between the hours of 5:00 p.m. and 7:00 a.m. on **Contract Days** the CONTRACTOR shall submit a written request to the ENGINEER 24 hours prior. If approval is given by ENGINEER to CONTRACTOR for authorized overtime work, ENGINEER's and ENGINEER's authorized personnel will charge overtime and other incidental administrative expenses necessary for performing inspections on Saturdays, Sundays, OWNER-observed holidays, or at night between the hours of 5:00 p.m. and 7:00 a.m., the CONTRACTOR will be responsible to pay for all such rates and charges, and shall not be granted a Contract Price increase for such charges. Overtime and other incidental administrative expenses for Engineer and Engineer's authorized personnel are as follows:

DESCRIPTION	HOURLY RATE
Engineer	$60.00
Construction Inspector	$45.00
Operations Supervisor	$45.00
Maintenance Worker	$30.00
Clerical	$25.00
Vehicle	$15.00

6.4 Unless otherwise specified in the General Requirements, CONTRACTOR shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up, and completion of the Work.

6.5 All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. All warranties and guarantees specifically called for by the Specifications shall expressly run to the benefit of OWNER. If required by ENGINEER, CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise provided in the Contract Documents.

Progress Schedule

6.6 CONTRACTOR shall adhere to the progress schedule established in accordance with paragraph 2.8 as it may be adjusted from time to time as provided below:

6.6.1 CONTRACTOR shall submit to ENGINEER for acceptance (to the extent indicated in paragraph 2.8) proposed adjustments in the progress schedule that will not change the Contract Times (or Milestones). Such adjustments will conform

generally to the progress schedule then in effect and additionally will comply with any provisions of the General Requirements applicable thereto.

6.6.2 Proposed adjustments in the progress schedule that will change the Contract Times (or Milestones) shall be submitted in accordance with the requirements of paragraph 12.1. Such adjustments may only be made by a Change Order or Written Amendment in accordance with Article 12.

Substitutes and "Or-Equal" Items

6.7

6.7.1 Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment of other Suppliers may be accepted by ENGINEER under the following circumstances:

"Or-Equal"

6.7.1.1 If in ENGINEER's sole discretion an item of material or equipment proposed by CONTRACTOR is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by ENGINEER as an "or-equal" item, in which case review and approval of the proposed item may, in ENGINEER's sole discretion, be accomplished without compliance with some or all of the requirements for acceptance of proposed substitute items.

Substitute Items

6.7.1.2 If in ENGINEER's sole discretion an item of material or equipment proposed by CONTRACTOR does not qualify as an "or-equal" item under subparagraph 6.7.1.1, it will be considered a proposed substitute item. CONTRACTOR shall submit sufficient information as provided below to allow ENGINEER to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. The procedure for review by the ENGINEER will include the following as supplemented in the General Requirements and as ENGINEER may decide is appropriate under the circumstances. Requests for review of proposed substitute items of material or equipment will not be accepted by ENGINEER from anyone other than CONTRACTOR. If CONTRACTOR wishes to furnish or use a substitute item of material or equipment, CONTRACTOR shall first make written application to ENGINEER for acceptance thereof, certifying that the proposed substitute will perform

adequately the functions and achieve the results called for by the general design, be similar in substance to that specified and be suited to the same use as that specified. The application will state the extent, if any, to which the evaluation and acceptance of the proposed substitute will prejudice CONTRACTOR's achievement of Substantial Completion on time, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) to adapt the design to the proposed substitute and whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified will be identified in the application and available maintenance, repair, and replacement service will be indicated. The application will also contain an itemized estimate of all costs or credits that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which will be considered by ENGINEER in evaluating the proposed substitute. ENGINEER may require CONTRACTOR to furnish additional data about the proposed substitute.

CONTRACTOR's Expense

6.7.1.3 All data to be provided by CONTRACTOR in support of any proposed "or-equal" or substitute item will be at CONTRACTOR's expense.

Substitute Construction Methods or Procedures

6.7.2 If a specific means, method, technique, sequence, or procedure of construction is shown or indicated in and expressly required by the Contract Documents, CONTRACTOR may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction acceptable to ENGINEER. CONTRACTOR shall submit sufficient information to allow ENGINEER, in ENGINEER's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The procedure for review by ENGINEER will be similar to that provided in subparagraph 6.7.1.2.

ENGINEER's Evaluation

6.7.3 ENGINEER will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to paragraphs 6.7.1.2 and 6.7.2. ENGINEER will be the sole judge of acceptability. No "or-equal" or substitute will be ordered, installed, or utilized without ENGINEER's prior written acceptance, which will be evidenced by either a Change Order or an approved Shop Drawing. OWNER may require CONTRACTOR to furnish at CONTRACTOR's expense a special performance guarantee or other surety with respect to any "or-equal" or

substitute. ENGINEER will record time required by ENGINEER and ENGINEER's Consultants in evaluating substitutes proposed or submitted by CONTRACTOR pursuant to paragraphs 6.7.1.2 and 6.7.2 and in making changes in the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) occasioned thereby. Whether or not ENGINEER accepts a substitute item so proposed or submitted by CONTRACTOR, CONTRACTOR shall reimburse OWNER for the charges of ENGINEER and ENGINEER's Consultants for evaluating each such proposed substitute item.

Concerning Subcontractors, Suppliers, and Others

6.8

6.8.1 CONTRACTOR shall not employ any Subcontractor, Supplier, or other person or organization, whether initially or as a substitute, against whom OWNER or ENGINEER may have reasonable objection. CONTRACTOR shall not be required to employ any Subcontractor, Supplier, or other person or organization to furnish or perform any of the Work against whom CONTRACTOR has reasonable objection.

6.8.2 The Contract Documents require the identity of certain Subcontractors, Suppliers, or other persons or organizations (including those who are to furnish the principal items of materials or equipment) to be submitted to OWNER with the Bid in the Bid Form prior to the Effective Date of the Agreement for acceptance by OWNER and ENGINEER, and if CONTRACTOR has submitted a list thereof in accordance with the Contract Documents, OWNER's or ENGINEER's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in Contract Documents) of any such Subcontractor, Supplier, or other person or organization so identified may be revoked on the basis of reasonable objection after due investigation, in which case CONTRACTOR shall submit an acceptable substitute. No acceptance by OWNER or ENGINEER of any such Subcontractor, Supplier, or other person or organization shall constitute a waiver of any right of OWNER or ENGINEER to reject defective Work.

6.8.3 Subletting of Contract. The Contractor shall not sublet, sell, transfer, assign, or dispose of the Contract or Contracts, or any portion thereof without written consent of the Engineer. The Contractor will be permitted to sublet a portion of the Contract, however, the Contractor's organization shall perform work amounting to not less than 50 percent of the total contract cost.

The calculation of the percentage of subcontracted work shall be based on the prime contract unit prices rather than subcontract unit prices. Proportional value for a subcontracted partial contract item shall be verified by the Engineer. For the purpose of calculating the value of subcontracted work, the cost of procuring materials and manufactured products can be included in either the prime contract or subcontract. However, when a firm both sells material to a prime contractor and performs the work of incorporating the materials into the project, these two phases shall be considered in combination and as constituting a single subcontract.

Subcontracts, or transfer of Contract shall not release the Contractor of liability under the Contract and bonds.

6.8.4 CONTRACTOR shall be fully responsible to OWNER and ENGINEER for all acts and omissions of the Subcontractors. Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR just as CONTRACTOR is responsible for CONTRACTOR's own acts and omissions. OWNER or ENGINEER may furnish to any such Subcontractor, Supplier, or other person or organization, to the extent practicable, evidence of amounts paid to CONTRACTOR in accordance with CONTRACTOR's Applications for Payment. Nothing in the Contract Documents shall create for the benefit of any such Subcontractor, Supplier, or other person or organization any contractual relationship between OWNER or ENGINEER and any such Subcontractor, Supplier, or other person or organization, nor shall it create any obligation on the part of OWNER or ENGINEER to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other person or organization except as may otherwise be required by Laws and Regulations.

6.8.5 CONTRACTOR shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR. CONTRACTOR shall require all Subcontractors, Suppliers, and such other persons and organizations performing or furnishing any of the Work to communicate with the ENGINEER through CONTRACTOR.

6.9 The divisions and sections of the Specifications and the identifications of any Drawings shall not control CONTRACTOR in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

6.10 All Work performed for CONTRACTOR by a Subcontractor or Supplier will be pursuant to an appropriate agreement between CONTRACTOR and the Subcontractor or Supplier, which specifically binds the Subcontractor or Supplier to the applicable terms and, conditions of the Contract Documents for the benefit of OWNER and ENGINEER.

Patent Fees and Royalties

6.11 CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of OWNER or ENGINEER its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by OWNER in the Contract Documents. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants and the officers, directors, employees, agents, and other consultants of each and any of them from and against all claims, costs, losses, and damages arising out of or resulting from any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the

Work of any invention, design, process, product, or device not specified in the Contract Documents.

Permits

6.12 Unless otherwise provided in the Supplementary Conditions, CONTRACTOR shall obtain and pay for all construction permits and licenses. OWNER shall assist CONTRACTOR, when necessary, in obtaining such permits and licenses. CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. CONTRACTOR shall pay all charges of utility owners for connections to the Work, and OWNER shall pay all charges of such utility owners for capital costs related thereto such as plant investment fees.

6.12.1 Prior to the commencement date for the Work set forth in the Notice to Proceed, The CONTRACTOR, and all subcontractors shall be or shall become a CONTRACTOR licensed in accordance with the applicable ordinance of the City of Louisville, Colorado.

6.12.2 If water is required for the project, CONTRACTOR shall obtain a bulk water permit from the City of Louisville, Public Works Department in accordance with the permit requirements.

6.12.3 CONTRACTOR shall obtain a Right-of-Way Permit from the City of Louisville, Public Works Department for all Work to be completed within the City right-of-way.

6.12.4 CONTRACTOR shall obtain and pay for all other necessary construction permits and licenses.

Laws and Regulations

6.13

6.13.1 CONTRACTOR shall give all notices and comply with all Laws and Regulations applicable to furnishing and performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither OWNER nor ENGINEER shall be responsible for monitoring CONTRACTOR's compliance with any Laws or Regulations.

6.13.2 If CONTRACTOR performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, CONTRACTOR shall bear all claims, costs, losses, and damages caused by, arising out of, or resulting therefrom; however, it shall not be CONTRACTOR's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve CONTRACTOR of CONTRACTOR's obligations under paragraph 3.3.2.

Taxes

6.14 CONTRACTOR shall pay all sales, consumer, use, and other similar taxes required to be paid by CONTRACTOR in accordance with the Laws and Regulations of the place of the Project, which are applicable during the performance of the Work. City of Louisville municipal taxes shall be waived upon application for and acceptance of "tax exemption".

The CONTRACTOR shall apply for and receive a Certificate of Exemption from the Colorado Department of Revenue for construction materials to be physically incorporated into the Work. This Certificate of Exemption provides that the CONTRACTOR shall neither pay nor include in his bid prices Sales and Use Taxes collected by the State of Colorado on those building and construction materials physically incorporated into the Work. Sales and Use Taxes of the State of Colorado, RTD, and the County are collected by the State of Colorado. All applicable Sales and Use Taxes (including State collected taxes) on any items other than construction and building materials physically incorporated into the Work are to be paid by the Contractor and are to be included in the appropriate bid items. CONTRACTOR and any Subcontractor assume all liability for the nonpayment of taxes, or the payment of exempt taxes resulting from a failure to use the Certificate of Exemption required by this paragraph.

Use of Premises

6.15 CONTRACTOR shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the site and land and areas identified in and permitted by the Contract Documents and other land and areas permitted by Laws and Regulations, rights-of-way, permits and easements, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment. CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any adjacent land or areas, resulting from the performance of the Work. Should any claim be made by any such owner or occupant because of the performance of the Work, CONTRACTOR shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law. CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultant, and anyone directly or indirectly employed by any of them from and against all claims, costs, losses, and damages arising out of or resulting from any claim or action, legal or equitable, brought by any such owner or occupant against OWNER, ENGINEER, or any other party indemnified hereunder to the extent caused by or based upon CONTRACTOR's performance of the Work.

6.16 During the progress of the Work, CONTRACTOR shall keep the premises free from accumulations of waste materials, rubbish, and other debris resulting from the Work. At the completion of the Work, CONTRACTOR shall remove all waste materials, rubbish, and debris from and about the premises as well as all tools, appliances, construction equipment and machinery, and surplus materials. CONTRACTOR shall leave the site clean and ready for occupancy by OWNER at Substantial Completion of the Work. CONTRACTOR shall restore to original condition all property not designated for alteration by the Contract Documents.

6.17 CONTRACTOR shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall CONTRACTOR subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

Record Documents

6.18 CONTRACTOR shall maintain in a safe place at the site one record copy of all Drawings, Specifications, Addenda, Written Amendments, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications (issued pursuant to paragraph 9.4) in good order and annotated to show all changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to ENGINEER for reference. Upon completion of the Work, these record documents, Samples and Shop Drawings will be delivered to ENGINEER for OWNER.

Safety and Protection

6.19 CONTRACTOR shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:

6.19.1 all persons on the Work site or who may be affected by the Work;

6.19.2 all the Work and materials and equipment to be incorporated therein, whether in storage on or off the site; and

6.19.3 other property at the site or adjacent thereto, including but not limited to trees, shrubs, lawns, walks, pavements, roadways, structures, fences, gates, ditches, utilities, and underground facilities not designated for removal, relocation, or replacement in and during the course of construction.

6.19.4 The CONTRACTOR shall take all measures necessary to mitigate the impact of weather so that the project may continue on schedule. In no event shall OWNER be liable for extra costs incurred on materials and any part of the Work due to CONTRACTOR's failing to take all measures necessary protect the Work from weather and CONTRACTOR shall not be entitled to such claims. Also, no extension of the Contract Time shall be allowed if the CONTRACTOR is able, notwithstanding the weather, to proceed with other Work of the Contract.

CONTRACTOR shall comply with all applicable Laws and Regulations of any public body having jurisdiction for safety of persons or property or to protect them from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR shall notify owners of adjacent property and of Underground Facilities and utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property. All damage, injury or loss to any property referred to in paragraph 6.20.2 or 6.20.3 caused, directly or indirectly, in whole or in part, by CONTRACTOR, any Subcontractor, Supplier, or any other person or organization directly or employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, shall be remedied by CONTRACTOR. CONTRACTOR's duties and responsibilities for safety and for protection of the work shall continue until such time as all the Work is completed and ENGINEER has issued a notice to OWNER and CONTRACTOR in accordance with paragraph 14.13 that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

Safety Representative

6.20 CONTRACTOR shall designate a qualified and experienced safety representative at the site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

Hazard Communication Programs

6.21 CONTRACTOR shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the site in accordance with Laws or Regulations.

Emergencies

6.22 In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, CONTRACTOR, without special instruction or authorization from OWNER or ENGINEER, is obligated to act to prevent threatened damage, injury or loss. CONTRACTOR shall give ENGINEER prompt written notice if CONTRACTOR believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby. If ENGINEER determines that a change in the Contract Documents is required because of the action taken by CONTRACTOR in response to such an emergency, a Work Change directive or Change order will be issued to document the consequences of such action.

Shop Drawings and Samples

6.23

6.23.1 After checking and verifying all field measurements, CONTRACTOR shall submit to ENGINEER for review and approval in accordance with the accepted schedule of shop drawings and sample submittal (see paragraph 2.8), three copies (or at ENGINEER's option, one reproducible copy) of all shop drawings, which shall have been checked and approved by the CONTRACTOR. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show ENGINEER the materials and equipment CONTRACTOR proposes to provide and to enable ENGINEER to review the information for the limited purposes required by paragraph 6.26.

6.23.2 CONTRACTOR shall also submit Samples to ENGINEER for review and approval in accordance with said accepted schedule of Shop Drawings and Sample submittals. Each Sample will be identified clearly as to material, Supplier, pertinent data such as catalog numbers and the use for which intended and otherwise as ENGINEER may require to enable ENGINEER to review the submittal for the limited purposes required by paragraph 6.24. The numbers of each Sample to be submitted will be as specified in the Specifications.

Submittal Procedures

6.24

6.24.1 Before submitting each Shop Drawing or Sample, CONTRACTOR shall have determined and verified:

6.24.1.1 all field measurements, quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

6.24.1.2 all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work, and

6.24.1.3 all information relative to CONTRACTOR's sole responsibilities in respect of means, methods, techniques, sequences, and procedures of construction and safety precautions and programs incident thereto.

CONTRACTOR shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

6.24.2 Each submittal will bear a stamp or specific written indication that CONTRACTOR has satisfied CONTRACTOR's obligations under the Contract Documents with respect to CONTRACTOR's review and approval of that submittal.

6.24.3 At the time of each submission, CONTRACTOR shall give ENGINEER specific written notice of such variations, if any, that the Shop Drawing or Sample submitted may have from the requirements of the Contract Documents, such notice to be in a written communication separate from the submittal; and, in addition, shall cause a specific notation to be made on each Shop Drawing and Sample submitted to ENGINEER for review and approval of each such variation.

6.25 ENGINEER will review and approve Shop Drawings and Samples in accordance with the schedule of Shop Drawings and Sample submittals accepted by ENGINEER as required by paragraph 2.8. ENGINEER's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. ENGINEER's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions. CONTRACTOR shall make corrections required by ENGINEER, and shall return the required number of corrected copies of Shop Drawings and submit as required new Samples for review and approval. CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by ENGINEER on previous submittals.

6.26 ENGINEER's review and approval of Shop Drawings or Samples shall not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents unless CONTRACTOR has in writing called ENGINEER's attention to each such variation at the time of submission as required by paragraph 6.24.3 and ENGINEER has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample approval; nor will any approval by ENGINEER relieve CONTRACTOR from responsibility for complying with the requirements of paragraph 6.24.1.

6.27 Where a Shop Drawing or Sample is required by the Contract Documents or the schedule of Shop Drawings and Sample submissions accepted by ENGINEER as required by paragraph 2.8, any related Work performed prior to ENGINEER's review and approval of the pertinent submittal will be at the sole expense and responsibility of CONTRACTOR.

Continuing the Work

6.28 CONTRACTOR shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with OWNER. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by paragraph 15.5 or as OWNER and CONTRACTOR may otherwise agree in writing.

CONTRACTOR's General Warranty and Guarantee

6.29

6.29.1 CONTRACTOR warrants and guarantees to OWNER, ENGINEER, and ENGINEER's Consultants that all Work will be in accordance with the Contract Documents and will not be **defective**. CONTRACTOR's warranty and guarantee hereunder excludes defects or damage caused by:

6.29.1.1 abuse, modification, or improper maintenance or operation by persons other than CONTRACTOR, Subcontractors, or Suppliers; or

6.29.1.2 normal wear and tear under normal usage.

6.29.2 CONTRACTOR's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of CONTRACTOR's obligation to perform the work in accordance with the Contract Documents:

6.29.2.1 observations by ENGINEER;

6.29.2.2 recommendation of any progress or final payment by ENGINEER;

6.29.2.3 the issuance of a certificate of Substantial Completion or any payment by OWNER to CONTRACTOR under the Contract Documents;

6.29.2.4 use or occupancy of the Work or any part thereof by OWNER;

6.29.2.5 any acceptance by OWNER or any failure to do so;

6.29.2.6 any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by ENGINEER pursuant to paragraph 14.13;

6.29.2.7 any inspection, test, or approval by others; or

6.29.2.8 any correction of **defective** Work by OWNER.

6.29.3 The CONTRACTOR warrants that, unless otherwise specified in the Contract Documents, the materials and equipment installed in the Work will be new, merchantable, and fit for the purpose for which they are intended, and that the Work will be performed in a workmanlike manner. The CONTRACTOR also warrants the workers who perform the Work will be sufficiently skilled to produce a high quality product which is free of blemishes (surface defects) and flaws (internal defects).

The CONTRACTOR is under a continuing duty to warn the OWNER and ENGINEER of any possible defect in the design of the Work and materials incorporated in the Work and against potentially unsafe uses of products incorporated in the Work which may cause personal injury or property damage as soon as the CONTRACTOR discovers the possible defect or has notice that the product may be unsafe. The CONTRACTOR's duty under this paragraph shall be continuing and shall not expire when the OWNER accepts the Work or when the CONTRACTOR's guarantee expires. If the CONTRACTOR fails to warn the Owner of a design or product defect of which the CONTRACTOR is aware, and if personal or property damage thereafter results from such design or product defect, the CONTRACTOR shall be liable jointly and severally with any other party responsible at law for all damages resulting from such defect.

Indemnification

6.30

The CONTRACTOR agrees to indemnify and hold harmless the OWNER (City of Louisville), ENGINEER, ENGINEER's consultants, and their officers, employees, agents, and insurers, from and against all liability, claims, and demands, on account of injury, loss, or damage, including without limitation claims arising from bodily injury, personal injury, sickness, disease, death, property loss or damage, or any other loss of any kind whatsoever, which arise out of or are in any manner connected with this contract, if such injury, loss, or damage is caused in whole or in part by, or is claimed to be caused in whole or in part by, the act, omission, error, professional error, mistake, negligence, or other fault of the CONTRACTOR, any Subcontractor of the CONTRACTOR, or any officer, employee, representative, or agent of the CONTRACTOR or of any Subcontractor of the CONTRACTOR, or which arise out of any workers' compensation claim of any employee of the

CONTRACTOR or of any employee of any subcontractor of the CONTRACTOR. The CONTRACTOR agrees to investigate, handle, respond to, and to provide defense for and defend against, any such liability, claims or demands at the sole expense of the CONTRACTOR. The CONTRACTOR also agrees to bear all other costs and expenses related thereto, including court costs and attorney fees, whether or not any such liability, claims, or demands alleged are groundless, false, or fraudulent.

6.31 In any and all claims against OWNER or ENGINEER or any of their respective consultants, agents, officers, directors, or employees by any employee (or the survivor or personal representative of such employee) of CONTRACTOR, any Subcontractor, any Supplier, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 6.30 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for CONTRACTOR or any such Subcontractor, Supplier, or other person or organization under workers' compensation acts, disability benefit acts, or other employee benefit acts.

Survival of Obligations

6.32 All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the work and termination or completion of the Agreement.

Article 7. Other Work

Related Work at Site

7.1 OWNER may perform other work related to the Project at the site by OWNER's own forces, or let other direct contracts therefor which shall contain General Conditions similar to these, or have other work performed by utility owners. If the fact that such other work is to be performed was not noted in the Contract Documents, then: (i) written notice thereof will be given to CONTRACTOR prior to starting any such other work, and (ii) CONTRACTOR may make a claim therefor as provided in Articles 11 and 12 if CONTRACTOR believes that such performance will involve additional expense to CONTRACTOR or requires additional time and the parties are unable to agree as to the amount or extent thereof.

7.2 CONTRACTOR shall afford each other contractor who is a party to such a direct contract and each utility owner (and OWNER, if OWNER is performing the additional work with OWNER's employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work and shall properly connect and coordinate the Work with theirs. Unless otherwise provided in the Contract Documents, CONTRACTOR shall do all cutting, fitting, and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. CONTRACTOR shall not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of ENGINEER and the others whose work will be affected. The duties and responsibilities of CONTRACTOR under this

paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of CONTRACTOR in said direct contracts between OWNER and such utility owners and other contractors.

7.3 If the proper execution or results of any part of CONTRACTOR's work depends upon work performed by others under this Article 7, CONTRACTOR shall inspect such other work and promptly report to ENGINEER in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of CONTRACTOR's Work. CONTRACTOR's failure so to report will constitute an acceptance of such other work as fit and proper for integration with CONTRACTOR's Work except for latent or non-apparent defects and deficiencies in such other work.

Coordination

7.4 Unless otherwise provided in the Supplementary Conditions, OWNER shall have sole authority and responsibility in respect of such coordination.

Should CONTRACTOR cause damage to the Work or property of any separate CONTRACTOR at the site, or should any claim arising out of CONTRACTOR's performance of the Work at the site be made by any separate contractor against CONTRACTOR, OWNER, ENGINEER, or any other person, CONTRACTOR shall promptly attempt to settle with such other contractor by agreement, or to otherwise resolve the dispute by arbitration or at law. CONTRACTOR shall, to the fullest extent permitted by Laws, and Regulations, indemnify and hold OWNER and ENGINEER harmless from and against all claims, damages, losses, and expenses (including, but not limited to, fees of engineers, architects, attorneys, and other professionals and court and arbitration costs) arising directly, indirectly, or consequentially out of any action, legal or equitable, brought by any separate contractor against OWNER or ENGINEER to the extent based on a claim arising out of CONTRACTOR's performance of the Work. Should a separate contractor cause damage to the Work or property of CONTRACTOR or should the performance of Work by any separate CONTRACTOR at the site give rise to any other claim, CONTRACTOR shall not institute any action, legal or equitable, against OWNER or ENGINEER or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from OWNER or ENGINEER on account of any such damage or claim. If CONTRACTOR is delayed at any time in performing or furnishing Work by any act or neglect of a separate contractor and OWNER and CONTRACTOR are unable to agree as to the extent of any adjustment in Contract Time attributable thereto, CONTRACTOR may make a claim for an extension of time in accordance with Article 12. An extension of the Contract Time shall be CONTRACTOR's exclusive remedy with respect to OWNER and ENGINEER for any delay, disruption, interference, or hindrance caused by any separate contractor. This paragraph does not prevent recovery from OWNER or ENGINEER for activities that are their respective responsibilities.

Article 8. Owner's Responsibilities

8.1 Except as otherwise provided in these General Conditions, OWNER shall issue all communications to CONTRACTOR through ENGINEER.

8.2 In case of termination of the employment of ENGINEER, OWNER shall appoint an engineer whose status under the Contract Documents shall be that of the former ENGINEER.

8.3 OWNER shall furnish the data required of OWNER under the Contract documents promptly and shall make payments to CONTRACTOR promptly when they are due as provided in paragraphs 14.4 and 14.13.

8.4 OWNER's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in paragraphs 4.1 and 4.4.

8.5 OWNER is obligated to execute Change Orders as indicated in paragraph 10.4.

8.6 OWNER's responsibility in respect of certain inspections, tests, and approvals is set forth in paragraph 13.4.

8.7 In connection with OWNER's right to stop Work or suspend Work, see paragraphs 13.10 and 15.1. Paragraph 15.2 deals with OWNER's right to terminate services of CONTRACTOR under certain circumstances.

8.8 The OWNER shall not supervise, direct, or have control or authority over, nor be responsible for, CONTRACTOR's means, methods, techniques, sequences, or procedures of construction or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the furnishing or performance of the Work. OWNER will not be responsible for CONTRACTOR's failure to perform or furnish the Work in accordance with the Contract Documents.

8.9 OWNER's responsibility in respect of undisclosed Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Materials uncovered or revealed at the site is set forth in paragraph 4.5.

8.10 If and to the extent OWNER has agreed to furnish CONTRACTOR reasonable evidence that financial arrangements have been made to satisfy OWNER's obligations under the Contract Documents, OWNER's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

Article 9. Engineer's Status During Construction

OWNER's Representative

9.1 ENGINEER will be OWNER's representative during the construction period. The duties and responsibilities and the limitations of authority of ENGINEER as OWNER's representative during construction are set forth in the Contract Documents and shall not be extended without written consent of OWNER and ENGINEER.

Visits to Site

9.2 ENGINEER will make visits to the site at intervals appropriate to the various stages of construction as ENGINEER deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of

CONTRACTOR's executed Work. Based on information obtained during such visits and observations, ENGINEER will endeavor for the benefit of OWNER to determine, in general, if the Work is proceeding in accordance with the Contract Documents. ENGINEER will not be required to make exhaustive or continuous onsite inspections to check the quality or quantity of the Work. ENGINEER's efforts will be directed toward providing for OWNER a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and onsite observations, ENGINEER will keep OWNER informed of the progress of the Work and will endeavor to guard OWNER against **defective** Work. ENGINEER's visits and onsite observations are subject to all the limitations on ENGINEER's authority and responsibility set forth in paragraph 9.13 and particularly, but without limitation, during or as a result of ENGINEER's onsite visits or observations of CONTRACTOR's Work ENGINEER will not supervise, direct, control, or have authority over or be responsible for CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the furnishing or performance of the Work.

Project Representative

9.3 ENGINEER will furnish a Resident Project Representative, assistants, and other field staff to assist ENGINEER in observing the performance of the Work of the CONTRACTOR. The responsibilities and authority and limitations thereon of any such Resident Project Representative and assistants will be as provided in paragraph 9.13 and in the Supplementary Conditions. If OWNER designates another representative or agent to represent OWNER at the site who is not ENGINEER's Consultant, agent or employee, the responsibilities and authority and limitations thereon of such other person will be as provided in the Supplementary Conditions.

9.3.1 Resident Project Representative is ENGINEER's Agent and will act as directed by and under the supervision of ENGINEER, and will confer with ENGINEER regarding his actions. His dealings in matters pertaining to the onsite Work will in general be with ENGINEER and CONTRACTOR keeping the ENGINEER advised as necessary. His dealings with Subcontractors will only be through or with the full knowledge and approval of CONTRACTOR.

Duties and Responsibilities

Resident Project Representative will:

Schedules

Review the progress schedule, schedule of Shop Drawing submittal, schedule of values and other schedules prepared by CONTRACTOR and consult with ENGINEER concerning acceptability.

Conferences and Meetings

Attend meetings with CONTRACTOR, such as preconstruction conferences, progress meetings and other job conferences, and other project-related meetings.

Liaison

Serve as ENGINEER's liaison with CONTRACTOR, working principally through CONTRACTOR's superintendent and assist him in understanding the intent of the Contract Documents. Assist ENGINEER in serving as OWNER's liaison with CONTRACTOR when CONTRACTOR's operations affect OWNER's onsite operations.

Assist in obtaining from ENGINEER additional details or information, when required for proper execution of the Work.

Shop Drawings and Samples

Record date of receipt of Shop Drawings and samples.
Receive samples, which are furnished at the site by CONTRACTOR for ENGINEER's review, and notify ENGINEER of their availability for examination.

Advise ENGINEER and CONTRACTOR of the commencement of any Work requiring a Shop Drawing or sample submission if the submission has not been approved by ENGINEER.

Review of Work, Rejection of Defective Work, Inspections, and Tests

Conduct onsite observations of the Work in progress to assist ENGINEER in determining that the Work is proceeding in accordance with the Contract Documents.

Report to ENGINEER whenever he believes that any Work is unsatisfactory, faulty or defective, or does not conform to the Contract Documents, or has been damaged, or does not meet the requirements of any inspections, tests, or approvals required to be made; and advise ENGINEER when he believes Work should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection, or approval.

Verify that tests, equipment, and systems startups and operating and maintenance training are conducted in presence of the appropriate personnel, and that CONTRACTOR maintains adequate records thereof; observe, record, and report to ENGINEER appropriate details relative to the test procedures and start-ups.

Accompany visiting inspectors representing public or other agencies having jurisdiction over the Project, record the results of these inspections and report to ENGINEER.

Interpretation of Contract Documents

Report to ENGINEER when clarifications and interpretations of the Contract Documents are needed and Transmit to CONTRACTOR clarification and interpretation of the Contract Documents as issued by ENGINEER.

Modifications

Consider and evaluate CONTRACTOR's suggestions for modification in Drawings or Specifications and report with his recommendations to ENGINEER. Transmit to CONTRACTOR decisions issued by ENGINEER.

Records

Maintain at the job site orderly files for correspondence, reports of job conferences, Shop Drawings and samples, reproductions or original Contract Documents including all Work Directive Changes, Addenda, Change Orders, Field Orders, additional Drawings issued subsequent to the execution of the Agreement, ENGINEER's clarifications and interpretations of the Contract Documents, progress reports, and other Project related documents.

Keep a diary, daily report form, or log book, recording hours on the job site, weather conditions, data relative to questions of Work Directive Changes, Change Orders, or changed conditions, list of job site visitors, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures.

Record names, addresses, and telephone numbers of all CONTRACTORs, subcontractors, and major suppliers of equipment and materials.

Reports

Furnish ENGINEER periodic reports as required of progress of the Work and of CONTRACTOR's compliance with the progress schedule and schedule of Shop Drawings and sample submittal.

Consult with ENGINEER in advance of scheduled major tests, inspections or start of important phases of the Work.

Draft proposed Change Orders and Work Directive Changes, obtaining backup material from CONTRACTOR and recommend to ENGINEER Change Orders, Work Directive Changes, and Field Orders.

Report immediately to ENGINEER upon the occurrence of any accident.

Payment Requests

Review applications for payment with CONTRACTOR for compliance with the established procedure for their submission and forward with his recommendations to ENGINEER, noting particularly the relationship of the payment requested to the schedule of values, Work completed and materials and equipment delivered at the site but not incorporated in the Work.

Certificates, Maintenance, and Operations Manuals

During the Course of Work verify that certifications, maintenance, and operation manuals and other data required to be assembled and furnished by CONTRACTOR are applicable to the items actually installed and in accordance with the Contract Documents, and have this material delivered to ENGINEER for review and forwarding to OWNER prior to final payment of the Work.

Completion

Before ENGINEER issues a Certificate of Substantial Completion, submit to CONTRACTOR a list of observed items requiring correction or completion.

Conduct final inspection in the company of ENGINEER and CONTRACTOR and prepare a final list of items to be corrected or completed.

Observe that all items on final list have been corrected or completed and make recommendations to ENGINEER concerning acceptance.

Limitation of Authority

Resident Project Representative shall not:

Authorize any deviations from the Contract Documents or accept any substitute materials or equipment, unless authorized by ENGINEER.

Exceed limitations of ENGINEER's authority as set forth in the Contract Documents.

Undertake any of the responsibilities of CONTRACTOR, Subcontractors, or CONTRACTOR's superintendent.
Advise on, or issue directions relative to or assume control over any aspect of the means, methods, techniques, sequences, or procedures for construction unless such is specifically called for in the Contract Documents.

Advise on or issue directions regarding or assume control over safety precautions and programs in connection with the Work.

Shall not accept Shop Drawings or sample submittals from anyone other than CONTRACTOR.

Authorize OWNER to occupy the Work in whole or in part.

Participate in specialized field or laboratory tests or inspections conducted by others except as specifically authorized by ENGINEER.

Clarifications and Interpretations

9.4 ENGINEER will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings or otherwise) as ENGINEER may determine necessary, which shall be consistent with the intent of and reasonably inferable from Contract Documents. Such written clarifications and interpretations will be binding on OWNER and CONTRACTOR. If OWNER or CONTRACTOR believes that a written clarification or interpretation justifies an adjustment in the Contract Price or the Contract Times and the parties are unable to agree to the amount or extent thereof, if any, OWNER or CONTRACTOR may make a written claim therefor as provided in Article 11 or Article 12.

Authorized Variations in Work

9.5 ENGINEER may authorize minor variations in the work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on OWNER and also on CONTRACTOR who shall perform the Work involved promptly.

Rejecting Defective Work

9.6 ENGINEER will have authority to disapprove or reject Work which ENGINEER believes to be **defective**, or that ENGINEER believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. ENGINEER will also have authority to require special inspection or testing of the work as provided in paragraph 13.9, whether or not the work is fabricated, installed or completed.

Shop Drawings, Change Orders and Payments

9.7 In connection with ENGINEER's authority as to Shop Drawings and Samples, see paragraphs 6.24 through 6.28 inclusive.

9.8 In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.

9.9 In connection with ENGINEER's authority as to Applications for Payment, see Article 14.

Determinations for Unit Prices

9.10 ENGINEER will have authority to determine the actual quantities and classifications of items of Unit Price Work performed by CONTRACTOR, and the written decisions of ENGINEER on such matters will be final, binding on OWNER and CONTRACTOR and not subject to appeal (except as modified by ENGINEER to reflect changed factual conditions).

Decisions on Disputes

9.11 ENGINEER will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. Claims, disputes, and other matters relating to the

acceptability of the Work or the interpretation of the requirements of the Contract Documents pertaining to the performance and furnishing of the Work and Claims under Articles 11 and 12 in respect of changes in the Contract Price or Contract Times will be referred initially to ENGINEER in writing with a request for a formal decision in accordance with this paragraph. Written notice of each such claim, dispute or other matter will be delivered by the claimant to ENGINEER and the other party to the Agreement promptly (but in no event later than fifteen days) after the start of the occurrence or event giving rise thereto, and written supporting data will be submitted to ENGINEER and the other party within thirty days after the start of such occurrence or event unless ENGINEER allows an additional period of time for the submission of additional or more accurate data in support of such claim, dispute of other matter. The opposing party shall submit any response to ENGINEER and the claimant within thirty days after receipt of the claimant's last submittal (unless ENGINEER allows additional time). ENGINEER will render a formal decision in writing within thirty days after receipt of the opposing party's submittal, if any, in accordance with this paragraph. ENGINEER's written decision on such claim, dispute or other matter will be final and binding upon OWNER and CONTRACTOR.

9.12 When functioning under paragraphs 9.10 and 9.11, ENGINEER will not show partiality to OWNER or CONTRACTOR and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity. The rendering of a decision by ENGINEER pursuant to paragraphs 9.10 or 9.11 with respect to any such claim, dispute or other matter (except any which have been waived by the making or acceptance of final payment as provided in paragraph 14.15) will be a condition precedent to any exercise by OWNER or CONTRACTOR of such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations.

Limitations on ENGINEER's Authority and Responsibilities

9.13

9.13.1 Neither ENGINEER's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by ENGINEER in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by ENGINEER shall create, impose or give rise to any duty owned by ENGINEER to CONTRACTOR, any Subcontractor, any Supplier, any other person or organization, or to any surety for or employee or agent of any of them.

9.13.2 ENGINEER will not supervise, direct, control, or have authority over or be responsible for CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the furnishing or performance of the Work. ENGINEER will not be responsible for CONTRACTOR's failure to perform or furnish the Work in accordance with the Contract Documents.

9.13.3 ENGINEER will not be responsible for the acts or omissions of CONTRACTOR or of any Subcontractor, any Supplier, or of any other person or organization performing or furnishing any of the Work.

9.13.4 ENGINEER's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds and certificates of inspection, tests and approvals, and other documentation required to be delivered by paragraph 14.12 will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests and approvals that the results certified indicate compliance with, the Contract Documents.

9.13.5 The limitations upon authority and responsibility set forth in this paragraph 9.13 shall also apply to ENGINEER's Consultants, Resident Project Representative, and Assistants.

Article 10. Changes in the Work

10.1 Without invalidating the Agreement and without notice to any surety, OWNER may, at any time or from time to time, order additions, deletions, or revisions in the Work. A Written Amendment, a Change Order, or a Work Change Directive will authorize such additions, deletions, or revisions. Upon receipt of any such document, CONTRACTOR shall promptly proceed with the Work involved, which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

10.2 If OWNER and CONTRACTOR are unable to agree as to the extent, if any, of an adjustment in the Contract Price or an adjustment of the Contract Times that should be allowed as a result of a Work Change Directive, a claim may be made therefor as provided in Article 11 or Article 12.

10.3 CONTRACTOR shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any Work performed that is not required by the Contract Documents as amended, modified, and supplemented as provided in paragraphs 3.5 and 3.6 except in the case of an emergency as provided in paragraph 6.23 or in the case of uncovering Work as provided in paragraph 13.9.

10.4 OWNER and CONTRACTOR shall execute appropriate Change Orders recommended by ENGINEER (or Written Amendments) covering:

10.4.1 changes in the Work which are (i) ordered by OWNER pursuant to paragraph 10.1., (ii) required because of acceptance of **defective** Work under paragraph 13.13 or correcting **defective** Work under paragraph 13.14, or (iii) agreed to by the parties;

10.4.2 changes in the Contract Price or Contract Times which are agreed to by the parties; and

10.4.3 changes in the Contract Price or Contract Times, which embody the substance of any written decision rendered by ENGINEER pursuant to paragraph 9.11.

10.5 If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the

provisions of any Bond to be given to a surety, the giving of any such notice will be CONTRACTOR's responsibility, and the amount of each applicable Bond will be adjusted accordingly.

Article 11. Change of Contract Price

11.1 The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to CONTRACTOR for performing the Work. All duties, responsibilities, and obligations assigned to or undertaken by CONTRACTOR shall be at CONTRACTOR's expense without change in the Contract Price.

11.2 The Contract Price may only be changed by a Change Order or by a Written Amendment. Any claim for an adjustment in the Contract Price shall be based on written notice delivered by the party making the claim to the other party and to ENGINEER promptly (but in no event later than fifteen days) after the start of the occurrence or event giving rise to the claim and stating the general nature of the claim. Notice of the amount of the claim with supporting data shall be delivered within thirty days after the start of such occurrence or event (unless ENGINEER allows additional time for claimant to submit additional or more accurate data in support of the claim) and shall be accompanied by claimant's written statement that the adjustment claimed covers all known amounts to which the claimant is entitled as a result of said occurrence or event. ENGINEER shall determine all claims for adjustment in the Contract Price in accordance with paragraph 9.11 if OWNER and CONTRACTOR cannot otherwise agree on the amount involved. No claim for ad adjustment in the Contract Price will be valid if not submitted in accordance with this paragraph 11.2.

11.3 The value of any Work covered by a Change Order or of any claim for an adjustment in the Contract Price will be determined as follows:

11.3.1 where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of paragraphs 11.9.1 through 11.9.3 inclusive);

11.3.2 where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with paragraph 11.6.2);

11.3.3 where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under paragraph 11.3.2, on the basis of the Cost of the Work (determined as provided in paragraphs 11.4 and 11.5) plus a CONTRACTOR's fee for overhead and profit (determined as provided in paragraph 11.6).

Cost of the Work

11.4 The term Cost of the Work means the sum of all costs necessarily incurred and paid by CONTRACTOR in the proper performance of the Work. Except as otherwise may be agreed to in writing by OWNER, such costs shall be in amounts no higher than those prevailing in the locality

of the Project, shall include only the following items and shall not include any of the costs itemized in paragraph 11.5:

11.4.1 Certified payroll record costs for employees in the direct employment of CONTRACTOR in the performance of the Work under schedules of job classifications shall be submitted to the ENGINEER with the claim. Such employees shall include without limitation superintendents, foremen, and other personnel employed full-time at the site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work after regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by OWNER.

11.4.2 Invoices for cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith shall be submitted to the ENGINEER with the claim. All cash discounts shall accrue to CONTRACTOR unless OWNER deposits funds with CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to OWNER. All trade discounts, rebates, refunds, and returns from sale of surplus materials and equipment shall be in accordance with the State Department of Highways, Division of Highways, and State of Colorado Standard Specifications for Road and Bridge Construction 2005 Edition. If the materials used in performing the extra Work are taken from the CONTRACTOR's stock, then in lieu of invoices the CONTRACTOR shall furnish an affidavit, certifying that such materials were taken from its stock, that the quantity claimed was actually used in the Work, and that the price and transportation claimed represent the actual cost to the CONTRACTOR shall be submitted to the ENGINEER with the claim.

11.4.3 Payments made by CONTRACTOR to the Subcontractors for Work performed or furnished by Subcontractors. If required by OWNER, CONTRACTOR shall obtain competitive bids from subcontractors acceptable to OWNER and CONTRACTOR and shall deliver such bids to OWNER who will then determine, with the advice of ENGINEER, which bids, if any, will be accepted. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work Plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as CONTRACTOR's Cost of the Work and fee as provided in paragraphs 11.4, 11.5, 11.6 and 11.7. All subcontracts shall be subject to the other provisions of the Contract Documents insofar as applicable.

11.4.4 Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

11.4.5 Supplemental costs including the following:

11.4.5.1 The proportion of necessary transportation, travel, and subsistence expenses of CONTRACTOR's employees incurred in discharge of duties connected with the Work.

11.4.5.2 Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost less market value of such items used but not consumed which remain the property of CONTRACTOR.

11.4.5.3 Rentals rates of all construction equipment and machinery and the parts thereof which has been authorized by the ENGINEER, the CONTRACTOR will be paid for the use of equipment in the manner hereinafter specified. Rental rates will be from the current edition of the Rental Rate Blue Book for Construction Equipment and will be determined as follows:

Hourly rate: RR = (ADJ BB/176)(RF)(SAF)+EOC

Where:	RR	=	Hourly rental rate
	ADJ BB/176	=	Blue Book Monthly Rate adjusted for year of manufacture/176
	RF	=	Regional Factor of 1.06
	SAF	=	State Adjustment Factor of 1.05
	EOC	=	Estimated Hourly Operating Costs from Blue Book

With each claim, the CONTRACTOR shall submit the rental rate calculations including copies of the appropriate pages of the Blue Book for each piece of equipment listed in the claim.

Rental of equipment not owned by the CONTRACTOR will be paid for by invoice cost plus operating cost (EOC). Copies of the applicable pages of the Rental Rate Blue Book for Construction Equipment shall be submitted to the ENGINEER with the claim.

The costs of transportation, loading, unloading, installation, dismantling, and removal thereof all in accordance with the terms of said rental agreements. If equipment is used intermittently and when not in use could be returned to its rental source at less expense to the OWNER than holding it at the Work site, it shall be returned unless the CONTRACTOR elects to keep

it at the Work site at no expense to the OWNER. The rental of any such equipment, machinery, or parts shall cease when the use of the equipment is no longer necessary for the Work. No payment will be made for the use of tools, which have a replacement value of $200.00 or less. Operators will be paid for separately as provided in paragraph 11.4.1. Certified invoices for rental cost of all construction equipment and machinery incorporated in the Work shall be submitted to the ENGINEER with the claim.

11.4.5.4 Sales, consumer, use, or similar taxes related to the Work, and for which CONTRACTOR is liable, imposed by Laws and Regulations.

11.4.5.5 Deposits lost for causes other than negligence of CONTRACTOR, any Subcontractor or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable.

11.4.5.6 Losses and damages (and related expenses) caused by damage to the work, not compensated by insurance or otherwise, sustained by CONTRACTOR in connection with the performance and furnishing of the Work, (except losses and damages within the deductible amounts of property insurance established by OWNER in accordance with paragraph 5.9), provided they have resulted from causes other than the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of OWNER. No such losses, damages and expenses shall be included in the Cost of the Work for the purpose of determining CONTRACTOR's fee. If, however, any such loss or damage requires reconstruction and CONTRACTOR is placed in charge thereof, CONTRACTOR shall be paid for services a fee proportionate to that stated in paragraph 11.6.2.

11.4.5.7 The cost of utilities, fuel, and sanitary facilities at the site.

11.4.5.8 Minor expenses such as telegrams, long distance telephone calls, telephone service at the site, expressage, and similar petty cash items in connection with the Work.

11.5 The term Cost of the Work shall not include any of the following:

11.5.1 Payroll costs and other compensation of CONTRACTOR's officers, executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by CONTRACTOR whether at the site or in CONTRACTOR's principal or a branch office for general administration of the Work and not specifically

included in the agreed upon schedule of job classifications referred to in paragraph 11.4.1 or specifically covered by paragraph 11.4.4: all of which are to be considered administrative costs covered by the CONTRACTOR's fee.

11.5.2 Expenses of CONTRACTOR's principal and branch offices other than CONTRACTOR's office at the site.

11.5.3 Any part of CONTRACTOR's capital expenses, including interest on CONTRACTOR's capital employed for the Work and charges against CONTRACTOR for delinquent payments.

11.5.4 Cost of premiums for all Bonds and for all insurance whether or not CONTRACTOR is required by the Contract Documents to purchase and maintain the same (except for the cost of premiums covered by subparagraph 11.4.5.9 above).

11.5.5 Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of **defective** Work, disposal of materials or equipment wrongly supplied and making good any damage to property.

Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraph 11.4.

11.6 The CONTRACTOR's fee allowed to CONTRACTOR for overhead and profit shall be determined as follows:

11.6.1 a mutually acceptable fixed fee; or

11.6.2 if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the work:

11.6.2.1 for costs incurred under paragraphs 11.4.1 and 11.4.2, the CONTRACTOR's fee shall be fifteen percent;

11.6.2.2 for costs incurred under paragraph 11.4.3, the CONTRACTOR's fee shall be five percent;

11.6.2.3 where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of paragraphs 11.4.1, 11.4.2, 11.4.3, and 11.6.2 is that the Subcontractor who actually performs or furnishes the Work, at whatever tier, will be paid a fee of fifteen percent of the costs incurred by such Subcontractor under paragraphs 11.4.1 and 11.4.2 and that any higher tier Subcontractor and CONTRACTOR will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

11.6.2.4 no fee shall be payable on the basis of costs itemized under paragraphs 11.4.4, 11.4.5, and 11.5;

11.6.2.5 the amount of credit to be allowed by CONTRACTOR to OWNER for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in CONTRACTOR's fee by an amount equal to five percent of such net decrease; and

11.6.2.6 when both additions and credits are involved in any one change, the adjustment in CONTRACTOR's fee shall be computed on the basis of the net change in accordance with paragraphs 11.6.2.1 through 11.6.2.5, inclusive.

11.7 Whenever the cost of any Work is to be determined pursuant to paragraphs 11.4 and 11.5, CONTRACTOR will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in form acceptable to ENGINEER an itemized cost breakdown together with supporting data.

Cash Allowances

11.8 It is understood that CONTRACTOR has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be furnished and performed for such sums as may be acceptable to OWNER and ENGINEER. CONTRACTOR agrees that:

11.8.1 the allowances include the cost to CONTRACTOR (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the site, and all applicable taxes; and

11.8.2 CONTRACTOR's costs for unloading and handling on the site, labor, installation costs, overhead, profit, and other expenses contemplated for the allowances have been included in the Contract Price and not in the allowances and no demand for additional payment on account of any of the foregoing will be valid.

Prior to final payment, an appropriate Change Order will be issued as recommended by ENGINEER to reflect actual amounts due CONTRACTOR on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

Unit Price Work

11.9

11.9.1 Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual

quantities and classifications of Unit Price Work performed by CONTRACTOR will be made by ENGINEER in accordance with paragraph 9.10.

11.9.2 Each unit price will be deemed to include an amount considered by CONTRACTOR to be adequate to cover CONTRACTOR's overhead and profit for each separately identified item.

11.9.3 OWNER or CONTRACTOR may make a claim for an adjustment in the contract Price in accordance with Article 11 if:

11.9.3.1 the quantity of any item of Unit Price Work performed by CONTRACTOR differs materially and significantly from the estimated quantity of such item indicated in the Agreement;

11.9.3.2 there is no corresponding adjustment with respect to any other item of Work; and

11.9.3.3 if CONTRACTOR believes that CONTRACTOR is entitled to an increase in Contract Price as a result of having incurred additional expense of, OWNER believes that OWNER is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

11.9.4 In no event shall a claim be made or an adjustment of Unit Price allowed if a variation in actual quantities used does not equal or exceed 25 percent (25%) of the total Bid Price.

Article 12. Change of Contract Times

12.1 The Contract Times (or Milestones) may only be changed by a Change Order or a Written Amendment. Any claim for an adjustment of the Contract Times (or Milestones) shall be based on written notice delivered by the party making the claim to the other party and to ENGINEER promptly (but in no event later than fifteen days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the extent of the claim with supporting data shall be delivered within thirty days after such occurrence (unless ENGINEER allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by the claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant has reason to believe it is entitled as a result of the occurrence of said event. All claims for adjustment in the Contract Times (or Milestones) shall be determined by ENGINEER in accordance with paragraph 9.11 if OWNER and CONTRACTOR cannot otherwise agree. No claim for an adjustment in the Contract Times (or Milestones) will be valid if not submitted in accordance with the requirements of this paragraph 12.1.

12.2 Liquidated damages. The OWNER and the CONTRACTOR agree and recognize that time is of the essence for every time period set forth in the Contract Documents and that the OWNER will suffer financial loss if the Work is not substantially complete within the time set forth in the Contract Documents, plus any extensions thereof allowed in accordance with this Article 12 of the General Conditions. If the CONTRACTOR fails to perform the Work within the specified time set forth in

the Contract Documents as adjusted pursuant to Article 12, the OWNER and CONTRACTOR agree that as liquidated damages, and not as a penalty, for delay in performance the Contractor shall pay OWNER in the amount stipulated below for each and every contract day that expires after the time set forth in the Contract Documents for Substantial Completion of the Work until the same is finally complete and ready for Final Payment. The OWNER shall have the right to deduct liquidated damages from any amount due or that may become due to the CONTRACTOR, or to collect such liquidated damages from the CONTRACTOR or the Surety. The OWNER has the option to enforce liquidated damages or to waive such damages. The liquidated damages herein specified shall only apply to the CONTRACTOR's delay in performance. Liquidated damages are intended only to compensate the OWNER for additional OWNER personnel efforts in administering the Contract after normally scheduled completion dates, and for City governmental and citizen inconvenience, lost opportunities, and lost confidence in government and morale of government when work is not completed on time. Such damages are uncertain in amount and difficult to measure and prove accurately. By executing this contract, the CONTRACTOR agrees that the liquidated damages specified in the Contract Documents are reasonable in amount and are not disproportionate to actual anticipated damages. Liquidated damages do not include any sums of money to reimburse the OWNER for extra costs which the OWNER may become obligated to pay on other contracts which are delayed or extended because of CONTRACTOR's failure to complete the Work within the time periods set forth in the Contract Documents. Liquidated damages are not intended to include litigation or attorneys' fees incurred by the OWNER, or other incidental or consequential damages suffered by the OWNER due to CONTRACTOR's performance. If the OWNER charges liquidated damages to the CONTRACTOR, this shall not preclude the Owner from commencing an action against the CONTRACTOR for other actual harm resulting from the CONTRACTOR's performance, which is not due to the CONTRACTOR's delay in performance. In order to recover liquidated damages, OWNER is under no obligation to prove the actual damages sustained by OWNER due to the CONTRACTOR's delay in performance. In no event shall the CONTRACTOR be assessed liquidated damages if the contract is suspended or terminated for events beyond the control of the CONTRACTOR for which a time extension beyond the original schedule of performance could be granted under 12.3.

The parties agree that liquidated damages shall be in the amount set forth in Article 2 of the Agreement.

12.3 Where CONTRACTOR is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of CONTRACTOR, the Contract Times (or Milestones) will be extended in an amount equal to the time lost due to such delay if a claim is made therefor as provided in paragraph 12.1. Delays beyond the control of CONTRACTOR shall include, but not be limited to, acts or neglect by OWNER, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions or acts of God. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of CONTRACTOR.

12.4 The CONTRACTOR specifically waives any and all claims against the OWNER for damages resulting from any hindrance or delay caused by circumstances beyond the control of CONTRACTOR that prevents completing any part of the Work within the Contract Times (or Milestones), whether or not caused by the OWNER. The CONTRACTOR may instead be granted an extension of the Contract Times for which the OWNER will not claim liquidated damages, provided that the hindrance or delay is beyond the control of the CONTRACTOR. An extension of the Contract Times (or Milestones) in an amount equal to the time lost due to such delay shall be CONTRACTOR's sole

and exclusive remedy for such delay. In no event shall OWNER be liable to CONTRACTOR, any subcontractor, any supplier, any other person or organization, or to any surety for or employee or agent of any of them, for damages arising out of or resulting from delays caused by or within the control of Contractor, or delays beyond the control of CONTRACTOR whether or not caused by the OWNER.

Article 13. Tests and Inspections; Correction, Removal, or Acceptance of Defective Work

Notice of Defects

13.1 Prompt notice of all **defective** Work of which OWNER or ENGINEER has actual knowledge will be given to CONTRACTOR. All **defective** Work may be rejected, corrected, or accepted as provided in this Article 13.

Access to Work

13.2 OWNER, ENGINEER, ENGINEER's Consultants, other representatives and personnel of OWNER, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Work at reasonable times for their observation, inspecting and testing. CONTRACTOR shall provide them proper and safe conditions for such access and advise them of CONTRACTOR's site safety procedures and programs so that they may comply therewith as applicable.

Tests and Inspections

13.3 CONTRACTOR shall give ENGINEER timely notice of readiness of the Work for all required inspections, tests or approvals, and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

13.4 OWNER shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

13.4.1 for inspections, tests, or approvals covered by paragraph 13.5 below:

13.4.2 that costs incurred in connection with tests or inspections conducted pursuant to paragraph 13.9 below shall be paid as provided in said paragraph 13.9; and

13.4.3 as otherwise specifically provided in the Contract Documents.

13.4.4 Any and all retesting of soil necessitated by the CONTRACTOR's operations or inability to obtain specified density test results on the first attempt shall be the sole responsibility and costs of the CONTRACTOR to achieve required passing test results. Retesting required because of non-conformance to specified requirements shall be performed by the independent firm employed by the OWNER. Payment for retesting will be charged to the CONTRACTOR by deducting inspection, testing and administrative charges from the Contract Price.

13.5 If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested or approved by an employee or other representative of such public body, CONTRACTOR shall assume full responsibility for arranging and obtaining such inspections, tests or approvals, pay all costs in connection therewith, and furnish ENGINEER the required certificates of inspection, or approval. CONTRACTOR shall also be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests or approvals required for OWNER's and ENGINEER's acceptance of materials or equipment to be incorporated in the Work, or of materials, mix designs, or equipment submitted for approval prior to CONTRACTOR's purchase thereof for incorporation in the Work.

13.6 If any Work (or the work of others) that is to be inspected, tested, or approved is covered by CONTRACTOR without written concurrence of ENGINEER, it must, if requested by ENGINEER, be uncovered for observation.

13.7 Uncovering Work as provided in paragraph 13.6 shall be at CONTRACTOR's expense unless CONTRACTOR has given ENGINEER timely notice of CONTRACTOR's intention to cover the same and ENGINEER has not acted with reasonable promptness in response to such notice.

Uncovering Work

13.8 If any Work is covered contrary to the written request of ENGINEER, it must, if requested by ENGINEER, be uncovered for ENGINEER's observation and replaced at CONTRACTOR's expense.

13.9 If ENGINEER considers it necessary or advisable that covered Work be observed by ENGINEER or inspected or tested by others, CONTRACTOR, at ENGINEER's request, shall uncover, expose or otherwise make available for observation, inspection or testing as ENGINEER may require, that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is found that such Work is **defective,** CONTRACTOR shall pay all claims, costs, losses and damages caused by, arising out of or resulting from such uncovering, exposure, observation, inspection and testing and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and OWNER shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, may make a claim therefor as provided in Article 11.

OWNER May Stop the Work

13.10 If the Work is **defective**, or CONTRACTOR fails to supply sufficient skilled workers or suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, OWNER may order CONTRACTOR to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of OWNER to stop the Work shall not give rise to any duty on the part of OWNER to exercise this right for the benefit of CONTRACTOR or any surety or other party.

Correction or Removal of Defective Work

13.11 If required by ENGINEER, CONTRACTOR shall promptly, as directed, either correct all **defective** Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by ENGINEER, remove it from the site and replace it with Work that is not **defective.** CONTRACTOR

shall pay all claims, costs, losses, and damages caused by or resulting from such correction or removal (including but not limited to all costs of repair or replacement of work of others).

Correction Period
13.12

13.12.1 If within one year after the date of Final Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, CONTRACTOR shall within seven calendar days after receiving notice from OWNER, without cost to OWNER and in accordance with OWNER's written instructions: (i) correct such defective Work, or if it has been rejected by OWNER, remove it from the site and replace it with WORK that is not defective, and (ii) satisfactorily correct or remove and replace any damage to other Work or the work of others resulting therefrom. If CONTRACTOR does not within seven calendar days after receiving notice from OWNER comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, OWNER may have the defective Work corrected or the rejected Work removed and replaced, and all claims, costs, losses, and damages caused by or resulting from such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by CONTRACTOR.

13.12.2 In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications or by Written Amendment.

13.12.3 Where **defective** Work (and damage to other Work resulting therefrom) has been corrected, removed, or replaced under this paragraph 13.12, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

Acceptance of Defective Work

13.13 If, instead of requiring correction or removal and replacement of **defective** Work, OWNER (and, prior to ENGINEER's recommendation of final payment, also ENGINEER) prefers to accept it, OWNER may do so. CONTRACTOR shall play all claims, costs, losses, and damages attributable to OWNER's evaluation of and determination to accept such **defective** Work (such costs to be approved by ENGINEER as to reasonableness). If any such acceptance occurs prior to ENGINEER's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, OWNER may make a claim therefor as provided in Article 11. If the acceptance occurs after such recommendation, CONTRACTOR will pay an appropriate amount to OWNER.

OWNER May Correct Defective Work

13.14 If CONTRACTOR fails within a reasonable time after written notice from ENGINEER to correct **defective** Work or to remove and replace rejected Work as required by ENGINEER in accordance with paragraph 13.11, or if CONTRACTOR fails to perform the Work in accordance with the Contract Documents, or if CONTRACTOR fails to comply with any other provision of the Contract Documents, OWNER may, after seven days' written notice to CONTRACTOR, correct and remedy any such deficiency. In exercising the rights and remedies under this paragraph OWNER shall proceed expeditiously. In connection with such corrective and remedial action, OWNER may exclude CONTRACTOR from all or part of the site, take possession of all or part of the Work, and suspend CONTRACTOR's services related thereto, take possession of CONTRACTOR's tools, appliances, construction equipment and machinery at the site and incorporate in the Work all materials and equipment stored at the site or for which OWNER has paid CONTRACTOR but which are stored elsewhere. CONTRACTOR shall allow OWNER, OWNER's representatives, agents and employees, OWNER's other contractors and ENGINEER and ENGINEER's Consultants access to the site to enable OWNER to exercise the rights and remedies under this paragraph. All claims, costs, losses, and damages incurred or sustained by OWNER in exercising such rights and remedies will be charged against CONTRACTOR and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, OWNER may make a claim therefor as provided in Article 11. Such claims, costs, losses, and damages will include but not be limited to all costs of repair or replacement of work of others destroyed or damaged by correction, removal or replacement of CONTRACTOR's **defective** Work. CONTRACTOR shall not be allowed an extension of the Contract Times (or Milestones) because of any delay in the performance of the Work attributable to the exercise by OWNER of OWNER's rights and remedies hereunder.

Article 14. Payments to Contractor and Completion

Schedule of Values

14.1 Progress payments on account of Unit Price Work will be based on the number of units completed.

Application for Progress Payment

14.2 At least twenty days before the date established for each progress payment (but not more often than once a month), CONTRACTOR shall submit to ENGINEER for review an Application for Payment filled out and signed by CONTRACTOR covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice or other documentation warranting that OWNER has received the materials and equipment free and clear of all Liens, claims, security interests, or encumbrances and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect OWNER's interest therein, all of which will be satisfactory to OWNER. The amount of retainage with respect to progress payments will be as stipulated in the

Agreement. With each application for payment the CONTRACTOR shall submit a notarized waiver(s) of claim signed by the CONTRACTOR acceptable in form to the ENGINEER. The waiver of claim for payment for the work of the CONTRACTOR shall equal the amount of the previous payment distributed to the CONTRACTOR for work of the CONTRACTOR and the amount of the total previous payment distributed to the CONTRACTOR.

CONTRACTOR's Warranty of Title

14.3 CONTRACTOR warrants and guarantees that title to all Work, materials and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to OWNER no later than the time of payment free and clear of all Liens.

Review of Applications for Progress Payment

14.4 ENGINEER will, within ten days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to OWNER, or return the Application to CONTRACTOR indicating in writing ENGINEER's reasons for refusing to recommend payment. In the latter case, CONTRACTOR may make the necessary corrections and resubmit the Application. Ten days after presentation of the Application for Payment to OWNER with ENGINEER's recommendation, the amount recommended will (subject to the provisions of the last sentence of paragraph 14.7) become due and when due will be paid by OWNER to CONTRACTOR.

14.5 ENGINEER's recommendation of any payment requested in an Application for Payment will constitute a representation by ENGINEER to OWNER, based on ENGINEER's onsite observations of the executed Work as an experienced and qualified design professional and on ENGINEER's review of the Application for Payment and the accompanying data and schedules, that to the best of ENGINEER's knowledge, information and belief:

14.5.1 the Work has progressed to the point indicated,

14.5.2 the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under paragraph 9.10 and to any other qualifications stated in the recommendation), and

14.5.3 the conditions precedent to CONTRACTOR's being entitled to such payment appear to have been fulfilled insofar as it is ENGINEER's responsibility to observe the Work.

However, by recommending any such payment ENGINEER will not thereby be deemed to have represented that: (i) exhaustive or continuous onsite inspections have been made to check the quality or the quantity of the Work beyond the responsibilities specifically assigned to ENGINEER in the Contract Documents or (ii) that there may not be other matters or issues between the parties that might entitle CONTRACTOR to be paid additionally by OWNER or entitle OWNER to withhold payment to CONTRACTOR.

14.6 ENGINEER's recommendation of any payment, including final payment, shall not mean that ENGINEER is responsible for CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the furnishing or performance of Work, or for any failure of CONTRACTOR to perform or furnish Work in accordance with the Contract Documents.

14.7 ENGINEER may refuse to recommend the whole or any part of any payment if, in ENGINEER's opinion, it would be incorrect to make the representations to OWNER referred to in paragraph 14.5. ENGINEER may also refuse to recommend any such payment, or, because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify any such payment previously recommended, to such extent as may be necessary in ENGINEER's opinion to protect OWNER from loss because:

14.7.1 the Work is **defective**, or completed Work has been damaged requiring correction or replacement,

14.7.2 the Contract Price has been reduced by Written Amendment or Change Order,

14.7.3 OWNER has been required to correct **defective** Work or complete Work in accordance with paragraph 13.14, or

14.7.4 ENGINEER has actual knowledge of the occurrence of any of the events enumerated in paragraphs 15.2.1 through 15.2.3 inclusive.

In addition to the retainages set forth in the Contract Documents, the Owner may retain one hundred percent (100%) of all progress payments for any unsatisfactory performance of the Work and any payment recommended by the ENGINEER, including without limitation:

Defective work or failure to repair or replace defective work;

Claims filed against the CONTRACTOR, or reasonable evidence indicating probable filing of such claims;

Failure of the CONTRACTOR to make adequate or proper payments to subcontractors or suppliers for materials, equipment or labor;
Failure to obtain necessary permits or licenses, or to comply with applicable laws, ordinances, codes, or regulations, unless such noncompliance is due to reasons beyond the control of the CONTRACTOR, or due to act of the OWNER or and ENGINEER hired by the OWNER, or agents or employees thereof;

Reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Price then unpaid;

Reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;

Persistent failure to carry out the Work in accordance with the Contract Documents;

As a set off for amounts due the Owner on other items;

Collusion with other bidders in preparing the bid;

Actual knowledge of the occurrence of any of the events enumerated in paragraphs 14.7.1 through 14.7.3 or paragraphs 15.2.1 through 15.2.3, inclusive.

When the above reasons for withholding payment are removed and corrected to the OWNER's satisfaction, OWNER shall make payment to the CONTRACTOR of the sums withheld pursuant to this paragraph, subject to the amounts required to be retained by the Contract Documents.

Progress Payments to Suppliers and Subcontractors. The CONTRACTOR shall make partial payments of the amount due to each of the CONTRACTOR's suppliers and subcontractors in the same manner as the OWNER is required to pay the CONTRACTOR under Article 4 of the Agreement and Article 14 of the General Conditions, provided that the suppliers and subcontractors are performing to the CONTRACTOR's satisfaction. If the OWNER is notified that the CONTRACTOR is in arrears in payments to the CONTRACTOR's suppliers or subcontractors, the OWNER shall notify the CONTRACTOR and determine why such funds are being withheld. If the OWNER determines that no legitimate basis exists for the CONTRACTOR's withholding of such payments, the OWNER may, five (5) days after the mailing of written notice to the CONTRACTOR, make such payments directly to the CONTRACTOR's suppliers or subcontractors from funds which otherwise would be due the CONTRACTOR.

Substantial Completion

14.8 When CONTRACTOR considers the entire Work ready for its intended use CONTRACTOR shall notify OWNER and ENGINEER in writing that the entire Work is substantially complete (except for items specifically listed by CONTRACTOR as incomplete) and request that ENGINEER issue a certificate of Substantial Completion. Within a reasonable time thereafter, OWNER, CONTRACTOR, and ENGINEER shall make an inspection of the Work to determine the status of completion. If ENGINEER does not consider the Work substantially complete, ENGINEER will notify CONTRACTOR in writing giving the reasons therefor. If ENGINEER considers the Work substantially complete, ENGINEER will prepare and deliver to OWNER a tentative certificate of Substantial Completion, which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. OWNER shall have seven days after receipt of the tentative certificate during which to make written objection to ENGINEER as to any provisions of the certificate or attached list. If, after considering such objections, ENGINEER concludes that the Work is not substantially complete, ENGINEER will within fourteen days after submission of the tentative certificate to OWNER notify CONTRACTOR in writing, stating the reasons therefor. If, after consideration of OWNER's objections, ENGINEER considers the Work substantially complete, ENGINEER will within said fourteen days execute and deliver to OWNER and CONTRACTOR a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as ENGINEER believes justified after consideration of any objections from OWNER. At the time of delivery of the tentative certificate of Substantial Completion, ENGINEER

will deliver to OWNER and CONTRACTOR a written recommendation as to division of responsibilities pending final payment between OWNER and CONTRACTOR with respect to security, operation, safety, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless OWNER and CONTRACTOR agree otherwise in writing and so inform ENGINEER in writing prior to ENGINEER's issuing the definitive certificate of Substantial Completion, ENGINEER's aforesaid recommendation will be binding on OWNER and CONTRACTOR until final payment.

14.9 OWNER shall have the right to exclude CONTRACTOR from the Work after the date of Substantial Completion, but OWNER shall allow CONTRACTOR reasonable access to complete or correct items on the tentative list.

Partial Utilization

14.10 Use by OWNER at OWNER's option of any substantially completed part of the Work which: (i) has specifically been identified in the Contract Documents or (ii) OWNER, ENGINEER, and CONTRACTOR agree constitutes a separately functioning and usable part of the Work that can be used by OWNER for its intended purpose without significant interference with CONTRACTOR's performance of the remainder of the Work, may be accomplished prior to Substantial Completion of all the Work subject to the following:

14.10.1 OWNER at any time may request CONTRACTOR in writing to permit OWNER to use any such part of the Work which OWNER believes to be ready for its intended use and substantially complete. If CONTRACTOR agrees that such part of the Work is substantially complete, CONTRACTOR will certify to OWNER and ENGINEER that such part of the Work is substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. CONTRACTOR at any time may notify OWNER and ENGINEER in writing that CONTRACTOR considers any such part of the Work ready for its intended use and substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. Within a reasonable time after either such request, OWNER, CONTRACTOR, and ENGINEER shall make an inspection of that part of the Work to determine its status of completion. If ENGINEER does not consider that part of the Work to be substantially complete, ENGINEER will notify OWNER and CONTRACTOR in writing giving the reasons therefor. If ENGINEER considers that part of the Work to be substantially complete, the provisions of paragraphs 14.8 and 14.9 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof land access thereto.

Final Inspection

14.11 Upon written notice from CONTRACTOR that the entire Work or an agreed portion thereof is complete, ENGINEER will make a final inspection with OWNER and CONTRACTOR and will notify CONTRACTOR in writing of all particulars in which this inspection reveals that the Work is incomplete or **defective.** CONTRACTOR shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

Final Application for Payment

14.12 After CONTRACTOR has completed all such corrections to the satisfaction of ENGINEER and delivered in accordance with the Contract Documents all maintenance and operating instructions, schedules, guarantees, Bonds, certificates or other evidence of insurance required by paragraph 5.4, certificates of inspection, marked-up record documents (as provided in paragraph 6.19) and other documents. CONTRACTOR may make application for final payment following the procedure for progress payments. The final application for payment shall be accompanied (except as previously delivered) by: (i) all documentation called for in the Contract Documents, including but not limited to the evidence satisfactory to the OWNER of the continuation of completed operations insurance and any insurance coverage written on a claims-made basis at final payment and one year thereafter; (ii) the consent of surety to final payment and that the performance bond shall remain in effect throughout the guarantee period; (iii) complete and legally effective claim releases signed by all suppliers and subcontractors in the form provided in the Contract Documents certifying that all outstanding claims for payment have been paid. The CONTRACTOR shall not receive final payment due under the Agreement until the CONTRACTOR obtains and files the foregoing items (i), (ii), and (iii).

14.12.1 LIENS. Colorado Statutes do not provide for any right of lien against public buildings. In lieu thereof, §38-26-107, Colorado Revised Statutes, as amended, provides adequate relief for any claimant having furnished labor, materials, rental machinery, tools, equipment, or services toward construction of the particular public work in that final payment may not be made to a CONTRACTOR until all such creditors have been put on notice by publication of such pending payment and given opportunity to stop payment to the CONTRACTOR in the amount of such claims. Pursuant to §38-26-107, C.R.S., any supplier may bring a suit and file a notice of lis pendens against the OWNER within ninety (90) days after the date set for final settlement. If any such supplier or person files any such claim and notice of lis pendens, the OWNER shall withhold retained amounts from final payments to the CONTRACTOR as are necessary to satisfy fully such claims. References to liens appearing in Article 14 shall be deemed as references to claims made pursuant to C.R.S §38-26-101 et seq. unless the context requires otherwise.

Final Payment and Acceptance

14.13 If, on the basis of ENGINEER's observation of the Work during construction and final inspection, and ENGINEER's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, ENGINEER is satisfied that the Work has been completed and CONTRACTOR's other obligations under the Contract Documents have been fulfilled, ENGINEER will, within ten days after receipt of the final Application for Payment, indicate in writing ENGINEER's recommendation of payment and present the Application to OWNER for payment. At the same time ENGINEER will also give written notice to OWNER and CONTRACTOR that the Work is acceptable subject to the provisions of paragraph 14.15. Otherwise, ENGINEER will return the Application to CONTRACTOR, indicating in writing the reasons for refusing to recommend final payment, in which case CONTRACTOR shall make the necessary corrections and resubmit the Application. Upon receipt of the ENGINEER's recommendation for payment and the final Application for Payment, OWNER shall order the publication of Notice of Final Payment as

required by C.R.S. §38-26-107(1) and shall make final payment in accordance with C.R.S. 38-26-107(3).

14.14 If, through no fault of CONTRACTOR, final completion of the Work is significantly delayed and if ENGINEER so confirms, OWNER shall, upon receipt of CONTRACTOR's final Application for Payment and recommendation of ENGINEER, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by OWNER for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if Bonds have been furnished as required in paragraph 5.1, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by CONTRACTOR to ENGINEER with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

Waiver of Claims

14.15 The making and acceptance of final payment will constitute:

14.15.1 a waiver of all claims by OWNER against CONTRACTOR, except claims arising from unsettled Liens, from **defective** Work appearing after final inspection pursuant to paragraph 14.11, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from CONTRACTOR's continuing obligations under the Contract Documents; and

14.15.2 a waiver of all claims by CONTRACTOR against OWNER other than those previously made in writing and still unsettled.

Article 15. Suspension of Work and Termination

OWNER May Suspend Work

15.1 At any time and without cause, OWNER may suspend the Work or any portion thereof for a period of not more than ninety days by notice in writing to CONTRACTOR and ENGINEER, which will fix the date on which Work will be resumed. CONTRACTOR shall resume the Work on the date so fixed. CONTRACTOR shall be allowed an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if CONTRACTOR makes an approved claim therefor as provided in Articles 11 and 12.

OWNER May Terminate

15.2 Upon the occurrence of any one or more of the following events:

15.2.1 if CONTRACTOR persistently fails to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 2.8 as adjusted from time to time pursuant to paragraph 6.6);

15.2.2 if CONTRACTOR disregards Laws or Regulations of any public body having jurisdiction;

15.2.3 if CONTRACTOR otherwise violates in any substantial way any provisions of the Contract Documents;

OWNER may, after giving CONTRACTOR (and the surety, if any,) seven days' written notice and to the extent permitted by Laws and Regulations, terminate the services of CONTRACTOR, exclude CONTRACTOR from the site and take possession of the Work and of all CONTRACTOR's tools, appliances, construction equipment, and machinery at the site and use the same to the full extent they could be used by CONTRACTOR (without liability to CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the site or for which OWNER has paid CONTRACTOR but which are stored elsewhere, and finish the Work as OWNER may deem expedient. In such case CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages sustained by OWNER arising out of or resulting from completing the Work such excess will be paid to CONTRACTOR. If such claims, costs, losses, and damages exceed such unpaid balance, CONTRACTOR shall pay the difference to OWNER. Such claims, costs, losses, and damages incurred by OWNER will be reviewed by ENGINEER as to their reasonableness and when so approved by ENGINEER incorporated in a Change Order, provided that when exercising any rights or remedies under this paragraph OWNER shall not be required to obtain the lowest price for the Work performed.

15.3 Where CONTRACTOR's services have been so terminated by OWNER, the termination will not affect any rights or remedies of OWNER against CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys due CONTRACTOR by OWNER will not release CONTRACTOR from liability.

15.4 Upon seven days' written notice to CONTRACTOR and ENGINEER, OWNER may, without cause and without prejudice to any other right or remedy of OWNER, elect to terminate the Agreement. In such case, CONTRACTOR shall be paid (without duplication of any items):

15.4.1 for completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

15.4.2 for expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

15.4.3 for all claims, costs, losses and damages incurred in settlement of terminated contracts with Subcontractors, Suppliers and others; and

15.4.4 for reasonable expenses directly attributable to termination.

CONTRACTOR shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

CONTRACTOR May Stop Work or Terminate

15.5 If, through no act or fault of CONTRACTOR, the Work is suspended for a period of more than ninety days by OWNER or under an order of court or other public authority, or ENGINEER fails to act on any Application for Payment within thirty days after it is submitted or OWNER fails for thirty days to pay CONTRACTOR any sum finally determined to be due, then CONTRACTOR may, upon seven days' written notice to OWNER and ENGINEER, and provided OWNER or ENGINEER do not remedy such suspension or failure within that time, terminate the Agreement and recover from OWNER payment on the same terms as provided in paragraph 15.4. In lieu of terminating the Agreement and without prejudice to any other right or remedy, if ENGINEER has failed to act on an Application for Payment within thirty days after it is submitted, or OWNER has failed for thirty days to pay CONTRACTOR any sum finally determined to be due, CONTRACTOR may upon seven days' written notice to OWNER and ENGINEER stop the Work until payment of all such amounts due CONTRACTOR, including interest thereon. The provisions of this paragraph 15.5 are not intended to preclude CONTRACTOR from making claim under Articles 11 and 12 for an increase in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to CONTRACTOR's stopping Work as permitted by this paragraph.

Article 16. Miscellaneous

Giving Notice

16.1 Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

Computation of Times

16.2.1 When any period of time is referred to in the Contract Documents by days, it will be computed to include the first and the last day of such period.

Notice of Claim

16.3 Should OWNER or CONTRACTOR suffer injury or damage to person or property because of any error, omission or act of the other party or of any of the other party's employees or agents or others for whose acts the other party is legally liable, claim will be made in writing to the other party within a reasonable time of the first observance of such injury or damage. The provisions of this paragraph 16.3 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitations or repose.

Cumulative Remedies

16.4 The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto, and, in particular but without limitation, the warranties, guarantees, and obligations imposed upon CONTRACTOR by paragraphs 6.12, 6.16, 6.30, 6.31, 6.32, 13.1, 13.12, 13.14, 14.3, and 15.2 and all of the rights and remedies available to OWNER and

ENGINEER thereunder, are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee or by other provisions of the Contract Documents, and the provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply.

Professional Fees and Court Costs Included

16.5 Whenever reference is made to "claims, costs, losses, and damages," it shall include in each case, but not be limited to, all fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs.

Interest

16.6 In the event that any payment of interest is to be made pursuant to any provision of the Contract Documents, excluding any bid bond, labor and materials bond or performance bond entered into by the CONTRACTOR, interest shall be paid at the average rate earned by the City of Louisville on its invested funds during the quarterly fiscal period prior to the period during which the interest was accrued.

Third Parties

16.7 The contract is not intended to create any right in or for the public or any member thereof, any subcontractor or supplier, or any other third party, or to authorize anyone not a party to the contract to maintain a suit to enforce its terms. The duties, obligations, and responsibilities of the parties to the contract, with respect to third parties, shall remain as imposed by law. This paragraph shall not apply to any surety to the extent it is acting under any labor and materials bond or performance bond entered into by the CONTRACTOR.

Severability

16.8 To the extent that the performance of the parties' obligations may be accomplished within the intent of the contract, the terms of the contract are severable, and should any term or provision of the contract be declared invalid or become inoperative for any reason, such invalidity or failure shall not affect the validity of any other contract term or provision.

Equal Opportunity Employer

16.9 The CONTRACTOR will not discriminate against any employee or applicant for employment because of race, color, religion, age, sex, disability, or national origin. The CONTRACTOR will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard for their race, color, religion, age, sex, disability, or national origin. Such action shall include but not be limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. The CONTRACTOR agrees to post in conspicuous places, available to employees and applicants for employment,

notice to be provided by an agency of the federal government, setting forth the provisions of the Equal Opportunity Laws.

The CONTRACTOR shall be in compliance with the appropriate areas of the Americans with Disabilities Act of 1990 as enacted and from time to time amended and any other applicable federal regulation. A signed, written certificate stating compliance with the Americans with Disabilities Act may be requested at any time during the life of any contract and with any contract entered by the OWNER.

Supplementary Conditions

CONDITIONS OF THE CONTRACT

These Supplementary Conditions amend or supplement the General Conditions of the Project Manual as indicated below. All provisions, which are not so amended or supplemented, remain in full force and effect.

1. GC-1 DEFINITIONS

A. Section 1.9.1, **CONTRACT DAY** of Article 1 of the General Conditions, delete the definition in its entirety and add the following language:

CONTRACT DAY – A calendar day of 24 hours each, excluding Saturdays, Sundays, OWNER-observed holidays and Abnormal Weather days.

B. Section 1.41, **SUBSTANTIAL COMPLETION** of Article 1 of the General Conditions, add the following language:

The Work will not be considered suitable for Substantial Completion review until all project Bid Items and incidentals in the Work are completed and operational as designed, all designated or required governmental inspections and certifications have been made and posted, designated instruction of Owner's personnel in the operation of systems has been completed, and all final finishes within the Contract are in place. In general, the only remaining work shall be minor in nature, so that the Owner could occupy the building or utilize the improvements on that date and the completion of the Work by the Contractor would not materially interfere or hamper the Owner's normal operations. As a further condition of Substantial Completion acceptance, the Contractor shall certify that all remaining "punch list" work will be completed within twenty (20) Contract Days after receipt of notification or as agreed upon following the date of issuance of Certificate of Substantial Completion.

2. GC-2 PRELIMINARY MATTERS

A. Add the following language to Section 2.3 of Article 2 of the General Conditions:

- Contractor shall not park equipment and employee vehicles on abutting side streets that can be used by residents that are directly impacted by the reconstruction.

- Construction Phasing for the project shall be as follows:

All Locations

a. Provide ingress, egress to private drives and single access developments. No additional payment will be made to provide access. All closures must be communicated to the property owners 5-days in advance of driveway closures.

No work shall be performed on the following City observed Holidays without prior authorization:

- New Year's Day
- Martin Luther King Jr. Day
- President's Day
- Memorial Day - No work after 12 PM Friday before through Monday
- Juneteenth
- Independence Day
- Labor Day – No work after 12 PM Friday before through Monday
- Veteran's Day
- Thanksgiving Day
- Day after Thanksgiving
- Christmas Eve
- Christmas Day

3. GC-4 AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS

A. Section 4.4, **REFERENCE POINTS,** of Article 4 of the General Conditions, delete the second paragraph in its entirety and add the following language:

The OWNER shall not provide survey reference points, construction stakes, lines and grade for the work unless otherwise noted.

4. GC-5 BONDS AND INSURANCE

A. Delete paragraph 5.1 in its entirety and insert the following:

5.1 CONTRACTOR shall furnish Performance and Payment Bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all CONTRACT-OR's obligations under the Contract Documents. These Bonds shall remain in effect at least until two years after the date when final payment becomes due, except as provided otherwise by Laws or Regulations or by the Contract Documents. CONTRACTOR shall also furnish such other Bonds as are required by the Supplementary Conditions. All Bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff, Bureau of Government Financial Operations, U.S. Treasury Department. All Bonds signed by an agent must be accompanied by a certified copy of such agent's authority to act. The CONTRACTOR shall furnish the performance and payment bond in the form provided in the Contract Documents or approved by the OWNER; the earlier of ten (10) days after the OWNER has issued the notice of award or delivery of the executed Agreement. The OWNER reserves the right to exclude any Surety

Company on any ground it deems appropriate. The cost of the bonds shall be included in the bid."

4. GC-6 CONTRACTOR'S RESPONSIBILITIES- Labor, Materials and Equipment

A. **Labor, Materials and Equipment**, delete paragraph 6.3 in its entirety and insert the following:

6.3 CONTRACTOR shall provide competent, suitably qualified personnel to survey, layout and construct the Work as required by the Contract Documents. CONTRACTOR shall at all times maintain good discipline and order at the site. Except as otherwise required for the safety or protection of persons or the Work or property at the site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Work at the site shall be performed during regular working hours and CONTRACTOR will not permit overtime work or the performance of Work on Saturday, or at night without OWNER's written consent given after prior written notice to ENGINEER. No extra payment will be paid to the CONTRACTOR by the OWNER due to labor overtime or other increased costs of performing the Work on Friday afternoons, or at night. Should the CONTRACTOR desire to work at night between the hours of 5:00 p.m. and 8:00 p.m., Monday-Thursday, from 3:30 p.m. to 8:00 p.m. Friday, the CONTRACTOR shall submit a written request to the ENGINEER 24 hours prior. If approval is given by ENGINEER to CONTRACTOR for authorized overtime work, ENGINEER's and ENGINEER's authorized personnel will charge overtime and other incidental administrative expenses necessary for performing inspections between the hours of 5:00 p. m. and 8:00 p.m., Monday-Thursday and 3:30 p.m. to 8:00 p.m. Friday, the CONTRACTOR will be responsible to pay for all such rates and charges, and shall not be granted a Contract Price increase for such charges. Overtime and other incidental administrative expenses for Engineer's and Engineer's authorized personnel are as follows:

DESCRIPTION	HOURLY RATE
Engineer	$70.00
Construction Inspector	$55.00
Operations Supervisor	$55.00
Operations Technician	$40.00
Clerical	$35.00
Vehicle	$25.00

5. GC-6 CONTRACTOR'S RESPONSIBILITIES-Permits

B. **Permits**

a. Paragraph 6.13.2, add the following language:

A deposit is required for the 2" water meter in an amount of $2500 and the deposit is reimbursed when the 2" meter is returned, in good condition. Charges for water consumption are waived when water is used for this project. Bulk Water Permit and meter are available from the City of Louisville Operations Division, located at 739 S. 104th St.

b. Paragraph 6.13.3, add the following language:

.

Right of Way Permit fee is waived for this project.

6. GC-7 OTHER WORK

A. Section 7.1 of Article 7 of the General Conditions, add the following language:

The OWNER has employed an asphalt contractor to resurface various streets. The concrete replacement work in this contract shall be completed prior to the asphalt resurfacing. Asphalt patching may take place at the same time as the concrete replacement work in the same location(s). It is critical for CONTRACTOR to maintain the phasing schedule identified in the Supplementary Conditions. CONTRACTOR shall coordinate their activities with the asphalt contractor to allow completion of concrete flatwork prior to asphalt resurfacing.

7. ARTICLE 9 ENGINEER'S STATUS DURING CONSTRUCTION

A. Section 9.3.1 **CONFERENCES AND MEETINGS** of the General Conditions, add the following language:

NEIGHBORHOOD MEETING

At least 10 days prior to the start of construction, CONTRACTOR will be required to coordinate and have a representative at a meeting with the residents of the neighborhood. CONTRACTOR is required to hand out notices to all affected residents at least 5 days prior to the meeting. A template for the notice is below. ENGINEER must review and approve the notice prior to delivery. ENGINEER shall be notified by CONTRACTOR after notices are distributed. At this meeting CONTRACTOR will be required to define the schedule for construction and to address any special needs and concerns of the residents. ENGINEER shall be present at this meeting.

Construction Notification / Neighborhood Meeting Invite

[CONTRACTOR NAME] has been contracted by the City of Louisville to perform the Storm System Maintenance Project in 2025. The intent of this work is to replace aging, cracked, broken storm system infrastructure, and clean existing storm sewer main lines effected by the Marshall Fire. This work will begin in [MONTH] and will be completed by [MONTH]

A neighborhood meeting is scheduled for [DATE] at [TIME]. The meeting will be located in the Council Chambers at City Hall at 749 Main Street. See map on back of this notice for 2025 System Maintenance Project work locations. Representatives from the City and [CONTRACTOR] will be present to discuss the project.

Topics that will be covered at the meeting will include coordination of work, and time frames.

Construction will begin at 7 AM and should be completed by 5 PM. Note that delays during the day could require the contractor to work beyond 5 PM on some days. All vehicles will need to be removed from the street by 7:00 AM if "NO PARKING" signs are on your street to allow the contractors access to the area. The "NO PARKING" signs will be placed on your street at least 24 hours prior to work beginning. When work is being performed in front of your address, the process will require that your street/driveway be closed for parking most of the day, so please make arrangements to park any vehicles you need outside the work area. Every effort will be made to have the street open by 5:00 PM.

We hope the coordination will reduce your inconvenience and allow for you to plan accordingly. We appreciate your patience as we repair the street near your address. If you have any questions or concerns or need immediate assistance, please contact [CONTRACTOR] Project Manager [NAME] at [CONTRACTOR PM PHONE NUMBER].

In the event that weather or other delays occur, we may need to reschedule the work and will attempt notify affected residents of any changes.

Attendees can request interpretation services at least 7 days in advance of the meeting (Los asistentes podrán solicitar los servicios de un intérprete con 7 días de anticipación a la fecha una reunion) by contacting Derek Cosson at dcosson@louisvilleco.gov or 303-335-4814.

8. GC-12 CHANGES OF CONTRACT TIMES

A. Section 12.2 **LIQUIDATED DAMAGES** of Article 12 of the General Conditions, add the following language:

PHASE TIMES – The work is broken into Phases as specified in the Supplementary Conditions with a specific road closure or lane closure limit, described work item with respective day limit, and Substantial Completion date for each Phase. Failure to perform the phase work described in Section 2.3 of the General Conditions will result in liquidated damages. The CONTRACTOR shall pay OWNER **ONE THOUSAND DOLLARS ($1,000.00)** for each and every **Contract Day** and portion thereof that expires after the specified road or lane closure limit days, described work item with respective day limit and Substantial Completion date until the same is finally complete.

B. Add the following language to Article 12 of the General Conditions:

12.4 EXTENSIONS OF TIME

a. The OWNER and CONTRACTOR are both aware that construction will be conducted during spring and summer and that variable weather conditions are typical for the site of the work.

b. The CONTRACTOR expressly agrees that the Contract Price is based on completion of the work within the times specified in the Agreement and under weather conditions typically encountered during the contemplated construction period at the site of the work.

c. For purposes of evaluating requests for extensions of time due to abnormal weather conditions, the following conditions, and no others, will be considered unusually severe:

1) Precipitation volume exceeding the historical mean for the *months* of the construction period by more than one standard deviation.

2) Isolated abnormal weather occurrences of a severely destructive nature, which in fact, cause such destruction at the site of the work.

d. For the purpose of determining mean conditions, all available data contained in the records of the National Weather Service for reporting from Denver, as well as data available from the State Climatologist for the same areas.

e. The CONTRACTOR further agrees that should a request for time extension due to abnormal weather conditions, the CONTRACTOR shall submit all necessary historical and detailed daily data during the construction period to support the claim.

9C-13 TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

A. Section 13.11, **CORRECTION OR REMOVAL OF DEFECTIVE WORK** of Article 13 of the General Conditions, add the following language:

Failure or neglect on the part of the ENGINEER to condemn unsatisfactory material or reject inferior workmanship will in no way release the CONTRACTOR, nor shall it be construed to mean the acceptance of such work, nor shall Final Acceptance bar the OWNER from recovering damages in case fraud was practiced, or for defective work resulting from the CONTRACTOR's dishonesty.

Work done contrary to or regardless of the instructions of the ENGINEER, work done without lines, grade, and/or cross section stakes and grades shown on the Plans or as given by the ENGINEER, or any deviation made from the Plans and Specifications without written authority will be considered unauthorized and at the expense of the CONTRACTOR and will not be measured or paid for by the OWNER. Any and all work so done may be ordered removed and replaced immediately at the CONTRACTOR's expense.

- END OF SECTION -

GENERAL REQUIREMENTS

SECTION 01010 – SUMMARY OF WORK

SECTION 01025 – MEASUREMENT AND PAYMENT

SECTION 01091 – REFERENCE STANDARDS

SECTION 01300 – SUBMITTALS

SECTION 01410 – TESTING AND INSPECTIONS

SECTION 01500 – TEMPORARY FACILITIES, CONTROLS, AND SERVICES

SECTION 01700 – CONTRACT CLOSEOUT

- END OF SECTION -

PART 1 - GENERAL

1.1 SUMMARY:

1.1.1 PROJECT NAME: 2025 WATER MAIN REPLACEMENT PROJECT AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT

1.1.2 PROJECT NUMBER: 501498-660181
PROJECT LOCATION: Louisville, Colorado

1.1.3 OWNER: City of Louisville

1.1.4 WORK INCLUDED: The Work consists of the demolition, water main replacement and water service line replacement, sanitary sewer backwater preventer valve installation, concrete replacement, asphalt patching, traffic control, incidentals and work appurtenant thereto on specified streets or within public property.

Water Scope of Work:

DESCRIPTION	UNIT	QUANTITY
12'' PVC WATER MAIN CLASS 235 DR 18	LF	102
8'' PVC WATER MAIN CLASS 235 DR 18	LF	2497
REMOVE FIRE HYDRANT ASSEMBLY	EA	3
FIRE HYDRANT ASSEMBLY	EA	6
FIRE HYDRANT EXTENSION (6")	EA	6
FIRE HYDRANT EXTENSION (12")	EA	6
12" 45 DEGREE BEND	EA	2
12”-8” REDUCER	EA	1
12" SOLID SLEEVE	EA	1
12"CAP	EA	1
GATE VALVE AND BOX (8”)	EA	11
8” x 8” x 8” SWIVEL TEE	EA	6
8” x 6” x 8” SWIVEL TEE	EA	6
8'' SOLID X SWIVEL ADAPTER	EA	8
8" 11 1/4 DEGREE BEND	EA	8
8'' SOLID SLEEVE	EA	13
4" CAP	EA	9
8" CAP	EA	5
ABANDON EXISTING VALVE AND BOX	EA	8
WATER SERVICE CONNECTION 3/4'' SHORT	EA	32
WATER SERVICE CONNECTION 3/4'' LONG	EA	24
REMOVE AND REPLACE 3/4" WATER SERVICE	EA	8

REMOVE AND REPLACE 3/4" CURB STOP AND BOX	EA	8
STRUCTURE BACKFILL (COMPLETE IN PLACE)	TN	225
POTHOLING	EA	93
24" VERTICAL CURB AND GUTTER	LF	29
4” CONCRETE	SF	140
6’-0" x 6" CURBWALK	LF	20
8” CONCRETE WITH FIBERMESH	SF	610
FLOW FILL	CY	61
HOT ASPHALT PATCH GRADE SX (6'')	SY	2000
HOT ASPHALT PATCH GRADE SX (9'')	SY	122
CONSTRUCTION ZONE TRAFFIC CONTROL	LS	1

Sewer Scope of Work:

DESCRIPTION	**UNIT**	**QUANTITY**
4" BACKWATER VALVE KIT	EA	4
SCHEDULE 40 PVC PIPE (4")	LF	40
SCHEDULE 40 PVC PIPE (6")	LF	40
SANITARY SEWER SERVICE PIPE SDR 35 (4")	LF	20
STRONG BACK COUPLING (4")	EA	16
FITTINGS SDR 35 (4")	EA	15
24" VERTICAL CURB AND GUTTER	LF	20
4" CONCRETE	SF	40
HOT ASPHALT PATCH GRADE SX (6")	SY	10
CAST IRON CLEAN OUT BOX AND COVER	EA	2
LANDSCAPE RESTORATION	LS	1
CONSTRUCTION ZONE TRAFFIC CONTROL	LS	1

SECTION 01025 - MEASUREMENT AND PAYMENT

1.1 GENERAL

A. Measurement and payment criteria applicable to (portions of) the Work performed under a unit price payment method.

B. Defect assessment and non-payment for rejected work.

1.2 AUTHORITY

A. Measurement methods delineated in the individual specification sections complements the criteria of this section. (In the event of conflict, the requirements of the individual specification section govern.)

B. Take all measurements and compute quantities. ENGINEER will verify measurements and quantities.

1.3 UNIT QUANTITIES SPECIFIED

A. Quantities indicated in the Bid Form are for bidding and contract purposes only. Quantities and measurements supplied or placed in the Work and verified by ENGINEER determine payment.

B. If the actual Work requires more or fewer quantities than those quantities indicated, provide the required quantities at the unit/lump sum prices contracted.

C. If the actual Work requires a change that is equal to an increase or decrease that is 25 percent (25%) or more of the Bid Price, then OWNER or CONTRACTOR may claim for a Contract Price adjustment.

D. The City reserves the right to remove work from the Contract. If an item is removed from the contract, no payment will be made for said item.

1.3.1 LUMP SUM SCHEDULES

A. There will be no measurement for lump sum items included in the lump sum schedule.

1.3.2 FORCE ACCOUNT – MINOR CONTRACT REVISIONS

A. Force account items include the Project Manager’s estimate for items included in the Contract. The estimated amounts marked with “AL” will be added to the total bid to determine the amount of performance and payment bonds. Force Account work shall be performed as directed and approved by the City’s Project Manager. This is not a lump sum bid item, but rather an allowance for work not reasonably anticipated in the above items.

B. Payment will be made in accordance with the General Conditions. If additional work as described above is not encountered, this item will not be used.

C. Force Account Descriptions

i. F/A Minor Contract Revisions – This work consists of minor work and approved by the Project Manager, which is not included in the Contract drawings or specifications, and is necessary to accomplish the scope of work of this contract.

1.4 MEASUREMENT OF QUANTITIES

A. Measurement by volume: Measured by cubic dimension using mean length, width, and height or thickness.

B. Measurement by area: Measured by square dimension, using mean length and width or radius.

C. Linear measurement: Measured by linear dimension, at the item centerline or mean chord.

D. Measurement by weight: The term “ton” will mean the short ton consisting of 2000 pounds avoirdupois.

Materials measured or proportioned by weight shall be weighed on accurate scales. Scales shall be accurate within the allowable tolerances as prescribed by State law. The scales shall be sealed by the measurement Standards Section of the Colorado Department of Agriculture at least once each year, each time the scales are relocated, and as often as ENGINEER may deem necessary. Scales shall be furnished by CONTRACTOR or CONTRACTOR may utilize commercial scales.

Scales shall be operated according to the Colorado Department of Agriculture’s regulations. Weighers, scales, scale tickets, scale house, and verification of the scale’s accuracy will not be measured and paid for separately but shall be included in the work.

CONTRACTOR may use either certified hopper scales or certified platform scales.

When platform scales are used to weigh vehicles carrying material paid for by weight, each vehicle shall be weighed by a certified weigher. Hopper scales used to directly measure material paid for by weight shall be operated by certified weighers and provide an accurate net weight.

The operator of each vehicle carrying material measured and paid for by weight shall obtain a scale ticket (certificate of correct weight) from the certified weigher and deliver the ticket to ENGINEER at the point of delivery of the material.

The scale ticket shall include the following information:

1. Project Number
2. Date
3. Ticket Number

4. Haul Unit Number
5. Gross weight
6. Tare Weight
7. Net Weight
8. Material Type
9. Certified Weigher's Name

1.5 PAYMENT

A. Payment includes: Full compensation for all required labor, products, tools, equipment, plant, transportation, services and incidentals; erection, application or installation of an item of the Work; overhead and profit.

B. Final payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities accepted by ENGINEER multiplied by the unit price for Work which is incorporated in or made necessary by the Work.

1.6 DEFECT ASSESSMENT

A. Replace the Work, or portions of the Work, not conforming to specified requirements.

1.7 NON-PAYMENT FOR REJECTED PRODUCTS

A. Payment will not be made for any of the following:

1. Products wasted or disposed of in a manner that is not acceptable.
2. Products determined as unacceptable before or after placement.
3. Products not completely unloaded from the transporting vehicle.
4. Products placed beyond the lines and levels of the required Work.
5. Products remaining on hand after completion of the Work.
6. Loading, hauling, and disposing of rejected Products.

2.0 PRODUCTS - Not Used

3.0 EXECUTION - Not Used

SECTION 01091 - REFERENCE STANDARDS

PART 1 - SUMMARY

1.1 SUMMARY:

1.1.1 WORK INCLUDED:

A. This Section contains a summary of industry-accepted and recognized standards published by trade associations, government, and institutional organizations, which are referred to in the various sections of these specifications or elsewhere in the Contract Documents.

B. Standards listed herein are included in the Contract Documents by this reference, and become a part of the Contract Documents to the same extent as though included in their entirety unless specific limitations are noted in the individual Specifications Sections.

C. Listings of reference standards include name and address of the organization publishing the standard, plus the full name and designator of each of the standards referenced herein.

D. If a publication date or edition number is listed with the reference standard, that publication date or edition number shall apply; otherwise, the publication date of edition number in effect at the Contract Date shall apply.

E. Inclusion of reference standards herein does not make the Engineer an agent of the publishing agency, nor does it obligate the Engineer to perform inspections required by or enforce rules or regulations contained in the reference standards.

1.2 REFERENCES:

1.2.1 RELATED DOCUMENTS: General Conditions, Supplementary Conditions, and applicable provisions of other Division 1 sections apply to this section.

1.2.2 PRECEDENCE OF REQUIREMENTS: In the event of a conflict between the requirements of a published reference standard and the specific requirements of the general conditions, supplementary conditions, or other Contract Documents, or between one reference standard and another reference standard, the more stringent requirements shall take precedence.

PART 2 - PRODUCTS - (Not Used)

PART 3 - EXECUTION

3.1.1 AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)

444 North Capital Street NW, Suite 225, Washington, DC 2002

M103 -- Mild to medium strength carbon-steel castings for general application

M105 -- Gray iron castings
M111 -- Zinc (Hot-Galvanized) coatings on products fabricated from rolled, pressed, and forged steel shapes, plates, bar, and strip
M183 -- Structural steel
T166 -- Bulk specific gravity of compacted bituminous mixtures

3.1.2 AMERICAN CONCRETE INSTITUTE (ACI)

P.O. Box 19150, Redford Station, Detroit, MI 48219
(313) 372-9800

ACI 211.1 -- Standard practice for selecting proportions for normal, heavyweight, and mass concrete
ACI 211.2 -- Standard practice for selecting proportions for structural lightweight concrete
ACI 301 -- Specifications for structural concrete for buildings
ACI 304 -- Recommended practice for measuring, mixing, transporting, and placing concrete
ACI 304.2R -- Placing concrete by pumping methods
ACI 305R -- Hot weather concreting
ACI 306R -- Cold weather concreting
ACI 315 -- Details and detailing of concrete reinforcement
ACI 318 -- Building codes requirements for reinforced concrete
Note: Reference to ACI 318 may be limited by more stringent requirements of local building code
ACI 347 -- Recommended practice for concrete formwork
ACI SP-66 -- ACI detailing manual (synopsis)

3.1.3 AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

1916 Race Street, Philadelphia, PA 19103
(215) 299-5585

ASTM A27 -- Specification for steel castings, carbon, for general application
ASTM A36 -- Standard specification for structural steel
ASTM A48 -- Specification for gray iron castings
ASTM A53 -- Specification for pipe, steel, black and hot-dipped, zinc-coated, welded and seamless
ASTM A82 -- Specifications for steel wire, plain, for concrete reinforcement.
ASTM A120 -- Specification for pipe, steel, black and hot-dipped zinc-coated (galvanized) welded and seamless, for ordinary uses
ASTM A123 -- Specification for zinc (hot dipped-galvanized) coatings on iron and steel products
ASTM A185 -- Specifications for steel welded wire, fabric, plain, for concrete reinforcement
ASTM A283 -- Specification for low and intermediate tensile strength carbon steel plates, shapes, and bars
ASTM A307 -- Specification for carbon steel externally threaded standard fasteners
ASTM A325 -- Specification for high-strength bolts for structural steel joints
ASTM A366 -- Specification for steel, carbon, cold-rolled sheet, commercial quality
ASTM A416 -- Specification for uncoated seven-wire stress-relieved steel strand for pre-stressed concrete
ASTM A421 -- Specification for uncoated stress-relieved wire for pre-stressed concrete

ASTM A446 -- Specification for steel sheet, zinc-coated (galvanized) by the hot-dip process, structural (physical) quality
ASTM A490 -- Specification for heat-treated, steel structural bolts, 150 ksi (1035 map) tensile strength
ASTM A500 -- Specification for cold-formed welded and seamless carbon steel structural tubing in rounds and shapes
ASTM A501 -- Specification for hot-formed welded and seamless carbon steel structural tubing
ASTM A525 -- Specification for general requirements for steel sheet, zinc-coated (galvanized) by the hot-dip process
ASTM A526 -- Specification for sheet steel, zinc-coated (galvanized) by the hot-dip process, commercial quality
ASTM A536 -- Specification for ductile iron castings
ASTM A568 -- Specification for general requirements for steel, carbon, and high-strength, low-alloy hot-rolled sheet and cold-rolled sheet
ASTM A570 -- Specification for hot-rolled carbon steel sheet and strip, structural quality
ASTM A572 -- Specification for high-strength low-alloy columbium-vanadium steels of structural quality
ASTM A588 -- Specification for high-strength low-alloy structural steel with 50 ksi (345MPa) minimum yield point to 4 inches thick
ASTM A611 -- Specification for steel, cold-rolled sheet, carbon, structural
ASTM A615 -- Specification for deformed and plain billet-steel bars for concrete reinforcement
ASTM A663 -- Specification for steel bars, carbon, merchant quality, mechanical properties
ASTM A775 -- Specification for epoxy-coated reinforcing steel bars
ASTM B32 -- Specification for solder metal
ASTM B88 -- Specification for seamless copper water tube
ASTM B209 -- Specification for aluminum and aluminum-alloy sheet and plate
ASTM B221 -- Specification for aluminum-alloy extruded bars, rods, wire, shapes, and tubes
ASTM C31 -- Methods of making and curing concrete test specimens in the field
ASTM C33 -- Specification for concrete aggregates
ASTM C36 -- Specification for gypsum wall board
ASTM C39 -- Test method for compressive strength of cylindrical concrete specimens
ASTM C42 -- Method of obtaining and testing drilled cores and sawed beams of concrete
ASTM C67 -- Method of testing brick and structural clay tile
ASTM C76 -- Specification for reinforced concrete culvert, storm drain, and sewer pipe
ASTM C79 -- Test method for gypsum sheathing board
ASTM C94 -- Specification for ready mixed concrete
ASTM C109 -- Test method for compressive strength of hydraulic cement mortars (using 2-inch or 50 mm cube specimens)
ASTM C110 -- Methods for physical testing of quicklime, hydrated lime, and limestone
ASTM C136 -- Method for sieve analysis of fine and coarse aggregates
ASTM C138 -- Test method for unit weight, yield, and air content (gravimetric) of concrete
ASTM C140 -- Method of sampling and testing concrete masonry units
ASTM C143 -- Test method for slump or Portland cement concrete
ASTM C144 -- Specification for aggregate for masonry mortar
ASTM C150 -- Specification for Portland cement

ASTM C171 -- Specification for sheet materials for curing concrete
ASTM C172 -- Method of sampling fresh concrete
ASTM C173 -- Test method for air content of freshly mixed concrete by the volumetric method
ASTM C207 -- Specification for hydrated lime for masonry purposes
ASTM C231 -- Test method for a content of freshly mixed concrete by the pressure method
ASTM C260 -- Specification for air entraining admixtures for concrete
ASTM C270 -- Specification for mortar for unit masonry
ASTM C309 -- Specification for liquid membrane-forming compounds for curing concrete
ASTM C330 -- Specification for lightweight aggregated for structural concrete
ASTM C425 -- Specification for compression joints for vitrified clay pipe and fittings
ASTM C476 -- Specification for grout for masonry
ASTM C478 -- Specification for precast reinforced concrete manhole sections
ASTM C494 -- Specification for chemical admixtures for concrete
ASTM C506 -- Specification for reinforced concrete arch culvert, storm drain, and sewer pipe
ASTM C507 -- Specification for reinforced concrete elliptical culvert, storm drain, or sewer pipe
ASTM C578 -- Specification for performed, cellular polystyrene thermal insulation
ASTM C612 -- Specification for mineral fiber block and board thermal insulation
ASTM C630 -- Specification of water-resistant gypsum backing board
ASTM C641 -- Test method for staining materials in lightweight concrete aggregates
ASTM C645 -- Specification for non-load (axial) bearing steel studs, runners (track), and furring channels for screw application of gypsum board
ASTM C665 -- Specification for mineral fiber blanket thermal insulation for light frame construction and manufactured housing
ASTM C672 -- Test method for scaling resistance of concrete surfaces exposed to deicing chemicals
ASTM C700 -- Specification for vitrified clay pipe, extra strength, standard strength, and perforated
ASTM C726 -- Specification for mineral fiber and mineral fiber, rigid cellular, polyurethane composite roof insulation board
ASTM C803 -- Test method for penetration resistance of hardened concrete
ASTM C805 -- Test method for rebound number of hardened concrete
ASTM C828 -- Recommended practice for low-pressure air test of vitrified clay pipe lines
ASTM C834 -- Specification for latex sealing compounds
ASTM C920 -- Specification for elastomeric joint sealants
ASTM C936 -- Specification for solid concrete interlocking paving units
ASTM D41 -- Specification for asphalt primer used in roofing and waterproofing
ASTM D312 -- Specification for asphalt used in roofing
ASTM D422 -- Test method for particle size analysis of soils
ASTM D448 -- Specification for standard sizes of coarse aggregate for highway construction
ASTM D698 -- Test method for moisture density relations of soils and soil-aggregate mixtures using 5.5-lb rammer and 12-inch drop
ASTM D1188 -- Test method for bulk specific gravity and density of compacted bituminous mixtures using paraffin-coated specimens

ASTM D1227 -- Specification for emulsified asphalt used as a protective coating for built-up roofing
ASTM D1556 -- Test method for density of soil in place by the sand-cone method
ASTM D1557 -- Method for moisture density relations of soils and soil-aggregate mixtures using 10-lb rammer and 18-inch drop
ASTM D1559 -- Test method for resistance to plastic flow of bituminous mixtures using marshal apparatus
ASTM D1667 -- Specification for flexible cellular materials - vinyl chloride polymers and copolymers (closed-cell vinyl)
ASTM D1751 -- Specification for preformed expansion joint fillers for concrete paving and structural construction (non-extruding and resilient bituminous types)
ASTM D1752 -- Specification for preformed sponge rubber and cork expansion joint fillers for concrete paving and structural construction
ASTM D1784 -- Specification for rigid poly (vinyl chloride) (PVC) compounds and chlorinated poly (vinyl chloride) (CPVC) compounds
ASTM D1785 -- Specification for poly (vinyl chloride) (PVC) pipe, schedules 40, 80, and 120
ASTM D2000 -- Classification for rubber products in automotive applications
ASTM D2167 -- Test method for density of soil in place by the rubber-balloon method
ASTM D2172 -- Test method for quantitative extraction of bitumen from bituminous paving mixtures
ASTM D2178 -- Specification for asphalt glass (felt) used in roofing and waterproofing
ASTM D2216 -- Method for laboratory determination of water (moisture) content of soil, rock, and soil-aggregate mixtures
ASTM D2241 -- Specification for poly (vinyl chloride) (PVC) plastic pipe (SDR-PR)
ASTM D2287 -- Specification for nonrigid vinyl chloride polymer and copolymer molding and extrusion compounds
ASTM D2487 -- Test method for classification of soils for engineering purposes
ASTM D2564 -- Specification for solvent cements for poly (vinyl chloride) (PVC) plastic pipe and fittings
ASTM D2729 -- Specification for poly (vinyl chloride) (PVC) sewer pipe and fittings
ASTM D2855 -- Recommended practice for making solvent cemented joints with poly (vinyl chloride) (PVC) pipe and fittings
ASTM D2898 -- Accelerated weathering of fire-retardant-treated wood for fire testing
ASTM D2922 -- Test method for density of soil and soil-aggregate in place by nuclear method
ASTM D2950 -- Test method for density of bituminous concrete in place by nuclear method
ASTM D3017 -- Test method for moisture content of soil and soil-aggregate in place by nuclear methods (shallow depth)
ASTM D3034 -- Specification for type PSM poly (vinyl chloride) (PVC) sewer pipe and fittings
ASTM D3909 -- Specification for asphalt roll roofing (glass mat) surfaced with mineral granules
ASTM D4253 -- Test method for maximum index density of soils using a vibratory table

ASTM D4254 -- Test methods for minimum index density of soils and calculation of relative density
ASTM D4318 -- Test method for liquid limit, plastic limit, plasticity index of soils
ASTM D4397 -- Specification for polyethylene sheeting for construction, industrial, and agricultural applications
ASTM E84 -- Test method for surface burning characteristics of building materials
ASTM E96 -- Test methods for water vapor transmission of materials
ASTM E136 -- Test method for behavior of materials in a vertical tube furnace at 750°C
ASTM E283 -- Test method for rate of air leakage through exterior windows, curtain walls, and doors
ASTM E329 -- Recommended practice for inspection and testing agencies for concrete, steel, and bituminous materials as used in construction
ASTM E331 -- Test method for water penetration of exterior windows, curtain walls, and doors by uniform static air pressure difference
ASTM E605 -- Test method for thickness and density of sprayed fire-resistive material applied to structural members
ASTM E759 -- Test method for effect of deflection of sprayed fire-resistive material applied to structural members
ASTM E760 -- Test method for effect of impact on bonding of sprayed fire-resistive material applied to structural members
ASTM E761 -- Test method for compressive strength of sprayed fire-resistive material applied to structural members
ASTM E859 -- Test method for air erosion of sprayed fire-resistive material applied to structural members
ASTM F567 -- Practice for installation of chain link fence
ASTM F679 -- Specification for poly (vinyl chloride) (PVC) large diameter plastic gravity sewer pipe and fittings

3.1.4 AMERICAN WATER WORKS ASSOCIATION (AWWA)
6666 W. Quincy Ave., Denver, CO 80235
(303) 794-7711

Specifications and Test Methods Specifically Referenced Herein.

3.1.5 PORTLAND CEMENT ASSOCIATION (PCA)
5420 Old Orchard Road, Skokie, IL 60077
(312) 966-6200

Design and Control of Concrete Admixtures.

3.1.6 CITY OF LOUISVILLE
Department of Public Works - Engineering Division
749 Main Street, Louisville, Colorado 80027
(303) 335-4608

Design and Construction Standards, 1994 Edition

3.1.7 COLORADO DEPARTMENT OF TRANSPORTATION (CDOT)
4201 E. Arkansas Avenue, Denver, CO 80222
(303) 757-9011

Standard Specification for Road and Bridge Construction, current Edition.

- END OF SECTION -

SECTION 01300 - SUBMITTALS

PART 1 - GENERAL

1.1 SUMMARY:

1.1.1 WORK INCLUDED:

A. This section contains a summary of submittals required by the Contract Documents, and establishes the general procedures and requirements for submittals.

B. Submittals covered under this section include, but are not necessarily limited to, schedules, notifications, reports, product data, shop drawings, samples, and miscellaneous data specifically prepared for the work by CONTRACTOR or any subcontractor, manufacturer, or supplier, to illustrate some portion of the work.

1.1.2 RELATED WORK: Specific requirements for submittals are included in the individual specification sections.

1.2 REFERENCES:

1 .2.1 RELATED DOCUMENTS: General conditions, supplementary conditions, and applicable provisions of Division 1 sections apply to this section.

1.3 DEFINITIONS:

1 .3.1 PRODUCT DATA: As used herein, the term "product data" includes standard printed information published by the manufacturer describing materials, products, systems, and installation instruction not specifically prepared for this project, other than designation of selections from among available choices printed.

1.3.2 SHOP DRAWINGS: As used herein, the term "shop drawings" includes specially prepared technical data forms including drawings, diagrams, performance curves, data sheets, schedules templates, patterns, reports, calculations, instructions, measurements and similar information not in standard printed form for application to more than one project. Supplier's standard component drawings may be submitted if they clearly show the exact items required for the work, in context with adjacent materials and with such relationships clearly shown. Shop drawings are not part of Contract Documents.

1 .3.3 SAMPLES: As used herein, the term "samples" includes fabricated and unfabricated physical examples of materials, products, and units of work; as complete units or smaller portions of units of work; either for limited visual inspection or, where in indicated, for more detailed testing and analysis.

1.3.4 MOCK-UPS: As used herein, the term "mock-ups" means special on-site of off-site forms of samples, which are too large or otherwise inconvenient for handling in transmittal or submittal form.

1.3.5 MISCELLANEOUS DATA: As used herein, the term "miscellaneous data" means various documents related directly to the work, including project notifications, photographs, survey data and reports, physical work records, statements of applicability, copies of certificates, bonds, quality testing and certifying reports, copies of industry standards, record drawings, field measurement data, operation and maintenance materials, overrun stock, security/protection/safety keys, and similar information, devices, materials, which are applicable to the work but not processed as shop drawings, product data, or samples.

1.4 QUALITY ASSURANCE:

1.4.1 GENERAL

A. No extension of time will be granted, nor will consideration be given to claims arising out of CONTRACTOR's failure to submit shop drawings, product data, samples, or related submittals which do not allow adequate lead time for Engineer's review, and also do not allow ample time for revision, resubmission, and subsequent review by Engineer as required.

1.4.2 PERFORMANCE: Promptly check each submittal for accuracy, completeness, and applicability, and review, approve, and submit - in sequence according to the submittal schedule so as to cause no delay in the work or in the work of the OWNER or any separate Contractor - all submittals required by the Contract Documents. Identify each submittal to include name of project, specification section, supplier, source, finish, and location of use in the project.

1.4.3 VERIFICATION:

A. By making a submittal to ENGINEER, CONTRACTOR represents that he has approved such submittals and has determined and verified:

1. The applicability of the submittal to the project,
2. all quantities and sizes of materials, detailed fabricating dimensions, temporary erection connections or closures, tolerances and the proper fit and mating with adjacent materials,
3. related field measurements and field construction criteria, and
4. information pertaining to fabrication process and techniques of construction and erection.

B. CONTRACTOR further represents that he has checked and coordinated information contained within such submittal with requirements of the work and of the Contract Documents.

1.4.4 RESPONSIBILITY: CONTRACTOR shall not be relieved of responsibility for any deviation from requirements of the Contract Documents by ENGINEER review of submittals, unless CONTRACTOR has specifically informed ENGINEER in writing of such deviation at the time of submission, and ENGINEER has taken no written exception to the specific deviation. CONTRACTOR shall not be relieved from responsibility for errors or omissions in submittals by ENGINEER's review of or action upon such submittals.

1.4.5 SUBMITTAL VALIDITY: Submittals submitted which are not required to be submitted or are submitted without CONTRACTOR's approval will not be processed by ENGINEER,

but will be returned to CONTRACTOR for his compliance with Contract Document requirements, in which event it shall be deemed that CONTRACTOR has not complied with requirements of the Contract Documents, and CONTRACTOR shall bear responsibility for all delays as if no submittals had been submitted.

1.4.6 COMMENCEMENT OF WORK: No portion of the work requiring submittals shall be commenced until submittals have been acted on by ENGINEER. All such portions of the work shall be in accordance with appropriate, required submittals. **All submittals shall be submitted to ENGINEER prior to commencement of project construction**.

1.5 GENERAL SUBMITTAL REQUIREMENTS:

1.5.1 SCHEDULING: Where appropriate in various required administrative submittals (listing of products, manufacturers, suppliers, subcontractors, and in the progress schedule), show principal work-related submittal requirements and time schedules for coordination and integration of submittal activity with related work.

1.5.2 COORDINATION AND SEQUENCING: Coordinate preparation and processing of submittals with performance of work so that the work will not be delayed by submittals. Coordinate and sequence different categories of submittals for the same work, and for interfacing units of work, so that one will not be delayed by coordination with another. No extension of time will be allowed because of failure to properly coordinate and sequence submittals.

1.5.3 PREPARATION OF SUBMITTALS: Provide permanent marking on each submittal to identify project, date, Contractor, subcontractor, submittal name, applicable specification section, and similar information to distinguish it from other submittals. Show evidence of CONTRACTOR's review by clearly exhibiting check marks and stamped approval marking acceptance and provide space for ENGINEER's and ENGINEER's consultant's review or action marking. Package each submittal appropriately for transmittal and handling.

1.5.4 SPECIFIC CATEGORY SUBMITTAL REQUIREMENTS: Except as otherwise indicated in individual specifications sections, comply with general requirements specified herein for each indicated submittal category. Furnish and process intermediate submittals, where required between initial and final, similar to initial submittals(s).

1.5.5 PROGRESS SCHEDULE: Refer to supplementary conditions for progress schedule requirements.

1.5.6 DAILY REPORTS: Furnish copies of each daily report prepared by CONTRACTOR's Project Superintendent to ENGINEER and the OWNER. Transmit reports on a daily basis.

1.5.7 SHOP DRAWINGS:

A. Furnish newly-prepared information, on reproducible sheets, with graphic information at accurate scale (except as otherwise indicated), with name of preparer (firm name) indicated thereon. Affix seal of Contractor's or fabricator's design engineer where applicable. Show all dimensions, and note which are based on field measurement. Identify materials and products in the work shown. Indicate compliance with standards, and special coordination requirements.

B. Where shop drawings are normally required, and where specifically called for in the specifications, submit to ENGINEER four (4) blueline or blackline prints of each shop drawing and/or schedule required. Two prints will be returned.

C. Subsequent submittal(s), if required for correction or confirmation of corrective items, shall be same as initial submittal except as otherwise requested by ENGINEER or specified in conditions of the contract.

D. Shop drawings and schedules will be reviewed for general conformance with the design concept contained within the Contract Documents.

E. Do not allow shop drawing copies into field without appropriate final markings by ENGINEER.

1.5.8 PRODUCT DATA:

A. Collect required data into one submittal for each unit of work or system. Mark each copy in a legible and reproducible manner to show which choices and options are applicable to the project; "highlighting" with colored markers not acceptable. Include manufacturer's standard printed recommendations for application and use, compliance with standards, application of labels and seals, notation of field measurements which have been checked, and special coordination requirements.

B. Do not submit product data, or allow its use on the project, until compliance with requirements of Contract Documents has been confirmed by CONTRACTOR. Submittals of product data are for information and record, unless otherwise indicated.

C. The initial submittal will be the only submittal required unless returned promptly by ENGINEER, marked with an action which indicated an observed noncompliance. Submit 4 copies, each marked or labeled with project name, date, Contractor, subcontractor, submittal name, applicable specification section, and similar information to distinguish it from other submittals. Provide sufficient space for ENGINEER’s action stamp. ENGINEER will retain two copies for himself and return the rest.

D. Do not proceed with installation of materials, products, or systems, until a copy of applicable product data is in the possession of the installer.

E. Maintain one set of product data for each submittal at the project site.

1.5.9 PUBLISHED STANDARDS: Where submittal of published standards is required, except where specified integrally with "Product Data" submittals, submit a single copy for ENGINEER’s use. Where workmanship at the project site and elsewhere is governed by published standards, furnish additional copies to fabricators, installers, and others involved in performance of the work.

1.5.10 CONSTRUCTION PHOTOGRAPHS: Unless otherwise provided in the Contract Documents, OWNER will arrange and pay for construction photographs, and/or videotapes.

PART 2- PRODUCTS - (Not Used)
PART 3 - EXECUTION

3.1 SCHEDULES:

3.1.1 SUBMITTAL SCHEDULE: The following scheduled is included as a checklist for convenience only, and may not include all submittals required. Failure to include submittals in this schedule does not relieve CONTRACTOR from providing submittals if required by individual specification sections.

General Requirements		
Section	Title	Submittals Required
1410	Testing and Inspections	N/A - City to provide Testing Services
1010	Notifications	• Door Hanger • Neighborhood Meeting Letter, • Plan for Notifying Trash and Bus companies.
1010	Photos/Videos	• Existing photos and videos of areas adjacent to concrete work prior to beginning work.
1700	Contract Closeout	Record documents, Certificates of Compliance, Certificates of Inspection, Warranties, Guaranties, Bonds, Insurance Certificates, Consent of Surety, Releases of Liens, List of subcontractors and suppliers Acknowledgment of date of commencement of warranties and guaranties
Technical Specifications		
Section	Title	Submittals Required
2000	PIPELINE EXCAVATION, BEDDING AND COMPACTION	Product Data, Samples, Gradation
2100	WATER MAIN REPLACEMENT	Product Data, Shop Drawings, Test Reports, Certificates, Resident-Business Notification,
2200	SANITARY SEWER REPLACEMENT	Product Data, Test Reports, Certificates of Compliance.

2400	CONCRETE	Product data, Concrete Mix Designs, Test Reports, Certificates of Compliance
2500	ASPHALT	Mix Design Certificates of Compliance, Product Data, Test Reports
2600	CONSTRUCTION ZONE TRAFFIC CONTROL	Traffic Control Plan, Method for Handling Traffic (MHT)
2800	LANDSCAPE RESTORATION	Product Data

- END OF SECTION-

PART 1 - SUMMARY:

1.1.1 WORK INCLUDED:

A. This section defines the responsibilities of the various agencies or parties performing testing and inspection services as specified herein or required by the Contract Documents.

B. Quality assurance testing and inspections will be provided by an independent testing and inspections agency selected and paid for by OWNER.

C. Cooperate with the selected testing and inspections agency and all others who may be responsible for testing and inspection of the work.

1.1.2 RELATED WORK: Specific testing and inspection requirements are described in the various sections of these specifications. Failure to list specific testing or inspection requirements does not relieve CONTRACTOR from providing all tests, which are indicated to be his responsibility, or from cooperating with the testing and inspections agency.

1.1.3 LIMITATION OF AUTHORITY: The testing and inspections agency is not authorized to release, revoke, or alter the requirements of the Contract Documents, or to approve or accept any portion of the work without ENGINEER's written consent.

1.2 REFERENCES:

1.2.1 RELATED DOCUMENTS: General conditions, supplementary conditions, and applicable provisions of other Division 1 Sections apply to this Section.

1.2.2 REFERENCE STANDARDS: Comply with the requirements of all reference standards, codes, ordinances, rules, and regulations contained in the various sections of these specifications, except where more stringent requirements are listed herein or otherwise required by the Contract Documents. A complete listing of applicable reference standards, including full name of publishing agency and date or number is contained in section 01091.

1.3 DEFINITIONS:

1.3.1 QUALITY ASSURANCE TESTS AND INSPECTIONS: All tests and inspections specified herein or elsewhere in the Contract Documents which are performed by an independent testing and inspections agency to determine compliance of materials, products, equipment, or completed work with the requirements of the Contract Documents.

1.3.2 CODE COMPLIANCE TESTS AND INSPECTIONS: Mandatory tests or inspections required by codes or ordinances, or other authorities having jurisdiction over the work.

1.3.3 CONTRACTOR'S CONVENIENCE TESTS AND INSPECTIONS: Tests or inspections informed exclusively for the CONTRACTOR's convenience or information.

1.3.4 RE-TESTING: Subsequent testing or inspections of the work or any portion of the work for which initial testing has indicated non-compliance with the Contract Documents or with applicable codes, ordinances, rules, and regulations.

1.4 SUBMITTALS:

1.4.1 TEST AND INSPECTION REPORTS: Copies of all test and inspection reports will be promptly delivered by the testing and inspections agency directly to OWNER and ENGINEER.

1.5 PAYMENT FOR TESTS AND INSPECTIONS:

1.5.1 INITIAL QUALITY ASSURANCE TESTS AND INSPECTIONS: Paid for by OWNER.

1.5.2 CODE COMPLIANCE TESTS AND INSPECTION: Paid for by CONTRACTOR**.**

1.5.3 CONTRACTOR'S CONVENIENCE TESTS AND INSPECTIONS: Paid for by CONTRACTOR.

1.5.4 ADDITIONAL OR ALTERNATIVE TESTS AND INSPECTIONS: Paid for by OWNER if the materials or work tested is found to be in compliance with the Contract Documents; otherwise paid for by CONTRACTOR.

1.5.5 RE-TESTING: Paid for by CONTRACTOR.

PART 2 - PRODUCTS - (Not Used)

PART 3 - EXECUTION

3.1 COOPERATION WITH TESTING AND INSPECTIONS AGENCY:

3.1.1 ACCESS TO THE WORK: Representatives of the testing and inspections agency or other legally constituted testing or inspections personnel shall have unrestricted access to the site and all other locations where the work is in progress, including borrow pits, batch plants, material yards, or other locations where materials are being obtained, fabricated, or stored.

3.1.2 FACILITIES FOR TESTING: Provide all necessary facilities required for testing and inspecting the work, including but not limited to, lifts, and suitable safe storage areas for freshly poured concrete test cylinders.

3.1.3 NOTIFICATION: Notify ENGINEER not less than forty-eight (48) hours prior to tentative date or time when testing and inspection services will be required. Re-confirm date and time not less than twenty-four (24) hours prior to time when such services will be required. ENGINEER will schedule testing and inspection agency.

3.2 TEST AND INSPECTION PROCEDURES:

3.2.1 GENERAL: Gathering of specimens or samples, measuring, and testing of all materials, products, or other work shall be performed according to the procedures of the referenced standard test method.

3.2.2 TAKING SPECIMENS: Unless otherwise indicated, all specimens and samples for testing will be taken by the testing and inspections agency personnel, either at the source of the material or at the site for work in progress.

3.2.3 DELIVERY OF SPECIMENS: Unless otherwise indicated, pick-up and delivery of specimens or samples to the testing and inspections agency's laboratory will be done by the agency's personnel. This includes concrete test cylinders, which have been stored on site for the initial curing period.

3.2.4 RE-TESTING: When initial tests or inspections indicate non-compliance of the work or any portion thereof, the non-complying portion shall be removed, replaced, or reworked (re-compacted in the case of subgrade, fill, or backfill material), and re-tested by the same agency performing the initial test or inspection. Do not proceed with additional work until the non-complying work has re-tested and found to be in compliance.

3.2.5 ADDITIONAL OR ALTERNATIVE TESTS:

A. OWNER and ENGINEER reserve the right to require additional or alternative tests or inspections of materials or work for which either has reason to believe may not be in compliance with the requirements of the Contract Documents.

B Examples of such additional tests may include, but are not limited to, additional sieve analysis of aggregates or granular fill material; additional field density tests of subgrade, fill, or backfill materials; additional slump tests of concrete as it is being placed; core tests of in-place structural concrete; load testing of concrete structures; x-ray or other non-destructive testing of structural steel; and field-cut test strips of membrane roofing.

C. Payment for additional or alternative tests will be determined as provided herein above.

3.3 SCHEDULES:

3.3.1 SCHEDULE OF QUALITY CONTROL TESTS AND INSPECTIONS:

A. The following schedule is included for information only, as a convenience to CONTRACTOR, and is not intended to limit the number and type of tests to be performed by the testing and inspections agency.

B. Carefully examine the individual sections of these specifications for additional or complete quality control testing and inspections requirements. Failure to include any test or inspection in this schedule does not relieve CONTRACTOR from the testing and inspection requirements contained in the individual sections of the specifications.

C. This schedule includes quality control tests and inspections only, which will be performed by the selected testing and inspections agency and paid for as previously mentioned in Article 13 of the General Conditions. Code compliance tests and inspections, Contractor's convenience tests and inspections, and additional or alternative tests and inspections requested by the City are not included.

Section	Description of Test or Inspection	Test Qty/Interval
Earthwork	Fill and Backfill Material (Lab): Moisture Content – ASTM D2216	1 each test/soil type

	Max. Index Density – ASTM D4253 Moisture/Density Rel. – ASTM D698 or ASTM D1557 Plasticity Index – ASTM D4318 Particle Size Analysis – ASTM D422 Field Density Tests – ASTM D1556, D2167, or D2922 Field Moisture Tests – ASTM D3017 Subgrade: Fill, Bldg., and Paved Areas: Backfill: Site and Misc. Fills:	 One/500 sf One/500 sf per lift One/250 sf/2 ft vert. One/500 sf/1 ft vert.
Utilities	Bedding Material (Lab): Particle Size Analysis – ASTM D422 Backfill Material (Lab): Moisture/Density Relation – ASTM D698 or D1557 Field Density Tests – ASTM D1556, D2167, or D2922 Field Moisture Tests – ASTM D3017:	1/soil type 1/soil type One/150 lf @ trench bottom at 2 ft vert. intervals, and at top
Paving	Asphalt Content – ASTM D2172 Asphalt Gradation – ASTM C136 Bulk Specific Gravity – ASTM D1188 AASHTO T166 Marshall Test – ASTM D1559	One each/500 tons, min. 2/day
Concrete	Concrete Quality: Fresh Concrete – ASTM C172 Compressive Strength – ASTM C39 Unit Weight – ASTM C138 Slump – ASTM C142 Air Content – ASTM C173 or C231 Hardened Concrete (failings only): ASTM C42, C803, C805, or load tests	One each/50 CY or major fraction thereof; min. 1/pour One each/truck As determined by ENGINEER

- END OF SECTION -

PART 1 - GENERAL

1.1 SUMMARY:

1.1.1 WORK INCLUDED: Provide temporary utilities and miscellaneous temporary facilities required during construction, including installation, maintenance, and removal upon completion of the work.

1.2 REFERENCES:

1.2.1 RELATED DOCUMENTS:

A. General conditions, supplementary conditions, and applicable provisions of other Division 1 sections apply to this section.

B. Section 02600 Construction Zone Traffic Control.

PART 2 - PRODUCTS

2.1 TEMPORARY CONSTRUCTION FACILITIES:

2.1.1 STORAGE STRUCTURES: Provide enclosed, weather tight storage facilities for materials and equipment, which require protection from the elements.

2.1.2 SANITARY FACILITIES:

A. Provide temporary toilet facilities for duration of work, for use by any and all employees engaged in the work. Comply with requirements of applicable codes, regulations, laws, and ordinances.

B. **ENGINEER shall approve locations of all temporary toilet facilities for the work. CONTRACTOR shall instruct any and all employees engaged in the work to use the designated temporary toilet facility or other approved toilet facility**.

2.1.3 FENCES AND BARRICADES:

A. Provide temporary orange fences along the property owner side of the construction limits as shown on the plans. In the remaining work areas and streets provide traffic control devices as may be specified elsewhere within certain sections of the specifications, and as may be required by local code or authority and as required to maintain safety of work place.

B. Maintain temporary fences, bulkheads, and other protective facilities in good condition throughout the term of the work. Remove at completion of the work and replace or repair all work damaged thereby. Repair or replace on a daily basis safety facilities or devices damaged or removed during the course of the work.

2.1.4 CONSTRUCTION STAGING

A. Coordinate construction activities with the property and business owners to minimize impacts.

B. CONTRACTOR will not be permitted to operate trucks and equipment or store equipment and supplies on private property unless he has written permission to do so.

2.1.5 STORAGE OF MATERIALS/EQUIPMENT, ETC.

A. CONTRACTOR shall not be allowed to park any vehicles (including worker's personal vehicles) or equipment in any on-street parking spaces that are open to traffic.

B. No construction trailers or storage yards will be allowed in the work area and neighborhood. CONTRACTOR shall locate trailer/storage yard subject to approval of ENGINEER.

2.3 TEMPORARY CONTROLS

A. Noise Control. Equip construction machinery and vehicles with practical sound and muffling devices and operate in a manner to minimize noise consistent with efficient performance of the work.

B. Dust Control.

1. Take reasonable measures to prevent unnecessary dust.

2. Moisten dirt roads used for transportation and haul with water or apply a chemical dust suppressant to control dust.

3. Cover dusty material in transit when necessary to prevent blowing.

C. Pollution Control.

1. Prevent the pollution of drains and watercourses by sanitary wastes, sediment, debris, and other substances resulting from construction activities.

2. Retain all spent oils, hydraulic fluids, and other petroleum fluids in containers for disposal off the site.

3. Do not perform equipment maintenance or fueling within 50 feet of any water course.

D. Erosion Control.

1. Take such measures as are necessary to prevent erosion of soil on the site and adjacent properties that might result from construction activities.

2. Provide temporary materials such as hay bales, sand bags, or plastic sheets, to prevent the erosion of banks or excavation where runoff may be increased or concentrated due to construction activities.

3. Take such measures as are necessary to prevent soil, mud, debris, etc. from entering the storm sewer system. CONTRACTOR shall be responsible for cleaning existing storm sewer downstream of the site if any soil, mud, debris, etc. enter it from the site. ENGINEER shall inspect system prior to final inspection and required cleaning will be noted on the punch list. CONTRACTOR shall clean to the satisfaction of ENGINEER.

2.4 OTHER TEMPORARY SERVICES:

2.4.1 CLEANING:

A. Provide daily sweeping and cleanup of dust, debris, litter, trash containers, and other items required to maintain a clean, orderly, and accessible site. Hauling of debris to legal dump or landfill is required daily as a minimum.

B. Provide daily sweeping or cleaning of adjacent streets and walkways as required to prevent accumulation of mud, dust, or soil thereon from construction traffic and personnel.

C. CONTRACTOR shall at his/her own expense clean up and remove all refuse and unused materials of any kind resulting from the work. Upon failure to do so within seventy-two (72) hours after request by ENGINEER, the work may be done by OWNER and the cost thereof be charged to CONTRACTOR and deducted from his/her final estimate.

2.4.2 ACCESS RAMPS:

A. During resurfacing activities (milling and leveling) provide hard surface ramps as directed by ENGINEER to access private property, public property, pedestrian crossings, streets, and alleys.

2.4.3 OWNER-MAINTAINED FACILITIES:

A. During construction activities including but not limited to demolition, unclassified excavation, subgrade cement treatment, and asphalt paving, CONTRACTOR shall protect from damage all OWNER-maintained facilities. Street signage, storm sewer inlets and manholes, sanitary sewer manholes, water main valve boxes, and water service curb stop boxes damaged or backfilled during construction shall be repaired, replaced, and made accessible. Backfilled manholes and inlets shall be cleaned immediately. Upon failure to repair, replace, or clean OWNER-maintained facilities promptly, the work may be completed by OWNER and the cost thereof be charged to CONTRACTOR and deducted from his/her final estimate.

PART 3 - EXECUTION

3.1 MAINTENANCE OF TEMPORARY FACILITIES:

3.1.1 TEMPORARY STRUCTURES: Maintain temporary offices, storage facilities, sanitary facilities, fire protection facilities, trailers, fences, barricades, and other structures in a neat, orderly appearance for the duration of the work.

3.1.2 REMOVAL OF TEMPORARY FACILITIES: Remove temporary facilities and structures from the site as soon as practicable or when no longer required by CONTRACTOR or subcontractors. Restore areas occupied by temporary facilities to like new condition, or to match surrounding areas.

PART 4 - MEASUREMENT AND PAYMENT

4.1 SUMMARY

4.1.1 Temporary Facilities and Controls and Services will not be paid for separately but shall be included in the work.

- END OF SECTION -

SECTION 01700 - CONTRACT CLOSEOUT

1.0 GENERAL

2.0 PRODUCTS

3.0 EXECUTION

4.0 MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 SUMMARY:

1.1.1 WORK INCLUDED: This section includes administrative procedures and closeout submittals required at substantial completion and final completion of the work.

1.1.2 RELATED WORK: Additional specific requirements are specified in the various sections of these specifications.

1.2 REFERENCES:

1.2.1 RELATED DOCUMENTS: General conditions, supplementary conditions, and applicable provisions of these specifications apply to this section.

1.3 DEFINITIONS:

1.3.1 CONTRACT CLOSEOUT: Contract closeout is defined to include general administrative requirements near the end of the contract time, in preparation for final acceptance, final payment, normal completion of the contract, occupancy by OWNER, and similar actions evidencing completion of the work. Time of closeout is directly related to substantial completion, and therefore may be either a single time period for the entire work or a series of time periods for individual parts of the work which have been certified as substantially complete at different dates. That time variation, if any, shall be applicable to other provisions of this section.

1.4 SUBMITTALS

1.4.1 RECORD DOCUMENTS - GENERAL:

A. Additional or specific requirements for record documents are indicated in individual sections of these specifications.

B. Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire resistive location.

C. Provide access to record documents for ENGINEER’s or OWNER’s reference during normal working hours.

D. Review record documents for progress and accuracy at regularly scheduled job progress meetings.

E. Upon completion of mark-up, submit record documents to the ENGINEER for the OWNER’s records.

1.4.2 RECORD DRAWINGS (FIELD SET):

A. Maintain at the project site during the course of the work a white print set (blueline or blackline) of contract drawings and shop drawings in clean, undamaged condition, with mark-ups of actual installations which vary substantially form the work as originally shown.

B. Mark whichever drawing is most capable of showing "field" condition fully and accurately; however, where shop drawings are used for mark up, record a cross reference at corresponding locations on the contract drawings.

C. Mark changes or deviations with red erasable pencil. Where feasible, use other colors to distinguish between variations in separate categories of work.

D. Record new information, which is recognized to be of importance to the OWNER but was not shown on either the contract drawings or shop drawings. Give particular attention to concealed work which would be difficult to measure and record at a later date. Note related change order or field order numbers where applicable.

E. Record all deviations in sizes, locations, or other features of work from the Contract Documents. It shall be possible, using these drawings, to correctly and easily locate, identity, and establish sizes of all piping, directions of flow, and other features of the work which will be concealed in finished work or underground.

F. Establish locations of concealed and underground work by accurate dimensions to column lines or permanent walls, locating all bends or turns, and properly referencing invert elevations and rates of fall.

G. Organize record drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates, and other identification on cover of each set.

1.4.3 FINAL RECORD DRAWINGS (AS-BUILTS):

A. Submit the final marked-up field copy of record drawings to the ENGINEER for review and approval.

1.4.4 RECORD SPECIFICATIONS:

A. Maintain one copy of specifications, including addenda, change orders, and similar modifications issued in printed form during construction. Mark up variations of substance in actual work in comparison with text of specifications and modifications as issued.

B. Give particular attention to substitutions, selection of options, and similar information on work where it is concealed or cannot otherwise be readily discerned at a later date by direct observation.

C. Note related record drawing information and product data where applicable.

D. Label record specifications with the words "RECORD COPY" and the date submitted, stamped or neatly printed in block letters on the cover.

1.4.5 OTHER DOCUMENTS: Submit the required number of the following additional documents, which may be required by the various specification sections:

1) Certificates of compliance with applicable reference standards.
2) Certificates of inspection or other evidence of compliance with governmental agencies or authorities having jurisdiction over the work.
3) Warranties, guarantees, and bonds.

4) Certificates of insurance for products and completed operations.
5) Written consent of surety.
6) Evidence of payment and release of liens for subcontractors, suppliers, and other goods and services (Claims Release Forms).
7) Certificate of substantial completion form signed by CONTRACTOR accepting the date of substantial completion.
8) Final Inspection report signed by CONTRACTOR.
9) Certificate of final completion signed by the CONTRACTOR acknowledging the date of final completion.
10) Operations and maintenance manuals as required.

PART 2 - PRODUCTS - (Not Used)

PART 3 - EXECUTION

3.1 PREREQUISITES:

3.1.1 FINAL COMPLETION: Prior to requesting the City's final observation for certification of final acceptance and payment, as required by the general and supplemental conditions, complete the following:

1) Submit final payment request with final releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required. List known exceptions to final completion of the work, if any, in the request.

2) Submit updated final statement, accounting for additional changes to contract sum.

3) Submit certified copy of final punch list of itemized work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance.

4) Submit written consent of surety.

5) Revise and submit evidence of final, continuing insurance coverage complying with insurance requirements.

PART 4 - MEASUREMENT AND PAYMENT

4.1 SUMMARY

4.1.1 Contract Closeout will not be paid for separately but shall be included in the work.

- END OF SECTION -

TECHNICAL SPECIFICATIONS

SECTION 02000 – PIPELINE EXCAVATION, BEDDING AND COMPACTION TECH SPECIFICATIONS

SECTION 02070 – DEMOLITION

SECTION 02100 – WATER MAIN REPLACEMENT TECHNICAL SPECIFICATIONS

SECTION 02200 – SANITARY SEWER REPLACEMENT TECHNICAL SPECIFICATIONS

SECTION 02400 – CONCRETE TECHNICAL SPECIFICATIONS

SECTION 02500 – ASPHALT TECHNICAL SPECIFICATIONS

SECTION 02600 – CONSTRUCTION ZONE TRAFFIC CONTROL

SECTION 02800 – LANDSCAPE RESTORATION

2025 WATER MAIN REPLACEMENT PROJECT

AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT

City *of* Louisville

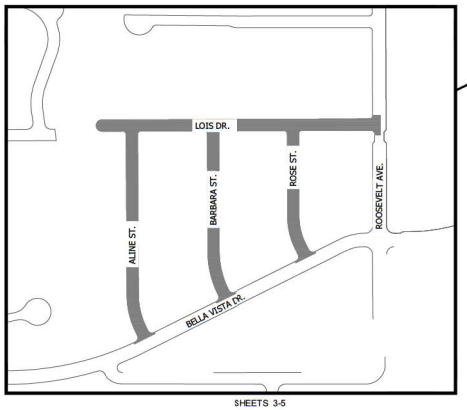
LEGEND

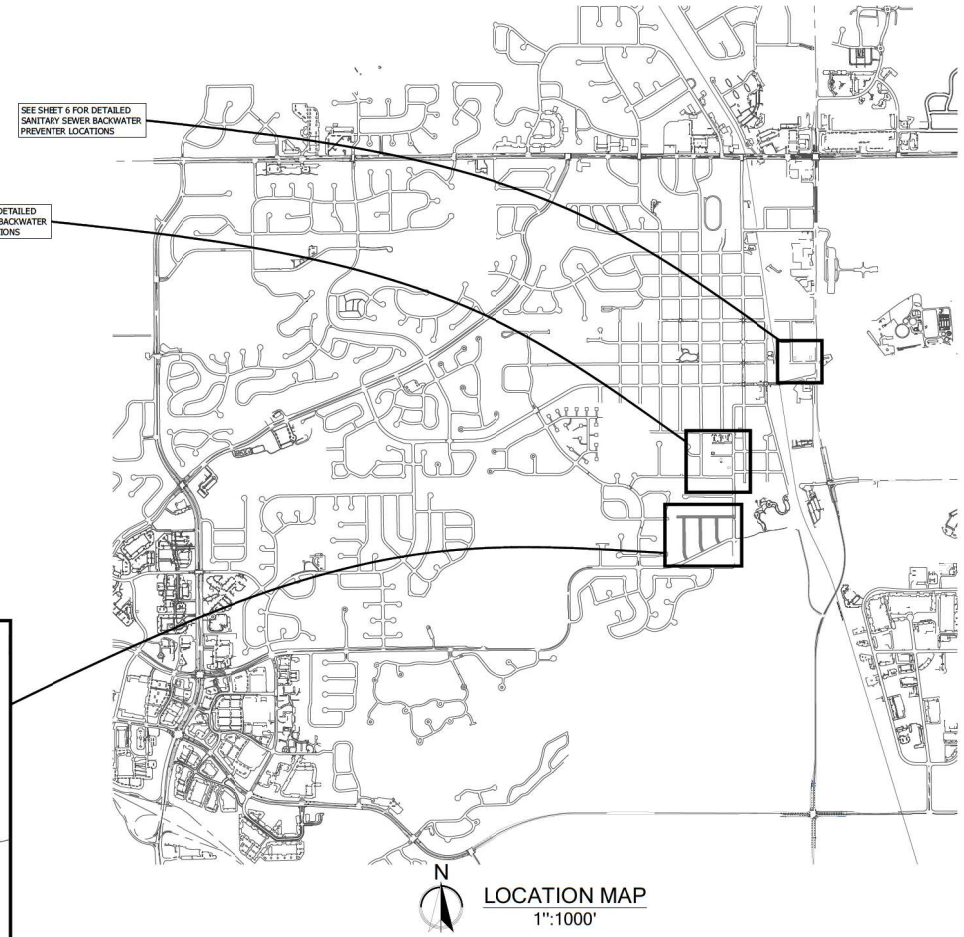
EXISTING:

- WALK
- CURB & GUTTER
- ROW
- W — WATER MAIN & VALVE
- FIRE HYDRANT
- SS — SANITARY SEWER & MANHOLE
- INLET
- ST — STORM SEWER & MANHOLE
- G — GAS LINE
- E — ELECTRIC LINE
- FO — FIBER OPTIC LINE
- CTV — CABLE TV
- UTILITY POLE

PROPOSED CONCRETE:

- 4" CONCRETE
- 8" CONCRETE
- CURBWALK
- CURB AND GUTTER
- ASPHALT PATCH





LOCATION MAP
1":1000'

SHEET INDEX

SHEET NO.	SHEET TITLE
1	COVER SHEET
2	NOTES
3	LOIS DR.
4	ALINE ST. AND BARBARA ST.
5	ROSE ST.
6	SANITARY SEWER BACKWATER PREVENTER VALVE LOCATIONS
7	DETAILS
8	DETAILS
9	SANITARY SEWER BACKWATER PREVENTER VALVE DETAILS

WATER LEGEND

PROPOSED:

- 90° BEND
- 45° BEND
- 22.5° BEND
- 11.25° BEND
- FIRE HYDRANT
- CROSS
- TEE W/ THRUST BLOCK
- GATE VALVE
- CAP
- REDUCER
- SOLID SLEEVE
- SOLID X SWIVEL ADAPTER

1" = 1'

1' 0 0.5' 1' 2'

GRAPHIC SCALE IN FEET

City of Louisville
COLORADO - SINCE 1878

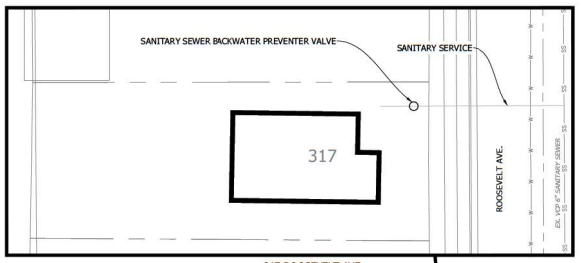
DESIGN BY: MW
DRAWN BY: RH
CHECKED BY: MW
APPROVED BY: TT
ISSUE DATE: 05/15/2025
REVISIONS:

COVER SHEET
2025 WATER MAIN REPLACEMENT PROJECT
AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT

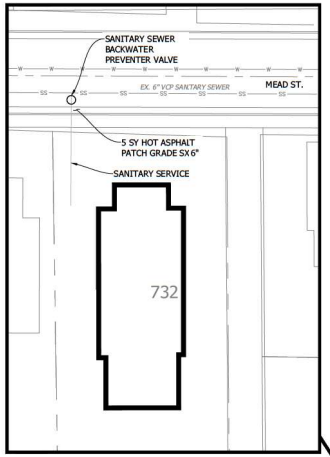
SHEET 1 OF 9

G:\CIPS\CIPS_2025\2025 WATER MAIN REPLACEMENT PROJECT-SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT\DRAWINGS\SHEETS\2025 WATER REPLACEMENT_COVER.DWG

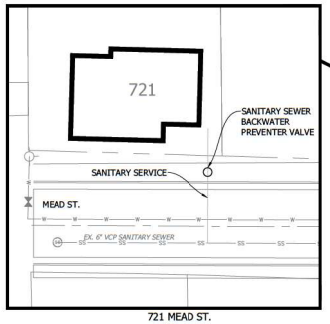
SANITARY SEWER BACKWATER PREVENTER VALVE LOCATIONS



317 ROOSEVELT AVE.
SCALE: 1"=20'



732 MEAD ST.
SCALE: 1"=20'



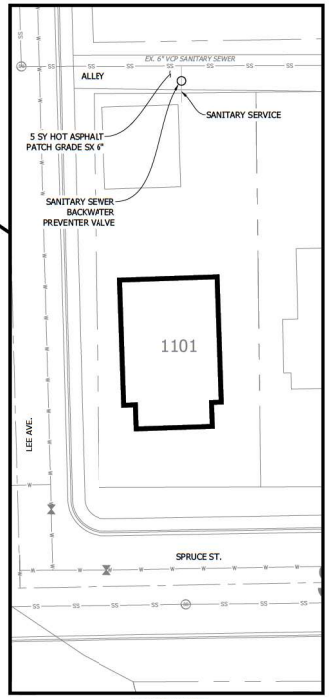
721 MEAD ST.
SCALE: 1"=20'

N

LOCATION MAP
1":100'

NOTES:

1. SEE SHEET 9 FOR BACKFLOW PREVENTER VALVE DETAILS.
2. BACKFLOW PREVENTER TO BE INSTALLED AT LOCATION DETERMINED BY THE ENGINEER.
3. ENGINEER SHALL FIELD VERIFY LOCATION OF SANITARY SEWER SERVICE.



1101 SPRUCE ST.
SCALE: 1"=20'

City of Louisville
COLORADO - SINCE 1878

DESIGN BY: CF
DRAWN BY: RH
CHECKED BY: RH
APPROVED BY: RH
ISSUE DATE: 05/15/2025
REVISIONS:

SANITARY SEWER BACKWATER PREVENTER VALVE LOCATIONS
2025 WATER MAIN REPLACEMENT PROJECT
AND SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT

SHEET 6 OF 9

G:\CIPS\CIPS_2025\2025 WATER MAIN REPLACEMENT PROJECT-SANITARY SEWER BACKWATER PREVENTER VALVE PROJECT\DRAWINGS\SHEETS\2025 WATER REPLACEMENT_SANITARY BACKFLOW PREVENTERS.DWG

SUBJECT: **WATER TREATMENT PLANT CHLORINE DIOXIDE REPLACEMENT**

i. **RESOLUTION NO. 44, SERIES 2025 – A RESOLUTION APPROVING AN AGREEMENT WITH BARNARD STRUCTURES, INC.**

ii. **RESOLUTION NO. 45, SERIES 2025 – A RESOLUTION APPROVING A PROPOSAL AND PURCHASE AGREEMENT WITH PURELINE TREATMENT SYSTEMS**

iii. **RESOLUTION NO. 46, SERIES 2025 – A RESOLUTION APPROVING AN AGREEMENT WITH JVA, INC. FOR CONSTRUCTION MANAGEMENT SERVICES**

DATE: **JULY 8, 2025**

PREPARED BY: **JUSTIN FERRON, P.E., CIVIL ENGINEER III**

PRESENTED BY: **KURT KOWAR, P.E., PUBLIC WORKS DIRECTOR**

SUMMARY:
Staff recommends the approval of a construction contract with Barnard Structures Inc. in the amount of $196,100 along with a 20% contingency of $40,000, Pureline Treatment Systems for purchase of a chlorine dioxide feed unit in the amount of $127,978, and JVA Inc. for construction management services in the amount of $27,000 along with a 15% contingency of $4,000 for the Sid Copeland (SCWTP) and Howard Berry (HBWTP) Water Treatment Plants chlorine dioxide feed systems replacement and associated improvements.

BACKGROUND / PRIOR DISCUSSIONS:
This project is a critical component of the City's water treatment process and will ensure safe and great tasting water.

The chlorine dioxide generation equipment provides an effective oxidant and disinfectant during the treatment process. However, the generation equipment has experienced ongoing reliability issues, including multiple component failures and extended downtime due to repair delays and parts availability.

In 2022, a different chlorine dioxide unit by manufacturer Pureline was pilot tested at the HBWTP. During the test, an unrelated but adjacent fire occurred in the HBWTP chemical building. As a result of the fire, the City was required to purchase the piloted unit. The Pureline system has since demonstrated superior performance and operational reliability. Based on this success, a second pilot unit has been temporarily installed at SCWTP and is performing well.

In May of 2024 engineering consultant JVA Inc. (JVA) was awarded a contract to design the permanent installations as well as securing approval from the Colorado Department of Environmental and Public Health (CDPHE). The design was completed in December of 2024 with CDPHE approval received in March of 2025.

The construction bid documents were completed in April of 2025 and publicly advertised on April 23rd and April 30th. Bids were received on May 9th and summarized as follows:

Contractor	SCWTP Installation	HBWTP Installation	Total
Barnard Structures Inc.	$100,620	$95,480	$196,100
Glacier Construction Co.	$113,600	$114,000	$227,600
GSE Construction Company Inc.	$137,600	$118,300	$255,900

Staff recommend Barnard Structures Inc. as the lowest responsive bidder based upon staff review of bid line items, adherence to bid requirements, and contractor reference checks.

ANALYSIS:
The existing chlorine dioxide generation equipment has experienced several component failures and staff have had difficulty in obtaining replacement parts in a reasonable time frame. This equipment is a critical part of the water treatment disinfection process as well as minimizing potential taste and odor issues.

This project recommends proceeding with the permanent installation of the Pureline chlorine dioxide generation at HBWTP, purchasing and installing an additional unit for SCWTP, and awarding a construction management support contract to JVA.

Efficiency and cost savings were found by: combining design work for replacements, having a single CDPHE permit process, and a single installation contract for construction rather than separating over multiple years.

2025 COUNCIL WORK PLAN:
This project is included in the City's current Capital Improvement Program and supports the 2025 Council Work Plan under Core Services. It is also aligned with the Utility Master Plan.

FISCAL IMPACT:
Budgeted?: **Yes**

Projected Funding

Description	Account	Budget Amount
Total Budget (2024, 2025 & 2026)	501498-640167	$700,000

Projected Expenses

Description	Amount
Engineering Design and Permitting (approved in 2024)	($50,000)
SCWTP Unit Purchase - Pureline	($127,978)
Construction for HBWTP and SCWTP – Barnard	($196,100)
Contingency (20%)	($40,000)
Construction Management – JVA	($27,000)
Contingency (15%)	($4,000)
Total Expenses:	**($445,078)**
Remaining Funds	**$254,922**

This project was budgeted across three years (FY2024-26) under account 501498-640167 with a total budget of $700,000. $50,000 was allocated in 2024 for design work, $150,000 for 2025 for HBWTP installation, and $500,000 in 2026 for purchasing a new unit and installation at SCWTP.

By advancing the SCWTP portion into 2025, significant project savings can be realized. Staff were able to combine the design and permitting, reducing the cost of the engineering. Staff were also able to secure 2024 pricing for the SCWTP replacement unit. Lastly, the combined construction results in reduced mobilization costs and consolidated contractor overhead.

The project will require an increase in funding for 2025 in the amount of $245,078 that will result in an ultimate budget reduction or savings of $254,922. This funding adjustment will require a budget amendment for 2025. The existing water fund has adequate reserves to accommodate moving these funds forward.

ALTERNATIVE(S):

Alternative disinfection technologies, such as ozone systems, were considered but determined to be cost prohibitive. These systems would require significantly larger capital investment, expanded treatment facilities, more complex permitting, and higher long-term operational and energy costs.

RECOMMENDATION:

Staff recommends City Council approval of a construction contract with Barnard Structures Inc. in the amount of $196,100 along with a 20% contingency of $40,000 (item 7.C.i), a purchase agreement with Pureline Treatment Systems for a chlorine dioxide feed unit in the amount of $127,978 (item 7.C.ii), and a consultant service contract with JVA Inc. for construction management services in the amount of $27,000 along with a 15% contingency of $4,000 (item 7.C.iii) for the SCWTP and HBWTP chlorine dioxide feed systems replacement, authorize staff to execute change orders for project contingency, and authorize the Mayor, City Manager, Public Works Director and City Clerk to sign and execute contract documents on behalf of the City.

ATTACHMENT(S):

1. Resolution No. 44, Series 2025
2. Bernard Structures Inc. Construction Contract
3. Resolution No. 45, Series 2025
4. Pureline Treatment Systems Purchase Proposal
5. Resolution No. 46, Series 2025
6. JVA Construction Management Contract

RESOLUTION NO. 44
SERIES 2025

A RESOLUTION APPROVING AN AGREEMENT WITH BARNARD STRUCTURES, INC.

WHEREAS, an Agreement has been proposed between the City and Barnard Structures, Inc. for the Howard Berry and the Sid Copeland Water Treatment Plants Chlorine Dioxide Feed Systems Replacement Project (the "Project"); and

WHEREAS, by this resolution the City Council desires to approve the Agreement and to authorize additional contingency for the Project.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO:

Section 1. The City Council hereby approves the Agreement by and between the City of Louisville and Barnard Structures, Inc. for the Project (the "Agreement") in substantially the same form as the copy of such Agreement accompanying this Resolution.

Section 2. The City Council hereby approves an additional twenty percent (20%) contingency in the amount of $40,000. The City Manager and/or Public Works Director are authorized to execute change orders to the Agreement in a total amount not to exceed $40,000 if deemed necessary for the Project.

Section 3. The Mayor and City Clerk are hereby authorized to execute the Agreement on behalf of the City, and the Mayor is hereby further authorized to negotiate and approve such revisions to the Agreement as the Mayor determines are necessary or desirable for the protection of the City, so long as the essential terms and conditions of the Agreement are not altered.

PASSED AND ADOPTED this 8th day of July, 2025.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Genny Kline, Interim City Clerk

AGREEMENT

THIS AGREEMENT is made and entered into this **8th** day of **July** in the year 2025 by and between:

CITY OF LOUISVILLE, COLORADO
(hereinafter called OWNER)

and

Barnard Structures Inc.
(hereinafter called CONTRACTOR)

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows.

ARTICLE 1. WORK

CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

PROJECT: HOWARD BERRY AND SID COPELAND WATER TREATMENT PLANTS CHLORINE DIOXIDE FEED SYSTEMS REPLACEMENT
PROJECT NUMBER: 501498-640167

ARTICLE 2. CONTRACT TIMES

2.1 The CONTRACTOR shall substantially complete all work by and within **180 Consecutive Contract Days** after the date when the Contract Time commences to run. The Work shall be completed and ready for final payment in accordance with paragraph 14.13 of the General Conditions within **240 Consecutive Contract Days** after the date when the Contract Times commence to run. The Contract Times shall commence to run on the day indicated in the Notice to Proceed.

2.2 LIQUIDATED DAMAGES. The OWNER and the CONTRACTOR agree and recognize that time is of the essence in this contract and that the OWNER will suffer financial loss if the Work is not substantially complete by the date specified in paragraph 2.1 above, plus any extensions thereof allowed in accordance with the Article 12 of the General Conditions. OWNER and CONTRACTOR also agree that such damages are uncertain in amount and difficult to measure accurately. Accordingly, the OWNER and CONTRACTOR agree that as liquidated damages, and not as a penalty, for delay in performance the CONTRACTOR shall pay the OWNER **FIVE HUNDRED DOLLARS ($500)** for each and every **Contract Day** and portion thereof that expires after the time specified above for substantial completion of the Work until the same is finally complete and ready for final payment. The liquidated damages herein specified shall only apply to the CONTRACTOR's delay in performance, and shall not include litigation or attorneys' fees incurred by the OWNER, or other incidental or consequential damages suffered by the OWNER due to the CONTRACTOR's performance. If the OWNER charges liquidated damages to the CONTRACTOR, this shall not preclude the OWNER from commencing an action against the CONTRACTOR for other actual harm resulting form the CONTRACTOR's performance, which is not due to the CONTRACTOR's delay in performance.

ARTICLE 3. CONTRACT PRICE

3.1 The OWNER shall pay in current funds, and the CONTRACTOR agrees to accept in full payment for performance of the Work, subject to additions and deductions from extra and/or omitted work and determinations of actual quantities as provided in the Contract Documents, the Contract Price of **one hundred and ninety six thousand and one hundred dollars (<u>$196,100)</u>** and <u>00</u>/100 as set forth in the Bid Form of the CONTRACTOR dated **<u>5/9/2025</u>**.

As provided in paragraph 11.9 of the General Conditions estimated quantities are not guaranteed, and determinations of actual quantities and classification are to be made by ENGINEER as provided in paragraph 9.10 of the General Conditions. Unit prices have been computed as provided in paragraph 11.9 of the General Conditions.

ARTICLE 4. PAYMENT PROCEDURES

CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by OWNER as provided in the General Conditions.

4.1 PROGRESS PAYMENTS. OWNER shall make progress payments on the basis of CONTRACTOR's Applications for Payment as recommended by ENGINEER, on or about the third Wednesday of each month during construction as provided below. All progress payments will be on the basis of the progress of the Unit Price Work based on the number of units completed as provided in the General Conditions.

4.1.1.1 Prior to Substantial Completion, progress payments will be made in the amount equal to 90 percent of the completed Work, and/or 90 percent of materials and equipment not incorporated in the Work (but delivered, suitably stored and accompanied by documentation satisfactory to OWNER as provided in 14.2 of the General Conditions), but in each case, less the aggregate of payments previously made and such less amounts as ENGINEER shall determine, or OWNER may withhold, in accordance with paragraph 14.7 of the General Conditions.

If Work has been 50 percent completed as determined by ENGINEER, and if the character and progress of the Work have been satisfactory to OWNER, OWNER may determine that as long as the character and progress of the Work remain satisfactory to them and no claims have been made by Subcontractors or material suppliers for unpaid work or materials, there will be no additional retainage on account of Work completed in which case the remaining progress payments prior to Substantial Completion may be in an amount equal to 100 percent of the Work completed.

Nothing contained in this provision shall preclude the OWNER and CONTRACTOR from making other arrangements consistent with C.R.S. 24-91-105 prior to contract award.

4.2 FINAL PAYMENT. Upon final completion and acceptance of the Work in accordance with paragraph 14.13 of the General Conditions, OWNER shall pay the remainder of the Contract Price as provided in said paragraph 14.13 of the General Conditions.

ARTICLE 5. CONTRACTOR'S REPRESENTATIONS

In order to induce OWNER to enter into this Agreement CONTRACTOR makes the following representations:

5.1 CONTRACTOR has examined and carefully studied the Contract Documents, (including the Addenda listed in paragraph 6.10) and the other related data identified in the Bidding Documents including "technical".

5.2 CONTRACTOR has inspected the site and become familiar with and is satisfied as to the general, local and site conditions that may affect cost, progress, performance or furnishing of the Work.

5.3 CONTRACTOR is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress and furnishing of the Work.

5.4 CONTRACTOR has carefully studied all reports of exploration and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions relating to surface or subsurface structures at or contiguous to the site (Except Underground facilities) which have been identified in the General Conditions as provided in paragraph 4.2.1 of the General Conditions. CONTRACTOR accepts the determination set forth in paragraph 4.2 of the General Conditions. CONTRACTOR acknowledges that such reports and drawings are not Contract Documents and may not be complete for CONTRACTOR's purposes. CONTRACTOR acknowledges that OWNER and ENGINEER do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Contract Documents with respect to such reports, drawings or to Underground Facilities at or contiguous to the site. CONTRACTOR has conducted, obtained and carefully studied (or assume responsibility for having done so) all necessary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences and procedures of construction to be employed by CONTRACTOR and safety precautions and programs incident thereto. CONTRACTOR does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary for the performance and furnishing of the Work at the Contract Price, within the Contract Times and in accordance with the other terms and conditions of the Contract Documents.

5.5 CONTRACTOR has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities. No additional examinations, investigations, explorations, tests, reports, studies or similar information or data in respect of said Underground Facilities are or will be required by CONTRACTOR in order to perform and furnish the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 4.3 of the General Conditions.

5.6 CONTRACTOR is aware of the general nature of work to be performed by OWNER and others at the site that relates to the Work as indicated in the Contract Documents.

5.7 CONTRACTOR has correlated the information known to CONTRACTOR, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests studies and data with the Contract Documents.

5.8 CONTRACTOR has given ENGINEER written notice of all conflicts, errors, ambiguities or discrepancies that CONTRACTOR has discovered in the Contract Documents and the written

resolution thereof by ENGINEER is acceptable to CONTRACTOR, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing the Work.

ARTICLE 6. CONTRACT DOCUMENTS

The Contract Documents, which constitute the entire agreement between OWNER and CONTRACTOR concerning the Work, are all written documents, which define the Work and the obligations of the Contractor in performing the Work and the OWNER in providing compensation for the Work. The Contract Documents include the following:

6.1 Invitation to Bid

6.2 Instruction to Bidders

6.3 Bid Form

6.4 This Agreement

6.5 General Conditions

6.6 Supplementary Conditions – N/A

6.7 General Requirements

6.8 Technical Specifications

6.9 Drawings

6.10 Change Orders, Addenda and other documents which may be required or specified including:

6.10.1 Addenda No. **0** to **1** exclusive
6.10.2 Documentation submitted by CONTRACTOR prior to Notice of Award.
6.10.3 Schedule of Subcontractors/References
6.10.4 Anti-Collusion Affidavit
6.10.5 Certification of EEO Compliance
6.10.6 Contractor's Pre-Contract Certification Regarding Employing Illegal Aliens
6.10.7 Notice of Award
6.10.8 Performance Bond
6.10.9 Labor and Material Payment Bond
6.10.10 Certificates of Insurance
6.10.11 Notice to Proceed
6.10.12 Contractor's Proposal Request
6.10.13 Contractor's Overtime Request
6.10.14 Field Order
6.10.15 Work Change Directive
6.10.16 Change Order
6.10.17 Application for Payment
6.10.18 Certificate of Substantial Completion
6.10.19 Claim Release
6.10.20 Final Inspection Report
6.10.21 Certificate of Final Completion
6.10.22 Guarantee Period Inspection Report

6.11 The following which may be delivered or issued after the Effective Date of the Agreement and are attached hereto: All Written Amendments and other documents amending, modifying, or supplementing the Contract Documents pursuant to paragraphs 3.5 and 3.6 of the General Conditions.

6.12 In the event of conflict between the above documents, the prevailing document shall be as follows:

1. Permits from other agencies as may be required.

2. Special Provisions and Detail Drawings.

3. Technical Specifications and Drawings. Drawings and Technical Specifications are intended to be complementary. Anything shown or called for in one and omitted in another is binding as if called for or shown by both.

4. Supplementary Conditions.

5. General Conditions.

6. City of Louisville Design and Construction Standards.

7. Reference Specifications.

In case of conflict between prevailing references above, the one having the more stringent requirements shall govern.

There are no Contract Documents other than those listed above in this Article 6. The Contract Documents may only be amended, modified or supplemented as provided in paragraphs 3.5 and 3.6 of the General Conditions.

ARTICLE 7. MISCELLANEOUS

7.1 Terms used in this Agreement, which are defined in Article 1 of the General Conditions, shall have the meanings indicated in the General Conditions.

7.2 No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment no assignment will release or discharge that assignor from any duty or responsibility under the Contract Documents.

7.3 OWNER and CONTRACTOR each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect to all covenants, agreements and obligations contained in the Contract Documents.

ARTICLE 8. OTHER PROVISIONS

IN WITNESS WHEREOF, OWNER and CONTRACTOR have signed this Agreement in duplicate. One counterpart each has been delivered to OWNER and CONTRACTOR. All portions of the Contract Documents have been signed, initialed or identified by OWNER and CONTRACTOR.

This Agreement will be effective on **July 8, 2025**.

OWNER: CITY OF LOUISVILLE, COLORADO

By: _____
Christopher M. Leh, Mayor

(CORPORATE SEAL)

Attest: _____
Genny Kline, City Clerk

Address for giving notices:

749 Main Street
Louisville, Colorado
80027

Attention: Justin Ferron, P.E.

CONTRACTOR: Barnard Structures, Inc.

By: _____
Mike Barnard, President

(CORPORATE SEAL)

Attest: _____
Phil Grow, PM

Address for giving notices:

4096 Cheyenne Dr.
Larkspur, Colorado 80118

Attention: Mike Barnard

ADDENDUM NO. 1
to the
BIDDING AND CONTRACT DOCUMENTS
for the
CITY OF LOUISVILLE, COLORADO
HOWARD BERRY & SID COPELAND WATER TREATMENT PLANTS
CHLORINE DIOXIDE FEED SYSTEMS REPLACMENT PROJECT

TO: ALL HOLDERS OF BIDDING AND CONTRACT DOCUMENTS

DATE: May 7, 2025

The following changes, additions, and/or deletions are hereby made part of the Bidding and Contract Documents for the City of Louisville, Colorado, **Howard Berry and Sid Copeland Water Treatment Plants Chlorine Dioxide Feed Systems Replacement Project.**

The bidder shall acknowledge receipt of the Addendum on the Bid Form.

CHANGES TO SPECIFICATIONS

Addendum Number	Specification Section/ Sheet Number/Location	Addendum Item
AD1-1	Drawing Sheet G1.0	**Change** "Ikawi" **To** "Iwaki"
AD1-2	Drawing Sheet G1.0	**Add** "NOTE: CONTRACTOR TO ACQUIRE ONE (1) IWAKI IX-B015TCN PUMP AND ONE (1) GRUNDFOS CMBE-1-44 PUMP"
AD1-3	Specification 11321, page 3	**Add** "Contractor to work with Manufacturer for startup of PureLine HP-40 Chlorine Dioxide Generators. The City is coordinating with the Manufacturer to be onsite during startup"
AD1-4	Drawing Sheet P1.1 & P2.1	**Add** To Hydrogen vent through roof: "OR CITY APPROVED EXISTING PENETRATION TO ATMOSPHERE"

END OF ADDENDUM NO. 1

PROPOSAL FOR

City of Louisville

Howard Berry & Sid Copeland Water Treatment Plants

Chlorine Dioxide Feed Systems Replacement

Barnard Structures Inc.
4096 Cheyenne Drive
Larkspur CO 80118
303-347-0175

Website: https://www.barnardstructures.com
Contact: Mike Barnard
Email: bsi.mbarnard@gmail.com

BID FORM

PROJECT: HOWARD BERRY AND SID COPELAND WATER TREATMENT PLANTS CHLORINE DIOXIDE FEED SYSTEMS REPLACEMENT
PROJECT NUMBER: 501498-640167
OWNER: CITY OF LOUISVILLE, COLORADO

THIS BID IS SUBMITTED TO: THE CITY OF LOUISVILLE, COLORADO

1. The undersigned BIDDER proposes and agrees, if this Bid is accepted, to enter into an Agreement with OWNER in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Contract Price and within the Contract Time indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.

2. BIDDER accepts all of the terms and conditions of the Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid Security. This Bid will remain subject to acceptance for sixty days after the day of Bid opening. BIDDER will sign and submit the Agreement with the Bonds and other documents required by the Bidding Requirements within ten days after the date of OWNER's Notice of Award.

3. In submitting this Bid, BIDDER represents, as more fully set forth in the Agreement, that:

   (a) BIDDER has examined copies of all the Bidding Documents and of the following Addenda receipt of all which is hereby acknowledged: (List Addenda by Addendum Number and Date):

Date	Number
5-8-2025	Addendum 1

   (b) BIDDER has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance or furnishing of the Work.

   (c) BIDDER has studied carefully all reports and drawings of subsurface conditions and drawings of physical conditions which are identified in the General Conditions as provided in paragraph 4.2, and accepts the determination set forth in paragraph 4.2 of the General Conditions. BIDDER has inspected the site and has obtained conducted and carefully studied (or assumes responsibility for obtaining and carefully studying) all examinations, investigations, explorations, tests and studies which pertain to the subsurface or physical conditions at the site or otherwise may affect the cost, progress, performance or furnishing of the Work as BIDDER considers necessary for the performance or furnishing of the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 4.2 of the General Conditions; and no additional examinations, investigations, explorations, tests, reports or similar information or data are or will be required by BIDDER for such purpose.

(d) BIDDER has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities. No additional examinations, investigations, explorations, tests, reports or similar information or data in respect of said Underground Facilities are or will be required by BIDDER in order to perform and furnish the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of Contract Documents, including specifically the provisions of paragraph 4.3 of the General Conditions.

(e) BIDDER has correlated the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.

(f) BIDDER has given ENGINEER written notice of all conflicts, errors, ambiguities or discrepancies that BIDDER has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to BIDDER, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which this Bid is submitted.

(g) This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; BIDDER has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; BIDDER has not solicited or induced any person, firm or corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for himself any advantage over any other Bidder or over OWNER.

4. BIDDER will complete the Work in accordance with Contract Documents for the following price(s):

SCHEDULE OF UNIT PRICES

PROJECT: HOWARD BERRY AND SID COPELAND WATER TREATMENT PLANTS CHLORINE DIOXIDE FEED SYSTEMS REPLACEMENT
PROJECT NUMBER: 501498-640167
OWNER: CITY OF LOUISVILLE, COLORADO

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
1	Installation of Chlorine Dioxide Feed System at Howard Berry WTP as described in the contract documents	LS	1	$ N/A	$ 95,480.00
2	Installation of Chlorine Dioxide Feed System at Sid Copeland WTP as described in the contract documents	LS	1	$ N/A	$ 100,620.00

BASE BID PRICE (Items 1 + Item 2): $ 196,100.00
(figures)

Unit Prices have been computed in accordance with paragraph 11.9.2 of the General Conditions.

BIDDER acknowledges that quantities are not guaranteed and final payment will be based on actual quantities determined as provided in the Contract Documents.

5. BIDDER agrees that the Work;

   will be substantially complete and completed and ready for final payment in accordance with paragraph 14.13 of the General Conditions on or before the dates or within the number of Contract Days indicated in the Agreement.

   BIDDER accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified in the Agreement.

6. The following documents are attached to and made a condition of this Bid:

   (a) Required Bid Security;

   (b) A list of Subcontractors and other persons and organizations proposed to perform the Work are required to be identified on the Schedule of Subcontractors and submitted in this Bid;

   (c) Anti-Collusion Affidavit; and

   (d) If BIDDER is a partnership, a list of all partners, their addresses, and their interest and role in the partnership business.

7. Communications concerning this Bid shall be addressed to:
   The address of BIDDER indicated below.

   4096 Cheyenne Drive

   Larkspur CO 80118

8. Terms used in this Bid, which are defined in the General Conditions of the Construction Contract included as part of the Contract Documents, have the meanings assigned to them in the General Conditions.

SUBMITTED on May 9th, 2025.

If BIDDER is:

An Individual

By _____
(Individual's Name)

(SEAL)

doing business as _____

Business address: _____

_____

_____

Phone No.: _____

A Partnership

By _____
(Firm Name)

(SEAL)

_____
(General Partner)

Business address: _____

_____

_____

Phone No.: _____

A Corporation

By Barnard Structures Inc.
(Corporation Name)

Colorado
(State of incorporation)

By Mike Barnard
(Name of person authorized to sign)

President
(Title)

(CORPORATE SEAL)

Attest Lauren Rickard
(Secretary)

Business address: 4096 Cheyenne Drive, Larkspur CO 80118

Phone No.: 303-347-0175

Date of Qualification to do business: March 1st, 1998

A Joint Venture

By
(Name)

(Address)

By
(Name)

(Address)

Phone Number and Address for receipt of official communications

(Each joint venturer must sign. The manner of signing for each individual, partnership and corporation that is a party to the joint venture should be in the manner indicated above.)

Bid Bonds

BID BOND

BIDDER (Name and Address):

Barnard Structures, Incorporated
4096 Cheyenne Dr.
Larkspur, CO 80118

SURETY (Name and Address of Principal Place of Business):

The Gray Casualty & Surety Company
1625 West Casuseway Approach
Mandeville, LA 70471

OWNER (Name and Address):

City of Louisville
749 Main Street
Louisville, CO 80027

BID:

BID DUE DATE: May 9th, 2025
PROJECT (Brief Description Including Location):
Sid Copeland Water Treatment Plant (SCWTP) & Howard Berry Water Treatment Plant (HBWTP) Chlorine Dioxide Feed Systems Replacement

BOND:

BOND NUMBER: N/A
DATE: (Not later than Bid Due Date): April 30, 2025
PENAL SUM: Five Percent of Total Bid Amount

IN WITNESS WHEREOF, Surety and Bidder, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Bid Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

BIDDER

Barnard Structures, Incorporated (Seal)
Bidder's Name and Corporate Seal

By: Mike Barnard
Mike Barnard Signature and Title President

Attest: Melanie Barnard
Signature and Title Melanie Barnard, Witness

SURETY

The Gray Casualty & Surety Company (Seal)
Surety's Name and Corporate Seal

By: Chris Ramirez
Chris Ramirez Signature and Title Attorney-In-Fact
(Attach Power of Attorney)

Attest: Lana Ramirez
Signature and Title Lana Ramirez, Witness

Note: (1) Above addresses are to be used for giving requiring notice.
(2) Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

Minick & Company, Inc.
04/30/2025 17:36 238233602674

THE GRAY INSURANCE COMPANY
THE GRAY CASUALTY & SURETY COMPANY

GENERAL POWER OF ATTORNEY

Bond Number: N/A Bid bond **Principal:** Barnard Structures, Incorporated

Project: Sid Copeland Water Treatment Plant (SCWTP) & Howard Berry Water Treatment Plant (HBWTP) Chlorine Dioxide Feed Systems Replacement

KNOW ALL BY THESE PRESENTS, THAT The Gray Insurance Company and The Gray Casualty & Surety Company, corporations duly organized and existing under the laws of Louisiana, and having their principal offices in Metairie, Louisiana, do hereby make, constitute, and appoint: **Dick Minick and Chris Ramirez of Albuquerque, New Mexico jointly and severally** on behalf of each of the Companies named above its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver, for and on its behalf and as its deed, bonds, or other writings obligatory in the nature of a bond, as surety, contracts of suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract of suretyship executed under this authority shall exceed the amount of $25,000,000.00.

This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of both The Gray Insurance Company and The Gray Casualty & Surety Company at meetings duly called and held on the 26th day of June, 2003.

"RESOLVED, that the President, Executive Vice President, any Vice President, or the Secretary be and each or any of them hereby is authorized to execute a power of Attorney qualifying the attorney named in the given Power of Attorney to execute on behalf of the Company bonds, undertakings, and all contracts of surety, and that each or any of them is hereby authorized to attest to the execution of such Power of Attorney, and to attach the seal of the Company; and it is

FURTHER RESOLVED, that the signature of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be binding upon the Company now and in the future when so affixed with regard to any bond, undertaking or contract of surety to which it is attached.

IN WITNESS WHEREOF, The Gray Insurance Company and The Gray Casualty & Surety Company have caused their official seals to be hereinto affixed, and these presents to be signed by their authorized officers this 4th day of November, 2022.

THE GRAY INSURANCE COMPANY SEAL

By: Michael T. Gray
Michael T. Gray
President
The Gray Insurance Company

Cullen S. Piske
President
The Gray Casualty & Surety Company

THE GRAY CASUALTY & SURETY COMPANY SEAL

State of Louisiana
ss:
Parish of Jefferson

On this 4th day of November, 2022, before me, a Notary Public, personally appeared Michael T. Gray, President of The Gray Insurance Company, and Cullen S. Piske, President of The Gray Casualty & Surety Company, personally known to me, being duly sworn, acknowledged that they signed the above Power of Attorney and affixed the seals of the companies as officers of, and acknowledged said instrument to be the voluntary act and deed, of their companies.

Leigh Anne Henican
Notary Public
Notary ID No. 92653
Orleans Parish, Louisiana

Leigh Anne Henican
Notary Public, Parish of Orleans State of Louisiana
My Commission is for Life

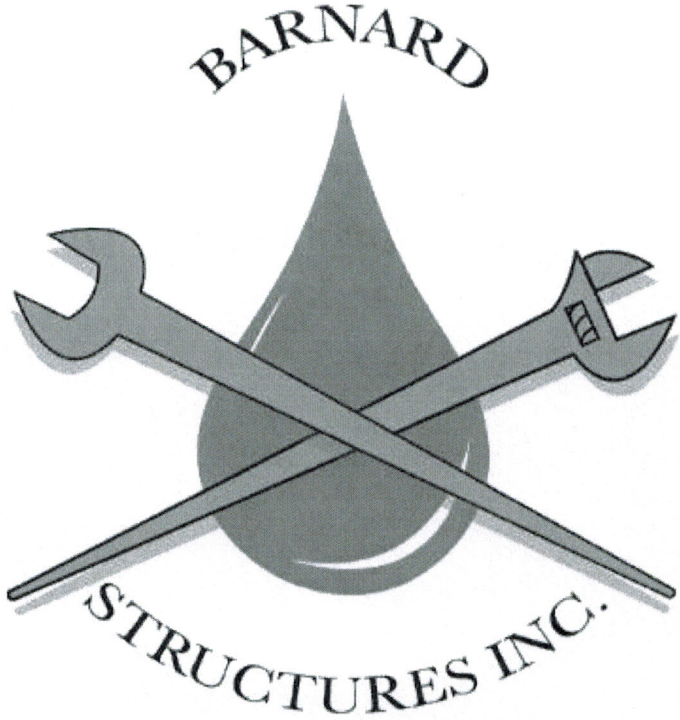
I, Mark S. Manguno, Secretary of The Gray Insurance Company, do hereby certify that the above and forgoing is a true and correct copy of a Power of Attorney given by the companies, which is still in full force and effect. IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Company this 30th day of April , 2025 .

I, Leigh Anne Henican, Secretary of The Gray Casualty & Surety Company , do hereby certify that the above and forgoing is a true and correct copy of a Power of Attorney given by the companies, which is still in full force and effect. IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Company this 30th day of April , 2025 .

THE GRAY INSURANCE COMPANY SEAL

THE GRAY CASUALTY & SURETY COMPANY SEAL

Subcontractors & References



SCHEDULE OF SUBCONTRACTORS AND REFERENCES

PROJECT: HOWARD BERRY AND SID COPELAND WATER TREATMENT PLANTS CHLORINE DIOXIDE FEED SYSTEMS REPLACEMENT
PROJECT NUMBER: 501498-640167
OWNER: CITY OF LOUISVILLE, COLORADO

This Bid is based on subcontracting certain portions of the work to subcontractors as listed below.

Name: Tower Electric Inc. Telephone No. 303-690-0235
Address: 8925 E Nichols Ave.
City: Centennial State: CO Zip Code: 80112
Services/equipment to be provided: Electrical

Name: Telephone No.
Address:
City: State: Zip Code:
Services/equipment to be provided:

Name: Telephone No.
Address:
City: State: Zip Code:
Services/equipment to be provided:

Provide three (3) references that include the last two years *(attach additional sheets as needed).*

Name: Jon Regaurd Telephone No. 719-499-1334
Address: 654 Beacon Light Rd
City: Monument State: CO Zip Code: 80132
Services/equipment provided for:
Jon is the Head water operator for the town of monument, we have done multiple projects with him involving water infrastructure

Name: Larry Watters Telephone No. 719-243-4518
Address: PO Box 9007
City: Woodland Park State: CO Zip Code: 80866
Services/equipment provided for:
Larry is the head water operator for the City of Woodland Park, we have done numerous projects Involving water infrastructure

Name: Doug Schwenke Telephone No. 719-243-3195
Address: 5540 Tech Center Dr
City: Colorado Springs State: CO Zip Code: 80919
Services/equipment provided for: BSI has been doing RESPEC (previously JDS Hydro) Projects for over 20 years, Doug (Owner) and the rest of the engineering staff are references for an abundance of projects done for them

ANTI-COLLUSION AFFIDAVIT

PROJECT: HOWARD BERRY AND SID COPELAND WATER TREATMENT PLANTS CHLORINE DIOXIDE FEED SYSTEMS REPLACEMENT
PROJECT NUMBER: 501498-640167
OWNER: CITY OF LOUISVILLE, COLORADO

I hereby attest that I am the person responsible within my firm for the final decision as to the price(s) and amount of this Bid or, if not, that I have written authorization, enclosed herewith, from that person to make the statements set out below on his or her behalf of my firm.

I further attest that:

1. The price(s) and amount of this bid have been arrived at independently, without consultation, communication or agreement for the purpose or with the effect of restricting competition with any other firm or person who is a BIDDER or potential prime BIDDER.
2A. Neither the price(s) nor the amount of this Bid have been disclosed to any other firm or person who is a BIDDER or potential prime BIDDER on this project, and will not be so disclosed prior to bid opening.
2B. Neither the prices nor the amount of the Bid of any other firm or person who is a BIDDER or potential prime BIDDER on this project have been disclosed to me or my firm.
3A. No attempt has been made to solicit, cause or induce any firm or person who is BIDDER or potential prime BIDDER to refrain from bidding on this project, or to submit a Bid higher than the Bid of this firm, or any intentionally high or noncompetitive Bid or other form of complementary Bid.
3B. No agreement has been promised or solicited for any other firm or person who is a BIDDER or potential prime BIDDER on this project to submit an intentionally high, noncompetitive or other form of complementary bid on this project.
4. The Bid of my firm is made in good faith and not pursuant to any consultation, communication, agreement or discussion with, or inducement or solicitation by or from any firm or person to submit any intentionally high, noncompetitive or other form of complementary bid.
5. My firm has not offered or entered into a subcontract or agreement regarding the purchase or sale of materials or services from any firm or person, or offered, promised or paid cash or anything of value to any firm or person, whether in connection with this or any other project, in consideration for an agreement or promise by any firm or person to refrain from bidding or to submit any intentionally high, noncompetitive or other form of complementary bid or agreeing or promising to do so on this project.
6. My firm has not accepted or been promised any subcontract or agreement regarding the sale of materials or services to any firm or person, and has not been promised or paid cash or anything of value by any firm or person, whether in connection with this or any other project, in consideration for my firm's submitting any intentionally high, noncompetitive or other form of complementary bid, or agreeing or promising to do so, on this project.
7. I have made a diligent inquiry of all members, officers, employees, and agents of my firm with responsibilities relating to the preparation, approval or submission of my firm's bid on this project and have been advised by each of them that he or she has not participated in any communication, consultation, discussion, agreement, collusion, or other conduct inconsistent with any of the statements and representations made in this affidavit.
8. I understand and my firm understands that any misstatement in this affidavit is and shall be treated as a fraudulent concealment from the OWNER of the true facts relating to submission of bids for this contract.

I DECLARE UNDER PENALTY OF PERJURY IN THE SECOND DEGREE, AND ANY OTHER APPLICABLE STATE OR FEDERAL LAWS THAT THE STATEMENTS MADE ON THIS DOCUMENT ARE TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

CONTRACTOR'S FIRM OR COMPANY NAME		SECOND CONTRACTOR'S FIRM OR COMPANY NAME (IF JOINT VENTURE)	
Barnard Structures Inc			
BY:	Mike Barnard	BY:	
TITLE:	President	TITLE:	
DATE:	May 9th, 2025	DATE:	

SWORN BEFORE ME THIS 7 DAY OF May, 2025

NOTARY PUBLIC: _____ MY COMMISSION EXPIRES: Aug 24, 2028

TREVOR DREILING
NOTARY PUBLIC - STATE OF COLORADO
NOTARY ID 20244032671
MY COMMISSION EXPIRES AUG 29, 2028

CERTIFICATION OF EEO COMPLIANCE

PROJECT: HOWARD BERRY AND SID COPELAND WATER TREATMENT PLANTS CHLORINE DIOXIDE FEED SYSTEMS REPLACEMENT
PROJECT NUMBER: 501498-640167
OWNER: CITY OF LOUISVILLE, COLORADO

Instructions: BIDDER's and Subcontractors must complete and submit this form with the Bid Form. This is required by the Equal Employment Opportunity Regulations 41 CFR 1.7 (b) (1).

1. _X_ Yes ___ No	I have developed and have on file at each establishment an affirmative action program as required by 41 CFR Chapter 60, Part 60-2.
2. ___ Yes _X_ No	I have participated in a previous contract/subcontract subject to the equal opportunity clause.
3. _X_ Yes ___ No	I have filed with the Joint Reporting Committee, the Director, or the Equal Employment Opportunity Commission all reports due under the applicable filing requirements.

I declare under penalty of perjury in the second degree and any other applicable state or federal laws that the statements made in this document are true and complete to the best of my knowledge.

CONTRACTOR
_X_ **BIDDER** ___ **PROPOSED SUBCONTRACTOR**

BY: Mike Barnard

TITLE: President

DATE: May 9th, 2025

OFFICE OF THE SECRETARY OF STATE
OF THE STATE OF COLORADO

CERTIFICATE OF DOCUMENT FILED

I, Jena Griswold , as the Secretary of State of the State of Colorado, hereby certify that, according to the records of this office, the attached document is a true and complete copy of the

Report

with Document # 20241785470 of

BARNARD STRUCTURES INCORPORATED

Colorado Corporation

(Entity ID # 19981029141)

consisting of 2 pages.

This certificate reflects facts established or disclosed by documents delivered to this office on paper through 03/04/2025 that have been posted, and by documents delivered to this office electronically through 03/05/2025@ 13:18:14.

I have affixed hereto the Great Seal of the State of Colorado and duly generated, executed, and issued this official certificate at Denver, Colorado on 03/05/2025 @ 13:18:14 in accordance with applicable law. This certificate is assigned Confirmation Number 17066425 .

Jena Griswold

Secretary of State of the State of Colorado

**********End of Certificate**********

Notice: A certificate issued electronically from the Colorado Secretary of State's website is fully and immediately valid and effective. However, as an option, the issuance and validity of a certificate obtained electronically may be established by visiting the Validate a Certificate page of the Secretary of State's website, https://www.coloradosos.gov/biz/CertificateSearchCriteria.do entering the certificate's confirmation number displayed on the certificate, and following the instructions displayed. Confirming the issuance of a certificate is merely optional and is not necessary to the valid and effective issuance of a certificate. For more information, visit our website, https://www.coloradosos.gov click "Businesses, trademarks, trade names" and select "Frequently Asked Questions."

SET NO. _____

PROJECT MANUAL

CITY OF LOUISVILLE

HOWARD BERRY AND SID COPELAND WATER TREATMENT PLANTS
CHLORINE DIOXIDE FEED SYSTEMS REPLACEMENT

APRIL 2025

PROJECT MANUAL

CITY OF LOUISVILLE

HOWARD BERRY AND SID COPELAND WATER TREATMENT PLANTS
CHLORINE DIOXIDE FEED SYSTEMS REPLACEMENT

JVA, Inc.
1319 Spruce Street
Boulder, CO 80302

JVA Job No. 240879.ENV

APRIL 2025

PROJECT MANUAL

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INVITATION TO BID

Bids will be received by the

CITY OF LOUISVILLE, STATE OF COLORADO

Hereinafter referred to as OWNER, at the office of Public Works, 749 Main Street, Louisville, Colorado 80027, for the

Sid Copeland Water Treatment Plant (SCWTP) & Howard Berry Water Treatment Plant (HBWTP) Chlorine Dioxide Feed Systems Replacement

The City of Louisville (City) is inviting bids from highly qualified contractors for the installation of new chlorine dioxide feed systems along with associated pumps, piping, electrical, and HVAC for the SCWTP & HBWTP in the City of Louisville, Colorado.

Bids will be accepted until **2:00 PM Mountain Time on May 9, 2025**. Late bids will not be accepted. Bids shall be submitted electronically via email to:

Justin Ferron, P.E.
Civil Engineer III
Office: 303-335-4607
Cell: 951-852-0344
jferron@louisvilleco.gov

The Work for which the Bid is requested for the permanent installation of replacement Chlorine Dioxide feed units at SCWTP and HBWTP. The main feed unit for each plant will be supplied by the City. This project consists of but is not limited to installation of concrete equipment pad, associated pumps/piping, electrical, and HVAC improvements. Installation will need to be coordinated with plant staff to minimize disruption to plant production particularly during peak summer months.

Digital copies of the Bid Documents will be available after **April 23, 2025** on-line through Rocky Mountain Bid System located on the City of Louisville's website: https://www.louisvilleco.gov/doing-business/bidding-opportunities-requests-for-proposals

A **mandatory** pre-bid conference and job walk through with representatives of prospective BIDDERs will be held at **10:00 a.m.,** MST at the SCWTP, 1955 Washington Ave., Louisville, Colorado, on **May 1, 2025**. Representatives of the City will be present to discuss the Project. Perspective BIDDERs are invited to attend and present their questions relative to this Bid at this conference. **Attendance at this pre-bid conference is required to submit a Bid.**

The City of Louisville reserves the right to award the Bids by parts, to reject any or all Bids, to waive any informalities and irregularities therein, and to accept the bid deemed to be from the lowest reliable and responsible bidder. Selection is also dependent on the negotiation of an acceptable contract with the successful bidder.

Bids will be received on a Unit price basis as described in the Bidding Documents.

The successful BIDDER will be required to furnish a performance bond and a labor and material payment bond to the City of Louisville guaranteeing faithful performance and the payment of all bills and obligations arising from the performance of the Contract.

No Bid may be withdrawn within a period of sixty (60) days after the date fixed for opening Bids.

Award of bid provisions are solely for the fiscal responsibility and benefit of the City of Louisville, and confer no rights, duties or entitlements to any bidders.

The City of Louisville assumes no responsibility for payment of any expenses incurred by any respondent to this Invitation to Bid.

Each Bid shall contain evidence of BIDDER'S qualification to do business in the state of Colorado or covenant to obtain such qualification.

Preference is hereby given to materials, supplies, and provisions produced, manufactured, or grown in Colorado, quality and price being equal to articles offered by competitors outside of the State. Whenever sources within the City of Louisville exist and are competitive, purchases may be made from local vendors. Bids may be awarded, as deemed appropriate solely within the discretion of the City, to local vendors in compliance with the City's purchasing policies.

The City of Louisville is an Equal Opportunity Employer.

1st Publication: April 23, 2025
2nd Publication: April 30, 2025

INSTRUCTIONS TO BIDDERS

1. DEFINED TERMS

Terms used in these Instructions to BIDDERs, which are defined in the General Conditions of this Manual have the meanings assigned to them in the General Conditions.

Certain additional terms used in these Instructions to Bidders have the meanings indicated below which are applicable to both the singular and plural thereof.

1.1 The term "BIDDER" means one who submits a Bid directly to OWNER, as distinct from a sub-bidder, who submits a bid to a BIDDER.

1.2 The term "ISSUING OFFICE" means the office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.

1.3 The term "SUCCESSFUL BIDDER" means the lowest, qualified, responsible and responsive BIDDER to whom OWNER (on the basis of OWNER's evaluation as hereinafter provided) makes an award.

1.4 The term "Bidding Documents" includes the Invitation to Bid, Instructions to Bidders, the Bid Form, and the Contract Documents (including all Addenda issued prior to receipt of Bids).

2. COPIES OF BIDDING DOCUMENTS

2.1 Complete sets of Bidding Documents stated in the Invitation to Bid may be obtained from the Issuing Office. No partial sets will be issued. The Bidding Documents may be examined at the locations identified in the Invitation to Bid.

2.2 Complete sets of Bidding Documents shall be used in preparing Bids; neither OWNER nor ENGINEER assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.3 OWNER and ENGINEER in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

3. QUALIFICATION OF BIDDERS

3.1 Each Bid shall contain evidence of BIDDER's qualification to do business in the state of Colorado or covenant to obtain such qualification.

3.3 The apparent low BIDDER shall be required to show that he has handled former work of similar type and that no just claims are pending against such work. No Bid will be awarded to a BIDDER who is engaged on any other work, which would impair his ability to perform or finance this Work.

4. EXAMINATION OF CONTRACT DOCUMENTS AND SITE

4.1 It is the responsibility of each BIDDER before submitting a Bid:

4.1.1 To examine thoroughly the Contract Documents and related data identified in the Bidding Documents;

4.1.2 To visit the site to become familiar with and satisfy BIDDER as to the general, local and site conditions that may affect cost, progress, performance or furnishing of the Work;

4.1.3 To consider federal, state and local Laws and Regulations that may affect cost, progress, performance or furnishing of the Work;

4.1.4 To study and carefully correlate BIDDER's knowledge and observations with the Contract Documents and other related data; and

4.1.5 **To promptly notify ENGINEER of all conflicts, errors, ambiguities or discrepancies, which Bidder has discovered in or between the Contract Documents and such other related documents.**

4.2 BIDDERS are responsible for examining and determining for themselves the location and nature of the proposed Work, the amount and character of the labor and materials required therefor, and the difficulties, which may be encountered. BIDDERS may not rely on oral or written representations made by the OWNER, including any reports and drawings identified pursuant to paragraph 4.2.1 and subparagraphs thereof of the General Conditions, unless the OWNER has guaranteed in writing that such representation is factually accurate, and by submitting a Bid, each Bidder waives all liability for any error in any representation made by the OWNER to the BIDDER. BIDDERS shall, at BIDDER'S own expense, inspect the site and its surroundings and conduct such supplementary examinations, investigations, and tests concerning conditions at or contiguous to the site (including surface, and subsurface) which may affect cost, progress, performance, or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences, or procedures of construction to be employed by BIDDER and safety precautions and programs incident thereto for performing the Work in accordance with the Contract Documents. By failing to make such an inspection, the BIDDER waives all rights to claim extra payment or time extensions due to unexpected conditions, which could have been determined had the site been reasonably inspected. If concealed or unknown conditions differ materially from those ordinarily encountered and generally recognized as inherent in the Work, or differ materially from the conditions indicated in the Contract Documents, then an equitable adjustment in the Contract Price or in the Contract Time will be allowed by change order as provided in Article 11 or Article 12 respectively of the General Conditions. By submitting a Bid, the BIDDER represents that the BIDDER'S observations at the site are not inconsistent with the requirements of the proposed Contract Documents, unless otherwise noted by the BIDDER.

4.2.1 Refer to General Conditions for identification of those reports of explorations and tests of subsurface conditions at or contiguous to the site, which have been utilized by ENGINEER in preparation of the Contract Documents. BIDDER may not rely upon the general accuracy of the "technical data" contained in such reports or upon non-technical data, interpretations, opinions or information contained in such reports or otherwise relating to the subsurface conditions at the site, nor upon the completeness thereof for the purposes of bidding or construction unless OWNER has guaranteed in writing that such data or representations are accurate.

4.2.2 Refer to General Conditions for identification of those drawings of physical conditions in or relating to existing surface and subsurface conditions (except Underground Facilities) which are at or contiguous to the site that have been utilized by ENGINEER in preparation of the Contract Documents. BIDDER may not rely upon the general accuracy of the "technical data" contained in such drawings or upon other data, interpretations, opinions or information shown or indicated in such drawings or otherwise relating to such structures, nor upon the completeness thereof for the purposes of bidding or construction unless OWNER has guaranteed in writing that such data or representations are accurate.

Copies of such reports and drawings will be made available by OWNER to any BIDDER on request. Those reports and drawings are not part of the Contract Documents, but the technical data contained therein upon which BIDDER is entitled to rely upon as factually accurate as provided in Paragraphs 4.2.1 of the General

Conditions. BIDDER is responsible for any interpretation or conclusion drawn from any "technical data" or any such data, interpretations, opinions or information.

4.3 Information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site is based upon information and data furnished to OWNER by OWNERS of such Underground Facilities or others, and OWNER and ENGINEER do not assume responsibility for the accuracy or completeness thereof.

4.4 On request in advance, OWNER will provide each BIDDER access to the site to conduct such examinations, investigations, explorations, tests and studies as each BIDDER deems necessary for submission of a Bid. BIDDER shall fill all holes, clean up and restore the site to its former conditions upon completion of such explorations, investigations, tests and studies.

4.5 Reference is made to the General Conditions for the identification of the general nature of work that is to be performed at the site by OWNER or others (such as utilities and other prime contractors) that relates to work for which a Bid is to be submitted. On request, OWNER will provide to each BIDDER for examination access to or copies of Contract Documents (other than portions thereof related to price) for such work.

4.6 The submission of a Bid will constitute an incontrovertible representation by BIDDER that BIDDER has complied with every requirement of this Article 4, that the BIDDER warrants that it is familiar with all provisions of the Contract Documents, that without exception the Bid is premised upon performing and furnishing the Work required by the Contract Documents and applying the specific means, methods, techniques, sequences or procedures of construction that may be shown or indicated in or expressly required by the Contract Documents, **that BIDDER has given ENGINEER written notice of all conflicts, errors, ambiguities and discrepancies that BIDDER has discovered in the Contract Documents and the written resolutions thereof by ENGINEER is acceptable to BIDDER**, and that the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing of the Work.

4.7 The provisions of 4.1 through 4.7 of this section, inclusive, do not apply to Asbestos, Polychlorinated biphenyl's (PCB's), Petroleum, Hazardous Waste or Radioactive Material covered by paragraph 4.5 of the General Conditions.

5. AVAILABILITY OF LANDS FOR WORK, ETC.

5.1 The lands upon which the Work is to be performed will be in both outdoor road right-of-way, outdoor private, and inside private commercial/residual structures. All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be obtained and paid for by CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by OWNER unless otherwise provided in the Contract Documents.

6. INTERPRETATIONS AND ADDENDA

6.1 All questions about the meaning or intent of the Bidding Documents are to be submitted in writing to the ENGINEER. Interpretation or clarifications considered necessary by ENGINEER in response to such questions will be issued only by Addenda mailed or delivered to all parties recorded by ENGINEER as having received Bidding Documents. Questions received less than five days prior to the date for opening of Bids may not be answered. Only questions answered by formal written Addenda will be binding. **Oral and other interpretations or clarifications will be without legal effect.**

6.2 Addenda may also be issued to modify the Bidding Documents as deemed advisable by ENGINEER.

7. BID SECURITY

7.1 Each Bid must be accompanied by a Bid Security consisting of a properly Certified Check, Cashier's Check, or Bid Bond on the form enclosed herewith, in the amount of five (5) percent of BIDDER's Total Bid Price, without conditions, payable to the City of Louisville, Colorado. The Bid Bond must be executed by a surety meeting the requirements of Paragraph 5.3 of the General Conditions. The cost of the Bid Security shall be included in the bid. The submission of the Bid and Bid Security is a pledge by the BIDDER that he will enter into an Agreement with the Owner on the terms stated in his Bid and will, if required, furnish required insurance certificates and bonds, covering the faithful performance of the Agreement and the payment of all obligations arising thereunder.

7.2 The Bid Security of the Successful BIDDER will be retained until such BIDDER has executed the Agreement, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid Security will be returned. If the successful BIDDER fails to execute, enter into or deliver an Agreement in accordance with an accepted bid proposal, or fails to furnish the required bonds or certificates, within ten (10) days from the mailing of the Notice of Award, or if the BIDDER has been guilty of collusion with other BIDDERS in submitting the Bid, the OWNER may annul the Notice of Award and the Bid Security shall be forfeited to and retained by the OWNER as liquidated damages and not as a penalty. By submitting the Bid security with the bid proposal, the BIDDER agrees to liquidated damages in the event the BIDDER fails to enter into the Agreement with the OWNER. The OWNER shall not have to prove actual damages suffered in order to retain the Bid Security as liquidated damages. The OWNER and the BIDDER agree that liquidated damages are appropriate because the anticipated actual damages are uncertain in amount and difficult to forecast accurately. The OWNER and the BIDDER agree that the amount of the Bid Security is a reasonable estimate of damages and not disproportionate to the anticipated loss or injury. The Bid Security of other BIDDER'S whom OWNER believes to have a reasonable chance of receiving the award may be retained by OWNER until the seventh day after the Effective Date of the Agreement whereupon Bid Security furnished by such BIDDER'S will be returned. Bid Security with Bids, which are not competitive will be returned within fourteen days after the Bid opening.

8. CONTRACT TIME

8.1 The number of days within which, or the dates by which, the Work is to be completed (the Contract Time) is set forth in the Agreement.

9. LIQUIDATED DAMAGES

9.1 Provisions for liquidated damages, if any, are set forth in the Agreement and General Conditions.

10. SUBSTITUTE AND "OR-EQUAL" ITEMS

10.1 The Contract, if awarded, will be on the basis of materials and equipment described on the Drawings or specified in the Specifications without consideration of possible substitute or "or equal" items. Whenever it is indicated on the Drawings or specified in the Specifications that a substitute or "or - equal" item of material or equipment may be furnished or used by CONTRACTOR if acceptable to ENGINEER, application for such acceptance will not be considered by ENGINEER until after the Effective Date of the Agreement. The procedure for submission of any such application by CONTRACTOR and consideration by ENGINEER is set forth in paragraphs 6.7.1, 6.7.2 and 6.7.3 of the General Conditions and may be supplemented in the General Requirements.

11. SUBCONTRACTORS, SUPPLIERS AND OTHERS

11.1 **When a BIDDER submits a Bid, that Bid shall include the Schedule of Subcontractors, which shall identify each element of the Work to be subcontracted. Subcontractors whose subcontract exceeds ten percent of the Total Bid Price shall be prequalified by the City of Louisville, City Engineer for their specific portion of the Work.**

11.2 If OWNER, who after due investigation has reasonable objection to any proposed Subcontractor, other person or organization, may before the Notice of Award is given, request the apparent Successful BIDDER to submit a substitute Subcontractor acceptable to the City without an increase in Bid price. If the apparent Successful BIDDER declines to make any such substitution, OWNER may award the contract to the next lowest BIDDER that proposes to use acceptable Subcontractors and other persons and organizations. The declining to make requested substitutions will not constitute grounds for sacrificing the Bid security of any BIDDER. Any Subcontractor or other person or organization listed and to whom OWNER does not make written objection prior to the giving of the Notice of Award will be deemed acceptable to OWNER subject to revocation of such acceptance after the Effective Date of the Agreement as provided in Paragraph 6.8.2. of the General Conditions.

11.3 CONTRACTOR shall not be required to employ any Subcontractor, Supplier, other person or organization against whom CONTRACTOR has reasonable objection.

11.4 The Contract Documents will take precedence over any nonconforming data submitted. Any Bid specifically conditioned upon furnishing equipment or materials, which are not responsive to the Contract Documents will not be considered.

12. BID FORM

12.1 The Bid Form is included in the Contract Documents.

12.2 All blanks on the Bid Form must be completed by printing in ink or by typewriter. All unit prices including lump sums in the unit price schedule are to be expressed in numerals only.

12.3 Bids by corporations must be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal shall be affixed and attested by the secretary or an assistant secretary. The state of incorporation shall be shown below the corporate name.

12.4 Bids by partnerships must be executed in the partnership name and signed by a duly authorized general partner, whose title must appear under the signature and the official address of the partnership must be shown below the signature. A partnership shall give the full names and addresses of all partners and their interest and role in the partnership business.

12.5 All names must be typed or printed in ink below the signature.

12.6 The Bid shall contain an acknowledgment of receipt of all Addenda (the numbers of which must be filled in on the Bid Form).

12.7 The BIDDER's business address and telephone number for communications regarding the Bid must be shown.

12.8 Each Bid shall contain evidence of BIDDER's qualification to do business in the state of Colorado or covenant to obtain such qualification.

12.9 No alterations in Bids, or in the printed forms therefor, by erasures, interpolations, or otherwise will be accepted unless each such alteration is signed or initialed by the BIDDER; if initialed, OWNER may require the BIDDER to identify any alteration so initialed.

12.10 Bids will be based on a combination of unit price and lump sum schedules including alternatives. Unit price schedules shall be bid as provided in Paragraph 12.10.1 below. Lump sum schedules shall be bid as provided in paragraph 12.10.2 below.

12.10.1 Bids for unit price schedules shall be based on a unit price basis. The Total Bid Price will be determined as the sum of the products of the estimated quantity of each item and the unit price set forth in the Schedule of Unit Prices. The final Contract Price will be subject to adjustment according to final measured, used or delivered quantities as provided in the Specifications and the unit prices in the Bid Form will apply to such final quantities except that unit prices may be subject to change by Change Order if quantities vary more than 25 percent.

12.10.2 Bids for lump sum schedules shall be based on a lump sum basis for each lump sum item.

13. SUBMISSION OF BIDS

13.1 Bids shall be submitted at the time and place indicated in the Advertisement of Invitation to Bid and shall be submitted electronically via email to: jferron@louisvilleco.gov

13.2 Bids shall be deposited at the designated location prior to the time and date for receipt of Bids indicated in the Invitation to Bid, or any extension thereof made by Addendum. Bids received after the time and date for receipt of Bids will be returned unopened. BIDDER shall assume full responsibility for timely delivery at the location designated for receipt of Bids.

13.3 Oral, telephonic, or telegraphic Bids are invalid and will not receive consideration.

13.4 No BIDDER may submit more than one Bid. Multiple Bids under different names will not be accepted from one firm or association.

14. MODIFICATION AND WITHDRAWAL OF BIDS

14.1 Bids may be modified or withdrawn by an appropriate document duly executed (in a manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.

14.2 Bids may also be modified or withdrawn in person by the BIDDER or an authorized representative provided he can prove his identity and authority.

14.3 Withdrawn Bids may be resubmitted up to the time designated for the receipt of Bids provided that they are then fully in conformance with these Instructions to BIDDERs.

14.4 If, within twenty-four hours after Bids are opened, any BIDDER files a duly signed, written notice with OWNER and promptly thereafter demonstrates to the reasonable satisfaction of OWNER that there was a material and substantial mistake in the preparation of its Bid, that BIDDER may withdraw its Bid and the Bid security will be returned. Thereafter, that BIDDER will be disqualified from further bidding on the Work to be provided under the Contract Documents.

15. OPENING OF BIDS

15.1 Bids will be opened and (unless obviously non-responsive) read aloud publicly as indicated in the Invitation to Bid. An abstract of the amounts of the base Bids and major alternates (if any) will be made available to BIDDERS.

16. BIDS TO REMAIN OPEN SUBJECT TO ACCEPTANCE

16.1 All Bids shall remain open for sixty (60) days after the day of the Bid opening, but OWNER may, in its sole discretion, release any Bid and return the Bid Security prior to that date.

17. AWARD OF CONTRACT

17.1 OWNER reserves the right to reject any or all Bids, including without limitation the rights to reject any or all irregular, nonconforming, nonresponsive, unbalanced or conditional Bids and to reject the Bid of any BIDDER if OWNER believes that it would not be in the best interest of the Project to make an award to that BIDDER, whether because the Bid is not responsive or the BIDDER is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by OWNER. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

17.2 In evaluating Bids, OWNER will consider the qualifications of the BIDDERs, whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.

17.3 OWNER will consider the qualifications and experience of Subcontractors and other persons and organizations proposed for those portions of the Work as to which the identity of Subcontractors and other persons and organizations must be submitted. OWNER also will consider the operating costs, maintenance requirements, performance data and guarantees of major items of materials and equipment proposed for incorporation in the Work when such data is required to be submitted prior to the Notice of Award.

17.4 OWNER may conduct such investigations as OWNER deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of the BIDDER, proposed Subcontractors and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to OWNER's satisfaction within the prescribed time.

17.5 If the contract is to be awarded, it will be awarded to the lowest responsible BIDDER based on the combination of Bid Schedules as determined by OWNER and whose evaluation by OWNER indicates to OWNER that the award will be in the best interest of the Project.

17.6 If the contract is to be awarded, OWNER will accept the Bid within sixty days after the Bid opening and will give the Successful BIDDER a Notice of Award within sixty-five days after the day of the Bid opening. The OWNER's acceptance of the Bid proposal shall bind the successful BIDDER to sign the Contract Documents within ten (10) days after the date of the receipt by the BIDDER of the Notice of Award. The rights and obligations set forth in the Contract Documents shall become effective only with the signature of the **MAYOR** on behalf of the City.

17.7 It is the OWNERS intention to award the entire contract as bid. The OWNER reserves the right to award a contract that is in the best interest of the OWNER and within the amount budgeted and that the OWNER has appropriated monies at least equal to the contract amount. The Total Bid Price shall be the basis of award. Quantities may be reduced in order to reach budget amount, in that case the unit prices shall govern to determine the lowest Total Bid Price, which shall then determine the basis of award. If quantity reductions are required, quantities may be reduced from any item.

The BIDDER acknowledges that the OWNER has the right to delete any item of the Schedule of Unit Prices or change quantities and locations in any item at OWNERS sole discretion without affecting the contract prices of any item of the Contract so long as the deletion or change does not exceed twenty-five (25) percent of the Total Bid Price.

Quantities listed in the Schedule of Unit Prices are approximate and are for the purpose of comparing bids. These quantities have been estimated and are for the general information of the BIDDER. Quantities are not guaranteed.

17.8 In addition to Paragraph 17.1 of the Instructions to Bidders, in evaluating Bids, the OWNER will consider Bids irregular, and intends to reject Bids, for any of the following substantial reasons:

17.8.1 Unsigned Bid Form;

17.8.2 Bid Forms which have items omitted by the BIDDER;

17.8.3 Altering a Bid as to specified time of commencement of completion of Work;

17.8.4 Bid Forms not accompanied by a Bid Security of character indicated or of an amount less than indicated;

17.8.5 If the Bid Form is on a form other than that provided in Contract Documents, or if the Bid Form is altered;

17.8.6 If there are unauthorized additions, conditional or alternate Bids, or discrepancies of any nature that make the Bid Form incomplete, indefinite, or ambiguous as to its meaning;

17.8.7 If the BIDDER adds any provisions reserving the right to accept or reject an award, or to enter into a Contract pursuant to an award;

17.8.8 If the Schedule of Unit Prices in the Bid Form does not contain a unit price for each item number listed; or,

17.8.9 Submitting more than one Bid, where there is evidence that any BIDDER has an interest in more than one Bid for the same work, or where there is evidence of collusion or other illegal activities between BIDDERS. In addition to any other remedies the OWNER may have, the OWNER may retain as liquidated damages for the disruption of the bidding process the Bid Security of all bidders involved in collusion or other illegal activities. The BIDDER and the OWNER agree that the amount of the Bid Security is a reasonable estimate of damages for collusion and other illegal activities on the part of the BIDDER and not disproportionate to the anticipated loss or injury. A person or entity, which has quoted prices to a BIDDER is not hereby disqualified from quoting prices to other BIDDERS or from submitting a direct bid on its own behalf.

17.9.0 In evaluating Bids, the OWNER may consider Bids informal, and may, in its sole discretion, elect to waive informalities for the following minor reasons:

17.9.1 Omission of dates when signed, or title of person signing;

17.9.2 Failure to acknowledge an addendum, which does not affect quantity, quality, time, or price;

17.9.3 Submission of a Bid in an unsealed envelope;

17.9.4 Unit price Bids which include reconcilable arithmetic errors may be corrected if it does not change the unit price; or,

17.9.5 Unit price Bids which include reconcilable arithmetic errors may be corrected, if it does not change the amount on which the award will be based.

18. CONTRACT SECURITY

18.1 Paragraph 5.1 of the General Conditions set forth OWNER's requirements as to performance and payment Bonds. When the Successful BIDDER delivers the executed Agreement to OWNER it shall be accompanied by the required performance and payment Bonds.

19. SIGNING OF AGREEMENT

19.1 When OWNER gives a Notice of Award to the Successful BIDDER, it will be accompanied by the required number of unsigned counterparts of the Agreement with all other written Contract Documents attached. Within ten (10) days after CONTRACTOR's receipt of the Notice of Award, CONTRACTOR shall sign and have notarized the required number of counterparts of the Agreement and attached documents and return them to the OWNER along with the required Bonds, insurance certificates and power of attorney authorizations.

20. SPECIAL LEGAL REQUIREMENTS

20.1 OWNER's Finances. OWNER has made adequate financial arrangements for the completion of all Work required by the Contract Documents and welcomes inquiries from prospective BIDDERs on the prime contract.

21. SALES AND USE TAXES

21.1 OWNER is exempt from Colorado State Sales and Use Taxes on materials and equipment to be incorporated in the Work. Said taxes shall not be included in the Contract Price. Refer to General Conditions 6.15 for additional information.

22. RETAINAGE

22.1 Provisions concerning retainage and CONTRACTORS' rights to deposit securities in lieu of retainage are set forth in the Agreement.

23. MISTAKES IN BIDDING INSTRUCTIONS

23.1 If the OWNER makes a mistake in drafting the Instructions to Bidders or any other Contract Documents, the OWNER reserves the right to reject any or all Bids, or to require that BIDDERS submit an alternate bid proposal with adjustments made to correct the error(s). Such errors will be set forth in an addendum. If the CONTRACTOR has already been selected and has started performing work under the contract, and the OWNER then discovers a mistake in the Contract Documents for which the OWNER is responsible, the OWNER may opt to reform the contract. If the mistake causes the Contractor to receive compensation for materials not used in the Work or for labor, which would not be required for the Work, the Contract Price shall be decreased proportionally. If the mistake causes the CONTRACTOR to fail to bid on work, which must be performed in order to properly complete the contract, the OWNER may increase the Contract Price to equal the proportionate increase in the cost of required materials and labor caused to the CONTRACTOR. In the alternative, the OWNER may solicit bids for such additional work, or the OWNER may reassign such additional work to another CONTRACTOR, as the OWNER deems appropriate. Nothing in this provision shall apply to mistakes made by the CONTRACTOR in completing the Bid Form or in performing the contract.

BID FORM

PROJECT: HOWARD BERRY AND SID COPELAND WATER TREATMENT PLANTS CHLORINE DIOXIDE FEED SYSTEMS REPLACEMENT
PROJECT NUMBER: 501498-640167
OWNER: CITY OF LOUISVILLE, COLORADO

THIS BID IS SUBMITTED TO: THE CITY OF LOUISVILLE, COLORADO

1. The undersigned BIDDER proposes and agrees, if this Bid is accepted, to enter into an Agreement with OWNER in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Contract Price and within the Contract Time indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.

2. BIDDER accepts all of the terms and conditions of the Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid Security. This Bid will remain subject to acceptance for sixty days after the day of Bid opening. BIDDER will sign and submit the Agreement with the Bonds and other documents required by the Bidding Requirements within ten days after the date of OWNER's Notice of Award.

3. In submitting this Bid, BIDDER represents, as more fully set forth in the Agreement, that:

   (a) BIDDER has examined copies of all the Bidding Documents and of the following Addenda receipt of all which is hereby acknowledged: (List Addenda by Addendum Number and Date):

   Date Number

   _____ _____
   _____ _____

   (b) BIDDER has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance or furnishing of the Work.

   (c) BIDDER has studied carefully all reports and drawings of subsurface conditions and drawings of physical conditions which are identified in the General Conditions as provided in paragraph 4.2, and accepts the determination set forth in paragraph 4.2 of the General Conditions. BIDDER has inspected the site and has obtained conducted and carefully studied (or assumes responsibility for obtaining and carefully studying) all examinations, investigations, explorations, tests and studies which pertain to the subsurface or physical conditions at the site or otherwise may affect the cost, progress, performance or furnishing of the Work as BIDDER considers necessary for the performance or furnishing of the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 4.2 of the General Conditions; and no additional examinations, investigations, explorations, tests, reports or similar information or data are or will be required by BIDDER for such purpose.

(d) BIDDER has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities. No additional examinations, investigations, explorations, tests, reports or similar information or data in respect of said Underground Facilities are or will be required by BIDDER in order to perform and furnish the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of Contract Documents, including specifically the provisions of paragraph 4.3 of the General Conditions.

(e) BIDDER has correlated the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.

(f) BIDDER has given ENGINEER written notice of all conflicts, errors, ambiguities or discrepancies that BIDDER has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to BIDDER, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which this Bid is submitted.

(g) This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; BIDDER has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; BIDDER has not solicited or induced any person, firm or corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for himself any advantage over any other Bidder or over OWNER.

4. BIDDER will complete the Work in accordance with Contract Documents for the following price(s):

SCHEDULE OF UNIT PRICES

PROJECT: HOWARD BERRY AND SID COPELAND WATER TREATMENT PLANTS CHLORINE DIOXIDE FEED SYSTEMS REPLACEMENT
PROJECT NUMBER: 501498-640167
OWNER: CITY OF LOUISVILLE, COLORADO

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
1	Installation of Chlorine Dioxide Feed System at Howard Berry WTP as described in the contract documents	LS	1	$	$
2	Installation of Chlorine Dioxide Feed System at Sid Copeland WTP as described in the contract documents	LS	1	$	$

BASE BID PRICE (Items 1 + Item 2): **$**_____
(figures)

Unit Prices have been computed in accordance with paragraph 11.9.2 of the General Conditions.

BIDDER acknowledges that quantities are not guaranteed and final payment will be based on actual quantities determined as provided in the Contract Documents.

5. BIDDER agrees that the Work;

   will be substantially complete and completed and ready for final payment in accordance with paragraph 14.13 of the General Conditions on or before the dates or within the number of Contract Days indicated in the Agreement.

   BIDDER accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified in the Agreement.

6. The following documents are attached to and made a condition of this Bid:

   (a) Required Bid Security;

   (b) A list of Subcontractors and other persons and organizations proposed to perform the Work are required to be identified on the Schedule of Subcontractors and submitted in this Bid;

   (c) Anti-Collusion Affidavit; and

   (d) If BIDDER is a partnership, a list of all partners, their addresses, and their interest and role in the partnership business.

7. Communications concerning this Bid shall be addressed to:
   The address of BIDDER indicated below.

   _____

   _____

   _____

8. Terms used in this Bid, which are defined in the General Conditions of the Construction Contract included as part of the Contract Documents, have the meanings assigned to them in the General Conditions.

SUBMITTED on _____, 2025.

If BIDDER is:

An Individual

By _____
(Individual's Name)

(SEAL)

doing business as _____

Business address: _____

_____

_____

Phone No.: _____

A Partnership

By _____
(Firm Name)

(SEAL)

_____
(General Partner)

Business address: _____

_____

_____

Phone No.: _____

A Corporation

By _____
(Corporation Name)

_____
(State of incorporation)

By _____
(Name of person authorized to sign)

_____
(Title)

(CORPORATE SEAL)

Attest _____
(Secretary)

Business address: _____

_____

_____

Phone No.:_____

Date of Qualification to do business: _____

A Joint Venture

By _____
(Name)

_____
(Address)

By _____
(Name)

_____
(Address)

Phone Number and Address for receipt of official communications

_____

_____

(Each joint venturer must sign. The manner of signing for each individual, partnership and corporation that is a party to the joint venture should be in the manner indicated above.)

BID BOND

BIDDER (Name and Address):

_____
_____
_____

SURETY (Name and Address of Principal Place of Business):

_____
_____
_____

OWNER (Name and Address):

_____
_____
_____

BID:

BID DUE DATE: _____
PROJECT (Brief Description Including Location):

_____
_____
_____

BOND:

BOND NUMBER: _____
DATE: (Not later than Bid Due Date): _____
PENAL SUM: _____

IN WITNESS WHEREOF, Surety and Bidder, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Bid Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

BIDDER	**SURETY**
_____(Seal)	_____(Seal)
Bidder's Name and Corporate Seal	Surety's Name and Corporate Seal
By: _____	By: _____
Signature and Title	Signature and Title (Attach Power of Attorney)
Attest: _____	Attest: _____
Signature and Title	Signature and Title

Note: (1) Above addresses are to be used for giving requiring notice.
(2) Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents the properly executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents and Contract Documents.

3. This obligation shall be null and void if:

   3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents and Contract Documents, or

   3.2. All bids are rejected by Owner, or

   3.3. Owner fails to issue a notice of award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by paragraph 5 hereof).

4. Payment under this Bond will be due and payable upon default of Bidder and within thirty (30) calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

5. Surety waives notice of and any and all defenses based on or arising out of any time extension to issue notice of award agreed to in writing by Owner and Bidder, provided that the time for issuing notice of award including extensions shall not in the aggregate exceed 120 days from Bid Due Date without Surety's written consent.

6. No suit or action shall be commenced under this Bond prior to thirty (30) calendar days after the notice of default required in paragraph 4 above is received by Bidder and Surety, and in no case later than one year after Bid Due Date.

7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.

8. Notice required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.

9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent or representative who executed this Bond on behalf of Surety to execute, seal and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirements of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of the Bond conflicts with any applicable provision of any applicable statute, then the provision of said statue shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "bid" as used herein includes a bid, offer or proposal as applicable.

SCHEDULE OF SUBCONTRACTORS AND REFERENCES

PROJECT: HOWARD BERRY AND SID COPELAND WATER TREATMENT PLANTS CHLORINE DIOXIDE FEED SYSTEMS REPLACEMENT
PROJECT NUMBER: 501498-640167
OWNER: CITY OF LOUISVILLE, COLORADO

This Bid is based on subcontracting certain portions of the work to subcontractors as listed below.

Name: _____ Telephone No. _____
Address: _____ _____ _____
City: _____ State: _____ Zip Code: _____
Services/equipment to be provided: _____
_____
_____

Name: _____ Telephone No. _____
Address: _____ _____ _____
City: _____ State: _____ Zip Code: _____
Services/equipment to be provided: _____
_____
_____

Name: _____ Telephone No. _____
Address: _____ _____ _____
City: _____ State: _____ Zip Code: _____
Services/equipment to be provided: _____
_____
_____

Provide three (3) references that include the last two years *(attach additional sheets as needed).*

Name: _____ Telephone No. _____
Address: _____ _____ _____
City: _____ State: _____ Zip Code: _____
Services/equipment provided for: _____
_____
_____

Name: _____ Telephone No. _____
Address: _____ _____ _____
City: _____ State: _____ Zip Code: _____
Services/equipment provided for: _____
_____
_____

Name: _____ Telephone No. _____
Address: _____ _____ _____
City: _____ State: _____ Zip Code: _____
Services/equipment provided for: _____
_____

ANTI-COLLUSION AFFIDAVIT

PROJECT: HOWARD BERRY AND SID COPELAND WATER TREATMENT PLANTS CHLORINE DIOXIDE FEED SYSTEMS REPLACEMENT
PROJECT NUMBER: 501498-640167
OWNER: CITY OF LOUISVILLE, COLORADO

I hereby attest that I am the person responsible within my firm for the final decision as to the price(s) and amount of this Bid or, if not, that I have written authorization, enclosed herewith, from that person to make the statements set out below on his or her behalf of my firm.

I further attest that:

1. The price(s) and amount of this bid have been arrived at independently, without consultation, communication or agreement for the purpose or with the effect of restricting competition with any other firm or person who is a BIDDER or potential prime BIDDER.

2A. Neither the price(s) nor the amount of this Bid have been disclosed to any other firm or person who is a BIDDER or potential prime BIDDER on this project, and will not be so disclosed prior to bid opening.

2B. Neither the prices nor the amount of the Bid of any other firm or person who is a BIDDER or potential prime BIDDER on this project have been disclosed to me or my firm.

3A. No attempt has been made to solicit, cause or induce any firm or person who is BIDDER or potential prime BIDDER to refrain from bidding on this project, or to submit a Bid higher than the Bid of this firm, or any intentionally high or noncompetitive Bid or other form of complementary Bid.

3B. No agreement has been promised or solicited for any other firm or person who is a BIDDER or potential prime BIDDER on this project to submit an intentionally high, noncompetitive or other form of complementary bid on this project.

4. The Bid of my firm is made in good faith and not pursuant to any consultation, communication, agreement or discussion with, or inducement or solicitation by or from any firm or person to submit any intentionally high, noncompetitive or other form of complementary bid.

5. My firm has not offered or entered into a subcontract or agreement regarding the purchase or sale of materials or services from any firm or person, or offered, promised or paid cash or anything of value to any firm or person, whether in connection with this or any other project, in consideration for an agreement or promise by any firm or person to refrain from bidding or to submit any intentionally high, noncompetitive or other form of complementary bid or agreeing or promising to do so on this project.

6. My firm has not accepted or been promised any subcontract or agreement regarding the sale of materials or services to any firm or person, and has not been promised or paid cash or anything of value by any firm or person, whether in connection with this or any other project, in consideration for my firm's submitting any intentionally high, noncompetitive or other form of complementary bid, or agreeing or promising to do so, on this project.

7. I have made a diligent inquiry of all members, officers, employees, and agents of my firm with responsibilities relating to the preparation, approval or submission of my firm's bid on this project and have been advised by each of them that he or she has not participated in any communication, consultation, discussion, agreement, collusion, or other conduct inconsistent with any of the statements and representations made in this affidavit.

8. I understand and my firm understands that any misstatement in this affidavit is and shall be treated as a fraudulent concealment from the OWNER of the true facts relating to submission of bids for this contract.

I DECLARE UNDER PENALTY OF PERJURY IN THE SECOND DEGREE, AND ANY OTHER APPLICABLE STATE OR FEDERAL LAWS THAT THE STATEMENTS MADE ON THIS DOCUMENT ARE TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

CONTRACTOR'S FIRM OR COMPANY NAME		SECOND CONTRACTOR'S FIRM OR COMPANY NAME (IF JOINT VENTURE)	
BY:	_____	BY:	_____
TITLE:	_____	TITLE:	_____
DATE:	_____	DATE:	_____

SWORN BEFORE ME THIS _____ DAY OF, _____, 2025

NOTARY PUBLIC: _____ MY COMMISSION EXPIRES: _____

CERTIFICATION OF EEO COMPLIANCE

PROJECT: HOWARD BERRY AND SID COPELAND WATER TREATMENT PLANTS CHLORINE DIOXIDE FEED SYSTEMS REPLACEMENT
PROJECT NUMBER: 501498-640167
OWNER: CITY OF LOUISVILLE, COLORADO

Instructions: BIDDER's and Subcontractors must complete and submit this form with the Bid Form. This is required by the Equal Employment Opportunity Regulations 41 CFR 1.7 (b) (1).

1. ___ Yes ___ No	I have developed and have on file at each establishment an affirmative action program as required by 41 CFR Chapter 60, Part 60-2.
2. ___ Yes ___ No	I have participated in a previous contract/subcontract subject to the equal opportunity clause.
3. ___ Yes ___ No	I have filed with the Joint Reporting Committee, the Director, or the Equal Employment Opportunity Commission all reports due under the applicable filing requirements.

I declare under penalty of perjury in the second degree and any other applicable state or federal laws that the statements made in this document are true and complete to the best of my knowledge.

CONTRACTOR
___ **BIDDER** ___ **PROPOSED SUBCONTRACTOR**

BY: _____

TITLE: _____

DATE: _____

AGREEMENT

THIS AGREEMENT is made and entered into this _day of _____ in the year 2025 by and between:

CITY OF LOUISVILLE, COLORADO
(hereinafter called OWNER)

and

_____
(hereinafter called CONTRACTOR)

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows.

ARTICLE 1. WORK

CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

PROJECT: HOWARD BERRY AND SID COPELAND WATER TREATMENT PLANTS CHLORINE DIOXIDE FEED SYSTEMS REPLACEMENT
PROJECT NUMBER: 501498-640167

ARTICLE 2. CONTRACT TIMES

2.1 The CONTRACTOR shall substantially complete all work within **180 Consecutive Contract Days** after the date when the Contract Time commences to run. The Work shall be completed and ready for final payment in accordance with paragraph 14.13 of the General Conditions within **60 Consecutive Contract Days** after the date when the Contract Times commence to run. The Contract Times shall commence to run on the day indicated in the Notice to Proceed.

2.2 LIQUIDATED DAMAGES. The OWNER and the CONTRACTOR agree and recognize that time is of the essence in this contract and that the OWNER will suffer financial loss if the Work is not substantially complete by the date specified in paragraph 2.1 above, plus any extensions thereof allowed in accordance with the Article 12 of the General Conditions. OWNER and CONTRACTOR also agree that such damages are uncertain in amount and difficult to measure accurately. Accordingly, the OWNER and CONTRACTOR agree that as liquidated damages, and not as a penalty, for delay in performance the CONTRACTOR shall pay the OWNER **FIVE HUNDRED DOLLARS ($500)** for each and every **Contract Day** and portion thereof that expires after the time specified above for substantial completion of the Work until the same is finally complete and ready for final payment. The liquidated damages herein specified shall only apply to the CONTRACTOR's delay in performance, and shall not include litigation or attorneys' fees incurred by the OWNER, or other incidental or consequential damages suffered by the OWNER due to the CONTRACTOR's performance. If the OWNER charges liquidated damages to the CONTRACTOR, this shall not preclude the OWNER from commencing an action against the CONTRACTOR for other actual harm resulting form the CONTRACTOR's performance, which is not due to the CONTRACTOR's delay in performance.

ARTICLE 3. CONTRACT PRICE

3.1 The OWNER shall pay in current funds, and the CONTRACTOR agrees to accept in full payment for performance of the Work, subject to additions and deductions from extra and/or omitted work and determinations of actual quantities as provided in the Contract Documents, the Contract Price of _____dollars and 00/100 ($_____) as set forth in the Bid Form of the CONTRACTOR dated _____.

As provided in paragraph 11.9 of the General Conditions estimated quantities are not guaranteed, and determinations of actual quantities and classification are to be made by ENGINEER as provided in paragraph 9.10 of the General Conditions. Unit prices have been computed as provided in paragraph 11.9 of the General Conditions.

ARTICLE 4. PAYMENT PROCEDURES

CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by OWNER as provided in the General Conditions.

4.1 PROGRESS PAYMENTS. OWNER shall make progress payments on the basis of CONTRACTOR's Applications for Payment as recommended by ENGINEER, on or about the third Wednesday of each month during construction as provided below. All progress payments will be on the basis of the progress of the Unit Price Work based on the number of units completed as provided in the General Conditions.

4.1.1.1 Prior to Substantial Completion, progress payments will be made in the amount equal to 90 percent of the completed Work, and/or 90 percent of materials and equipment not incorporated in the Work (but delivered, suitably stored and accompanied by documentation satisfactory to OWNER as provided in 14.2 of the General Conditions), but in each case, less the aggregate of payments previously made and such less amounts as ENGINEER shall determine, or OWNER may withhold, in accordance with paragraph 14.7 of the General Conditions.

If Work has been 50 percent completed as determined by ENGINEER, and if the character and progress of the Work have been satisfactory to OWNER, OWNER may determine that as long as the character and progress of the Work remain satisfactory to them and no claims have been made by Subcontractors or material suppliers for unpaid work or materials, there will be no additional retainage on account of Work completed in which case the remaining progress payments prior to Substantial Completion may be in an amount equal to 100 percent of the Work completed.

Nothing contained in this provision shall preclude the OWNER and CONTRACTOR from making other arrangements consistent with C.R.S. 24-91-105 prior to contract award.

4.2 FINAL PAYMENT. Upon final completion and acceptance of the Work in accordance with paragraph 14.13 of the General Conditions, OWNER shall pay the remainder of the Contract Price as provided in said paragraph 14.13 of the General Conditions.

ARTICLE 5. CONTRACTOR'S REPRESENTATIONS

In order to induce OWNER to enter into this Agreement CONTRACTOR makes the following representations:

5.1 CONTRACTOR has examined and carefully studied the Contract Documents, (including the Addenda listed in paragraph 6.10) and the other related data identified in the Bidding Documents including "technical".

5.2 CONTRACTOR has inspected the site and become familiar with and is satisfied as to the general, local and site conditions that may affect cost, progress, performance or furnishing of the Work.

5.3 CONTRACTOR is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress and furnishing of the Work.

5.4 CONTRACTOR has carefully studied all reports of exploration and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions relating to surface or subsurface structures at or contiguous to the site (Except Underground facilities) which have been identified in the General Conditions as provided in paragraph 4.2.1 of the General Conditions. CONTRACTOR accepts the determination set forth in paragraph 4.2 of the General Conditions. CONTRACTOR acknowledges that such reports and drawings are not Contract Documents and may not be complete for CONTRACTOR's purposes. CONTRACTOR acknowledges that OWNER and ENGINEER do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Contract Documents with respect to such reports, drawings or to Underground Facilities at or contiguous to the site. CONTRACTOR has conducted, obtained and carefully studied (or assume responsibility for having done so) all necessary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences and procedures of construction to be employed by CONTRACTOR and safety precautions and programs incident thereto. CONTRACTOR does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary for the performance and furnishing of the Work at the Contract Price, within the Contract Times and in accordance with the other terms and conditions of the Contract Documents.

5.5 CONTRACTOR has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities. No additional examinations, investigations, explorations, tests, reports, studies or similar information or data in respect of said Underground Facilities are or will be required by CONTRACTOR in order to perform and furnish the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 4.3 of the General Conditions.

5.6 CONTRACTOR is aware of the general nature of work to be performed by OWNER and others at the site that relates to the Work as indicated in the Contract Documents.

5.7 CONTRACTOR has correlated the information known to CONTRACTOR, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests studies and data with the Contract Documents.

5.8 CONTRACTOR has given ENGINEER written notice of all conflicts, errors, ambiguities or discrepancies that CONTRACTOR has discovered in the Contract Documents and the written

resolution thereof by ENGINEER is acceptable to CONTRACTOR, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing the Work.

ARTICLE 6. CONTRACT DOCUMENTS

The Contract Documents, which constitute the entire agreement between OWNER and CONTRACTOR concerning the Work, are all written documents, which define the Work and the obligations of the Contractor in performing the Work and the OWNER in providing compensation for the Work. The Contract Documents include the following:

6.1 Invitation to Bid

6.2 Instruction to Bidders

6.3 Bid Form

6.4 This Agreement

6.5 General Conditions

6.6 Supplementary Conditions – N/A

6.7 General Requirements

6.8 Technical Specifications

6.9 Drawings

6.10 Change Orders, Addenda and other documents which may be required or specified including:

6.10.1 Addenda No. ___ to ___ exclusive
6.10.2 Documentation submitted by CONTRACTOR prior to Notice of Award.
6.10.3 Schedule of Subcontractors/References
6.10.4 Anti-Collusion Affidavit
6.10.5 Certification of EEO Compliance
6.10.6 Contractor's Pre-Contract Certification Regarding Employing Illegal Aliens
6.10.7 Notice of Award
6.10.8 Performance Bond
6.10.9 Labor and Material Payment Bond
6.10.10 Certificates of Insurance
6.10.11 Notice to Proceed
6.10.12 Contractor's Proposal Request
6.10.13 Contractor's Overtime Request
6.10.14 Field Order
6.10.15 Work Change Directive
6.10.16 Change Order
6.10.17 Application for Payment
6.10.18 Certificate of Substantial Completion
6.10.19 Claim Release
6.10.20 Final Inspection Report
6.10.21 Certificate of Final Completion
6.10.22 Guarantee Period Inspection Report

6.11 The following which may be delivered or issued after the Effective Date of the Agreement and are attached hereto: All Written Amendments and other documents amending, modifying, or supplementing the Contract Documents pursuant to paragraphs 3.5 and 3.6 of the General Conditions.

6.12 In the event of conflict between the above documents, the prevailing document shall be as follows:

1. Permits from other agencies as may be required.

2. Special Provisions and Detail Drawings.

3. Technical Specifications and Drawings. Drawings and Technical Specifications are intended to be complementary. Anything shown or called for in one and omitted in another is binding as if called for or shown by both.

4. Supplementary Conditions.

5. General Conditions.

6. City of Louisville Design and Construction Standards.

7. Reference Specifications.

In case of conflict between prevailing references above, the one having the more stringent requirements shall govern.

There are no Contract Documents other than those listed above in this Article 6. The Contract Documents may only be amended, modified or supplemented as provided in paragraphs 3.5 and 3.6 of the General Conditions.

ARTICLE 7. MISCELLANEOUS

7.1 Terms used in this Agreement, which are defined in Article 1 of the General Conditions, shall have the meanings indicated in the General Conditions.

7.2 No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment no assignment will release or discharge that assignor from any duty or responsibility under the Contract Documents.

7.3 OWNER and CONTRACTOR each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect to all covenants, agreements and obligations contained in the Contract Documents.

ARTICLE 8. OTHER PROVISIONS

IN WITNESS WHEREOF, OWNER and CONTRACTOR have signed this Agreement in duplicate. One counterpart each has been delivered to OWNER and CONTRACTOR. All portions of the Contract Documents have been signed, initialed or identified by OWNER and CONTRACTOR.

This Agreement will be effective on _____, 2025.

OWNER: CITY OF LOUISVILLE, COLORADO

By: _____
Christopher M. Leh, Mayor

(CORPORATE SEAL)

Attest: _____
Genny Kline, City Clerk

Address for giving notices:

749 Main Street
Louisville, Colorado
80027

Attention: Justin Ferron, P.E.

CONTRACTOR: _____

By: _____

(CORPORATE SEAL)

Attest: _____

Address for giving notices:

_____
_____

Attention: _____

PERFORMANCE BOND

_____, as Principal, hereinafter called the Contractor, and

_____, as Surety, with general offices in

_____
a Corporation organized under the laws of the State of _____, and authorized to transact business in the State of Colorado, are hereby bound unto the City of Louisville, Colorado, as Obligee, hereinafter called the City, in the penal sum of _____ ($_____) in the United States currency, for the payment of which sum the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

WHEREAS, the Contractor has entered into a written contract with the City dated _____, 2025, for _____ in accordance with plans and specifications contained in the Contract, a copy of which Contract is attached hereto and made a part hereof and is hereinafter referred to as the Contract;

NOW, THEREFORE, the conditions of this performance bond are such that, if the Contractor shall satisfactorily perform the Contract, then this bond shall be null and void; otherwise, the Surety shall promptly remedy the default, or shall promptly 1) Complete the Contract in accordance with its terms and conditions, or 2) Obtain a Bid or Bids for completing the contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, or if the City elects, upon determination by the City and the Surety jointly of the lowest responsible bidder, arrange for a Contract between such Bidder and the City, and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the costs of completion plus liquidated damages additional costs pursuant to Section 12.2 of the General Conditions of the Contract less the balance of the contract price, but not exceeding the amount set forth in the first paragraph hereof. The term "balance of the contract price", as used in this paragraph, shall mean the total amount payable by the City to the Contractor under the Contract and any amendments thereto, less the amount paid by the City to Contractor.

In addition, if the Contractor or a subcontractor shall fail to duly pay for any labor, materials, team hire, sustenance, provisions, provender, or other supplies used or consumed by such Contractor or subcontractor in performance of the Contract, or shall fail to duly pay any person who supplies rental machinery, tools, or equipment, all amounts due as the result of the use of such machinery, tools or equipment in the prosecution of the Work, then the Surety shall pay the same in the amount not exceeding the sum specified in the bond together with interest at a rate of eight percent per annum.

In addition to the other conditions hereof, this bond shall include all provisions set forth in Section 38-26-106, C.R.S.

THE UNDERSIGNED SURETY for value received hereby agrees that no extension of time, change in, addition to, or other modification of the terms of the Contract of Work to be performed thereunder or the specifications of the Contract Documents shall in any way affect its obligation on this bond and the Surety does hereby waive notice of any such extension of time, change, addition, or modifications.

SIGNED AND SEALED this_____day of _____, 2025.

_____	_____
(Contractor)	**(Surety Company)**
By: _____	Address: _____
(President)	
_____	By: _____
(Attest)	(Attorney-in-fact)

LABOR AND MATERIAL PAYMENT BOND

BOND NUMBER:

KNOW ALL MEN BY THESE PRESENCES: that

(Firm) _____
(Address) _____
(an Individual), (a Partnership), (a Corporation), hereinafter referred to as "the Principal", and

(Firm)_____
(Address)_____
hereinafter referred to as "the Surety", are held and firmly bound unto the
CITY OF LOUISVILLE, 749 MAIN STREET, LOUISVILLE, COLORADO a Municipal Corporation, hereinafter referred to as "the Owner", in the penal sum of
_____ Dollars
($_____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITIONS OF THIS OBLIGATION are such that whereas the Principal entered into a certain Agreement with the Owner, dated the _____ day of _____, 2025, a copy of which is hereto attached and made a part hereof for the performance of

NOW, THEREFORE, if the Principal shall make payment to all persons, firms, subcontractors and corporations furnishing materials for or performing labor in the prosecution of the Work provided for in such Agreement, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, repairs on machinery, equipment and tools, consumed, rented or used in connection with the construction of such work, and all insurance premiums on said Work, and for all labor, performed in such Work whether by Subcontractor or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement or to the Work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this Bond; and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Agreement or to the Work or to the Specifications.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

In addition to the other conditions hereof, this bond shall include all provisions set forth in Section 38-26-105, C.R.S.

IN WITNESS WHEREOF, this instrument is executed in (3) counterparts, each one of which shall be deemed an original, this _____ day of _____, 2025.

IN THE PRESENCE OF:

_____

_____

PRINCIPAL:

BY: _____

_____

(Title)

(Corporate Seal)

Addresses:

_____

_____

_____

IN THE PRESENCE OF:

_____

_____

OTHER PARTNERS:

By: _____

By: _____

IN THE PRESENCE OF:

_____

_____

SURETY:

By: _____

(Attorney-in fact)

Address:

(Surety Seal)

_____

_____

NOTE: Date of Bond must not be prior to date of Agreement.
If Contractor is a Partnership, all partners must execute Bond.

IMPORTANT: Surety Company must be authorized to transact business in the state of Colorado and be acceptable to the Owner.

NOTICE OF AWARD

DATED: _____

TO: _____
_____

PROJECT: HOWARD BERRY AND SID COPELAND WATER TREATMENT PLANTS CHLORINE DIOXIDE FEED SYSTEMS REPLACEMENT
PROJECT NUMBER: 501498-640167
OWNER: CITY OF LOUISVILLE, COLORADO

Please be advised that on _____, 2025, the City of Louisville, Colorado City Council awarded the HOWARD BERRY AND SID COPELAND WATER TREATMENT PLANTS CHLORINE DIOXIDE FEED SYSTEMS REPLACEMENT your company in the amount of $_____ per your qualified, low unit price bids. In accordance with the Contract Documents, you are required to execute two copies of the Agreement and return both copies with the required bonds and certificates of insurance within **10 days** of the date of this Notice of Award by _____, 2025.

Failure to comply with these conditions within the time specified will entitle OWNER to consider your bid abandoned, to annul this Notice of Award and to declare your Bid Security forfeited.

CITY OF LOUISVILLE, COLORADO	ACCEPTANCE OF NOTICE
By: _____	By: _____
Justin Ferron, P.E.	
Title: Civil Engineer III _____	Title: _____

NOTICE TO PROCEED

DATED: _____

TO: _____
_____

PROJECT: HOWARD BERRY AND SID COPELAND WATER TREATMENT PLANTS CHLORINE DIOXIDE FEED SYSTEMS REPLACEMENT
PROJECT NUMBER: 501498-640167
OWNER: CITY OF LOUISVILLE, COLORADO

You are hereby notified that the Contract Time under the above Contract will commence to run on _____**, 2025**. On that date, you are to begin performing the Work in accordance with the Contract Documents and you are to complete the Work within **180 Contract Days** thereafter. The date of substantial completion of all Work is therefore _____**, 2025.**

CITY OF LOUISVILLE, COLORADO

By: _____
Justin Ferron, P.E.

Title: Civil Engineer III

ACKNOWLEDGEMENT

Receipt of the above Notice to Proceed in hereby acknowledged.

CONTRACTOR: _____

By: _____

Title: _____

Date: _____

CHANGE ORDER NO. _____

DATED: _____, 2025

PROJECT: HOWARD BERRY AND SID COPELAND WATER TREATMENT PLANTS CHLORINE DIOXIDE FEED SYSTEMS REPLACEMENT

AGREEMENT DATE: _____2025

PROJECT NUMBER: **501498-640167** OWNER: CITY OF LOUISVILLE, COLORADO

The following changes are hereby made to the Contract Documents:

Description: _____
_____
_____
_____

Purpose: _____
_____
_____
_____
_____

Attachments: _____
_____
_____
_____

ADJUSTMENT TO CONTRACT PRICE:

Original contract price	$_____
Set change previous Change Orders No. __ to __	$_____
Contract price prior to this Change Order	$_____
Net adjustment resulting from this Change Order (+/-)	$_____
Current contract price including this Change Order	$_____

ADJUSTMENT TO CONTRACT TIME:

Original contract time (days or date)
Net change previous Change Orders No. __ to __ (days)
Contract time prior to this Change Order (days or date)
Net Adjustment Resulting from this Change Order (days)
Current contract time including this Change Order (days or date)

Recommended:	Approved:	Accepted:
_____	CITY OF LOUISVILLE, COLORADO	_____
ENGINEER	OWNER	CONTRACTOR
By: _____	By: _____	By: _____
Date: _____	Date: _____	Date: _____

FIELD ORDER

No._____

TO: _____

PROJECT: HOWARD BERRY AND SID COPELAND WATER TREATMENT PLANTS CHLORINE DIOXIDE FEED SYSTEMS REPLACEMENT
PROJECT NUMBER: 501498-640167
OWNER: CITY OF LOUISVILLE, COLORADO

DATE ISSUED: _____

You are hereby directed and instructed to execute promptly minor variations in the Work by this Field Order as follows:

Attachments:

This form shall be used to authorize minor variations in the Work from the requirements of the Contract Documents, which do not include an adjustment in the Contract Price or the Contract Times.

CITY OF LOUISVILLE		**ACCEPTED BY CONTRACTOR**	
BY:	_____	BY:	_____
TITLE:	_____	TITLE:	_____
DATE:	_____	DATE:	_____

WORK CHANGE DIRECTIVE

No. _____

PROJECT: HOWARD BERRY AND SID COPELAND WATER TREATMENT PLANTS CHLORINE DIOXIDE FEED SYSTEMS REPLACEMENT
PROJECT NUMBER: 501498-640167
OWNER: CITY OF LOUISVILLE, COLORADO

DATE ISSUED: _____ EFFECTIVE DATE: _____

You are directed to proceed promptly with the following change(s):

Description:

_____
_____
_____

Purpose of Work Change Directive:

_____
_____
_____

Attachments (List documents supporting change):

_____
_____
_____

If a claim is made that the above change(s) have affected Contract Price of Contract Times any claim for a Change Order based thereon will involve one or more of the following methods of determining the effect of the change(s).

Method of determining change in Contract Price:

____ Unit Prices
____ Lump Sum
____ Other _____
_____
_____

Method of determining change in Contract Times:

____ Contractor's Records
____ Engineer's Records
____ Other _____
_____
_____

Estimated increase (decrease) in Contract Price:
$_____
If the change involves an increase, the estimated amount is not to be exceeded without further authorization.

Estimated increase (decrease) in Contract Times
Substantial Completion: _____days;
Ready for final payment: _____days.
If the change involves an increase, the estimated times are not to be exceeded without further authorization.

RECOMMENDED:

_____
ENGINEER

BY: _____

ACCEPTED:

_____
CONTRACTOR

BY: _____

WORK CHANGE DIRECTIVE INSTRUCTIONS

A. GENERAL INFORMATION

This document was developed for use in situations involving changes in the Work that, if not processed expeditiously, might delay the Project. These changes are often initiated in the field and may affect the Contract Price or the Contract Times. This is not a Change Order, but only a directive to proceed with Work that may be included in a subsequent Change Order.

For supplemental instructions and minor changes not involving a possible change in the Contract Price or the contract Times a Field Order may be used.

B. COMPLETING THE WORK CHANGE DIRECTIVE FORM

Engineer initiates the form, including a description of the items involved and attachments.

Based on conversations between Engineer and Contractor, Engineer completes the following:

METHOD OF DETERMINING CHANGE, IF ANY, IN CONTRACT PRICE. Mark the method to be used in determining the final cost of Work involved and the estimated net effect on the Contract Price. If the change involves an increase in the Contract Price and the estimated amount is approached before the additional or changed Work is completed, another Work Change Directive must be issued to change the estimated price or Contractor may stop the changed Work when the estimated price is reached. If the Work Change Directive is not likely to change the Contract Price, the space for estimated increase (decrease) should be marked "Not Applicable.

METHOD OF DETERMINING CHANGE, IF ANY, IN CONTRACT TIMES: Mark the method to be used in determining the change in Contract Times and the estimated increase or decease in Contract Times. If the change involves an increase in the Contract Times and the estimated times are approached before the additional or changed Work is completed, another Work Change Directive must be issued to change the times or Contractor may stop the changed Work when the estimated times are reached. If the Work Change Directive is not likely to change the Contract Times, the space for estimated increase (decrease) should be marked "Not Applicable".

Once authorized by Engineer a copy will be sent to Contractor. Price and Times may only be changed by Change Order signed by Owner and Contractor.

Once the Work covered by this directive is completed or final cost and times are determined, Contractor should submit documentation for inclusion in a Change Order.

THIS IS A DIRECTIVE TO PROCEED WITH A CHANGE THAT MAY AFFECT THE CONTRACT PRICE OR THE CONTRACT TIMES. A CHANGE ORDER, IF ANY, SHOULD BE CONSIDERED PROMPTLY.

INSERT APPLICATION FOR PAYMENT

CONTRACTOR'S PROPOSAL REQUEST

(Not a Change Order)

Date Submitted: _____, 2025 No. _____

TO: _____

PROJECT: HOWARD BERRY AND SID COPELAND WATER TREATMENT PLANTS CHLORINE DIOXIDE FEED SYSTEMS REPLACEMENT
PROJECT NUMBER: 501498-640167
OWNER: CITY OF LOUISVILLE, COLORADO

We hereby request the cost of the following proposed change in the Contract. A breakdown of the proposed cost is attached.

Description of the proposed change:

_____

_____

_____

_____

_____

_____

All work shall be in accordance with the terms, stipulations, and conditions of the Contract Documents. If the Work herein requested is approved by Change Order, the time of completion will be (increased), (decreased), (unchanged) by _____ calendar days.

New Substantial Completion Date: _____, 2025

This change will:

___ Increase the Contract by $_____
___ Decrease the Contract by $_____
___ No change in the Contract

SUBMITTED BY CONTRACTOR

BY: _____

DATE: _____

DATE: _____

CITY OF LOUISVILLE

___ Contractors Proposal Request Accepted

___ Contractors Proposal Request Not Accepted

BY: _____

DATE: _____

TITLE: _____

CONTRACTOR'S OVERTIME REQUEST

Date Submitted: _____, 2025

TO: _____

PROJECT: HOWARD BERRY AND SID COPELAND WATER TREATMENT PLANTS CHLORINE DIOXIDE FEED SYSTEMS REPLACEMENT
PROJECT NUMBER: 501498-640167
OWNER: CITY OF LOUISVILLE, COLORADO

We hereby request to perform work on overtime in accordance with the terms, stipulations, and conditions of the Contract Documents.

Requested date of overtime work: _____, 2025

Requested hours of overtime work: _____ (a. m./p. m.) to _____ (a. m./p. m.)

Description of proposed overtime work:

No extra payment will be paid to the CONTRACTOR by the OWNER due to labor overtime or other increased costs of performing the Work. Should the CONTRACTOR desire to work outside the hours of 6:00a.m. to 8:00p.m. the CONTRACTOR shall submit a written request to the ENGINEER 24 hours prior. If approval is given by ENGINEER to CONTRACTOR for authorized overtime work, ENGINEER's and ENGINEER's authorized personnel will charge overtime and other incidental administrative expenses necessary for performing inspections or operational coordination. The CONTRACTOR will be responsible to pay for all such rates and charges, and shall not be granted a Contract Price increase for such charges.

Hours of overtime work shall only be allowed from 8:00 p.m. to 10:00 p.m. Monday thru Sunday.

SUBMITTED BY CONTRACTOR

BY: _____

DATE: _____

TITLE: _____

CITY OF LOUISVILLE

____ Contractors Proposal Request Accepted

____ Contractors Proposal Request Not Accepted

BY: _____

DATE: _____

TITLE: _____

CLAIM RELEASE

PROJECT: HOWARD BERRY AND SID COPELAND WATER TREATMENT PLANTS CHLORINE DIOXIDE FEED SYSTEMS REPLACEMENT
PROJECT NUMBER: 501498-640167
OWNER: CITY OF LOUISVILLE, COLORADO

Application for Payment Number: _____
Application for Payment Amount: _____
Application for Payment Date: _____

For valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the undersigned hereby releases the City of Louisville, Colorado, and waives all rights of the undersigned to file a claim for material, equipment, tools, machinery or services heretofore furnished for use in and for labor heretofore performed upon the construction, alteration, addition to or repair of the structure or improvements described in the Contract Documents as:

Project: City of Louisville _____

Description of Property: _____

Owner: City of Louisville, Colorado

We acknowledge that the foregoing is an adequate description of the real property and improvement inasmuch as the foregoing description is the description given in the Contract Documents, which govern the performance of the Work for which consideration has been received.

In executing this release, we certify that all claims for labor or materials, or both, furnished or performed by the undersigned or on our behalf by our material suppliers or subcontractors have been paid or that satisfactory arrangements for payment have been made.

In further consideration of the payment made or to be made to the undersigned and to induce said payment, we agree to defend and indemnify the City of Louisville from any claim or claims on the part of our material suppliers, laborers, employees, servants, and agents, or subcontractors arising from our work on this project, and we further agree to fully satisfy any such claim brought against the City of Louisville and reimburse the City of Louisville for any and all costs, including reasonable attorney fees, which it may incur as a result of such claims.

SUPPLIER OR SUBCONTRACTOR	**CONTRACTOR**
By: _____ President	By: _____ President
Date: _____	Date: _____

CERTIFICATE OF SUBSTANTIAL COMPLETION

TO: _____

PROJECT: HOWARD BERRY AND SID COPELAND WATER TREATMENT PLANTS CHLORINE DIOXIDE FEED SYSTEMS REPLACEMENT
PROJECT NUMBER: 501498-640167
OWNER: CITY OF LOUISVILLE, COLORADO

This Certificate of Substantial Completion applies to all Work under the Contract Documents or to the following specified parts thereof:

_____

_____

_____

The Work to which this Certificate applies has been inspected by authorized representatives of OWNER, and that Work is hereby declared to be substantially complete in accordance with the Contract Documents on

_____
DATE OF SUBSTANTIAL COMPLETION

A tentative list of items to be completed or corrected is attached hereto. This list may not be all-inclusive, and the failure to include an item in the list does not alter the responsibility of CONTRACTOR to complete all the Work in accordance with the Contract Documents. The items in the tentative list shall be completed or corrected by CONTRACTOR within **ten (10)** days of the issuance of this Certificate of Substantial Completion.

CONTRACTOR shall maintain all contractual responsibilities until Final Acceptance.

The following documents are attached to and made a part of this Certificate of Substantial Completion:

Attachments:

_____

_____

_____

(For items to be attached see definition of Substantial Completion as supplemented and other specifically noted conditions precedent to achieving Substantial Completion as required by the Contract Documents.)

This certificate does not constitute an acceptance of Work or start of the guarantee period nor its release of CONTRACTOR's obligation to complete the Work in accordance with the Contract Documents. Issuance of Substantial Completion does not commence the guarantee period with this certificate.

CITY OF LOUISVILLE, COLORADO		**ACCEPTED BY CONTRACTOR**	
BY:	_____	BY:	_____
TITLE:	_____	TITLE:	_____
DATE:	_____	DATE:	_____

FINAL INSPECTION REPORT

DATE: _____

TO: _____
_____

PROJECT: HOWARD BERRY AND SID COPELAND WATER TREATMENT PLANTS CHLORINE DIOXIDE FEED SYSTEMS REPLACEMENT
PROJECT NUMBER: 501498-640167
OWNER: CITY OF LOUISVILLE, COLORADO

The ENGINEER has performed final inspection of the Work, and accepts the Work subject to the Contractor's performance and completion of the following repairs, corrections and/or replacements:

All outstanding work and Punch List items are complete as of _____

_____

_____

_____

_____

_____

_____

The ENGINEER does/does not (circle one) hereby finally accept the Work and hereby certifies that the Contractor is eligible to receive final payment of the Work.

CITY OF LOUISVILLE, COLORADO	**CONTRACTOR**
BY: _____	BY: _____
TITLE: _____	TITLE: _____
DATE: _____	DATE: _____

CERTIFICATE OF FINAL COMPLETION

DATE: _____

TO: _____
_____

PROJECT: HOWARD BERRY AND SID COPELAND WATER TREATMENT PLANTS CHLORINE DIOXIDE FEED SYSTEMS REPLACEMENT
PROJECT NUMBER: 501498-640167
OWNER: CITY OF LOUISVILLE, COLORADO

This Certificate of Final Completion applies to all Work under the Contract Documents, or to the following specified parts thereof:

(specify) All work under the Contract Documents. _____

_____

_____

The Work to which this Certificate applies has been inspected by authorized representatives of the ENGINEER and the Work is hereby declared to be complete in accordance with the Contract Documents on

DATE OF FINAL COMPLETION

In consideration therefor, the OWNER agrees to make Final Payment to Contractor of all amounts retained by OWNER, except such amounts that are subject to verified claims pursuant to Section 38-26-107, C.R.S, if any.

CITY OF LOUISVILLE, COLORADO		**CONTRACTOR**	
BY:	_____	BY:	_____
TITLE:	_____	TITLE:	_____
DATE:	_____	DATE:	_____

GUARANTEE PERIOD INSPECTION REPORT

DATE: _____, 20__

TO: _____
_____

PROJECT: HOWARD BERRY AND SID COPELAND WATER TREATMENT PLANTS CHLORINE DIOXIDE FEED SYSTEMS REPLACEMENT
PROJECT NUMBER: 501498-640167
OWNER: CITY OF LOUISVILLE, COLORADO

The ENGINEER's authorized representative performed the guarantee period inspection on _____, 20 ___, which guarantee was originally due to expire on _____, 20___.

The ENGINEER hereby determines that the project has ___/ has not ___ satisfactorily met the conditions required to pass the guarantee period inspection.

The identified following items of Work are defective and must be repaired, corrected and/or replaced:

_____

_____

_____

_____

_____

The guarantee period shall be extended for the items listed above until the following date:

_____, 20__.

CITY OF LOUISVILLE, COLORADO	**CONTRACTOR**
BY: _____	BY: _____
TITLE: _____	TITLE: _____
DATE: _____	DATE: _____

GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS

Wherever used in these General Conditions or in the other Contract Documents the following terms have the meanings indicated which are applicable to both the singular and plural thereof:

1.0 **Abnormal Weather** - Snowfall, rainfall, freezing temperatures, or wind conditions, in excess of those encountered in the project area of Boulder County during the past 10 years that necessitates cessation of Work and causes consequence to the project.

1.1 **Addenda** - Written or graphic instruments issued prior to the opening of Bids, which clarify, correct or change the Bidding Requirements or the Contract Documents.

1.2 **Agreement** - The written contract between OWNER and CONTRACTOR covering the Work to be performed; other Contract Documents are attached to the Agreement and made a part thereof as provided therein.

1.3 **Application for Payment** - The form accepted by ENGINEER which is to be used by CONTRACTOR in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

1.4 **Asbestos** - Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

1.5 **Bid** - The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

1.6 **Bidding Documents** - The advertisement or invitation to Bid, instructions to Bidders, the Bid form, and the proposed Contract Documents (including all Addenda issued prior to receipt of Bids).

1.7 **Bidding Requirements** - The advertisement or invitation to Bid, instructions to bidders, and the Bid form.

1.8 **Bonds** - Performance and Payment bonds and other instruments of security.

1.9 **Change Order** - A document recommended by ENGINEER, which is signed by CONTRACTOR and OWNER and authorizes an addition, deletion or revision in the Work, or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

1.9.1 **Contract Day** – A Contract Day specifies that construction will be completed Monday through Sunday, excluding OWNER-observed holidays and Abnormal Weather days.

1.10 **Contract Documents** - The Agreement, Addenda (which pertain to the Contract Documents), CONTRACTOR's Bid (including documentation accompanying the Bid and any post Bid documentation submitted prior to the Notice Award) when attached as an exhibit to the Agreement, the Notice to Proceed, the Bonds, these General Conditions, the Supplementary Conditions, the Specifications and the Drawings as the same are more specifically identified in the Agreement, together with all Written Amendments, Change Orders, Work

Change Directives, Field Orders and ENGINEER's written interpretations and clarifications issued pursuant to paragraphs 3.5, 3.6.1, and 3.6.3 on or after the Effective Date of the Agreement. Shop Drawing submittals approved pursuant to paragraphs 6.26 and 6.27 and the reports and drawings referred to in paragraphs 4.2.1.1 and 4.2.2.2 are not Contract Documents.

1.11 **Contract Price** - The moneys payable by OWNER to CONTRACTOR for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of paragraph 11.9.1 in the case of Unit Price Work).

1.12 **Contract Times** - The numbers of days or the dates stated in the Agreement: (i) to achieve Substantial Completion, and (ii) to complete the Work so that it is ready for final payment as evidenced by ENGINEER's written recommendation of final payment in accordance with paragraph 14.13.

1.13 **CONTRACTOR** - The person, firm or corporation with whom OWNER has entered into the Agreement.

1.14 **Defective** - An adjective which when modifying the work refers to Work that is unsatisfactory, faulty or deficient, in that it does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents, or has been damaged prior to ENGINEER's recommendation of final payment (unless responsibility for the protection thereof has been assumed by OWNER at Substantial Completion in accordance with paragraph 14.8 or 14.10).

1.15 **Drawings** - The drawings, which show the scope, extent and character of the Work to be furnished and performed by CONTRACTOR and which have been prepared or approved by ENGINEER and are referred to in the Contract Documents. Shop drawings are not Drawings as so defined.

1.16 **Effective Date of the Agreement** - The date indicated in the Agreement on which it becomes effective, but if no such date is indicated it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

1.17 **ENGINEER** - The word "ENGINEER" refers to the City of Louisville, Director of Public Works or his authorized representative, designated by the OWNER as its Engineering representative.

1.18 **OWNER'S Consultant** - A person, firm or corporation having a contract with OWNER to furnish services as OWNER's independent professional associate or consultant with respect to the Project and who is identified as such in the Supplementary Conditions.

1.19 **Field Order** - A written order issued by ENGINEER which orders minor changes in the Work in accordance with paragraph 9.5 but which does not involve a change in the Contract Price or the Contract Times.

1.20 **General Requirements** - Sections of Division 1 of the Specifications.

1.21 **Hazardous Waste** - The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

1.22 **Laws and Regulation: Laws or Regulations** - Any and all applicable laws, rules, regulations, ordinances, codes and orders of any and all governmental bodies, agencies, authorities and courts having jurisdiction.

1.23 **Liens** - Liens, charges, security interests or encumbrances upon real property or personal property.

1.24 **Milestone** - A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

1.25 **Notice of Award** - The written notice by OWNER to the apparent successful bidder stating that upon compliance by the apparent successful bidder with the conditions precedent enumerated therein, within the time specified, OWNER will sign and deliver the Agreement.

1.26 **Notice to Proceed** - A written notice given by OWNER to CONTRACTOR (with a copy to ENGINEER) fixing the date on which the Contract Times will commence to run and on which CONTRACTOR shall start to perform CONTRACTOR's obligations under the Contract Documents.

1.27 **OWNER** - The public body or authority, corporation, association, firm or person with whom CONTRACTOR has entered into the Agreement and for whom the Work is to be provided.

1.28 **Partial Utilization** - Use by OWNER of a substantially completed part of the Work for the purpose for which it is intended (or a related purpose) prior to Substantial Completion of all the Work.

1.29 **PCBs** - Polychlorinated biphenyls.

1.30 **Petroleum** - Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Wastes and crude oils.

1.31 **Plans** - The term plans as used in these Contract Documents shall have the same meaning as Drawings.

1.32 **Product** - Includes materials, equipment and systems.

1.33 **Project** - The total construction of which the Work to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.

1.34 **Provide** - Furnish and install specified materials and equipment, unless the context requires otherwise.

1.35 **Radioactive Material** - Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

1.36 **Resident Project Representative** - The authorized representative of ENGINEER who may be assigned to the site or any part thereof.

1.37 **Samples** - Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

1.38 **Shop Drawings** - All drawings, diagrams, illustrations, schedules and other data or information which are specifically prepared or assembled by or for CONTRACTOR and submitted by CONTRACTOR to illustrate some portion of the Work.

1.39 **Specifications** - Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the Work and certain administrative details applicable thereto.

1.40 **Subcontractor** - An individual, firm or corporation having a contract with CONTRACTOR or with any other Subcontractor for the performance of a part of the Work at the site.

1.41 **Substantial Completion** - The Work (or a specified part thereof) has progressed to the point where, in the opinion of ENGINEER as evidenced by ENGINEER's definitive certificate of Substantial Completion, it is sufficiently complete, in accordance with the Contract Documents, so that the Work (or specified part) can be utilized for the purposes for which it is intended; or if no such certificate is issued, when the Work is complete and ready for final payment as evidenced by ENGINEER's written recommendation of final payment in accordance with paragraph 14.13. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

1.42 **Supplementary Conditions** - The part of the Contract Documents, which amends or supplements these General Conditions.

1.43 **Supplier** - A manufacturer, fabricator, supplier, distributor, material man or vendor having a direct contract with CONTRACTOR or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by CONTRACTOR or any Subcontractor.

1.44 **Underground Facilities** - All pipeline, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.

1.45 **Unit Price Work** - Work to be paid for on the basis of unit prices.

1.46 **Work** - The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work includes and is the result of performing or furnishing labor and furnishing and incorporating materials and equipment into the construction, and performing or furnishing services and furnishing documents, all as required by the Contract Documents.

1.47 **Work Change Directive** - A written directive to CONTRACTOR, issued on or after the Effective Date of the Agreement and signed by OWNER and recommended by ENGINEER, ordering an addition, deletion or revision in the Work, or responding to differing or unforeseen physical conditions under which the Work is to be performed as provided in paragraph 4.2 or 4.3 or emergencies under paragraph 6.23. A Work Change Directive will not change the Contract Price or the Contract Times, but is evidence that the parties expect that the change directed or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times as provided in paragraph 10.2.

1.48 Written Amendment - A written amendment of the Contract Documents, signed by OWNER and CONTRACTOR on or after the Effective Date of the Agreement and normally dealing with the non-engineering or non-technical rather than strictly construction-related aspects of the Contract Documents.

ARTICLE 2 - PRELIMINARY MATTERS

Delivery of Bonds:

2.1 When CONTRACTOR delivers the executed Agreement to OWNER, CONTRACTOR shall also deliver to OWNER such Bonds and Certificates of Insurance as CONTRACTOR may be required to furnish in accordance with Article 5.

Copies of Documents:

2.2 OWNER shall furnish to CONTRACTOR up to four copies of the contract documents for the execution of the Work. Additional copies will be furnished, upon request, at the cost of reproduction.

Commencement of Contract Times; Notice to Proceed:

2.3 The Contract Times will commence to run on the day indicated in the Notice to Proceed. Timing and completion of the HOWARD BERRY AND SID COPELAND WATER TREATMENT PLANTS CHLORINE DIOXIDE FEED SYSTEMS REPLACEMENT required on or prior to 180 Contract Days from the contract commencement date. The OWNER has set the proposed project schedule and plans to implement the following schedule for this project. The CONTRACTOR shall be required to start construction on or before the start date listed below:

PROPOSED PROJECT SCHEDULE:

Pre-Bid Conference ..... May 1 2025
Bid Opening ..... May 9 2025
Contract Award by City Council ..... June 3 2025
Notice of Award Issued ..... June 6 2025
Bonds & Insurance Certificates Due ..... June 16 2025
Contract Agreement Executed ..... June 16 2025
Notice to Proceed Issued ..... June 16 2025
Pre-Construction Conference ..... June 16 2025
Contract Time Commences to run ..... June 16 2025
Substantial Completion ..... October 31 2025
Final Completion ..... December 31 2025

2.3.1 The Contractor shall substantially complete all work by **October 31, 2025** and within **120** consecutive contract days after the date when the Contract Time commences to run. Should work not be completed by the date and within the time period specified, the Owner shall access the Contractor liquidated damages in conformance with the Agreement, Article 2 – Contract Times, paragraph 2.2 Liquidated Damages.

Starting the Work:

2.4 CONTRACTOR shall start to perform the Work on the date when the Contract Times commence to run, but no Work shall be done at the site prior to the date on which the Contract Times commence to run.

Before Starting Construction:

2.5 Before undertaking each part of the Work, CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. CONTRACTOR shall promptly report in writing to ENGINEER any conflict, error, ambiguity or discrepancy which CONTRACTOR may discover and shall obtain a written interpretation or clarification from ENGINEER before proceeding with any Work affected thereby; however, CONTRACTOR shall not be liable to OWNER or ENGINEER for failure to report any conflict, error, ambiguity or discrepancy in the Contract Documents, unless CONTRACTOR knew or reasonably should have known thereof.

2.6 Within ten days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), CONTRACTOR shall submit to ENGINEER for review:

2.6.1 a preliminary progress schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestone specified in the Contract Documents;

2.6.2 a preliminary schedule of Shop Drawing and Sample submittals which will list each required submittal and the times for submitting, reviewing and processing such submittal.

Preconstruction Conference:

2.7 Before any Work at the site is started, a conference attended by CONTRACTOR, ENGINEER and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in paragraph 2.6, procedures for handling Shop Drawings and other submittal, processing Applications for Payment and maintaining required records.

Initially Acceptable Schedules:

2.8 Unless otherwise provided in the Contract Documents, at least ten days before submission of the first Application for Payment a conference attended by CONTRACTOR, ENGINEER and others as appropriate will be held to review the Application for Payment for acceptability to ENGINEER. No progress payment shall be made to CONTRACTOR until the schedules are submitted to and acceptable to ENGINEER as provided below. The progress schedule will be acceptable to ENGINEER as providing an orderly progression of the Work to completion within any specified Milestones and the Contract Times, but such acceptance will neither impose on ENGINEER responsibility for the sequencing, scheduling or progress of the Work nor interfere with or relieve CONTRACTOR from CONTRACTOR's full responsibility therefor. CONTRACTOR's schedule of Shop Drawing and Sample submissions will be acceptable to ENGINEER as providing a workable arrangement for reviewing and processing the required submittals.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

Intent:

3.1 The Contract Documents comprise the entire agreement OWNER and CONTRACTOR concerning the Work. The Contract Documents are complementary; what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the law of the place of the Project.

3.2 It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any Work, materials or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be furnished and performed whether or not specifically called for. When words or phrases, which have a well-known technical or construction industry or trade meaning are used to describe Work, materials or equipment, such words or phrases shall be interpreted in accordance with that meaning. Clarifications and interpretations of the Contract Documents shall be issued by ENGINEER as provided in paragraph 9.4.

3.3 Reference to Standards & Specifications of Technical Societies; Reporting and Resolving Discrepancies:

3.3.1. Reference to standards, specifications, manuals or codes of any technical society, organization or association, or to the Laws or Regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard, specification, manual, code or Laws or Regulations in effect at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

3.3.2 If, during the performance of the Work, CONTRACTOR discovers any conflict, error ambiguity or discrepancy within the Contract Documents or between the Contract Documents and any provision of any such Law or Regulation applicable to the performance of the Work or of any such standard, specification, manual or code or of any instruction of any Supplier referred to in paragraph 6.5, CONTRACTOR shall report it to ENGINEER in writing at once, and, CONTRACTOR shall not proceed with the Work affected thereby (except in an emergency as authorized by paragraph 6.23) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in paragraph 3.5 or 3.6; provided, however, that CONTRACTOR shall not be liable to OWNER or ENGINEER for failure to report any such conflict, error, ambiguity or discrepancy unless CONTRACTOR knew or reasonably should have known thereof. Upon notification to the ENGINEER, the CONTRACTOR shall proceed with other parts of the Work not affected by the conflict, error, ambiguity or discrepancy.

3.3.3 Except as otherwise specifically stated in the Contract Documents or as may be provided by amendment or supplement thereto issued by one of the methods indicated in paragraph 3.5 or 3.6, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity or discrepancy between the provisions of the Contract Documents and:

3.3.3.1 the provisions of any such standard, specification, manual, code or instruction (whether or not specifically incorporated by reference in the Contract Documents); or

3.3.3.2 the provisions of any such Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

No provision of any such standard, specification, manual, code or instruction shall be effective to change the duties and responsibilities of OWNER, CONTRACTOR or ENGINEER, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents, nor shall it be effective to assign to OWNER, ENGINEER or any of ENGINEER's Consultants, agents or employees any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of paragraph 9.13 or any other provision of the Contract Documents.

3.4 Whenever in the Contract Documents the terms "as ordered," "as directed," "as required," "as allowed," "as approved," or terms of like effect or import are used, or the adjectives "reasonable," "suitable": "acceptable," "proper" or "satisfactory" or adjectives of like effect or import are used to describe a requirement, direction, review or judgment of ENGINEER as to the Work, it is intended that such requirement, direction, review or judgment will be solely to evaluate, in general, the completed Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be effective to assign to ENGINEER any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 9.13 or any other provision of the Contract Documents.

Amending and Supplementing Contract Documents:

3.5 The Contract Documents may be amended to provide for additions, deletions and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways:

3.5.1 a formal Written Amendment,
3.5.2 a Change Order (pursuant to paragraph 10.4), or
3.5.3 a Work Change Directive (pursuant to paragraph 10.1)

3.6 In addition, the requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, in one or more of the following ways:

3.6.1 a Field Order (pursuant to paragraph 9.5)
3.6.2 ENGINEER's approval of a Shop Drawing or Sample (pursuant to paragraphs 6.26 and 6.27), or
3.6.3 ENGINEER's written interpretation or clarification (pursuant to paragraph 9.4).

Reuse of Documents:

3.7 CONTRACTOR, and any Subcontractor or Supplier or other person or organization performing or furnishing any of the Work under a direct or indirect contract with OWNER (i) shall not have or acquire any title to or ownership rights in any of the Drawings, Specifications or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or Engineer's Consultant, and (ii) shall not reuse any of such Drawings, Specifications, other documents or copies on extensions of the Project or any other project without written consent of OWNER and ENGINEER and specific written verification or adaption by ENGINEER.

ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; REFERENCE POINTS

Availability of Lands:

4.1 OWNER shall furnish, as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and such other lands which are designated for the use of CONTRACTOR. OWNER shall identify any encumbrances or restrictions not of general application but specifically related to use of lands so furnished with which CONTRACTOR will have to comply in performing the Work. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by OWNER, unless otherwise provided in the Contract Documents. If CONTRACTOR and OWNER are unable to agree on entitlement to or the amount or extent of any adjustments in the Contract Price or the Contract Times as a result of any delay in OWNER's furnishing these lands, rights-of-way or easements, CONTRACTOR may make a claim therefor as provided in Articles 11 and 12. CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

Subsurface and Physical Conditions:

4.2 BIDDER'S are responsible for examining and determining for themselves the location and nature of the proposed Work, the amount and character of the labor and materials required therefor, and the difficulties, which may be encountered. BIDDER's may not rely on oral or written representations made by the OWNER, including reports and drawings identified pursuant to 4.2.1 and subparagraphs thereof, unless the OWNER has guaranteed in writing that such representation is factually accurate, and by submitting a Bid, each BIDDER waives all liability for any error in any representation made by the OWNER to the BIDDER. BIDDER's shall inspect the site and its surroundings and conduct such supplementary examinations, investigations, and tests concerning conditions at or contiguous to the site (including surface, and subsurface) which may affect cost, progress, performance, or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences, or procedures of construction to be employed by BIDDER and safety precautions and programs incident thereto for performing the Work in accordance with the Contract Documents. By failing to make such an inspection, the BIDDER waives all rights to claim extra payment or time extensions due to unexpected conditions, which could have been determined had the site been reasonably inspected. If concealed or unknown conditions differ materially from those ordinarily encountered and generally recognized as inherent in the Work, or differ materially from the conditions indicated in the Contract Documents, then an equitable adjustment in the Contract Price or in the Contract Time will be allowed by change order as provided in Article 11 or Article 12 respectively. By submitting a Bid, the BIDDER represents that the BIDDER's observations at the site are not

inconsistent with the requirements of the proposed Contract Documents, unless otherwise noted by the BIDDER.

4.2.1 **Reports and Drawings:** Reference is made to the Supplementary Conditions for identification of:

The following reports of explorations and tests of subsurface conditions at the site of the Work:

4.2.1.1 **Subsurface Conditions:** Those reports of explorations and tests of subsurface conditions at or contiguous to the site that have been utilized by ENGINEER in preparing the Contract Documents; and

Report dated **N/A** , **N/A**, prepared by **N/A** entitled: **N/A** . The technical data contained in such report upon which CONTRACTOR may rely is **N/A** .

Copies of these reports that are not included with Bidding Documents may be examined at ENGINEER's office during regular business hours. Please call for appointment. Copies of such reports are not available for distribution. These reports and drawings are not part of the Contract Documents, but the technical data contained therein upon which CONTRACTOR is entitled to rely as provided in GC-4.2 and as identified and established above are incorporated therein by reference.

4.2.1.2 **Physical Conditions:** Those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except Underground Facilities) that have been utilized by ENGINEER in preparing the Contract Documents.

4.2.2 **Limited Reliance by CONTRACTOR authorized; Technical Data:** Reports and drawings identified pursuant to paragraph 4.2 are not Contract Documents. Unless otherwise set forth in the Contract Documents or OWNER has otherwise guaranteed in writing that such representation is factually accurate, CONTRACTOR may not rely upon or make any claim against the OWNER, ENGINEER or ENGINEER's consultants with respect to the accuracy of any "technical data" contained in reports and drawings and CONTRACTOR may not rely upon or make any claim against the OWNER, ENGINEER or ENGINEER's consultants with respect to:

4.2.2.1 The completeness of such reports and drawings for CONTRACTOR's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by CONTRACTOR and safety precautions and programs incident thereto, or

4.2.2.2 other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings, or

4.2.2.3 any CONTRACTOR interpretation of or conclusion drawn from any "technical data" or any such data, interpretations, opinions or information.

4.2.3 CONTRACTOR shall not be entitled to any adjustment in the Contract Price or Times if:

4.2.3.1 CONTRACTOR knew of the existence of such conditions at the time CONTRACTOR made a final commitment to OWNER in respect of Contract Price and Contract Times by the submission of a bid or becoming bound under a negotiated contract; or

4.2.3.2 the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test or study of the site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for CONTRACTOR prior to CONTRACTOR's making such final commitment.

If OWNER and CONTRACTOR are unable to agree on entitlement to or as to the amount or length of any such equitable adjustment in the Contract Price or Contract Times, a claim may be made therefor as provided in Articles 11 and 12. However, OWNER, ENGINEER and ENGINEER's Consultants shall not be liable to CONTRACTOR for any claims, costs, losses or damages sustained by CONTRACTOR on or in connection with any other project or anticipated project.

4.3 Physical Conditions - Underground Facilities:

4.3.1 **Shown or Indicated:** The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site is based on information and data furnished to OWNER or ENGINEER by the owners of such Underground Facilities or by others.

4.3.1.1 OWNER and ENGINEER shall not be responsible for the accuracy or completeness of any such information or data; and

4.3.1.2 The cost of all of the following will be included in the Contract Price and CONTRACTOR shall have full responsibility for: (i) reviewing and checking all such information and data, (ii) locating all Underground Facilities shown or indicated in the Contract Documents, (iii) coordination of the Work with the owners of such Underground Facilities during construction, and (iv) the safety and protection of all such Underground Facilities as provided in paragraph 6.20 and repairing any damage thereto resulting from the Work.

4.3.2 **Not Shown or Indicated:** If an Underground Facility is uncovered or revealed at or contiguous to the site which was not shown or indicated in the Contract Documents, CONTRACTOR shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by paragraph 6.23), identify the owner of such Underground Facility and give written notice to that owner and to OWNER and ENGINEER. CONTRACTOR shall be responsible for the safety and protection of such Underground Facility as provided in paragraph 6.20. CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, to the extent that they are attributable to the existence of any Underground Facility that was not shown or indicated in the Contract Documents and that CONTRACTOR did not know of and could not reasonably have been expected to be aware of or to have anticipated. If OWNER

and CONTRACTOR are unable to agree on entitlement to or the amount or length of any such adjustment in Contract Price or Contract Times, CONTRACTOR may make a claim therefor as provided in Articles 11 and 12. However, OWNER, ENGINEER and ENGINEER's Consultants shall not be liable to CONTRACTOR for any claims, costs, losses or damages incurred or sustained by CONTRACTOR on or in connection with any other project or anticipated project.

Reference Points:

4.4 OWNER shall provide engineering surveys to establish baseline and benchmarks for construction, which in ENGINEER's judgment are necessary to enable CONTRACTOR to proceed with the Work. CONTRACTOR shall be responsible for laying out the Work, shall protect and preserve the established reference points and shall make no changes or relocations without the prior written approval of OWNER, CONTRACTOR shall report to ENGINEER whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points by professionally qualified personnel.

OWNER shall provide survey reference points, construction stakes, lines and grades required for the completion of the work specified in the specifications, on the plans, or in the Special Conditions. Additional staking requested by the Contractor will be at the CONTRACTOR'S expense. When the CONTRACTOR requires staking, he shall notify the OWNER of his requirements in writing a reasonable length of time in advance of starting work that require construction staking. Under no circumstances, shall a notice of less than 2 contract days be considered a reasonable length of time. Failure of the CONTRACTOR to provide 2 contract days written notice to the OWNER of his staking requests shall relieve the OWNER from any responsibility for additional costs or delays caused by such failure. Stakes set by the OWNER shall be carefully preserved by the CONTRACTOR. When stakes are destroyed or damaged, the CONTRACTOR will be charged for the cost of necessary replacement or restoration of stakes. The charge for replacement and restoration of stakes will be deducted from any moneys due or to become due the CONTRACTOR.

4.5 Asbestos, PCB's Petroleum, Hazardous Waste or Radioactive Material:

4.5.1 OWNER shall be responsible for any Asbestos, PCB's, Petroleum, Hazardous Waste or Radioactive Material uncovered or revealed at the site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work and which may present a substantial danger to persons or property exposed thereto in connection with the Work at the site. OWNER shall not be responsible for any such materials brought to the site by CONTRACTOR, Subcontractor, Suppliers or anyone else for whom CONTRACTOR is responsible.

4.5.2 CONTRACTOR shall immediately: (i) stop all Work in connection with such hazardous condition and in any area affected thereby (except in an emergency as required by paragraph 6.23), and (ii) notify OWNER and ENGINEER (and thereafter confirm such notice in writing). OWNER shall promptly consult with ENGINEER concerning the necessity for OWNER to retain a qualified expert to evaluate such hazardous condition or take corrective action, if any. CONTRACTOR shall not be required to resume Work in connection with such hazardous condition or in any such affected area until after OWNER has obtained any required permits related thereto

and delivered to CONTRACTOR special written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (ii) specifying any special conditions under which such Work may be resumed safely. If OWNER and CONTRACTOR cannot agree as to entitlement to or the amount or extent of an adjustment, if any, in Contract Price or Contract Times as a result of such Work stoppage or such special conditions under which Work is agreed by CONTRACTOR to be resumed, either party may make a claim therefor as provided Articles 11 and 12.

4.5.3 If after receipt of such special written notice CONTRACTOR does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then OWNER may order such portion of the Work that is in connection with such hazardous condition or in such affected area to be deleted from the Work. If OWNER and CONTRACTOR cannot agree as to entitlement to or the amount or extent of an adjustment, if any, in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a claim therefor as provided in Articles 11 and 12. OWNER may have such deleted portion of the Work performed by OWNER's own forces or others in accordance with Article 7.

4.5.4 The provisions of paragraphs 4.2 and 4.3 are not intended to apply to Asbestos, PCB's, Petroleum, Hazardous Waste or Radioactive Material uncovered or revealed at the site.

ARTICLE 5 - BONDS AND INSURANCE

Performance, Payment and Other Bonds:

5.1 CONTRACTOR shall furnish Performance and Payment Bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all CONTRACT-OR's obligations under the Contract Documents. These Bonds shall remain in effect at least until one year after the date when final payment becomes due, except as provided otherwise by Laws or Regulations or by the Contract Documents. CONTRACTOR shall also furnish such other Bonds as are required by the Supplementary Conditions. All Bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff, Bureau of Government Financial Operations, U.S. Treasury Department. All Bonds signed by an agent must be accompanied by a certified copy of such agent's authority to act. The CONTRACTOR shall furnish the performance and payment bond in the form provided in the Contract Documents or approved by the OWNER; the earlier of ten (10) days after the OWNER has issued the notice of award or delivery of the executed Agreement. The OWNER reserves the right to exclude any Surety Company on any ground it deems appropriate. The cost of the bonds shall be included in the bid.

5.2 If the surety on any Bond furnished by CONTRACTOR is declared a bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of paragraph 5.1, CONTRACTOR shall within ten days thereafter substitute another Bond and surety, both of which must be acceptable to OWNER.

5.3 Licensed Sureties and Insurers; Certificates of Insurance:

5.3.1 All Bonds and insurance required by the Contract Documents to be purchased and maintained by CONTRACTOR shall be obtained from surety or insurance companies acceptable to OWNER that are duly licensed to transact business in the State of Colorado and to issue Bonds or insurance policies for the limits and coverage so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.3.2 CONTRACTOR shall deliver to OWNER, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by OWNER or any other additional insured) which CONTRACTOR is required to purchase and maintain accordance with paragraph 5.4. The certificates shall be reviewed and approved by OWNER prior to execution of the Agreement. The OWNER shall have the right to request and obtain copies of any insurance policies required under paragraph 5.4 of the General Conditions. The completed certificates of insurance shall be sent to: City of Louisville, 749 Main Street, Louisville, Colorado 80027, attention: CITY ENGINEER.

CONTRACTOR's Liability Insurance:

5.4 (a) The CONTRACTOR agrees to procure and maintain, at its own cost, a policy or policies of insurance sufficient to insure against all liability, claims, demands, and other obligations assumed by the CONTRACTOR pursuant to paragraphs 6.12, 6.16, 6.31, 6.32 and 6.33, and 6.5 in addition to any other insurance requirements imposed by the Contract Documents or by law. The CONTRACTOR shall not be relieved of any liability, claims, demands, or other obligations assumed pursuant to paragraphs 6.12, 6.16, 6.31, and 6.33 by reason of its failure to procure or maintain insurance, or by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types.

(b) CONTRACTOR shall procure and maintain, and shall cause any Subcontractor or Supplier of the CONTRACTOR to procure and maintain or insure the activity of his Subcontractors and Suppliers in his own policy, the minimum insurance coverages listed below. Such coverages shall be procured and maintained with forms and insurers acceptable to the OWNER. All coverages shall be continuously maintained from the date of commencement of the Work to cover all liability, claims, demands, and other obligations assumed by the CONTRACTOR pursuant to paragraphs 6.31 and 6.33. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage.

(1) Workers' Compensation insurance to cover obligations imposed by the Workers' Compensation Act of Colorado and any other applicable laws for any employee engaged in the performance of Work under this contract, and Employers' Liability insurance with minimum limits of FIVE HUNDRED THOUSAND DOLLARS ($500,000) each accident, FIVE HUNDRED THOUSAND DOLLARS ($500,000) disease - policy limit, and FIVE HUNDRED THOUSAND DOLLARS ($500,000) disease - each employee. Evidence of qualified self-insured status may be substituted for the Workers' Compensation requirements of this paragraph.

(2) Comprehensive General Liability insurance with minimum combined single limits of ONE MILLION DOLLARS ($1,000,000) each occurrence and TWO MILLION DOLLARS ($2,000,000) aggregate. The policy shall be applicable to all premises and operations. The policy shall include coverage for bodily injury, broad form property damage (including completed operations), personal injury (including coverage for contractual and employee acts), blanket contractual, independent contractors, products, and completed operations. The policy shall include coverage for explosion, collapse, and underground hazards. The policy shall contain a severability of interests' provision.

(3) Comprehensive Automobile Liability insurance with minimum combined single limits for bodily injury and property damage of not less than ONE MILLION DOLLARS ($1,000,000) each occurrence and ONE MILLION DOLLARS ($1,000,000) aggregate with respect to each of CONTRACTOR's owned, hired or non-owned vehicles assigned to or used in performance of the services. The policy shall contain a severability of interests' provision.

(4) The CONTRACTOR shall provide and maintain builder's risk insurance upon the entire project equal to one hundred percent (100%) of the insurable value thereof. Such insurance shall cover any and all physical damage including, without limitation, damage caused by fire, vandalism, malicious mischief, blasting, excessive surface runoff or storm water, high winds and other occurrences covered in a standard extended coverage endorsement. The policy shall remain in effect until the Work is accepted as substantially complete.

(c) The policy required by paragraph (2) above, by paragraph (3) and by (4) above shall be endorsed to include the OWNER, the ENGINEER and its consultants, and each of their officers, agents and employees as additional insureds. Every policy required above shall be primary insurance, and any insurance carried by the OWNER, its officers, or its employees, shall be excess and not contributory insurance to that provided by CONTRACTOR. No additional insured endorsement to the policy required by paragraph (1) above shall contain any exclusion for bodily injury or property damage arising from completed operations. The CONTRACTOR shall be solely responsible for any deductible losses under any policy required above.

(d) The certificate of insurance provided to OWNER shall be completed by the CONTRACTOR's insurance agent as evidence that policies providing the required coverages, conditions, and minimum limits are in full force and effect, and shall be reviewed and approved by the OWNER prior to commencement of the contract.

(e) Failure on the part of the CONTRACTOR to procure or maintain policies providing the required coverages, conditions, and minimum limits shall constitute a material breach of contract upon which the OWNER may immediately terminate this contract, or at its discretion may procure or renew any such policy or any extended reporting period thereto and may pay any and all premiums in connection therewith, and all monies so paid by the OWNER shall be repaid by CONTRACTOR to the OWNER upon demand, or the OWNER may offset the cost of the premiums against any monies due to CONTRACTOR from the Owner.

(f) The OWNER reserves the right to request and receive a certified copy of any policy and any endorsement thereto.

(g) The parties hereto understand and agree that the OWNER, the City of Louisville, is relying on, and does not waive or intend to waive by any provision of this contract, the monetary limitations (presently $150,000 per person and $600,000 per occurrence) or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, § 24-10-101 et seq., 10 C.R.S., as from time to time amended, or otherwise available to the City of Louisville, its officers, or its employees.

OWNER's Liability Insurance:

5.5 In addition to the insurance required to be provided by CONTRACTOR under paragraph 5.4, OWNER, at OWNER's option, may purchase and maintain at OWNER's expense OWNER's own liability insurance as will protect OWNER against claims which may arise from operations under the Contract Documents.

Property Insurance:

5.6 The OWNER shall be responsible for maintaining its own property insurance and, at its option, may maintain such insurance as will protect it against claims which may arise from operations under the Contract Documents.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

Supervision and Superintendence:

6.1 CONTRACTOR shall supervise, inspect and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences and procedures of construction, but CONTRACTOR shall not be responsible for the negligence of others in the design or specification of a specific means, method, technique, sequence or procedure of construction which is shown or indicated in and expressly required by the Contract Documents. CONTRACTOR shall be responsible to see that the completed Work complies accurately with the Contract Documents.

6.2 CONTRACTOR shall keep on the Work at all times during its progress a competent resident superintendent, who shall not be replaced without written notice to OWNER and ENGINEER except under extraordinary circumstances. The superintendent will be CONTRACTOR's representative at the site and shall have authority to act on behalf of CONTRACTOR. All communications to the superintendent shall be as binding as if given to CONTRACTOR.

Labor, Materials and Equipment:

6.3 CONTRACTOR shall provide competent, suitably qualified personnel to survey, layout and construct the Work as required by the Contract Documents. CONTRACTOR shall at all times maintain good discipline and order at the site. Except as otherwise required for the safety or protection of persons or the Work or property at the site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Work at the site shall be performed during regular working hours and CONTRACTOR will not permit overtime work or the performance of Work on Saturday, Sunday or any legal holiday without OWNER's written consent given after prior written notice to ENGINEER. No extra payment will be paid to the CONTRACTOR by the OWNER due to labor overtime or other increased costs of

performing the Work on Saturdays, Sundays, OWNER- observed holidays, or at night. Should the CONTRACTOR desire to work on Saturdays, Sundays, OWNER-observed holidays, or at night between the hours of 5:00 p.m. and 7:00 a.m. on **Contract Days** the CONTRACTOR shall submit a written request to the ENGINEER 24 hours prior. If approval is given by ENGINEER to CONTRACTOR for authorized overtime work, ENGINEER's and ENGINEER's authorized personnel will charge overtime and other incidental administrative expenses necessary for performing inspections on Saturdays, Sundays, OWNER-observed holidays, or at night between the hours of 5:00 p. m. and 7:00 a. m., the CONTRACTOR will be responsible to pay for all such rates and charges, and shall not be granted a Contract Price increase for such charges. Overtime and other incidental administrative expenses for Engineer and Engineer's authorized personnel are as follows:

DESCRIPTION	HOURLY RATE
Engineer	$100.00
Construction Inspector	$80.00
Operations Supervisor	$80.00
Maintenance Worker	$60.00
Clerical	$50.00
Vehicle	$25.00

6.4 Unless otherwise specified in the General Requirements, CONTRACTOR shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up and completion of the Work.

6.5 All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. All warranties and guarantees specifically called for by the Specifications shall expressly run to the benefit of OWNER. If required by ENGINEER, CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with instructions of the applicable Supplier, except as otherwise provided in the Contract Documents.

Progress Schedule:

6.6 CONTRACTOR shall adhere to the progress schedule established in accordance with paragraph 2.8 as it may be adjusted from time to time as provided below:

6.6.1 CONTRACTOR shall submit to ENGINEER for acceptance (to the extent indicated in paragraph 2.8) proposed adjustments in the progress schedule that will not change the Contract Times (or Milestones). Such adjustments will conform

generally to the progress schedule then in effect and additionally will comply with any provisions of the General Requirements applicable thereto.

6.6.2 Proposed adjustments in the progress schedule that will change the Contract Times (or Milestones) shall be submitted in accordance with the requirements of paragraph 12.1. Such adjustments may only be made by a Change Order or Written Amendment in accordance with Article 12.

6.7 Substitutes and "Or-Equal" Items:

6.7.1 Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent or "or-equal" item or no substitution is permitted, other items of material or equipment of other Suppliers may be accepted by ENGINEER under the following circumstances:

6.7.1.1 **"Or-Equal"**: If in ENGINEER's sole discretion an item of material or equipment proposed by CONTRACTOR is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by ENGINEER as an "or-equal" item, in which case review and approval of the proposed item may, in ENGINEER's sole discretion, be accomplished without compliance with some or all of the requirements for acceptance of proposed substitute items.

6.7.1.2 **Substitute Items:** If in ENGINEER's sole discretion an item of material or equipment proposed by CONTRACTOR does not qualify as an "or-equal" item under subparagraph 6.7.1.1, it will be considered a proposed substitute item. CONTRACTOR shall submit sufficient information as provided below to allow ENGINEER to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. The procedure for review by the ENGINEER will include the following as supplemented in the General Requirements and as ENGINEER may decide is appropriate under the circumstances. Requests for review of proposed substitute items of material or equipment will not be accepted by ENGINEER from anyone other than CONTRACTOR. If CONTRACTOR wishes to furnish or use a substitute items of material or equipment, CONTRACTOR shall first make written application to ENGINEER for acceptance thereof, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar in substance to that specified and be suited to the same use as that specified. The application will state the extent, if any, to which the evaluation and acceptance of the proposed substitute will prejudice CONTRACTOR's achievement of Substantial Completion on time, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) to adapt the design to the proposed substitute and whether or not incorporation or use of the substitute in connection

with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified will be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also contain an itemized estimate of all costs or credits that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which will be considered by ENGINEER in evaluating the proposed substitute. ENGINEER may require CONTRACTOR to furnish additional data about the proposed substitute.

6.7.1.3 **CONTRACTOR's Expense:** All data to be provided by CONTRACTOR in support of any proposed "or-equal" or substitute item will be at CONTRACTOR's expense.

6.7.2 **Substitute Construction Methods or Procedures:** If a specific means, method, technique, sequence or procedure of construction is shown or indicated in and expressly required by the Contract Documents, CONTRACTOR may furnish or utilize a substitute means, method, technique, sequence or procedure of construction acceptable to ENGINEER. CONTRACTOR shall submit sufficient information to allow ENGINEER, in ENGINEER's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The procedure for review by ENGINEER will be similar to that provided in subparagraph 6.7.1.2.

6.7.3 **ENGINEER's Evaluation**: ENGINEER will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to paragraphs 6.7.1.2 and 6.7.2. ENGINEER will be the sole judge of acceptability. No "or-equal" or substitute will be ordered, installed or utilized without ENGINEER's prior written acceptance, which will be evidenced by either a Change Order or an approved Shop Drawing. OWNER may require CONTRACTOR to furnish at CONTRACTOR's expense a special performance guarantee or other surety with respect to any "or-equal" or substitute. ENGINEER will record time required by ENGINEER and ENGINEER's Consultants in evaluating substitutes proposed or submitted by CONTRACTOR pursuant to paragraphs 6.7.1.2 and 6.7.2 and in making changes in the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) occasioned thereby. Whether or not ENGINEER accepts a substitute item so proposed or submitted by CONTRACTOR, CONTRACTOR shall reimburse OWNER for the charges of ENGINEER and ENGINEER's Consultants for evaluating each such proposed substitute item.

6.8 Concerning Subcontractors, Suppliers and Others:

6.8.1 CONTRACTOR shall not employ any Subcontractor, Supplier or other person or organization, whether initially or as a substitute, against whom OWNER or ENGINEER may have reasonable objection. CONTRACTOR shall not be required to employ any Subcontractor, Supplier or other person or organization to furnish or perform any of the Work against whom CONTRACTOR has reasonable objection.

6.8.2 The Contract Documents require the identity of certain Subcontractors, Suppliers or other persons or organizations (including those who are to furnish the principal items of materials or equipment) to be submitted to OWNER with the Bid in the Bid Form

prior to the Effective Date of the Agreement for acceptance by OWNER and ENGINEER, and if CONTRACTOR has submitted a list thereof in accordance with the Contract Documents, OWNER'S or ENGINEER's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in Contract Documents) of any such Subcontractor, Supplier, or other person or organization so identified may be revoked on the basis of reasonable objection after due investigation, in which case CONTRACTOR shall submit an acceptable substitute. No acceptance by OWNER or ENGINEER of any such Subcontractor, Supplier or other person or organization shall constitute a waiver of any right of OWNER or ENGINEER to reject defective Work.

6.8.3 Subletting of Contract. The Contractor shall not sublet, sell, transfer, assign, or dispose of the Contract or Contracts, or any portion thereof without written consent of the Engineer. The Contractor will be permitted to sublet a portion of the Contract, however, the Contractor's organization shall perform work amounting to not less than 50 percent of the total contract cost.

The calculation of the percentage of subcontracted work shall be based on the prime contract unit prices rather than subcontract unit prices. Proportional value for a subcontracted partial contract item shall be verified by the Engineer. For the purpose of calculating the value of subcontracted work, the cost of procuring materials and manufactured products can be included in either the prime contract or subcontract. However, when a firm both sells material to a prime contractor and performs the work of incorporating the materials into the project, these two phases shall be considered in combination and as constituting a single subcontract.

Subcontracts, or transfer of Contract shall not release the Contractor of liability under the Contract and bonds.

6.9.1 CONTRACTOR shall be fully responsible to OWNER and ENGINEER for all acts and omissions of the Subcontractors. Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR just as CONTRACTOR is responsible for CONTRACTOR's own acts and omissions. OWNER or ENGINEER may furnish to any such Subcontractor, Supplier or other person or organization, to the extent practicable, evidence of amounts paid to CONTRACTOR in accordance with CONTRACTOR's Applications for Payment. Nothing in the Contract Documents shall create for the benefit of any such Subcontractor, Supplier or other person or organization any contractual relationship between OWNER or ENGINEER and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of OWNER or ENGINEER to pay or to see to the payment of any moneys due any such Subcontractor, Supplier or other person or organization except as may otherwise be required by Laws and Regulations.

6.9.2 CONTRACTOR shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR. CONTRACTOR shall require all Subcontractors, Suppliers and such other persons and organizations performing or furnishing any of the Work to communicate with the ENGINEER through CONTRACTOR.

6.10 The divisions and sections of the Specifications and the identifications of any Drawings shall not control CONTRACTOR in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

6.11 All Work performed for CONTRACTOR by a Subcontractor or Supplier will be pursuant to an appropriate agreement between CONTRACTOR and the Subcontractor or Supplier, which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of OWNER and ENGINEER.

Patent Fees and Royalties:

6.12 CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of OWNER or ENGINEER its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by OWNER in the Contract Documents. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants and the officers, directors, employees, agents and other consultants of each and any of them from and against all claims, costs, losses and damages arising out of or resulting from any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product or device not specified in the Contract Documents.

Permits:

6.13 Unless otherwise provided in the Supplementary Conditions, CONTRACTOR shall obtain and pay for all construction permits and licenses. OWNER shall assist CONTRACTOR, when necessary, in obtaining such permits and licenses. CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. CONTRACTOR shall pay all charges of utility owners for connections to the Work, and OWNER shall pay all charges of such utility owners for capital costs related thereto such as plant investment fees.

6.13.1 Prior to the commencement date for the Work set forth in the Notice to Proceed, The CONTRACTOR and all subcontractors shall be or shall become a CONTRACTOR licensed in accordance with the applicable ordinance of the City of Louisville, Colorado.

6.13.2 If water is required for the project, CONTRACTOR shall obtain a bulk water permit from the City of Louisville, Public Works Department in accordance with the permit requirements.

6.13.3 CONTRACTOR shall obtain a Right-of-Way Permit from the City of Louisville, Public Works Department for all Work to be completed within the City right-of-way.

6.13.4 CONTRACTOR shall obtain and pay for all other necessary construction permits and licenses.

Laws and Regulations:

6.14.1 CONTRACTOR shall give all notices and comply with all Laws and Regulations applicable to furnishing and performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither OWNER nor ENGINEER shall be responsible for monitoring CONTRACTOR's compliance with any Laws or Regulations.

6.14.2 If CONTRACTOR performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, CONTRACTOR shall bear all claims, costs, losses and damages caused by, arising out of or resulting therefrom: however, it shall not be CONTRACTOR's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve CONTRACTOR of CONTRACTOR's obligations under paragraph 3.3.2.

Taxes:

6.15 CONTRACTOR shall pay all sales, consumer, use and other similar taxes required to be paid by CONTRACTOR in accordance with the Laws and Regulations of the place of the Project, which are applicable during the performance of the Work. City of Louisville municipal taxes shall be waived upon application for and acceptance of "tax exemption."

The CONTRACTOR shall apply for and receive a Certificate of Exemption from the Colorado Department of Revenue for construction materials to be physically incorporated into the Work. This Certificate of Exemption provides that the CONTRACTOR shall neither pay nor include in his bid prices Sales and Use Taxes collected by the State of Colorado on those building and construction materials physically incorporated into the Work. Sales and Use Taxes of the State of Colorado, RTD and the County are collected by the State of Colorado. All applicable Sales and Use Taxes (including State collected taxes) on any items other than construction and building materials physically incorporated into the Work are to be paid by the Contractor and are to be included in the appropriate bid items. CONTRACTOR and any Subcontractor assume all liability for the nonpayment of taxes, or the payment of exempt taxes resulting from a failure to use the Certificate of Exemption required by this paragraph.

Use of Premises:

6.16 CONTRACTOR shall confine construction equipment, the storage of materials and equipment and the operations of workers to the site and land and areas identified in and permitted by the Contract Documents and other land and areas permitted by Laws and Regulations, rights-of-way, permits and easements, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment. CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any adjacent land or areas, resulting from the performance of the Work. Should any claim be made by any such owner or occupant because of the performance of the Work, CONTRACTOR shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law. CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultant and anyone directly or indirectly employed by any of them from and against all claims, costs, losses and damages arising out of or resulting from any claim or action, legal or equitable, brought by any such owner or occupant against OWNER, ENGINEER, or any other party

indemnified hereunder to the extent caused by or based upon CONTRACTOR's performance of the Work.

6.17 During the progress of the Work, CONTRACTOR shall keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the Work. At the completion of the Work, CONTRACTOR shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery and surplus materials. CONTRACTOR shall leave the site clean and ready for occupancy by OWNER at Substantial Completion of the Work. CONTRACTOR shall restore to original condition all property not designated for alteration by the Contract Documents.

6.18 CONTRACTOR shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall CONTRACTOR subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

Record Documents:

6.19 CONTRACTOR shall maintain in a safe place at the site one record copy of all Drawings, Specifications, Addenda, Written Amendments, Change Orders, Work Change Directives, Field Orders and written interpretations and clarifications (issued pursuant to paragraph 9.4) in good order and annotated to show all changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to ENGINEER for reference. Upon completion of the Work, these record documents, Samples and Shop Drawings will be delivered to ENGINEER for OWNER.

Safety and Protection:

6.20 CONTRACTOR shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

6.20.1 all persons on the Work site or who may be affected by the Work:

6.20.2 all the Work and materials and equipment to be incorporated therein, whether in storage on or off the site; and

6.20.3 other property at the site or adjacent thereto, including but not limited to trees, shrubs, lawns, walks, pavements, roadways, structures, fences, gates, ditches, utilities, and underground facilities not designated for removal, relocation, or replacement in and during the course of construction.

6.20.4 The CONTRACTOR shall take all measures necessary to mitigate the impact of weather so that the project may continue on schedule. In no event shall OWNER be liable for extra costs incurred on materials and any part of the Work due to CONTRACTOR's failing to take all measures necessary protect the Work from weather and CONTRACTOR shall not be entitled to such claims. Also, no extension of the Contract Time shall be allowed if the CONTRACTOR is able, notwithstanding the weather, to proceed with other Work of the Contract.

CONTRACTOR shall comply with all applicable Laws and Regulations of any public body having jurisdiction for safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR shall notify owners of adjacent property and of Underground Facilities and utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation and replacement of their property. All damage, injury or loss to any property referred to in paragraph 6.20.2 or 6.20.3 caused, directly or indirectly, in whole or in part, by CONTRACTOR, any Subcontractor, Supplier or any other person or organization directly or employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, shall be remedied by CONTRACTOR. CONTRACTOR's duties and responsibilities for safety and for protection of the work shall continue until such time as all the Work is completed and ENGINEER has issued a notice to OWNER and CONTRACTOR in accordance with paragraph 14.13 that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

Safety Representative:

6.21 CONTRACTOR shall designate a qualified and experienced safety representative at the site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

Hazard Communication Programs:

6.22 CONTRACTOR shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the site in accordance with Laws or Regulations.

Emergencies:

6.23 In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, CONTRACTOR, without special instruction or authorization from OWNER or ENGINEER, is obligated to act to prevent threatened damage, injury or loss. CONTRACTOR shall give ENGINEER prompt written notice if CONTRACTOR believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby. If ENGINEER determines that a change in the Contract Documents is required because of the action taken by CONTRACTOR in response to such an emergency, a Work Change directive or Change order will be issued to document the consequences of such action.

6.24 Shop Drawings and Samples:

6.24.1 After checking and verifying all field measurements, CONTRACTOR shall submit to ENGINEER for review and approval in accordance with the accepted schedule of shop drawings and sample submittal (see paragraph 2.8), three copies (or at ENGINEERS option, one reproducible copy) of all shop drawings, which shall have been checked and approved by the CONTRACTOR. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to show ENGINEER the materials and equipment CONTRACTOR proposes to provide and to enable ENGINEER to review the information for the limited purposes required by paragraph 6.26.

6.24.2 CONTRACTOR shall also submit Samples to ENGINEER for review and approval in accordance with said accepted schedule of Shop Drawings and Sample submittals. Each Sample will be identified clearly as to material, Supplier, pertinent data such as catalog numbers and the use for which intended and otherwise as ENGINEER may require to enable ENGINEER to review the submittal for the limited purposes required by paragraph 6.26. The numbers of each Sample to be submitted will be as specified in the Specifications.

6.26 Submittal Procedures:

6.25.1 Before submitting each Shop Drawing or Sample, CONTRACTOR shall have determined and verified:

6.25.1.1 all field measurements, quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar information with respect thereto,

6.25.1.2 all materials with respect to intended use, fabrication, shipping, handling, storage, assembly and installation pertaining to the performance of the Work, and

6.25.1.3 all information relative to CONTRACTOR's sole responsibilities in respect of means, methods, techniques, sequences and procedures of construction and safety precautions and programs incident thereto.

CONTRACTOR shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

6.25.2 Each submittal will bear a stamp or specific written indication that CONTRACTOR has satisfied CONTRACTOR's obligations under the Contract Documents with respect to CONTRACTOR's review and approval of that submittal.

6.25.3 At the time of each submission, CONTRACTOR shall give ENGINEER specific written notice of such variations, if any, that the Shop Drawing or Sample submitted may have from the requirements of the Contract Documents, such notice to be in a written communication separate from the submittal; and, in addition, shall cause a specific notation to be made on each Shop Drawing and Sample submitted to ENGINEER for review and approval of each such variation.

6.26 ENGINEER will review and approve Shop Drawings and Samples in accordance with the schedule of Shop Drawings and Sample submittals accepted by ENGINEER as required by paragraph 2.8. ENGINEER's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. ENGINEER's review and approval will not extend to means, methods, techniques, sequences or procedures of construction (except where a particular means, method, technique, sequence or procedure of construction is specifically and expressly called for by the Contract documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions. CONTRACTOR shall make corrections required by ENGINEER, and

shall return the required number of corrected copies of Shop Drawings and submit as required new Samples for review and approval. CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by ENGINEER on previous submittals.

6.27 ENGINEER's review and approval of Shop Drawings or Samples shall not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents unless CONTRACTOR has in writing called ENGINEER's attention to each such variation at the time of submission as required by paragraph 6.25.3 and ENGINEER has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample approval; nor will any approval by ENGINEER relieve CONTRACTOR from responsibility for complying with the requirements of paragraph 6.25.1.

6.28 Where a Shop Drawing or Sample is required by the Contract Documents or the schedule of Shop Drawings and Sample submissions accepted by ENGINEER as required by paragraph 2.8, any related Work performed prior to ENGINEER's review and approval of the pertinent submittal will be at the sole expense and responsibility of CONTRACTOR.

Continuing the Work:

6.29 CONTRACTOR shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with OWNER. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by paragraph 15.5 or as OWNER and CONTRACTOR may otherwise agree in writing.

6.30 CONTRACTOR's General Warranty and Guarantee:

6.30.1 CONTRACTOR warrants and guarantees to OWNER, ENGINEER and ENGINEER's Consultants that all Work will be in accordance with the Contract Documents and will not be **defective**. CONTRACTOR's warranty and guarantee hereunder excludes defects or damage caused by:

6.30.1.1 abuse, modification or improper maintenance or operation by persons other than CONTRACTOR, Subcontractors or Suppliers; or

6.30.1.2 normal wear and tear under normal usage.

6.30.2 CONTRACTOR's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of CONTRACTOR's obligation to perform the work in accordance with the Contract Documents:

6.30.2.1 observations by ENGINEER;

6.30.2.2 recommendation of any progress or final payment by ENGINEER;

6.30.2.3 the issuance of a certificate of Substantial Completion or any payment by OWNER to CONTRACTOR under the Contract Documents;

6.30.2.4 use or occupancy of the Work or any part thereof by OWNER;

6.30.2.5 any acceptance by OWNER or any failure to do so;

6.30.2.6 any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by ENGINEER pursuant to paragraph 14.13;

6.30.2.7 any inspection, test or approval by others; or

6.30.2.8 any correction of **defective** Work by OWNER.

6.30.3 The CONTRACTOR warrants that, unless otherwise specified in the Contract Documents, the materials and equipment installed in the Work will be new, merchantable, and fit for the purpose for which they are intended, and that the Work will be performed in a workmanlike manner. The CONTRACTOR also warrants the workers who perform the Work will be sufficiently skilled to produce a high quality product which is free of blemishes, (surface defects) and flaws (internal defects).

The CONTRACTOR is under a continuing duty to warn the OWNER and ENGINEER of any possible defect in the design of the Work and materials incorporated in the Work and against potentially unsafe uses of products incorporated in the Work which may cause personal injury or property damage, as soon as the CONTRACTOR discovers the possible defect or has notice that the product may be unsafe. The CONTRACTOR's duty under this paragraph shall be continuing, and shall not expire when the OWNER accepts the Work or when the CONTRACTOR's guarantee expires. If the CONTRACTOR fails to warn the Owner of a design or product defect of which the CONTRACTOR is aware, and if personal or property damage thereafter results from such design or product defect, the CONTRACTOR shall be liable jointly and severally with any other party responsible at law for all damages resulting from such defect.

6.31 Indemnification:

The CONTRACTOR agrees to indemnify and hold harmless the OWNER (City of Louisville), ENGINEER, ENGINEER's consultants, and their officers, employees, agents and insurers, from and against all liability, claims, and demands, on account of injury, loss, or damage, including without limitation claims arising from bodily injury, personal injury, sickness, disease, death, property loss or damage, or any other loss of any kind whatsoever, which arise out of or are in any manner connected with this contract, if such injury, loss, or damage is caused in whole or in part by, or is claimed to be caused in whole or in part by, the act, omission, error, professional error, mistake, negligence, or other fault of the CONTRACTOR, any Subcontractor of the CONTRACTOR, or any officer, employee, representative, or agent of the CONTRACTOR or of any Subcontractor of the CONTRACTOR, or which arise out of any workers' compensation claim of any employee of the CONTRACTOR or of any employee of any subcontractor of the CONTRACTOR. The CONTRACTOR agrees to investigate, handle, respond to, and to provide defense for and defend against, any such liability, claims or demands at the sole expense of the CONTRACTOR. The CONTRACTOR also agrees to bear all other costs and expenses related thereto, including court costs and attorney fees, whether or not any such liability, claims, or demands alleged are groundless, false, or fraudulent.

6.32 In any and all claims against OWNER or ENGINEER or any of their respective consultants, agents, officers, directors or employees by any employee (or the survivor or personal representative of such employee) of CONTRACTOR, any Subcontractor, any Supplier, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 6.31 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for CONTRACTOR or any such Subcontractor, Supplier or other person or organization under workers' compensation acts, disability benefit acts or other employee benefit acts.

Survival of Obligations:

6.33 All representations, indemnifications, warranties and guarantees made in, required by or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion and acceptance of the work and termination or completion of the Agreement.

ARTICLE 7 - OTHER WORK

Related Work at Site:

7.1 OWNER may perform other work related to the Project at the site by OWNER's own forces, or let other direct contracts therefor which shall contain General Conditions similar to these, or have other work performed by utility owners. If the fact that such other work is to be performed was not noted in the Contract Documents, then: (i) written notice thereof will be given to CONTRACTOR prior to starting any such other work, and (ii) CONTRACTOR may make a claim therefor as provided in Articles 11 and 12 if CONTRACTOR believes that such performance will involve additional expense to CONTRACTOR or requires additional time and the parties are unable to agree as to the amount or extent thereof.

7.2 CONTRACTOR shall afford each other contractor who is a party to such a direct contract and each utility owner (and OWNER, if OWNER is performing the additional work with OWNER's employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work and shall properly connect and coordinate the Work with theirs. Unless otherwise provided in the Contract Documents, CONTRACTOR shall do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. CONTRACTOR shall not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of ENGINEER and the others whose work will be affected. The duties and responsibilities of CONTRACTOR under this paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of CONTRACTOR in said direct contracts between OWNER and such utility owners and other contractors.

7.3 If the proper execution or results of any part of CONTRACTOR's work depends upon work performed by others under this Article 7, CONTRACTOR shall inspect such other work and promptly report to ENGINEER in writing any delays, defects or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of CONTRACTOR's Work. CONTRACTOR's failure so to report will constitute an acceptance of such other work as fit and proper for integration with CONTRACTOR's Work except for latent or non-apparent defects and deficiencies in such other work.

Coordination:

7.4 Unless otherwise provided in the Supplementary Conditions, OWNER shall have sole authority and responsibility in respect of such coordination.

Should CONTRACTOR cause damage to the Work or property of any separate CONTRACTOR at the site, or should any claim arising out of CONTRACTOR's performance of the Work at the site be made by any separate contractor against CONTRACTOR, OWNER, ENGINEER, or any other person, CONTRACTOR shall promptly attempt to settle with such other contractor by agreement, or to otherwise resolve the dispute by arbitration or at law. CONTRACTOR shall, to the fullest extent permitted by Laws, and Regulations, indemnify and hold OWNER and ENGINEER harmless from and against all claims, damages, losses and expenses (including, but not limited to, fees of engineers, architects, attorneys and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any separate contractor against OWNER or ENGINEER to the extent based on a claim arising out of CONTRACTOR's performance of the Work. Should a separate contractor cause damage to the Work or property of CONTRACTOR or should the performance of Work by any separate CONTRACTOR at the site give rise to any other claim, CONTRACTOR shall not institute any action, legal or equitable, against OWNER or ENGINEER or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from OWNER or ENGINEER on account of any such damage or claim. If CONTRACTOR is delayed at any time in performing or furnishing Work by any act or neglect of a separate contractor and OWNER and CONTRACTOR are unable to agree as to the extent of any adjustment in Contract Time attributable thereto, CONTRACTOR may make a claim for an extension of time in accordance with Article 12. An extension of the Contract Time shall be CONTRACTOR's exclusive remedy with respect to OWNER and ENGINEER for any delay, disruption, interference or hindrance cause by any separate contractor. This paragraph does not prevent recovery from OWNER or ENGINEER for activities that are their respective responsibilities.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.1 Except as otherwise provided in these General Conditions, OWNER shall issue all communications to CONTRACTOR through ENGINEER.

8.2 In case of termination of the employment of ENGINEER, OWNER shall appoint an engineer whose status under the Contract Documents shall be that of the former ENGINEER.

8.3 OWNER shall furnish the data required of OWNER under the Contract documents promptly and shall make payments to CONTRACTOR promptly when they are due as provided in paragraphs 14.4 and 14.13.

8.4 OWNER's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in paragraphs 4.1 and 4.4.

8.5 OWNER is obligated to execute Change Orders as indicated in paragraph 10.4.

8.6 OWNER's responsibility in respect of certain inspections, tests and approvals is set forth in paragraph 13.4.

8.7 In connection with OWNER's right to stop Work or suspend Work, see paragraphs 13.10 and 15.1. Paragraph 15.2 deals with OWNER's right to terminate services of CONTRACTOR under certain circumstances.

8.8 The OWNER shall not supervise, direct or have control or authority over, nor be responsible for, CONTRACTOR's means, methods, techniques, sequences or procedures of construction or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the furnishing or performance of the Work. OWNER will not be responsible for CONTRACTOR's failure to perform or furnish the Work in accordance with the Contract Documents.

8.9 OWNER's responsibility in respect of undisclosed Asbestos, PCBs, Petroleum, Hazardous Waste or Radioactive Materials uncovered or revealed at the site is set forth in paragraph 4.5.

8.10 If and to the extent OWNER has agreed to furnish CONTRACTOR reasonable evidence that financial arrangements have been made to satisfy OWNER's obligations under the Contract Documents, OWNER's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

OWNER's Representative:

9.1 ENGINEER will be OWNER's representative during the construction period. The duties and responsibilities and the limitations of authority of ENGINEER as OWNER's representative during construction are set forth in the Contract Documents and shall not be extended without written consent of OWNER and ENGINEER.

Visits to Site:

9.2 ENGINEER will make visits to the site at intervals appropriate to the various stages of construction as ENGINEER deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of CONTRACTOR's executed Work. Based on information obtained during such visits and observations, ENGINEER will endeavor for the benefit of OWNER to determine, in general, if the Work is proceeding in accordance with the Contract Documents. ENGINEER will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. ENGINEER's efforts will be directed toward providing for OWNER a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and on-site observations, ENGINEER will keep OWNER informed of the progress of the Work and will endeavor to guard OWNER against **defective** Work. ENGINEER's visits and on-site observations are subject to all the limitations on ENGINEER's authority and responsibility set forth in paragraph 9.13 and particularly, but without limitation, during or as a result of ENGINEER's on-site visits or observations of CONTRACTOR's Work ENGINEER will not supervise, direct, control or have authority over or be responsible for CONTRACTOR's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the furnishing or performance of the Work.

Project Representative:

9.3 ENGINEER will furnish a Resident Project Representative, assistants and other field staff to assist ENGINEER in observing the performance of the Work of the CONTRACTOR. The responsibilities and authority and limitations thereon of any such Resident Project Representative and assistants will be as provided in paragraph 9.13 and in the Supplementary Conditions. If OWNER designates another representative or agent to represent OWNER at the site who is not ENGINEER's Consultant, agent or employee, the responsibilities and authority and limitations thereon of such other person will be as provided in the Supplementary Conditions.

9.3.1 Resident Project Representative is ENGINEER's Agent and will act as directed by and under the supervision of ENGINEER, and will confer with ENGINEER regarding his actions. His dealings in matters pertaining to the on-site Work will in general be with ENGINEER and CONTRACTOR keeping the ENGINEER advised as necessary. His dealings with Subcontractors will only be through or with the full knowledge and approval of CONTRACTOR.

Duties and Responsibilities:

Resident Project Representative will:

Schedules:

Review the progress schedule, schedule of Shop Drawing submittal, schedule of values and other schedules prepared by CONTRACTOR and consult with ENGINEER concerning acceptability.

Conferences and Meetings:

Attend meetings with CONTRACTOR, such as preconstruction conferences, progress meetings and other job conferences and other project related meetings.

Liaison:

Serve as ENGINEER's liaison with CONTRACTOR, working principally through CONTRACTOR's superintendent and assist him in understanding the intent of the Contract Documents. Assist ENGINEER in serving as OWNER's liaison with CONTRACTOR when CONTRACTOR's operations affect OWNER's on-site operations.

Assist in obtaining from ENGINEER additional details or information, when required for proper execution of the Work.

Shop Drawings and Samples:

Record date of receipt of Shop Drawings and samples.
Receive samples, which are furnished at the site by CONTRACTOR for ENGINEER's review, and notify ENGINEER of their availability for examination.

Advise ENGINEER and CONTRACTOR of the commencement of any Work requiring a Shop Drawing or sample submission if the submission has not been approved by ENGINEER.

Review of Work, Rejection of Defective Work, Inspections and Tests:

Conduct on-site observations of the Work in progress to assist ENGINEER in determining that the Work is proceeding in accordance with the Contract Documents.

Report to ENGINEER whenever he believes that any Work is unsatisfactory, faulty or defective or does not conform to the Contract Documents, or has been damaged, or does not meet the requirements of any inspections, tests or approvals required to be made; and advise ENGINEER when he believes Work should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.

Verify that tests, equipment and systems startups and operating and maintenance training are conducted in presence of the appropriate personnel, and that CONTRACTOR maintains adequate records thereof; observe, record and report to ENGINEER appropriate details relative to the test procedures and start-ups.

Accompany visiting inspectors representing public or other agencies having jurisdiction over the Project, record the results of these inspections and report to ENGINEER.

Interpretation of Contract Documents:

Report to ENGINEER when clarifications and interpretations of the Contract Documents are needed and Transmit to CONTRACTOR clarification and interpretation of the Contract Documents as issued by ENGINEER.

Modifications:

Consider and evaluate CONTRACTOR's suggestions for modification in Drawings or Specifications and report with his recommendations to ENGINEER. Transmit to CONTRACTOR decisions issued by ENGINEER.

Records:

Maintain at the job site orderly files for correspondence, reports of job conferences, Shop Drawings and samples, reproductions or original Contract Documents including all Work Directive Changes, Addenda, Change Orders, Field Orders, additional Drawings issued subsequent to the execution of the Agreement, ENGINEER's clarifications and interpretations of the Contract Documents, progress reports and other Project related documents.

Keep a diary, daily report form, or log book, recording hours on the job site, weather conditions, data relative to questions of Work Directive Changes, Change Orders, or changed conditions, list of job site visitors, daily activities, decisions, observations in general and specific observations in more detail as in the case of observing test procedures.

Record names, addresses and telephone numbers of all CONTRACTOR's, subcontractors and major suppliers of equipment and materials.

Reports:

Furnish ENGINEER periodic reports as required of progress of the Work and of CONTRACTOR's compliance with the progress schedule and schedule of Shop Drawings and sample submittal.

Consult with ENGINEER in advance of scheduled major tests, inspections or start of important phases of the Work.

Draft proposed Change Orders and Work Directive Changes, obtaining backup material from CONTRACTOR and recommend to ENGINEER Change Orders, Work Directive Changes, and Field Orders.

Report immediately to ENGINEER upon the occurrence of any accident.

Payment Requests:

Review applications for payment with CONTRACTOR for compliance with the established procedure for their submission and forward with his recommendations to ENGINEER, noting particularly the relationship of the payment requested to the schedule of values, Work completed and materials and equipment delivered at the site but not incorporated in the Work.

Certificates, Maintenance and Operations Manuals:

During the Course of Work verify that certifications, maintenance and operation manuals and other data required to be assembled and furnished by CONTRACTOR are applicable to the items actually installed and in accordance with the Contract Documents, and have this material delivered to ENGINEER for review and forwarding to OWNER prior to final payment of the Work.

Completion:

Before ENGINEER issues a Certificate of Substantial Completion, submit to CONTRACTOR a list of observed items requiring correction or completion.

Conduct final inspection in the company of ENGINEER and CONTRACTOR and prepare a final list of items to be corrected or completed.

Observe that all items on final list have been corrected or completed and make recommendations to ENGINEER concerning acceptance.

Limitation of Authority:

Resident Project Representative shall not:

Authorize any deviations from the Contract Documents or accept any substitute materials or equipment, unless authorized by ENGINEER.

Exceed limitations of ENGINEER's authority as set forth in the Contract Documents.

Undertake any of the responsibilities of CONTRACTOR, Subcontractors, or CONTRACTOR's superintendent.

Advise on, or issue directions relative to or assume control over any aspect of the means, methods, techniques, sequences or procedures for construction unless such is specifically called for in the Contract Documents.

Advise on or issue directions regarding or assume control over safety precautions and programs in connection with the Work.

Shall not accept Shop Drawings or sample submittals from anyone other than CONTRACTOR.

Authorize OWNER to occupy the Work in whole or in part.

Participate in specialized field or laboratory tests or inspections conducted by others except as specifically authorized by ENGINEER.

Clarifications and Interpretations:

9.4 ENGINEER will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings or otherwise) as ENGINEER may determine necessary, which shall be consistent with the intent of and reasonably inferable from Contract Documents. Such written clarifications and interpretations will be binding on OWNER and CONTRACTOR. If OWNER or CONTRACTOR believes that a written clarification or interpretation justifies an adjustment in the Contract Price or the Contract Times and the parties are unable to agree to the amount or extent thereof, if any, OWNER or CONTRACTOR may make a written claim therefor as provided in Article 11 or Article 12.

Authorized Variations in Work:

9.5 ENGINEER may authorize minor variations in the work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on OWNER and also on CONTRACTOR who shall perform the Work involved promptly.

Rejecting Defective Work:

9.6 ENGINEER will have authority to disapprove or reject Work which ENGINEER believes to be **defective**, or that ENGINEER believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. ENGINEER will also have authority to require special inspection or testing of the work as provided in paragraph 13.9, whether or not the work is fabricated, installed or completed.

Shop Drawings, Change Orders and Payments:

9.7 In connection with ENGINEER's authority as to Shop Drawings and Samples, see paragraphs 6.24 through 6.28 inclusive.

9.8 In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.

9.9 In connection with ENGINEER's authority as to Applications for Payment, see Article 14.

Determinations for Unit Prices:

9.10 ENGINEER will have authority to determine the actual quantities and classifications of items of Unit Price Work performed by CONTRACTOR, and the written decisions of ENGINEER on such matters will be final, binding on OWNER and CONTRACTOR and not subject to appeal (except as modified by ENGINEER to reflect changed factual conditions).

Decisions on Disputes:

9.11 ENGINEER will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. Claims, disputes and other matters relating to the acceptability of the Work or the interpretation of the requirements of the Contract Documents pertaining to the performance and furnishing of the Work and Claims under Articles 11 and 12 in respect of changes in the Contract Price or Contract Times will be referred initially to ENGINEER in writing with a request for a formal decision in accordance with this paragraph. Written notice of each such claim, dispute or other matter will be delivered by the claimant to ENGINEER and the other party to the Agreement promptly (but in no event later than fifteen days) after the start of the occurrence or event giving rise thereto, and written supporting data will be submitted to ENGINEER and the other party within thirty days after the start of such occurrence or event unless ENGINEER allows an additional period of time for the submission of additional or more accurate data in support of such claim, dispute of other matter. The opposing party shall submit any response to ENGINEER and the claimant within thirty days after receipt of the claimant's last submittal (unless ENGINEER allows additional time). ENGINEER will render a formal decision in writing within thirty days after receipt of the opposing party's submittal, if any, in accordance with this paragraph. ENGINEER's written decision on such claim, dispute or other matter will be final and binding upon OWNER and CONTRACTOR.

9.12 When functioning under paragraphs 9.10 and 9.11, ENGINEER will not show partiality to OWNER or CONTRACTOR and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity. The rendering of a decision by ENGINEER pursuant to paragraphs 9.10 or 9.11 with respect to any such claim, dispute or other matter (except any which have been waived by the making or acceptance of final payment as provided in paragraph 14.15) will be a condition precedent to any exercise by OWNER or CONTRACTOR of such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations.

9.13 Limitations on ENGINEER's Authority and Responsibilities:

9.13.1 Neither ENGINEER's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by ENGINEER in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise or performance of any authority or responsibility by ENGINEER shall create, impose or give rise to any duty owned by ENGINEER to CONTRACTOR, any Subcontractor, any Supplier, any other person or organization, or to any surety for or employee or agent of any of them.

9.13.2 ENGINEER will not supervise, direct, control or have authority over or be responsible for CONTRACTOR's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the furnishing or performance of the Work. ENGINEER will not be responsible for CONTRACTOR's failure to perform or furnish the Work in accordance with the Contract Documents.

9.13.3 ENGINEER will not be responsible for the acts or omissions of CONTRACTOR or of any Subcontractor, any Supplier, or of any other person or organization performing or furnishing any of the Work.

9.13.4 ENGINEER's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds and certificates of inspection, tests and approvals and other documentation required to be delivered by paragraph 14.12 will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests and approvals that the results certified indicate compliance with, the Contract Documents.

9.13.5 The limitations upon authority and responsibility set forth in this paragraph 9.13 shall also apply to ENGINEER's Consultants. Resident Project Representative and assistants.

ARTICLE 10 - CHANGES IN THE WORK

10.1 Without invalidating the Agreement and without notice to any surety, OWNER may, at any time or from time to time, order additions, deletions or revisions in the Work. Such additions, deletions or revisions will be authorized by a Written Amendment, a Change Order, or a Work Change Directive. Upon receipt of any such document, CONTRACTOR shall promptly proceed with the Work involved, which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

10.2 If OWNER and CONTRACTOR are unable to agree as to the extent, if any, of an adjustment in the Contract Price or an adjustment of the Contract Times that should be allowed as a result of a Work Change Directive, a claim may be made therefor as provided in Article 11 or Article 12.

10.3 CONTRACTOR shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any Work performed that is not required by the Contract Documents as amended, modified and supplemented as provided in paragraphs 3.5 and 3.6 except in the case of an emergency as provided in paragraph 6.23 or in the case of uncovering Work as provided in paragraph 13.9.

10.4 OWNER and CONTRACTOR shall execute appropriate Change Orders recommended by ENGINEER (or Written Amendments) covering:

10.4.1 changes in the Work which are (i) ordered by OWNER pursuant to paragraph 10.1., (ii) required because of acceptance of **defective** Work under paragraph 13.13 or correcting **defective** Work under paragraph 13.14, or (iii) agreed to by the parties:

10.4.2 changes in the Contract Price or Contract Times which are agreed to by the parties; and

10.4.3 changes in the Contract Price or Contract Times, which embody the substance of any written decision rendered by ENGINEER pursuant to paragraph 9.11;

10.5 If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be CONTRACTOR's responsibility, and the amount of each applicable Bond will be adjusted accordingly.

ARTICLE 11 - CHANGE OF CONTRACT PRICE

11.1 The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to CONTRACTOR for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by CONTRACTOR shall be at CONTRACTOR's expense without change in the Contract Price.

11.2 The Contract Price may only be changed by a Change Order or by a Written Amendment. Any claim for an adjustment in the Contract Price shall be based on written notice delivered by the party making the claim to the other party and to ENGINEER promptly (but in no event later than fifteen days) after the start of the occurrence or event giving rise to the claim and stating the general nature of the claim. Notice of the amount of the claim with supporting data shall be delivered within thirty days after the start of such occurrence or event (unless ENGINEER allows additional time for claimant to submit additional or more accurate data in support of the claim) and shall be accompanied by claimant's written statement that the adjustment claimed covers all known amounts to which the claimant is entitled as a result of said occurrence or event. All claims for adjustment in the Contract Price shall be determined by ENGINEER in accordance with paragraph 9.11 if OWNER and CONTRACTOR cannot otherwise agree on the amount involved. No claim for ad adjustment in the Contract Price will be valid if not submitted in accordance with this paragraph 11.2.

11.3 The value of any Work covered by a Change Order or of any claim for an adjustment in the Contract Price will be determined as follows:

11.3.1 where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of paragraphs 11.9.1 through 11.9.3 inclusive);

11.3.2 where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with paragraph 11.6.2);

11.3.3 where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under paragraph 11.3.2, on the basis of the Cost of the Work (determined as provided in paragraphs 11.4 and 11.5) plus a CONTRACTOR's fee for overhead and profit (determined as provided in paragraph 11.6).

Cost of the Work:

11.4 The term Cost of the Work means the sum of all costs necessarily incurred and paid by CONTRACTOR in the proper performance of the Work. Except as otherwise may be agreed to in writing by OWNER, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items and shall not include any of the costs itemized in paragraph 11.5:

11.4.1 Certified payroll record costs for employees in the direct employment of CONTRACTOR in the performance of the Work under schedules of job classifications shall be submitted to the ENGINEER with the claim. Such employees shall include without limitation superintendents, foremen and other personnel employed full-time at the site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work after regular working hours, on Saturday, Sunday or legal holidays, shall be included in the above to the extent authorized by OWNER.

11.4.2 Invoices for cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith shall be submitted to the ENGINEER with the claim. All cash discounts shall accrue to CONTRACTOR unless OWNER deposits funds with CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to OWNER. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall be in accordance with the State Department of Highways, Division of Highways, and State of Colorado Standard Specifications for Road and Bridge Construction 2005 Edition. If the materials used in performing the extra Work are taken from the CONTRACTOR's stock, then in lieu of invoices the CONTRACTOR shall furnish an affidavit, certifying that such materials were taken from its stock, that the quantity claimed was actually used in the Work, and that the price and transportation claimed represent the actual cost to the CONTRACTOR shall be submitted to the ENGINEER with the claim.

11.4.3 Payments made by CONTRACTOR to the Subcontractors for Work performed or furnished by Subcontractors. If required by OWNER, CONTRACTOR shall obtain competitive bids from subcontractors acceptable to OWNER and CONTRACTOR and shall deliver such bids to OWNER who will then determine, with the advice of ENGINEER, which bids, if any, will be accepted. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work Plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as CONTRACTOR's Cost of the Work and fee as provided in paragraphs 11.4, 11.5, 11.6 and 11.7. All subcontracts shall be subject to the other provisions of the Contract Documents insofar as applicable.

11.4.4 Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys and accountants) employed for services specifically related to the Work.

11.4.5 Supplemental costs including the following:

11.4.5.1 The proportion of necessary transportation, travel and subsistence expenses of CONTRACTOR's employees incurred in discharge of duties connected with the Work.

11.4.5.2 Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost less market value of such items used but not consumed which remain the property of CONTRACTOR.

11.4.5.3 Rentals rates of all construction equipment and machinery and the parts thereof which has been authorized by the ENGINEER, the CONTRACTOR will be paid for the use of equipment in the manner hereinafter specified. Rental rates will be from the current edition of the Rental Rate Blue Book for Construction Equipment and will be determined as follows:

Hourly rate: RR = (ADJ BB/176)(RF)(SAF)+EOC

Where: RR = Hourly rental rate
ADJ BB/176 = Blue Book Monthly Rate adjusted for year of manufacture/176
RF = Regional Factor of 1.06
SAF = State Adjustment Factor of 1.05
EOC = Estimated Hourly Operating Costs from Blue Book

With each claim, the CONTRACTOR shall submit the rental rate calculations including copies of the appropriate pages of the Blue Book for each piece of equipment listed in the claim.

Rental of equipment not owned by the CONTRACTOR will be paid for by invoice cost plus operating cost (EOC). Copies of the applicable pages of the Rental Rate Blue Book for Construction Equipment shall be submitted to the ENGINEER with the claim.

The costs of transportation, loading, unloading, installation, dismantling, and removal thereof all in accordance with the terms of said rental agreements. If equipment is used intermittently and when not in use could be returned to its rental source at less expense to the OWNER than holding it at the Work site, it shall be returned unless the CONTRACTOR elects to keep it at the Work site at no expense to the OWNER. The rental of any such equipment, machinery or parts shall cease when the use of the equipment is no longer necessary for the Work. No payment will be made for the use of tools, which have a replacement value of $200.00 or less. Operators will be paid for separately as provided in paragraph 11.4.1. Certified invoices for rental cost of all construction equipment and machinery incorporated in the Work shall be submitted to the ENGINEER with the claim.

11.4.5.4 Sales, consumer, use or similar taxes related to the Work, and for which CONTRACTOR is liable, imposed by Laws and Regulations.

11.4.5.5 Deposits lost for causes other than negligence of CONTRACTOR, any Subcontractor or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable.

11.4.5.6 Losses and damages (and related expenses) caused by damage to the work, not compensated by insurance or otherwise, sustained by CONTRACTOR in connection with the performance and furnishing of the Work, (except losses and damages within the deductible amounts of property insurance established by OWNER in accordance with paragraph 5.9), provided they have resulted from causes other than the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of OWNER. No such losses, damages and expenses shall be included in the Cost of the Work for the purpose of determining CONTRACTOR's fee. If, however, any such loss or damage requires reconstruction and CONTRACTOR is placed in charge thereof, CONTRACTOR shall be paid for services a fee proportionate to that stated in paragraph 11.6.2.

11.4.5.7 The cost of utilities, fuel and sanitary facilities at the site.

11.4.5.8 Minor expenses such as telegrams, long distance telephone calls, telephone service at the site, expressage and similar petty cash items in connection with the Work.

11.5 The term Cost of the Work shall not include any of the following:

11.5.1 Payroll costs and other compensation of CONTRACTOR's officers, executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks and other personnel employed by CONTRACTOR whether at the site or in CONTRACTOR's principal or a branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in paragraph 11.4.1 or specifically covered by paragraph 11.4.4--all of which are to be considered administrative costs covered by the CONTRACTOR's fee.

11.5.2 Expenses of CONTRACTOR's principal and branch offices other than CONTRACTOR's office at the site.

11.5.3 Any part of CONTRACTOR's capital expenses, including interest on CONTRACTOR's capital employed for the Work and charges against CONTRACTOR for delinquent payments.

11.5.4 Cost of premiums for all Bonds and for all insurance whether or not CONTRACTOR is required by the Contract Documents to purchase and maintain the same. (except for the cost of premiums covered by subparagraph 11.4.5.9 above).

11.5.5 Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of **defective** Work, disposal of materials or equipment wrongly supplied and making good any damage to property.

Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraph 11.4.

11.6 The CONTRACTOR's fee allowed to CONTRACTOR for overhead and profit shall be determined as follows:

11.6.1 a mutually acceptable fixed fee; or

11.6.2 if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the work:

11.6.2.1 for costs incurred under paragraphs 11.4.1 and 11.4.2, the CONTRACTOR's fee shall be fifteen percent;

11.6.2.2 for costs incurred under paragraph 11.4.3, the CONTRACTOR's fee shall be five percent;

11.6.2.3 where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of paragraphs 11.4.1, 11.4.2, 11.4.3 and 11.6.2 is that the Subcontractor who actually performs or furnishes the Work, at whatever tier, will be paid a fee of fifteen percent of the costs incurred by such Subcontractor under paragraphs 11.4.1 and 11.4.2 and that any higher tier Subcontractor and CONTRACTOR will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

11.6.2.4 no fee shall be payable on the basis of costs itemized under paragraphs 11.4.4, 11.4.5 and 11.5;

11.6.2.5 the amount of credit to be allowed by CONTRACTOR to OWNER for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in CONTRACTOR's fee by an amount equal to five percent of such net decrease; and

11.6.2.6 when both additions and credits are involved in any one change, the adjustment in CONTRACTOR's fee shall be computed on the basis of the net change in accordance with paragraphs 11.6.2.1 through 11.6.2.5, inclusive.

11.7 Whenever the cost of any Work is to be determined pursuant to paragraphs 11.4 and 11.5, CONTRACTOR will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in form acceptable to ENGINEER an itemized cost breakdown together with supporting data.

Cash Allowances:

11.8 It is understood that CONTRACTOR has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be furnished and performed for such sums as may be acceptable to OWNER and ENGINEER. CONTRACTOR agrees that:

11.8.1 the allowances include the cost to CONTRACTOR (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the site, and all applicable taxes; and

11.8.2 CONTRACTOR's costs for unloading and handling on the site, labor, installation costs, overhead, profit and other expenses contemplated for the allowances have been included in the Contract Price and not in the allowances and no demand for additional payment on account of any of the foregoing will be valid.

Prior to final payment, an appropriate Change Order will be issued as recommended by ENGINEER to reflect actual amounts due CONTRACTOR on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.9 Unit Price Work:

11.9.1 Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by CONTRACTOR will be made by ENGINEER in accordance with paragraph 9.10.

11.9.2 Each unit price will be deemed to include an amount considered by CONTRACTOR to be adequate to cover CONTRACTOR's overhead and profit for each separately identified item.

11.9.3 OWNER or CONTRACTOR may make a claim for an adjustment in the contract Price in accordance with Article 11 if:

11.9.3.1 the quantity of any item of Unit Price Work performed by CONTRACTOR differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

11.9.3.2 there is no corresponding adjustment with respect to any other item of Work; and

11.9.3.3 if CONTRACTOR believes that CONTRACTOR is entitled to an increase in Contract Price as a result of having incurred additional expense or OWNER believes that OWNER is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 - CHANGE OF CONTRACT TIMES

12.1 The Contract Times (or Milestones) may only be changed by a Change Order or a Written Amendment. Any claim for an adjustment of the Contract Times (or Milestones) shall be based on written notice delivered by the party making the claim to the other party and to ENGINEER promptly (but in no event later than fifteen days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the extent of the claim with supporting data shall be delivered within thirty days after such occurrence (unless ENGINEER allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by the claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant has reason to believe it is entitled as a result of the occurrence of said event. All claims for adjustment in the Contract Times (or Milestones) shall be determined by ENGINEER in accordance with paragraph 9.11 if OWNER and CONTRACTOR cannot otherwise agree. No claim for an adjustment in the Contract Times (or Milestones) will be valid if not submitted in accordance with the requirements of this paragraph 12.1.

12.2 Liquidated damages. The OWNER and the CONTRACTOR agree and recognize that time is of the essence for every time period set forth in the Contract Documents and that the OWNER will suffer financial loss if the Work is not substantially complete within the time set forth in the Contract Documents, plus any extensions thereof allowed in accordance with this Article 12 of the General Conditions. If the CONTRACTOR fails to perform the Work within the specified time set forth in the Contract Documents as adjusted pursuant to Article 12, the OWNER and CONTRACTOR agree that as liquidated damages, and not as a penalty, for delay in performance the Contractor shall pay OWNER in the amount stipulated below for each and every contract day that expires after the time set forth in the Contract Documents for Substantial Completion of the Work until the same is finally complete and ready for Final Payment. The OWNER shall have the right to deduct liquidated damages from any amount due or that may become due to the CONTRACTOR, or to collect such liquidated damages from the CONTRACTOR or the Surety. The OWNER has the option to enforce liquidated damages or to waive such damages. The liquidated damages herein specified shall only apply to the CONTRACTOR's delay in performance. Liquidated damages are intended only to compensate the OWNER for additional OWNER personnel efforts in administering the Contract after normally scheduled completion dates, and for City governmental and citizen inconvenience, lost opportunities, and lost confidence in government and morale of government when work is not completed on time. Such damages are uncertain in amount and difficult to measure and prove accurately. By executing this contract, the CONTRACTOR agrees that the liquidated damages specified in the Contract Documents are reasonable in amount and are not disproportionate to actual anticipated damages. Liquidated damages do not include any sums of money to reimburse the OWNER for extra costs which the OWNER may become obligated to pay on other contracts which are delayed or extended because of CONTRACTOR's failure to complete the Work within the time periods set forth in the Contract Documents. Liquidated damages are not intended to include litigation or attorneys' fees incurred by the OWNER, or other incidental or consequential damages suffered by the OWNER due to the Contractor's performance. If the OWNER charges liquidated damages to the CONTRACTOR, this shall not preclude the Owner from commencing an action against the CONTRACTOR for other actual harm resulting from the CONTRACTOR's performance, which is not due to the CONTRACTOR's delay in performance. In order to recover liquidated damages, OWNER is under no obligation to prove the actual damages sustained by OWNER due to the CONTRACTOR's delay in performance. In no event shall the CONTRACTOR be assessed liquidated damages if the contract is suspended or terminated for events beyond the control

of the CONTRACTOR for which a time extension beyond the original schedule of performance could be granted under 12.3.

The parties agree that liquidated damages shall be in the amount set forth in Article 2 of the Agreement.

12.3 Where CONTRACTOR is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of CONTRACTOR, the Contract Times (or Milestones) will be extended in an amount equal to the time lost due to such delay if a claim is made therefor as provided in paragraph 12.1. Delays beyond the control of CONTRACTOR shall include, but not be limited to, acts or neglect by OWNER, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions or acts of God. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of CONTRACTOR.

12.4 The CONTRACTOR specifically waives any and all claims against the OWNER for damages resulting from any hindrance or delay caused by circumstances beyond the control of CONTRACTOR that prevents completing any part of the Work within the Contract Times (or Milestones), whether or not caused by the OWNER. The CONTRACTOR may instead be granted an extension of the Contract Times for which the OWNER will not claim liquidated damages, provided that the hindrance or delay is beyond the control of the CONTRACTOR. An extension of the Contract Times (or Milestones) in an amount equal to the time lost due to such delay shall be CONTRACTOR's sole and exclusive remedy for such delay. In no event shall OWNER be liable to CONTRACTOR, any subcontractor, any supplier, any other person or organization, or to any surety for or employee or agent of any of them, for damages arising out of or resulting from delays caused by or within the control of Contractor, or delays beyond the control of CONTRACTOR whether or not caused by the OWNER.

ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

Notice of Defects:

13.1 Prompt notice of all **defective** Work of which OWNER or ENGINEER has actual knowledge will be given to CONTRACTOR. All **defective** Work may be rejected, corrected or accepted as provided in this Article 13.

Access to Work:

13.2 OWNER, ENGINEER, ENGINEER's Consultants, other representatives and personnel of OWNER, independent testing laboratories and governmental agencies with jurisdictional interests will have access to the Work at reasonable times for their observation, inspecting and testing. CONTRACTOR shall provide them proper and safe conditions for such access and advise them of CONTRACTOR's site safety procedures and programs so that they may comply therewith as applicable.

Tests and Inspections:

13.3 CONTRACTOR shall give ENGINEER timely notice of readiness of the Work for all required inspections, tests or approvals, and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

13.4 OWNER shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

13.4.1 for inspections, tests or approvals covered by paragraph 13.5 below:

13.4.2 that costs incurred in connection with tests or inspections conducted pursuant to paragraph 13.9 below shall be paid as provided in said paragraph 13.9; and

13.4.3 as otherwise specifically provided in the Contract Documents.

13.4.4 any and all retesting of soil necessitated by the CONTRACTOR's operations or inability to obtain specified density test results on the first attempt shall be the sole responsibility and costs of the CONTRACTOR to achieve required passing test results. Retesting required because of non-conformance to specified requirements shall be performed by the independent firm employed by the OWNER. Payment for retesting will be charged to the CONTRACTOR by deducting inspection, testing and administrative charges from the Contract Price.

13.5 If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested or approved by an employee or other representative of such public body, CONTRACTOR shall assume full responsibility for arranging and obtaining such inspections, tests or approvals, pay all costs in connection therewith, and furnish ENGINEER the required certificates of inspection, or approval. CONTRACTOR shall also be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests or approvals required for OWNER's and ENGINEER's acceptance of materials or equipment to be incorporated in the Work, or of materials, mix designs, or equipment submitted for approval prior to CONTRACTOR's purchase thereof for incorporation in the Work.

13.6 If any Work (or the work of others) that is to be inspected, tested or approved is covered by CONTRACTOR without written concurrence of ENGINEER, it must, if requested by ENGINEER, be uncovered for observation.

13.7 Uncovering Work as provided in paragraph 13.6 shall be at CONTRACTOR's expense unless CONTRACTOR has given ENGINEER timely notice of CONTRACTOR's intention to cover the same and ENGINEER has not acted with reasonable promptness in response to such notice.

Uncovering Work:

13.8 If any Work is covered contrary to the written request of ENGINEER, it must, if requested by ENGINEER, be uncovered for ENGINEER's observation and replaced at CONTRACTOR's expense.

13.9 If ENGINEER considers it necessary or advisable that covered Work be observed by ENGINEER or inspected or tested by others, CONTRACTOR, at ENGINEER's request, shall uncover, expose or otherwise make available for observation, inspection or testing as ENGINEER may require, that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is found that such Work is **defective,** CONTRACTOR shall pay

all claims, costs, losses and damages caused by, arising out of or resulting from such uncovering, exposure, observation, inspection and testing and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and OWNER shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, may make a claim therefor as provided in Article 11.

OWNER May Stop the Work:

13.10 If the Work is **defective**, or CONTRACTOR fails to supply sufficient skilled workers or suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, OWNER may order CONTRACTOR to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of OWNER to stop the Work shall not give rise to any duty on the part of OWNER to exercise this right for the benefit of CONTRACTOR or any surety or other party.

Correction or Removal of Defective Work:

13.11 If required by ENGINEER, CONTRACTOR shall promptly, as directed, either correct all **defective** Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by ENGINEER, remove it from the site and replace it with Work that is not **defective.** CONTRACTOR shall pay all claims, costs, losses and damages caused by or resulting from such correction or removal (including but not limited to all costs of repair or replacement of work of others).

13.12 Correction Period:

13.12.1 If within one year after the date of Final Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, CONTRACTOR shall within seven calendar days after receiving notice from OWNER, without cost to OWNER and in accordance with OWNER's written instructions: (i) correct such defective Work, or if its has been rejected by OWNER, remove it from the site and replace it with WORK that is not defective, and (ii) satisfactorily correct or remove and replace any damage to other Work or the work of others resulting therefrom. If CONTRACTOR does not within seven calendar days after receiving notice from OWNER comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, OWNER may have the defective Work corrected or the rejected Work removed and replaced, and all claims, costs, losses and damages caused by or resulting from such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by CONTRACTOR.

13.12.2 In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications or by Written Amendment.

13.12.3 Where **defective** Work (and damage to other Work resulting therefrom) has been corrected, removed or replaced under this paragraph 13.12, the

correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

Acceptance of Defective Work:

13.13 If, instead of requiring correction or removal and replacement of **defective** Work, OWNER (and, prior to ENGINEER's recommendation of final payment, also ENGINEER) prefers to accept it, OWNER may do so. CONTRACTOR shall play all claims, costs, losses and damages attributable to OWNER's evaluation of and determination to accept such **defective** Work (such costs to be approved by ENGINEER as to reasonableness). If any such acceptance occurs prior to ENGINEER's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, OWNER may make a claim therefor as provided in Article 11. If the acceptance occurs after such recommendation, an appropriate amount will be paid by CONTRACTOR to OWNER.

OWNER May Correct Defective Work:

13.14 If CONTRACTOR fails within a reasonable time after written notice from ENGINEER to correct **defective** Work or to remove and replace rejected Work as required by ENGINEER in accordance with paragraph 13.11, or if CONTRACTOR fails to perform the Work in accordance with the Contract Documents, or if CONTRACTOR fails to comply with any other provision of the Contract Documents, OWNER may, after seven days' written notice to CONTRACTOR, correct and remedy any such deficiency. In exercising the rights and remedies under this paragraph OWNER shall proceed expeditiously. In connection with such corrective and remedial action, OWNER may exclude CONTRACTOR from all or part of the site, take possession of all or part of the Work, and suspend CONTRACTOR's services related thereto, take possession of CONTRACTOR's tools, appliances, construction equipment and machinery at the site and incorporate in the Work all materials and equipment stored at the site or for which OWNER has paid CONTRACTOR but which are stored elsewhere. CONTRACTOR shall allow OWNER, OWNER's representatives, agents and employees, OWNER's other contractors and ENGINEER and ENGINEER's Consultants access to the site to enable OWNER to exercise the rights and remedies under this paragraph. All claims, costs, losses and damages incurred or sustained by OWNER in exercising such rights and remedies will be charged against CONTRACTOR and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, OWNER may make a claim therefor as provided in Article 11. Such claims, costs, losses and damages will include but not be limited to all costs of repair or replacement of work of others destroyed or damaged by correction, removal or replacement of CONTRACTOR's **defective** Work. CONTRACTOR shall not be allowed an extension of the Contract Times (or Milestones) because of any delay in the performance of the Work attributable to the exercise by OWNER of OWNER's rights and remedies hereunder.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

Schedule of Values:

14.1 Progress payments on account of Unit Price Work will be based on the number of units completed.

Application for Progress Payment:

14.2 At least twenty days before the date established for each progress payment (but not more often than once a month), CONTRACTOR shall submit to ENGINEER for review an Application for Payment filled out and signed by CONTRACTOR covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice or other documentation warranting that OWNER has received the materials and equipment free and clear of all Liens, claims, security interests, or encumbrances and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect OWNER's interest therein, all of which will be satisfactory to OWNER. The amount of retainage with respect to progress payments will be as stipulated in the Agreement. With each application for payment the CONTRACTOR shall submit a notarized waiver(s) of claim signed by the CONTRACTOR acceptable in form to the ENGINEER. The waiver of claim for payment for the work of the CONTRACTOR shall equal the amount of the previous payment distributed to the CONTRACTOR for work of the CONTRACTOR and the amount of the total previous payment distributed to the CONTRACTOR.

CONTRACTOR's Warranty of Title:

14.3 CONTRACTOR warrants and guarantees that title to all Work, materials and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to OWNER no later than the time of payment free and clear of all Liens.

Review of Applications for Progress Payment:

14.4 ENGINEER will, within ten days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to OWNER, or return the Application to CONTRACTOR indicating in writing ENGINEER's reasons for refusing to recommend payment. In the latter case, CONTRACTOR may make the necessary corrections and resubmit the Application. Ten days after presentation of the Application for Payment to OWNER with ENGINEER's recommendation, the amount recommended will (subject to the provisions of the last sentence of paragraph 14.7) become due and when due will be paid by OWNER to CONTRACTOR.

14.5 ENGINEER's recommendation of any payment requested in an Application for Payment will constitute a representation by ENGINEER to OWNER, based on ENGINEER's on-site observations of the executed Work as an experienced and qualified design professional and on ENGINEER's review of the Application for Payment and the accompanying data and schedules, that to the best of ENGINEER's knowledge, information and belief:

14.5.1 the Work has progressed to the point indicated.

14.5.2 the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit

Price Work under paragraph 9.10 and to any other qualifications stated in the recommendation), and

14.5.3 the conditions precedent to CONTRACTOR's being entitled to such payment appear to have been fulfilled insofar as it is ENGINEER's responsibility to observe the Work.

However, by recommending any such payment ENGINEER will not thereby be deemed to have represented that: (i) exhaustive or continuous on-site inspections have been made to check the quality or the quantity of the Work beyond the responsibilities specifically assigned to ENGINEER in the Contract Documents or (ii) that there may not be other matters or issues between the parties that might entitle CONTRACTOR to be paid additionally by OWNER or entitle OWNER to withhold payment to CONTRACTOR.

14.6 ENGINEER's recommendation of any payment, including final payment, shall not mean that ENGINEER is responsible for CONTRACTOR's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the furnishing or performance of Work, or for any failure of CONTRACTOR to perform or furnish Work in accordance with the Contract Documents.

14.7 ENGINEER may refuse to recommend the whole or any part of any payment if, in ENGINEER's opinion, it would be incorrect to make the representations to OWNER referred to in paragraph 14.5. ENGINEER may also refuse to recommend any such payment, or, because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify any such payment previously recommended, to such extent as may be necessary in ENGINEER's opinion to protect OWNER from loss because:

14.7.1 the Work is **defective**, or completed Work has been damaged requiring correction or replacement,

14.7.2 the Contract Price has been reduced by Written Amendment or Change Order,

14.7.3 OWNER has been required to correct **defective** Work or complete Work in accordance with paragraph 13.14, or

14.7.4 ENGINEER has actual knowledge of the occurrence of any of the events enumerated in paragraphs 15.2.1 through 15.2.3 inclusive.

In addition to the retainages set forth in the Contract Documents, the Owner may retain one hundred percent (100%) of all progress payments for any unsatisfactory performance of the Work and any payment recommended by the ENGINEER, including without limitation:

Defective work or failure to repair or replace defective work;

Claims filed against the CONTRACTOR, or reasonable evidence indicating probable filing of such claims;

Failure of the CONTRACTOR to make adequate or proper payments to subcontractors or suppliers for materials, equipment or labor;

Failure to obtain necessary permits or licenses, or to comply with applicable laws, ordinances, codes, or regulations, unless such noncompliance is due to reasons

beyond the control of the CONTRACTOR, or due to act of the OWNER or and ENGINEER hired by the OWNER, or agents or employees thereof:

Reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Price then unpaid;

Reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;

Persistent failure to carry out the Work in accordance with the Contract Documents;

As a set off for amounts due the Owner on other items;

Collusion with other bidders in preparing the bid;

Actual knowledge of the occurrence of any of the events enumerated in paragraphs 14.7.1 through 14.7.3 or paragraphs 15.2.1 through 15.2.4 inclusive.

When the above reasons for withholding payment are removed and corrected to the OWNER's satisfaction, OWNER shall make payment to the CONTRACTOR of the sums withheld pursuant to this paragraph, subject to the amounts required to be retained by the Contract Documents.

Progress Payments to Suppliers and Subcontractors. The CONTRACTOR shall make partial payments of the amount due to each of the CONTRACTOR's suppliers and subcontractors in the same manner as the OWNER is required to pay the CONTRACTOR under Article 4 of the Agreement and Article 14 of the General Conditions, provided that the suppliers and subcontractors are performing to the CONTRACTOR's satisfaction. If the OWNER is notified that the CONTRACTOR is in arrears in payments to the CONTRACTOR's suppliers or subcontractors, the OWNER shall notify the CONTRACTOR and determine why such funds are being withheld. If the OWNER determines that no legitimate basis exists for the CONTRACTOR's withholding of such payments, the OWNER may, five (5) days after the mailing of written notice to the CONTRACTOR, make such payments directly to the CONTRACTOR's suppliers or subcontractors from funds which otherwise would be due the CONTRACTOR.

Substantial Completion:

14.8 When CONTRACTOR considers the entire Work ready for its intended use CONTRACTOR shall notify OWNER and ENGINEER in writing that the entire Work is substantially complete (except for items specifically listed by CONTRACTOR as incomplete) and request that ENGINEER issue a certificate of Substantial Completion. Within a reasonable time thereafter, OWNER, CONTRACTOR and ENGINEER shall make an inspection of the Work to determine the status of completion. If ENGINEER does not consider the Work substantially complete, ENGINEER will notify CONTRACTOR in writing giving the reasons therefor. If ENGINEER considers the Work substantially complete, ENGINEER will prepare and deliver to OWNER a tentative certificate of Substantial Completion, which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. OWNER shall have seven days after receipt of the tentative certificate during which to make written objection to ENGINEER as to any provisions of the certificate or attached list. If, after considering such objections, ENGINEER concludes that the Work is not substantially complete, ENGINEER will within fourteen days after submission of the tentative certificate to OWNER notify CONTRACTOR in writing, stating the reasons therefor. If, after consideration of OWNER's objections,

ENGINEER considers the Work substantially complete, ENGINEER will within said fourteen days execute and deliver to OWNER and CONTRACTOR a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as ENGINEER believes justified after consideration of any objections from OWNER. At the time of delivery of the tentative certificate of Substantial Completion, ENGINEER will deliver to OWNER and CONTRACTOR a written recommendation as to division of responsibilities pending final payment between OWNER and CONTRACTOR with respect to security, operation, safety, maintenance, heat, utilities, insurance and warranties and guarantees. Unless OWNER and CONTRACTOR agree otherwise in writing and so inform ENGINEER in writing prior to ENGINEER's issuing the definitive certificate of Substantial Completion. ENGINEER's aforesaid recommendation will be binding on OWNER and CONTRACTOR until final payment.

14.9 OWNER shall have the right to exclude CONTRACTOR from the Work after the date of Substantial Completion, but OWNER shall allow CONTRACTOR reasonable access to complete or correct items on the tentative list.

Partial Utilization:

14.10 Use by OWNER at OWNER's option of any substantially completed part of the Work which: (i) has specifically been identified in the Contract Documents, or (ii) OWNER, ENGINEER, and CONTRACTOR agree constitutes a separately functioning and usable part of the Work that can be used by OWNER for its intended purpose without significant interference with CONTRACTOR's performance of the remainder of the Work, may be accomplished prior to Substantial Completion of all the Work subject to the following:

14.10.1 OWNER at any time may request CONTRACTOR in writing to permit OWNER to use any such part of the Work which OWNER believes to be ready for its intended use and substantially complete. If CONTRACTOR agrees that such part of the Work is substantially complete, CONTRACTOR will certify to OWNER and ENGINEER that such part of the Work is substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. CONTRACTOR at any time may notify OWNER and ENGINEER in writing that CONTRACTOR considers any such part of the Work ready for its intended use and substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. Within a reasonable time after either such request, OWNER, CONTRACTOR and ENGINEER shall make an inspection of that part of the Work to determine its status of completion. If ENGINEER does not consider that part of the Work to be substantially complete, ENGINEER will notify OWNER and CONTRACTOR in writing giving the reasons therefor. If ENGINEER considers that part of the Work to be substantially complete, the provisions of paragraphs 14.8 and 14.9 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof land access thereto.

Final Inspection:

14.11 Upon written notice from CONTRACTOR that the entire Work or an agreed portion thereof is complete, ENGINEER will make a final inspection with OWNER and CONTRACTOR and will notify CONTRACTOR in writing of all particulars in which this inspection reveals that the

Work is incomplete or **defective.** CONTRACTOR shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

Final Application for Payment:

14.12 After CONTRACTOR has completed all such corrections to the satisfaction of ENGINEER and delivered in accordance with the Contract Documents all maintenance and operating instructions, schedules, guarantees, Bonds, certificates or other evidence of insurance required by paragraph 5.4, certificates of inspection, marked-up record documents (as provided in paragraph 6.19) and other documents. CONTRACTOR may make application for final payment following the procedure for progress payments. The final application for payment shall be accompanied (except as previously delivered) by: (i) all documentation called for in the Contract Documents, including but not limited to the evidence satisfactory to the OWNER of the continuation of completed operations insurance and any insurance coverage written on a claims-made basis at final payment and one year thereafter; (ii) the consent of surety to final payment and that the performance bond shall remain in effect throughout the guarantee period; (iii) complete and legally effective claim releases signed by all suppliers and subcontractors in the form provided in the Contract Documents certifying that all outstanding claims for payment have been paid. The CONTRACTOR shall not receive final payment due under the Agreement until the CONTRACTOR obtains and files the foregoing items (i), (ii), and (iii).

14.12.1 LIENS. Colorado Statutes do not provide for any right of lien against public buildings. In lieu thereof, §38-26-107, Colorado Revised Statutes, as amended, provides adequate relief for any claimant having furnished labor, materials, rental machinery, tools, equipment, or services toward construction of the particular public work in that final payment may not be made to a CONTRACTOR until all such creditors have been put on notice by publication of such pending payment and given opportunity to stop payment to the CONTRACTOR in the amount of such claims. Pursuant to §38-26-107, C.R.S., any supplier may bring a suit and file a notice of lis pendens against the OWNER within ninety (90) days after the date set for final settlement. If any such supplier or person files any such claim and notice of lis pendens, the OWNER shall withhold retained amounts from final payments to the CONTRACTOR as are necessary to satisfy fully such claims. References to liens appearing in Article 14 shall be deemed as references to claims made pursuant to C.R.S §38-26-101 et seq. unless the context requires otherwise.

Final Payment and Acceptance:

14.13 If, on the basis of ENGINEER's observation of the Work during construction and final inspection, and ENGINEER's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, ENGINEER is satisfied that the Work has been completed and CONTRACTOR's other obligations under the Contract Documents have been fulfilled, ENGINEER will, within ten days after receipt of the final Application for Payment, indicate in writing ENGINEER's recommendation of payment and present the Application to OWNER for payment. At the same time ENGINEER will also give written notice to OWNER and CONTRACTOR that the Work is acceptable subject to the provisions of paragraph 14.15. Otherwise, ENGINEER will return the Application to CONTRACTOR, indicating in writing the reasons for refusing to recommend final payment, in which case CONTRACTOR shall make the necessary corrections and resubmit the Application. Upon receipt of the ENGINEER's recommendation for payment and the final

Application for Payment, OWNER shall order the publication of Notice of Final Payment as required by C.R.S. §38-26-107(1) and shall make final payment in accordance with C.R.S. 38-26-107(3).

14.14 If, through no fault of CONTRACTOR, final completion of the Work is significantly delayed and if ENGINEER so confirms, OWNER shall, upon receipt of CONTRACTOR's final Application for Payment and recommendation of ENGINEER, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by OWNER for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if Bonds have been furnished as required in paragraph 5.1, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by CONTRACTOR to ENGINEER with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

Waiver of Claims:

14.15 The making and acceptance of final payment will constitute:

14.15.1 a waiver of all claims by OWNER against CONTRACTOR, except claims arising from unsettled Liens, from **defective** Work appearing after final inspection pursuant to paragraph 14.11, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from CONTRACTOR's continuing obligations under the Contract Documents; and

14.15.2 a waiver of all claims by CONTRACTOR against OWNER other than those previously made in writing and still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

OWNER May Suspend Work:

15.1 At any time and without cause, OWNER may suspend the Work or any portion thereof for a period of not more than ninety days by notice in writing to CONTRACTOR and ENGINEER, which will fix the date on which Work will be resumed. CONTRACTOR shall resume the Work on the date so fixed. CONTRACTOR shall be allowed an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if CONTRACTOR makes an approved claim therefor as provided in Articles 11 and 12.

OWNER May Terminate:

15.2 Upon the occurrence of any one or more of the following events:

15.2.1 if CONTRACTOR persistently fails to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 2.8 as adjusted from time to time pursuant to paragraph 6.6);

15.2.2 if CONTRACTOR disregards Laws or Regulations of any public body having jurisdiction;

15.2.3 if CONTRACTOR otherwise violates in any substantial way any provisions of the Contract Documents;

OWNER may, after giving CONTRACTOR (and the surety, if any,) seven days' written notice and to the extent permitted by Laws and Regulations, terminate the services of CONTRACTOR, exclude CONTRACTOR from the site and take possession of the Work and of all CONTRACTOR's tools, appliances, construction equipment and machinery at the site and use the same to the full extent they could be used by CONTRACTOR (without liability to CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the site or for which OWNER has paid CONTRACTOR but which are stored elsewhere, and finish the Work as OWNER may deem expedient. In such case CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds all claims, costs, losses and damages sustained by OWNER arising out of or resulting from completing the Work such excess will be paid to CONTRACTOR. If such claims, costs, losses and damages exceed such unpaid balance, CONTRACTOR shall pay the difference to OWNER. Such claims, costs, losses and damages incurred by OWNER will be reviewed by ENGINEER as to their reasonableness and when so approved by ENGINEER incorporated in a Change Order, provided that when exercising any rights or remedies under this paragraph OWNER shall not be required to obtain the lowest price for the Work performed.

15.3 Where CONTRACTOR's services have been so terminated by OWNER, the termination will not affect any rights or remedies of OWNER against CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys due CONTRACTOR by OWNER will not release CONTRACTOR from liability.

15.4 Upon seven days' written notice to CONTRACTOR and ENGINEER, OWNER may, without cause and without prejudice to any other right or remedy of OWNER, elect to terminate the Agreement. In such case, CONTRACTOR shall be paid (without duplication of any items):

15.4.1 for completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

15.4.2 for expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

15.4.3 for all claims, costs, losses and damages incurred in settlement of terminated contracts with Subcontractors, Suppliers and others; and

15.4.4 for reasonable expenses directly attributable to termination.

CONTRACTOR shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

CONTRACTOR May Stop Work or Terminate:

15.5 If, through no act or fault of CONTRACTOR, the Work is suspended for a period of more than ninety days by OWNER or under an order of court or other public authority, or

ENGINEER fails to act on any Application for Payment within thirty days after it is submitted or OWNER fails for thirty days to pay CONTRACTOR any sum finally determined to be due, then CONTRACTOR may, upon seven days' written notice to OWNER and ENGINEER, and provided OWNER or ENGINEER do not remedy such suspension or failure within that time, terminate the Agreement and recover from OWNER payment on the same terms as provided in paragraph 15.4. In lieu of terminating the Agreement and without prejudice to any other right or remedy, if ENGINEER has failed to act on an Application for Payment within thirty days after it is submitted, or OWNER has failed for thirty days to pay CONTRACTOR any sum finally determined to be due, CONTRACTOR may upon seven days' written notice to OWNER and ENGINEER stop the Work until payment of all such amounts due CONTRACTOR, including interest thereon. The provisions of this paragraph 15.5 are not intended to preclude CONTRACTOR from making claim under Articles 11 and 12 for an increase in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to CONTRACTOR's stopping Work as permitted by this paragraph.

ARTICLE 16 - MISCELLANEOUS

Giving Notice:

16.1 Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

Computation of Times:

16.2.1 When any period of time is referred to in the Contract Documents by days, it will be computed to include the first and the last day of such period.

Notice of Claim:

16.3 Should OWNER or CONTRACTOR suffer injury or damage to person or property because of any error, omission or act of the other party or of any of the other party's employees or agents or others for whose acts the other party is legally liable, claim will be made in writing to the other party within a reasonable time of the first observance of such injury or damage. The provisions of this paragraph 16.3 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitations or repose.

Cumulative Remedies:

16.4 The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon CONTRACTOR by paragraphs 6.12, 6.16, 6.30, 6.31, 6.32, 13.1, 13.12, 13.14, 14.3 and 15.2 and all of the rights and remedies available to OWNER and ENGINEER thereunder, are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee or by other provisions of the Contract Documents, and the provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply.

Professional Fees and Court Costs Included:

16.5 Whenever reference is made to "claims, costs, losses and damages," it shall include in each case, but not be limited to, all fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs.

Interest:

16.6 In the event that any payment of interest is to be made pursuant to any provision of the Contract Documents, excluding any bid bond, labor and materials bond or performance bond entered into by the CONTRACTOR, interest shall be paid at the average rate earned by the City of Louisville on its invested funds during the quarterly fiscal period prior to the period during which the interest was accrued.

Third Parties:

16.7 The contract is not intended to create any right in or for the public or any member thereof, any subcontractor or supplier, or any other third party, or to authorize anyone not a party to the contract to maintain a suit to enforce its terms. The duties, obligations, and responsibilities of the parties to the contract, with respect to third parties, shall remain as imposed by law. This paragraph shall not apply to any surety to the extent it is acting under any labor and materials bond or performance bond entered into by the CONTRACTOR.

Severability:

16.8 To the extent that the performance of the parties' obligations may be accomplished within the intent of the contract, the terms of the contract are severable, and should any term or provision of the contract be declared invalid or become inoperative for any reason, such invalidity or failure shall not affect the validity of any other contract term or provision.

Equal Opportunity Employer:

16.9 The CONTRACTOR will not discriminate against any employee or applicant for employment because of race, color, religion, age, sex, disability or national origin. The CONTRACTOR will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard for their race, color, religion, age, sex, disability or national origin. Such action shall include but not be limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. The CONTRACTOR agrees to post in conspicuous places, available to employees and applicants for employment, notice to be provided by an agency of the federal government, setting forth the provisions of the Equal Opportunity Laws.

The CONTRACTOR shall be in compliance with the appropriate areas of the Americans with Disabilities Act of 1990 as enacted and from time to time amended and any other applicable federal regulation. A signed, written certificate stating compliance with the Americans with Disabilities Act may be requested at any time during the life of any contract and with any contract entered by the OWNER.

SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Work covered by contract documents

B. Work by others

C. Contractor use of site and premises

D. Work sequence

E. Protection of public and private property

F. Regulatory requirements

G. Cutting and patching

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work will include all necessary labor, supervision, equipment, tools and materials for the installation of two Chlorine Dioxide generation and feed systems. Work includes, but is not limited to, installation of the two generators including, piping, solution pump, water booster pump, control panel, valves and appurtenances, and ancillary piping and devices for complete functional systems.

B. Contractor shall furnish and pay for all materials, equipment, supplies, appurtenances; provide all construction equipment and tools; and perform all necessary labor and supervision

C. Contractor shall coordinate the progress of the Work including coordination between trades, subcontractors, suppliers, public utilities and Owner to insure the progress of Work

D. It is the intent of this contract that Work proceed in the most expeditious manner possible

E. Construct the Work under contract indicated in the Bid Form

F. The cross-referencing of specification sections under the heading "Related Sections" and elsewhere within each specification section is intended as an aid to the Contractor and shall not relieve the Contractor from his responsibility to coordinate the Work under the Contract Documents. Listings of cross-references are not intended to be comprehensive. The omission of a cross-reference to an additional or related requirement shall not relieve the Contractor of his obligation to provide a complete Project.

1.3 WORK BY OTHERS

A. Construct work to allow for work by others. Coordinate construction schedule with the Owner.

1.4 CONTRACTOR USE OF SITE AND PREMISES

A. Contractor shall limit use of the premises for Work and will use designated staging areas indicated by the Owner for equipment and material storage.

B. Coordinate use of premises under direction of Engineer and/or Owner

C. Assume full responsibility for the protection and safekeeping of equipment and products stored on site under this Contract

D. Contractor should plan for normal workdays, Monday through Friday, within the hours of 7:00 am to 7:00 pm, except for Holidays that are recognized by the City. Other work hours and days may be allowed by City and Engineer upon 48 hours written notice

1.5 OWNER USE OF SITE AND PREMISES

A. Owner shall coordinate with Contractor the entrance into work site for work performed under the Contract Documents to ensure Contractor's health and safety plans are followed

B. Existing facility to remain operational during construction. All access maintained.

1.6 WORK SEQUENCE AND WORK RESTRICTIONS

A. Construct work to allow for work by others. Coordinate construction schedule with the Owner.

B. Contractor shall submit a detailed CPM format schedule outlining all steps required to assure complete and satisfactory construction, testing, and startup of work in such a manner as to result in the least possible disruption to the operations and staff of the treatment facility and to allow the facility to achieve the finished water quality requirements established by regulations at all times. Address all work sequence and constraints described in this Section.

C. Conduct work in a manner that will not impair the operational capabilities of essential elements of the existing water treatment process.

D. Indicate required shutdowns of existing facilities or interruptions of existing operations on Progress Schedule. Shutdowns will be permitted to the extent that existing operation of the plant will not be jeopardized and identified constraints are satisfied.

E. Construct work in stages to minimize water service outages. Coordinate construction schedule and water main shutdowns with Engineer and Owner.

1.7 PROTECTION OF PUBLIC AND PRIVATE PROPERTY

A. Protect, shore, brace, support, and maintain underground conduits, drains, and other underground construction uncovered or otherwise affected by construction operations

B. Contractor shall be responsible for all damage to streets, roads, highways, shoulders, street lighting and/or signage, embankments, culverts, location or character, which may be caused by transporting equipment, materials, or personnel to or from the Work or any part or site thereof, whether by him or his subcontractors

C. Make satisfactory and acceptable arrangements with the Owner of, or the agency or authority having jurisdiction over, any damaged property concerning its repair or replacement or payment of costs incurred in connection with the damage

1.8 PROTECTION OF WORK AND FACILITIES

A. Contractor shall be solely responsible for the protection of Work until final acceptance

B. Contractor shall protect all and any previously performed Work, work in progress or completed by others, and existing facilities from damage during the performance of Work in the area

1.9 REGULATORY REQUIREMENTS

A. Comply with all federal, state, and local laws, regulations, codes, and ordinances applicable to the Work

B. References in the Contract Document to local codes shall mean the codes in effect in the City of Louisville.

C. Other standards and codes which apply to the Work are designated in the specific technical specifications

1.10 CUTTING AND PATCHING

A. Contractor shall be responsible for all cutting, and patching, including attendant excavation and backfill, required to complete the Work or to
   1. Uncover portions of the Work to provide for installation of ill-timed work
   2. Remove and replace defective work
   3. Remove and replace work not conforming to requirements of Contract Documents
   4. Remove samples of installed work as specified for testing

B. Provide products as specified or as required to complete cutting and patching operations

C. Inspection
   1. Inspect existing conditions of the Project, including elements subject to damage or to movement during cutting and patching

2. After uncovering work, inspect the conditions affecting the installation of products, or performance of the work
3. Report unsatisfactory or questionable conditions to the Engineer in writing; do not proceed with the work until the Engineer has provided further instructions

D. Preparation
1. Provide devices and methods to protect other portions of the Project from damage
2. Provide protection from the elements for that portion of the Project which may be exposed by cutting and patching work, and maintain excavations free from water
3. Execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances and finishes
4. Restore work which has been cut or removed; install new products to provide completed Work in accord with requirements of Contract Documents

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION

SECTION 01039

COORDINATION AND MEETINGS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. General requirements

B. Coordination

C. Field engineering

D. Alteration project procedures

E. Preconstruction conference

F. Progress meetings

G. Requests for information

1.2 RELATED SECTIONS

A. Section 01010 – Summary of Work

B. Section 01340 – Shop Drawings and Product Data

C. Section 01700 – Contract Closeout

1.3 GENERAL REQUIREMENTS

A. Refer to General Conditions for Owner meetings and other requirements

B. Engineer will schedule and administer pre-construction meeting according to agenda
   1. Prepare agenda for meetings including items required by Owner and Contractor
   2. Notify Contractor and Owner 4 days in advance of meeting date
   3. Preside at meeting

C. Contractor will schedule and administer site mobilization and weekly progress meetings. Contractor will also be responsible for coordination, field engineering, alteration, project procedures, cutting and patching procedures outlined herein. If work progress does not warrant a meeting, all parties can mutually agree to postpone meeting.
   1. Arrange for the attendance of Contractor's agents, employees, subcontractors, and suppliers as appropriate to the agenda
   2. Record the minutes; include all significant proceedings and decisions
   3. Reproduce and distribute copies of minutes within one week after each meeting
      a. To all participants in the meetings

b. To Engineer
c. To Owner

4. Owner and other inspecting parties such as the geotechnical engineer/technician as well as plant operators may attend meetings
5. Engineer will attend weekly meetings either via phone or on site

D. Representatives of contractors, subcontractors, and suppliers attending the meetings shall be qualified and authorized to act on behalf of the entity each represents

1.4 COORDINATION

A. Coordinate scheduling, submittals, and Work of the various Sections of specifications to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later by others.

B. Verify that utility requirement characteristics of operating equipment are compatible with available utilities. Coordinate work of various Sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment, and coordinate preparation of grading and other requirements for installation utility work by others.

C. Coordinate completion and clean-up of Work of separate Sections in preparation for final completion and for portions of Work designated for Owner’s use

D. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

1.5 FIELD ENGINEERING

A. Employ a Land Surveyor registered in the State of Colorado and acceptable to the Engineer and Owner.

B. Contractor will locate and protect survey control and reference points.

C. Control datum for survey is that established by Owner provided survey and shown on Drawings.

D. Provide field engineering services. Establish elevations, lines, and levels, utilizing recognized engineering survey practices.

1.6 ALTERATION PROJECT PROCEDURES

A. Materials: As specified in product Sections; match existing products and work for patching and extending work.

B. Where new work abuts or aligns with existing, perform a smooth and even transition. Patched work to match existing adjacent work in texture and appearance.

C. When finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Engineer.

D. Where a change of plane of 1/4-inch or more occurs, submit recommendation for providing a smooth transition for Engineer review.

E. Patch or replace portions of existing surfaces, which are damaged, lifted, or showing other imperfections.

F. Finish surfaces as specified in individual product sections.

1.7 PRECONSTRUCTION CONFERENCE

A. Engineer will schedule a conference after Notice of Award

B. Location: On site

C. Attendance
1. Owner's Representative
2. Engineer and his professional consultants
3. Geotechnical Engineer
4. Contractor's Project Manager
5. Contractor's Superintendent
6. Major Subcontractors
7. Others as Appropriate

D. Agenda:
1. Execution of Owner Contractor Agreement.
2. Submission of executed bonds and insurance certificates.
3. Distribution of Contract Documents.
4. Submission of list of subcontractors and suppliers, list of products, Schedule of Values, and Construction Project Schedule in critical path format.
5. Designation of personnel representing the parties in Contractor, Owner, and the Engineer.
6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, cost proposal requests, Change Orders and Contract closeout procedures.
7. Construction scheduling and updates.
8. Scheduling activities of Geotechnical Engineer, equipment manufacturers representatives, and other field tests
9. Critical work sequencing
10. Major equipment deliveries and priorities
11. Procedures for maintaining Record Documents
12. Construction facilities, controls and construction aids
13. Temporary utilities provided by Owner
14. Safety and first-aid procedures
15. Security and housekeeping procedures

16. Procedures for testing

1.8 PROGRESS MEETINGS

A. Contractor will schedule and administer meetings throughout progress of the Work at weekly intervals. If work progress does not warrant meeting, all parties can mutually agree to postpone the weekly meeting.

B. Location of the Meetings: The project field office of the Contractor, or other locations arranged for by Contractor, convenient to all parties

C. Contractor will make arrangements for meetings, prepare agenda with copies for participants, preside at meetings, record minutes, and distribute copies within one week to Contractor, Owner, participants, and those affected by decisions made.

D. Attendance
1. Owner's Representative
2. Engineer, and his professional consultants as needed
3. Contractor's Superintendent
4. Subcontractors as appropriate to the agenda
5. Suppliers as appropriate to the agenda
6. Others, as appropriate

E. Suggested Agenda
1. Review Minutes of Previous meetings
2. Review Unresolved issues from Last Meeting
3. Review of Work Progress
4. Field Observations, Problems, Conflicts and Decisions
5. RFI Review
6. Review of Submittals Schedule and Status of Submittals
7. Schedule
    a. General Schedule Issues
    b. Review of off-site fabrication and delivery schedules
    c. Planned progress during succeeding work period (3-week “Look ahead”)
    d. Maintenance of construction project schedule
    e. Corrective measures to regain project schedules
8. Maintenance of Quality and Work Standards
9. Change Orders
10. New PR’s
11. Accepted Change Orders
12. Pay Requests
13. Other Business

1.9 REQUESTS FOR INFORMATION (RFI)

A. The Contractor shall prepare and submit an RFI upon the discovery of the need for interpretation of the Contract Documents or additional information.
1. Only the Contractor shall submit RFIs to the Engineer.

2. RFIs shall be submitted on Engineer's RFI form. Engineer will provide a template for the Contractor upon request.

B. RFI shall include:
   1. Project Name
   2. Engineer Job Number
   3. Date
   4. Name of Contractor
   5. Name of Engineer
   6. RFI number, numbered sequentially
   7. Related specification section number, title, and related paragraphs, as needed
   8. Drawing number and detail references, as needed
   9. Field conditions
   10. Contractor's proposed solution. If the Contractor's solution(s) affect contract times or contract price, Contractor shall state the effects on the RFI.
   11. Contractor's signature
   12. Relevant attachments including but not limited to drawings, descriptions, measurements, photos, product data, and shop drawings

C. Electronically Submitted RFIs
   1. Contractor shall submit one (1) complete RFI file in Adobe Acrobat PDF format

D. Engineer's Response
   1. Engineer will review each RFI, determine action required, and respond.
   2. Engineer will review and respond to each RFI within seven (7) working days
   3. If Engineer receives an RFI after 1:00 P.M. local time, the RFI will be considered as received the following working day.
   4. Engineer will not respond to RFIs requesting approval of submittals, approval of substitutions, coordination and information already indicated in Contract Documents, adjustment in contract time or contract amount, or erroneous RFIs.
   5. Engineer may respond to RFIs on related issues with a single response.
   6. If Engineer requests additional information as a result of the RFI, any further action or RFIs submitted by the Contractor will restart a new seven (7) day review period.
   7. Contractor shall submit any request for change of contract time or contract price utilizing proper Change Order forms.

E. Contractor shall log and track all RFIs submitted organized by RFI number.
   1. RFI log shall be submitted at each progress meeting
   2. RFI log shall include:
      a. Project name
      b. Name, address, and phone number of Contractor
      c. Contractor representative name
      d. RFI number
      e. RFI description
      f. RFI submittal date
      g. RFI response date
      h. Related Change Order number, as needed

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION

SECTION 01080

IDENTIFICATION SYSTEMS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Color coding, lettering, and tagging of all new exposed pipe and electrical equipment

1.2 RELATED SECTIONS

A. Section 09900 – Coatings

1.3 REFERENCES

A. ANSI 13.1 – Scheme for the Identification of Piping Systems

PART 2 PRODUCTS

2.1 MATERIALS

A. Coatings: As specified in Section 09900

B. Nameplates: Plastic, two colors for surface and core

PART 3 EXECUTION

3.1 LOCATION OF IDENTIFICATION

A. Lettering and flow direction arrows
   1. Near equipment served
   2. Close to valve or flanges
   3. Adjacent to branches, tees and changes in direction of pipeline
   4. At intervals of not more than 20 feet on straight runs, unless otherwise indicated by Engineer

3.2 LETTERING

A. Lettering to be provided by:
   1. Paint, stencil
   2. Cylindrically coiled printed plastic sheets meeting ANSI A13.1-2007
      a. Seton, Setmark Pipe Markers
      b. Or accepted equal

B. Letter size as follows:

Outside Diameter of Pipe Or Covering (inch)	Minimum Height of Letters (inch)
¾ Through 4	¾
>4 to <8	1 1/4
8 or larger	2 1/2

3.3 NAME PLATES

A. Provide nameplates on all electrically powered equipment and electrical enclosures
   1. Size: Approximately 3-inch wide by 2-inch high, on red plastic surface engraved through to a yellow core
   2. Label: “Danger” in capital ½ inch letters on top line. The balance of sign in 3/8-inch capital letters reading: “Do not perform any equipment maintenance until main power disconnect is turned off and padlocked”
   3. Provide additional electrical nameplates of the size and colors indicated in the individual specification sections
   4. Install in prominent location agreed to by the Engineer and Owner

B. Provide nameplate at all non-potable water outlets
   1. Size: approximately 3-inch wide by 2-inch high, on red plastic surface engraved through to a white core
   2. Label: “Non-Potable Water” top line and “Do Not Drink” second line in ½ inch capital letters
   3. Securely attach to wall (if possible) or attach with stainless steel chain

3.4 SCHEDULED COLOR CODING

A. All 24-inch pipe and smaller

B. Bands where scheduled: 6-inch-wide, at 5-foot intervals

C. Provide only bands of color on un-insulated steel and PVC, elsewhere natural finish

3.5 PIPING NOT SCHEDULED

A. Paint to match wall or ceiling, unless otherwise directed by Engineer

B. Appropriately identify and place arrows

C. Un-insulated stainless steel and PVC
   1. Natural finish

3.6 SCHEDULE

A. Paint and letter colors

Piping Description	Pipe Base/Band Color	Color of Letters	Legend
Potable Water	Dark Blue	While	Potable Water
Sodium Chlorite Solution	Banding – no paint	White	Sodium Chlorite Solution
Chlorine Dioxide Solution	Banding – no paint	White	Sodium Chlorite Solution

B. For piping not specified above refer to “Ten State Standards-Water Works, 2012 Edition” and/or the CDPHE “Design Criteria for Potable Water Systems, September 2013” as well as consult with Engineer

C. Specifically paint the following items:
   1. Valve hand-wheels and levers: Red
   2. Hoist Hooks, blocks, monorail beams: Match existing

END OF SECTION

SECTION 01200

PAYMENT PROCEDURES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General Conditions and other Division 1 Specification Sections, apply to this Section.

B. This information is supplemental to the requirements as stated in the General Conditions.

1.2 SUMMARY

A. This Section includes additional administrative and procedural requirements necessary to prepare and process Applications for Payment. Refer to General Conditions for most requirements of the Owner.
   1. Unit Prices for administrative requirements governing use of unit prices
   2. Construction Progress Schedules

1.3 DEFINITIONS

A. Unit Price: An amount proposed by bidders, stated on the Bid Form, as a price per unit of measurement for materials or services.

1.4 PROCEDURES FOR UNIT PRICES

A. Unit bid prices, as quoted in the Bid Form, shall be in full compensation for labor, materials, equipment, rentals, freight, applicable taxes, overhead, profit and incidentals to complete all work for each pay item; and for all risk, loss, damage, or expense of whatever nature arising from the nature of the work or the prosecution thereof.

B. Work or materials that are essential to the work, but for which there are no pay items, will not be measured and paid for separately, but shall be included in other items of work.

C. Prices include all necessary material, for a complete installation, insurance, applicable taxes, overhead, and profit
   1. Bid Item No. 1: Howard Berry Chlorine Dioxide Feed System Replacement
      Description: No separate measurement for payment will be made for any labor, equipment, and materials required for this item. This bid item includes but is not limited to the following in accordance with the Drawings and Specifications or as otherwise directed by Engineer: protecting all existing items, materials, and surfaces not to be demolished; demolishing, hauling, and disposing of existing chlorine dioxide feed equipment as shown on the Drawings including existing De Nora generators; clean up; and providing all other related and necessary labor, equipment, and materials to complete the Work not covered by other items in this section.

a. Unit of Measurement: No measurement for payment will be made for this work. It shall be paid for at the Contract Lump Sum Price based upon the percentage completed and accepted of the work required by this bid item.

2. Bid Item No. 2: Sid Copeland Chlorine Dioxide Feed System Replacement Description: No separate measurement for payment will be made for any labor, equipment, and materials required for this item. This bid item includes but is not limited to the following in accordance with the Drawings and Specifications or as otherwise directed by Engineer: protecting all existing items, materials, and surfaces not to be demolished; demolishing, hauling, and disposing of existing chlorine dioxide feed equipment as shown on the Drawings including existing De Nora generators; clean up; and providing all other related and necessary labor, equipment, and materials to complete the Work not covered by other items in this section.
   a. Unit of Measurement: No measurement for payment will be made for this work. It shall be paid for at the Contract Lump Sum Price based upon the percentage completed and accepted of the work required by this bid item.

D. Measurement and Payment: Refer to bid form and 1.5 (A) of this Section for establishment of unit prices

E. Owner reserves the right to reject Contractor’s measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor.

1.5 APPLICATION FOR PAYMENTS

A. General
   1. Submit itemized payment request as required in General Conditions together with Schedule of Values and other submittals as specified herein
   2. Contractor shall not "project" work completed beyond the date of Application for Payment submittal for the purpose of payment request

B. Each Application for Payment shall be consistent with previous applications and payments as certified by the Engineer and paid for by the Owner.
   1. The initial Application for Payment, the Application for Payment at time of Substantial Completion, and the final Application for Payment involve additional requirements

C. Payment Application Times: Each progress payment date is as indicated in the Agreement. The period of construction Work covered by each Application for Payment is the period indicated in the Agreement

D. Application Preparation: Complete every entry on the form, including notarization and execution by person authorized to sign legal documents on behalf of the Owner. Incomplete applications will be returned without action.
   1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions have been made.

2. Include amounts of Change Orders issued prior to the last day of the construction period covered by the application

E. Transmittal
   1. Submit copy of each Application for Payment to the Engineer by means ensuring receipt within 24 hours
   2. Transmit each copy with a transmittal form listing attachments, and recording appropriate information related to the application in a manner acceptable to the Engineer

F. Initial Application for Payment
   1. Administrative actions and submittals that must precede or coincide with submittal of the first Application for Payment include the following:
      a. List of subcontractors
      b. List of principal suppliers and fabricators
      c. Schedule of Values
      d. Contractor's Construction Schedule (preliminary if not final)
      e. Schedule of principal products
      f. List of Contractor's staff assignments
      g. Copies of building permits
      h. Copies of authorizations and licenses from governing authorities for performance of the Work
      i. Certificates of insurance and insurance policies
      j. Performance and payment bonds, if required

G. Application for Payment at Substantial Completion
   1. Following issuance of the Certificate of Substantial Completion, submit an Application for Payment. This application shall reflect any Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of Work
      a. Administrative actions and submittals that shall precede or coincide with this application include:
         i) Occupancy permits and similar approvals
         ii) Warranties (guarantees) and maintenance agreements
         iii) Test/adjust/balance records
         iv) Maintenance instructions
         v) Meter readings
         vi) Start-up performance reports
         vii) Change-over information related to Owner's occupancy, use, operation and maintenance
         viii) Final cleaning
         ix) Application for reduction of retainage, and consent of surety
         x) Advice on shifting insurance coverages
      b. List of incomplete Work, recognized as exceptions to Engineer’s Certificate of Substantial Completion

H. Application for Final Payment

1. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Price, previous payments, and sum remaining due.
2. Application for Final Payment will not be considered until the following have been accomplished:
    a. Completion of Project closeout requirements
    b. Completion of items specified for completion after Substantial Completion
    c. Assurance that unsettled claims will be settled
    d. Assurance that Work not complete and accepted will be completed without undue delay
    e. Transmittal of required Project construction records to Owner
    f. Proof that taxes, fees and similar obligations have been paid
    g. Removal of temporary facilities and services
    h. Removal of surplus materials, rubbish and similar elements

1.6 PROCEDURES FOR THE CONSTRUCTION PROGRESS SCHEDULE

A. Coordination: coordinate preparation and updates of Contractor's Construction Schedule with the preparation of Schedule of Values.
    1. Correlate line items in the Construction Schedule with required project tasks, including the following:
        a. Mobilization/demobilization
        b. Permits and regulatory requirements
        c. Submittals
        d. Equipment
        e. O&M Manuals
        f. Work breakdown of major project work
        g. Major subcontractors work
        h. Startup and commissioning
        i. Training
        j. Substantial completion
        k. Final completion
        l. Milestones and operational shutdown requirements

B. Utilize the Critical Path Method (CPM) type construction schedule to establish preliminary progress schedule and track Work progress
    1. After acceptance by Engineer of preliminary Progress Schedule submitted per requirements of General Conditions, set preliminary Progress Schedule as the Construction Baseline Schedule
    2. Update and submit the construction progress schedule on a monthly basis with the pay application
        a. Monthly submittal should indicate progress of tasks, changes to baseline schedule logic, work additions such as change orders, milestone and contract date changes
        b. Submit two (2) color print copies, 11" x 17" size, and one Adobe pdf copy
        c. Upon request provide copy of project schedule CPM data file

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

A. Provide a list of unit prices as indicated in Division 0 Bid Form

END OF SECTION

SECTION 01340

SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Submission of all shop drawings and product data as required by the Contract Documents for all equipment and materials to be furnished under this contract unless specifically indicated otherwise

1.2 RELATED SECTIONS

A. Section 01600 – Materials and Equipment

B. Section 01730 – Operations and Maintenance Data

C. Specification Divisions 2 thru 16

1.3 SUBMITTALS

A. Definitions
   1. Technical submittals: Shop drawings, product data and samples prepared by Contractor, subcontractors, suppliers, or manufacturers
      a. Shall be submitted by the Contractor to Engineer for approval for the use of Equipment and Materials to complete the Work or as needed to describe the following:
         i) Operation and maintenance
         ii) Technical properties
         iii) Installation
      b. Shop drawings: Custom prepared data for the Project and Work including performance and capacity curves, diagrams, bills of material, instructions, and other information
      c. Product data: Non-custom prepared printed information for the Project and Work on materials and products
      d. Samples: Fabricated and non-fabricated tangible samples of products and material
         i) Used for visual inspection and testing and analysis
   2. Informational submittals: Reports, administrative informational submittals, certification and guarantees not including and defined as shop drawings, samples and product data
      a. Reports: Include laboratory reports and tests, technical procedures and records and design analysis
      b. Administrative informational submittals: Submittals necessary for administrative records such as construction photographs, work records, schedules, standards, record project data, safety data, and similar information submittals
      c. Certification: Includes manufacturer or supplier certificates and guarantees

B. General Requirements
   1. Quality
      a. Shall be of suitable quality for legibility and reproduction purposes
      b. Shall be useable for reproduction yielding legible hard copy
      c. Submittals not conforming to specified requirements herein and as specified in Divisions 2 through 16 shall be subject to rejection by Engineer and upon Engineer request, Contractor shall resubmit documents that are in conformance
   2. Dimensions
      a. English units shall be provided on submittals
      b. Metric units are acceptable in addition to English units
      c. English units shall govern
   3. Form of submittals
      a. Submittals shall be transmitted in electronic format as specified herein
      b. Scanned submittals are acceptable
      c. Electronic project documents and submittals shall be transmitted in the following format:
         i) Native electronic format, nonproprietary
         ii) Adobe PDF produced from native electronic format
      d. Filename:
         i) Shall be consistent for the initial and any subsequent submission revisions for a single submittal
         ii) Contractor shall use a consistent naming convention for all submittals
            a) Use number of original submittal followed directly by a capital letter corresponding to the number of times a submittal is resubmitted (i.e., #001, #001A, #001B, etc.)
   4. Non-conforming submittals shall be subject to rejection by Owner and/or Engineer
   5. Submittal completion requirements
      a. Submittals shall include design criteria, dimensions, construction materials and all other information specified for a complete submittal to facilitate Engineer review of the submittal information adequately
      b. In the event various drawings are included a submittal for a class of Equipment, Contractor shall annotate clearly which parts apply to furnished Equipment
         i) Information not pertaining to the submittal shall be clearly annotated. Highlighting of such information will cause rejection of the submittal by the Engineer
      c. Contract Drawings
         i) Copies or portions thereof will not be allowed as acceptable fabrication or erection drawings
         ii) In the event Contract Drawings are used by the Engineer for erection drawings to annotate information on erection or identify reference details, Engineer title block and professional seal shall be removed and replaced with the Contractor's title block on the Contract Drawing(s). Contractor shall revise such erection drawings for subsequent revisions by the Engineer to Contract Drawings

C. Preparation
   1. Shop Drawings

a. Drawings shall be presented in a clear and thorough manner:
b. Identify details by reference to sheet and detail, schedule or room numbers shown on Contract Drawings
c. Identify equipment by reference to equipment name and tag number shown on Contract Drawings
d. Scale and Measurements: Make drawings accurate to a scale with sufficient detail to show the kind, size, arrangement and function of component materials and devices
e. Minimum sheet size: 8.5" by 11"
f. Fabrication drawing size: 11" by 17"

2. Product Data
   a. Clearly mark each copy to identify pertinent products or models submitted for review
   b. Identify equipment by reference to equipment name and P&ID number
   c. Catalog cut sheets: Cross-out or hatch irrelevant data

D. Technical Submittals: Shop Drawings and Product Data Submittal Requirements
   1. Shop Drawings and Product Data shall include the following, at a minimum:
      a. Specifications of manufacturer(s)
      b. Equipment parts and catalogs
      c. Bills of materials, material lists, and schedules
      d. Shop erection and fabrication drawings
      e. Drawings shall include equipment dimensions, weights, installation location requirements, plates required, main components, support details, anchor bolt details/sizes/locations, support base sizes, baseplate sizes, spacing and clearance requirements for installation, erection, operation and maintenance disassembly
      f. Electrical requirements:
         i) Shall include schematic diagrams including one-line diagrams, terminal block numbers, internal wiring diagrams, external connections, controls, and any other information as requested in individual specification sections
      g. List of spare parts
      h. Instruction and Operation and Maintenance (O&M) manuals
         i) As specified herein and in Specification Section 01730
      i. Manufacturer’s performance testing of equipment
      j. Concrete mix design data and information
      k. Performance characteristics and capacities
      l. External connections, anchorages, and supports required
      m. Other drawings, parts, catalogs, specifications, samples, or data necessary for the Engineer to determine conformance with Contract Documents
   2. Samples – Office samples shall be of sufficient size and quantity to clearly illustrate:
      a. Functional characteristics of the product, with integrally related parts and attachment devices
      b. Full range of color, texture and pattern
      c. Comply with requirements identified in individual specification sections

E. Construction Schedule: Designate in the construction schedule, or in a separate coordinated shop drawing schedule, the dates for submission and the dates that reviewed Shop Drawings and Product Data will be needed, if accelerated review is requested

F. Field samples and Mock-ups:
   1. Contractor shall erect, at the Project Site, at a location acceptable to the Engineer and Owner
   2. Size or area: as specified in the respective specification section
   3. Fabricate each sample and mock-up complete and finished
   4. Remove mock-ups at conclusion of Work or when acceptable to Engineer

1.4 CONTRACTOR RESPONSIBILITIES

A. Review shop drawings and product data prior to submission for accuracy and completeness of each submission

B. Approve and stamp each submission before submitting to Engineer

C. Determine and verify:
   1. Field measurements
   2. Field construction criteria
   3. Catalog numbers and similar data
   4. Conformance with specifications and identification of all deviations
   5. Confirm assignment of unit responsibility

D. Prior to each submission, carefully review and coordinate all aspects of each item being submitted

E. Verify that each item and the corresponding submittal conform in all respects with specified requirements of the Work and of the Contract Documents with respect to means, methods, techniques, sequences, and operations of construction, and safety precautions and programs incidental thereto

F. Make submissions promptly in accordance with Construction Schedule, and in such sequence as to cause no delay in the Work or in the work of any other Contractor

G. Submittal review period shall be less than 14 calendar days

H. Notify Engineer in writing, at time of submission, of any deviations in the submittals from Contract Document requirements:
   1. Identify and tabulate all deviations in transmittal letter
   2. Indicate essential details of all changes proposed, including modifications to other facilities that may be a result of the deviation
   3. Include required piping and wiring diagrams

1.5 SUBMISSION REQUIREMENTS

A. Make submissions far enough in advance of scheduled dates for installation to provide time required for reviews, for securing necessary approvals, for possible revisions and resubmissions, and for placing orders and securing delivery

B. In scheduling, allow fourteen (14) calendar days for review by Engineer following receipt of submission in Engineer's office:
   1. Time required to mail submissions or resubmissions is not considered a part of review period

C. Submittal Naming and Numbering
   1. Assign a unique number to include all shop drawings, product data and other information required for individual specification sections, beginning with #001.
   2. Resubmissions shall have the original number with a letter, starting with "A". If the first submittal required resubmission, it would be labeled #001A.
   3. Each specification section may still have more than one submittal number for later submissions (i.e., Preliminary O&M Manuals, Final O&M Manuals, etc.)
   4. Contractor shall use a consistent naming convention for all submittals

D. Quantity of Submittals Required
   1. Shop Drawings and Product Data:
      a. Initial submittal:
         i) Electronic – One (1) copy to Engineer
      b. Resubmittal:
         i) Electronic – One (1) copy to Engineer
      c. Final Submittal for Distribution
         i) Paper hard copy - Maximum of two (2) copies for Contractor's use, plus a maximum of three (3) copies which will be distributed by Engineer when approved. Do not submit more than five (5) copies
         ii) One (1) electronic copy to Engineer
      d. As –constructed document submittals
         i) Paper hard copy – Maximum of two (2) copies for Contractor's use, plus a maximum of three (3) copies which will be distributed by Engineer when approved. Do not submit more than five (5) copies
         ii) Electronic – One (1) copy to Engineer and one (1) copy to Owner
   2. Samples
      a. Initial submittal:
         i) Submit three (3) of each sample unless specified otherwise in individual specification section
      b. Resubmittal:
         i) Submit three (3) to Engineer
      c. One (1) sample of approved sample submittal will be returned to Contractor
   3. Informational submittals
      a. Technical reports and administrative submittals
         i) Electronic – One (1) copy to Engineer
         ii) Paper: Three (3) copies to Engineer
      b. Certificates and guarantees:

i) Electronic – One (1) copy to Engineer
ii) Paper: Three (3) copies to Engineer

c. Test reports
i) Paper
a) Owner: Two (2) copies
b) Engineer: One (1) copy
c) Contractor: Two (2) copies
d) Manufacturer/supplier: One (1) copy

4. Instruction and O&M manuals
a. In accordance to Specification Section 01730
5. At no additional cost to the Owner and whether or not submittals are copyrighted, the Owner may copy and use for staff training and/or internal operations any submittals approved for final distribution as well as required by this Contract

E. Submittal Transmittal Requirements
1. Accompany each submittal with a letter of transmittal showing all information required for identification and checking
2. Shall include:
a. Drawing numbers and titles
b. Revision number
c. Electronic filename
d. Deviations from Contract Documents: As specified herein
e. Submittals unidentifiable will be returned for proper identification
f. Date

F. Submittals Requirements
1. Submittal number
2. Date of submission and dates of any previous submissions
3. Project title and number
4. Owner Contract identification number if applicable
5. Names of:
a. Contractor
b. Supplier
c. Manufacturer
6. Identification of the product, with the specification section number
7. Field dimensions, clearly identified as such
8. Relation to adjacent or critical features of the Work or materials
9. Applicable standards, such as ASTM or Federal Specification numbers
10. Identification of deviations from Contract Documents:
a. If Contractor proposes to provide material or equipment of Work which deviates from the Project Manual, Contractor shall indicate so under “deviations” on the transmittal form accompanying the submittal copies
b. Identify all requested deviations as specified and on the copies of Specifications and Drawings required by paragraph below.
11. Confirmation of compliance with Contract Documents and, if applicable, identification of deviations from Contract Documents:

a. Provide the following documents to demonstrate compliance with the contract specifications:
   i) A copy of the relevant Drawing(s) with all addendum updates that apply to the equipment in various Divisions marked to show specific changes necessary for the equipment proposed in the Contractor's submittal
      a) If no changes are required, the Drawing(s) shall be clearly marked "No Changes Required"
      b) Failure to include copies of relevant Drawing(s) with the submittal, whether changes are required or not, shall be cause for rejection of the entire submittal with no further review by Engineer
      c) Relevant Drawing(s) include as a minimum the control diagrams, process and instrumentation diagrams (P&IDs), and Process (P) drawings.
   ii) A copy of each pertinent specification section with all addendum updates included, all referenced and applicable specifications sections, with their respective addendum updates included, with each paragraph check-marked to indicate specification compliance or marked to indicate the requested deviations from the specification requirements:
      a) If deviations from the specifications are indicated and, therefore requested, by the Contractor, the submittal shall be accompanied by a detailed, written justification for each deviation
      b) Failure to include a copy of the marked up specification sections, along with justification for any requested deviations to the specification requirements, with the submittal shall be cause for rejection of the entire submittal with no further review by Engineer

12. Identification of revisions on resubmissions
13. An 8" by 4" blank space for Contractor's and Engineer's stamps
14. Stamp cover sheet of each submittal as identified in letter of transmittal
15. Contractor's stamp: Initialed or signed, certifying review and approval of submittal, verification of products, field measurements and field construction criteria, and coordination of the information within the submittal with requirements of the Work and of Contract Documents. Use stamp to include wording similar to the following:

> This submittal has been reviewed by [*Name of Contractor*] and approved with respect to the means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incidental thereto. [*Name of Contractor*] also warrants that this submittal complies with contract documents and comprises no deviations thereto:
> Section No:___ Submittal No:
> Date:_____ By:

G. For equipment that is provided directly by manufacturer without specification provide:
   1. Shop drawings: Illustrate complete assembly of products; foundation, installation and anchor requirements; dimensions and total weights of each, electrical wiring diagrams

2. Product data: Provide manufacturer’s literature including general assembly, materials of construction, model and type, detailed data describing parts and accessories, sufficient data to verify compliance with specifications
3. Manufacturer’s installation instructions: Provide detailed connection requirements and startup instructions
4. Manufacturer’s field report: Indicate personnel present and actual start-up procedures that were performed by manufacturer’s representative
5. Field report and test results shall be submitted to the Engineer by the Contractor

H. Submittal Log:
1. Maintain an accurate submittal log for duration of the Work showing current status of all submissions
2. Show submittal number, section number, section title, submittal description, dates and disposition of submittal
3. Make submittal log available to Engineer for Engineer's review upon request

I. Unless specified otherwise, make submissions in groups to facilitate efficient review and approval:
1. Include all associated items from individual specification sections to assure that all information is available for checking each item when it is received
2. Submit a complete initial submittal including all components when an item consists of components from several sources
3. Partial submittals may be rejected as not complying with provisions of the Contract
4. Engineer will not be held liable for delays due to poorly organized or incomplete submissions
5. Do not include items from more than one specification section for any one submittal number

J. Contractor may require subcontractors to provide drawings, setting diagrams and similar information to help coordinate the Work, but such data shall remain between Contractor and his subcontractors and will not be reviewed by Engineer unless specifically called for within the Contract Documents

K. All submittals for each component of multi-component systems shall be compiled and submitted through the Contractor to the Engineer by the manufacturer having System Responsibility

1.6 DISPOSITION OF SHOP DRAWINGS, PRODUCT DATA, AND INFORMATION SUBMITTALS

A. "No Exceptions Taken": Approved with No Corrections Noted
1. One copy sent to Owner
2. One copy sent to Resident Project Representative
3. One copy retained in Engineer's file
4. Remaining copies returned to Contractor for his use
   a. One copy to be kept on file at Contractor's office at job site
   b. Remaining copies for Contractor's office file, suppliers, or subcontractors

5. No corrections or comments noted on the submittal or on a Submittal Response Summary Sheet
6. Issues or miscellaneous comments pertaining to other related items of the Work may be included in transmittal letter
7. Resubmission not required

B. "Exceptions Noted": Approved with Corrections Noted
1. One copy sent to Owner
2. One copy sent to Resident Project Representative
3. One copy retained in Engineer's file
4. Remaining copies returned to Contractor for his use
    a. One copy to be kept on file at Contractor's office at job site
    b. Remaining copies for Contractor's office file, suppliers or subcontractors
    c. Copies of submittal data in operation and maintenance manuals to be revised according to corrections
5. Comply with corrections or comments as noted on the submittal or on a Submittal Response Summary Sheet
6. Resubmission not required

C. "Revise And Resubmit": Incorrect information provided or Significant Information Still Required
1. One copy sent to Resident Project Representative
2. One copy retained in Engineer's file
3. All remaining copies returned to Contractor for revision and re-submittal
4. Copy of transmittal letter and/or Submittal Response Summary Sheet sent to Owner. A "No Exceptions Taken" or "Exceptions Noted" submittal it will be forwarded to Owner after review per above disposition requirements
5. Submittal is either: incorrectly annotated; specific comments need to be addressed and incorporated in re-submittal; and/or additional information may be required as noted on the submittal or on a Submittal Response Summary Sheet
6. Submitted information may not include or address specific item required per the specification as identified on the submittal or on a Submittal Response Summary Sheet
7. Specific information related to identified item may be required for final approval of submittal
8. Resubmission of entire submittal may be required or resubmission of specific item may be required as identified on the submittal or on a Submittal Response Summary Sheet

D. "Rejected": Returned for Correction
1. One copy sent to Resident Project Representative
2. One copy retained in Engineer's file
3. All remaining copies returned to Contractor
4. Copy of transmittal letter and/or Submittal Response sent to Owner
5. Contractor required to resubmit complete submittal package in accordance with Contract Documents
6. Submittal does not comply with provisions of Contract Documents as noted on the submittal or on a Submittal Response Summary Sheet

7. Resubmission required

E. “Receipt Acknowledged”: For Reference Purposes Only, or for Record Copy:
1. Applicable to manufacturer or Contractor provided calculations and other miscellaneous documentation no subject to Engineer review and approval
2. One copy sent to Resident Project Representative
3. One copy retained in Engineer's file
4. One copy returned to Contractor
5. Copy of transmittal letter sent to Owner
6. Remaining submittal copies destroyed
7. Detailed review and comment by Engineer not required
8. Resubmission not required

1.7 DISPOSITION OF SAMPLES

A. "No Exceptions Taken": Approved with No Corrections Noted
1. One sample sent to Owner
2. One sample sent to Resident Project Representative
3. One sample retained in Engineer's file
4. Acknowledgement: Copy of transmittal letter sent to Contractor
5. Resubmission not required

B. "Exceptions Noted": Approved with Corrections Noted
1. One sample sent to Owner
2. One sample sent to Resident Project Representative
3. One sample retained in Engineer's file
4. Acknowledgement: Copy of transmittal letter sent to Contractor
5. Work performed or products furnished to comply with exceptions noted in acknowledgement
6. Resubmission not required

C. "Rejected": Returned for Correction
1. One sample retained in Engineer's file
2. Remaining samples sent to Contractor for resubmittal and compliance with the Contract Documents as noted in transmittal letter
3. Copy of transmittal letter sent to Owner
4. Resubmission required

1.8 RESUBMISSION REQUIREMENTS

A. Make any corrections or changes in submittals required by Engineer and resubmit until approved

B. Transmit each resubmission under new letter of transmittal. Use number of original submittal followed directly by a capital letter corresponding to the number of times a submittal is resubmitted (i.e., #001, #001A, #001B, etc.)

C. Shop Drawings and Product Data

1. Revise initial drawings or data and resubmit as specified for the initial submittal
2. Indicate any changes which have been made other than those requested by Engineer

D. Samples: Submit new samples as required for initial submittal

E. Reimbursement of Resubmission Review Costs:
1. Review of first submittal and one resubmittal will be performed by Engineer at no cost to Contractor
2. Cost for review of subsequent resubmissions will be directly paid by Contractor
3. Engineer will document work-hours required for review and costs for Engineer review will be deducted from payments due Contractor as Change Order deducts
4. Charges for review of resubmissions will include Engineer at maximum rate of $150 per hour and administrative staff at maximum rate of $75 per hour

1.9 PROJECT RECORD SUBMITTALS

A. After completion of the Work and prior to final payment, Contractor shall furnish record documents and final approved shop drawings and samples (as-constructed shop drawings and samples) in the number of copies specified herein.
1. Contractor shall provide additional copies of final approved shop drawings and samples for insertion in Equipment instruction and O&M manuals as required
2. All copies shall be clearly marked “Project Record”

1.10 ENGINEER'S DUTIES

A. Review submittals with reasonable promptness and in accordance with approved submission schedule provided that each submittal has been called for by the Contract Documents and is stamped by Contractor as indicated above
1. No extensions of time are allowed due to Engineer’s delay in reviewing submittals unless all the following criteria are met:
a. Contractor has notified Engineer in writing that timely review of particular submittal in question is critical to the progress of the Work and Contractor has identified the requested submittal return date.
b. Engineer has failed to return submittal within 21 days of receipt of the submittal or receipt of said notice, whichever is later
c. Contractor demonstrates that delay in progress of the Work was directly attributable to Engineer’s failure to return submittal within 21 days
2. No extensions of time are allowed due to delays in progress of the Work caused by rejection and subsequent resubmission of data, including multiple resubmissions
3. Engineer’s review shall not extend to means, methods, techniques, sequences, construction operations, and safety precautions and programs incidental thereto. No information regarding these items will be reviewed whether or not included in submittals
4. In the event that Engineer will require more than 21 calendar days to perform review, Engineer shall so notify Contractor

B. Review drawings and data submitted only for general conformity with Contract Documents

1. Engineer's review of drawings and data returned marked No Exceptions Taken or Exceptions Noted does not indicate a thorough review of all dimensions, quantities, and details of material, equipment device or items shown
2. Engineer's review does not relieve Contractor of responsibility for errors, omissions or deviations nor responsibility for compliance with the Contract Documents

C. Assume that no shop drawing or related submittal comprises a deviation to the Contract Documents unless Contractor advises Engineer otherwise in writing which is acknowledged by Engineer in writing:
   1. Consider and review only those deviations from the Contract Documents clearly identified as such on the submittal and tabulated on the Contractor's transmittal sheet.

D. Review informational submittals for indications of Work or Material deficiencies and will respond to Contractor regarding such deficiencies

E. Return submittals to Contractor for distribution or for resubmission

F. Transmit, unreviewed, to Contractor all copies of submittals received directly from suppliers, manufacturers and subcontractors

G. Transmit, unreviewed, to Contractor all copies of submittals not called for by the Contract Documents or which have not been approved by Contractor

H. Engineer will not review uncalled-for shop drawings or product data except by special arrangement

I. Affix stamp and indicate approval for submittal or resubmission requirements with the following stamp:

☐ NO EXCEPTIONS TAKEN ☐ EXCEPTIONS NOTED
☐ REVISE & RESUBMIT ☐ REJECTED
This review was performed only for general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. Modifications or comments made on the shop drawings and product data during this review do not relieve Contractor from responsibility for compliance with the requirements of the plans and specifications. Contractor is responsible for: dimensions and quantities; information that pertains solely to the fabrication processes or to the means, methods, of construction; coordination of the work of all trades.

JVA, Inc.

Date_____ By_____

1.11 SUBMITTAL SCHEDULE

A. Unless indicated otherwise, provide all submittals required by individual sections of the Contract Documents to establish compliance with the specified requirements.

B. Contractor to produce schedule of submittals for Engineer review

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION

SECTION 01380

CONSTRUCTION PHOTOGRAPHS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Construction record photographs prior to commencing and during the course of the Work

1.2 RELATED SECTIONS

A. Section 01010 – Summary of Work

B. Section 01700 – Contract Closeout: Project Record Documents

1.3 PHOTOGRAPHY REQUIRED

A. Take photographs of the existing conditions prior to commencing work to document existing conditions

B. Take photographs on the date on which each scheduled Application for Payment is due. Intent is for digital photos to be kept as project record

C. CD of Digital photos become the property of Owner

1.4 COSTS OF PHOTOGRAPHY

A. Pay all costs for specified photography and printing
   1. Parties requiring additional photography or prints will pay for them directly

1.5 DELIVERY OF PHOTOS

A. Submit digital photos to the Engineer with monthly pay requests or within 20 days of photo date

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 TECHNIQUE

A. Factual Presentation

B. Correct Exposure and Focus
   1. High resolution and sharpness

2. Maximum depth-of-field
3. Minimum distortion

3.2 VIEWS REQUIRED

A. Photograph from locations to adequately illustrate the condition of construction and the state of the Project
   1. Photographic survey of the existing site
      a. Show all areas to be modified
      b. Show all areas in which Contractor will conduct operations or store equipment
   2. Weekly photographs
      a. Minimum of eight (8) views weekly until final acceptance
      b. Views as designated by the Engineer or Owner

3.3 PHOTOGRAPH REQUIREMENTS FOR PROGRESS SITE PHOTOGRAPHS

A. Responsibility
   1. Site photographs for Owner record of construction progress shall be the responsibility of the Contractor
   2. Contractor shall be responsible for site photographs including the existing and progress of Work

B. Photographs shall include, but not limited to, the following:
   1. Existing site: Photographs of existing site conditions before site work commences
      a. Number of views shall be sufficient to cover the existing site conditions
   2. Progress of work: Shall include photographs from clearing throughout construction
      a. Number of views shall be sufficient to cover progress in Work and shall include a minimum of eight (8) different views
   3. After completion of Work: Shall be sufficient to show completed and finished Work

C. Digital images
   1. Provide images in uncompressed JPEG format
   2. Minimum resolution: 1500 x 2200
   3. Submitted digital images shall not be cropped

D. Identify each digital image file
   1. Name of project
   2. Orientation and description of view
   3. Date and time of exposure

3.4 ADDITIONAL PHOTOGRAPHS

A. Contractor shall provide additional photographs upon the request of the Engineer

B. Additional photographs may include, but not limited to, the following:
   1. Publicity photographs
   2. Special events at Project site
   3. Major phase of Work

4. Substantial Completion
5. Follow-up investigations for on-site events such as construction damage or losses
6. Additional record photographs during final acceptance

3.5 PROJECT RECORD

A. Submit CD of all photos, grouped by date

B. Engineer will distribute, after review
   1. One copy of each view to Owner
   2. One copy of each view to Engineer's file
   3. One copy of each view returned to Contractor for inclusion in Project Record Document

END OF SECTION

SECTION 01400

QUALITY CONTROL

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Quality assurance / Control of installation

B. Inspection and testing laboratory services

C. Qualification of laboratory

D. Laboratory duties

E. Limitations of authority of testing laboratory

F. Contractor's responsibilities

G. Field testing

H. Testing and services schedule

1.2 RELATED SECTIONS

A. Section 01010 - Summary of Work

B. Section 01340 - Shop Drawings, Product Data, and Samples

C. Section 01600 - Material and Equipment

1.3 REFERENCES

A. Conform to reference standard by date of issue current on date of Contract Documents

B. Obtain copies of standards when required by Contract Documents

C. Where specified reference standards conflict with Contract Documents, request clarification from Engineer before proceeding

D. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in any reference document

1.4 SUBMITTALS

A. Submit under provisions of Section 01340

B. Provide copies of written reports for materials, equipment or systems as scheduled at the end of this section. Reference each report by respective section number.

C. Laboratory Test Reports: Provide written reports of each test and inspection to Engineer. Each report shall include:
   1. Date issued
   2. Project title and number
   3. Testing laboratory name, address and telephone number
   4. Name and signature of laboratory inspector
   5. Date and time of sampling or inspection
   6. Record of temperature and weather conditions
   7. Date of test
   8. Identification of product and specification section
   9. Location of sample or test in the Project
   10. Type of inspection or test
   11. Results of tests and compliance with Contract Documents
   12. Interpretation of test results when requested by Engineer

D. Shop Test Reports: Provide reports detailing results of tests and certification from manufacturer to verify compliance with specifications

E. Field Test Reports: Provide reports detailing results of the tests. Indicate compliance or non-compliance with Contract Documents. Identify corrective action for materials and equipment which fails to pass field tests.

1.5 QUALITY ASSURANCE/CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship to produce Work of specified quality

B. Comply fully with manufacturer's instructions, including each step in sequence

C. Should manufacturer's instructions conflict with Contract Documents, request clarification from Engineer before proceeding

D. Comply with specified standards as a minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship

E. Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion or disfigurement

F. Inspections and testing required by laws, ordinances, rules, regulations, orders or approvals of public authorities: Conditions of the Contract

G. Certification of products: Respective sections of specifications

H. Laboratory tests required and standards for testing: Respective sections of specifications

1.6 INSPECTION AND TESTING LABORATORY SERVICES

A. Owner will employ and pay for the services of a testing agency to perform specified laboratory testing of materials where the technical specifications specifically obligate the Owner to provide the services
   1. It is the Contractor’s responsibility to initiate and coordinate all required tests and inspections including conformance with requirements of all applicable public agencies and authorities. Contractor will be responsible for coordinating the testing requirement with testing agency and provide the testing agency no less than two (2) working days advance notification to schedule tests.
   2. Employment of the testing agency shall in no way relieve Contractor's obligations to perform the Work of the Contract
   3. Contractor shall employ and pay for the services of a testing agency to perform all specified services and testing not specifically identified in the technical specifications to be provided by Owner related to the design of mixes, products and equipment, to Engineer's review of proposed materials and equipment before, during and after incorporation in the Work and to retest materials and equipment which fail original tests

B. Retesting required because of non-conformance to specified requirements shall be performed by the same testing agency on instructions by the Engineer. Payment for retesting will be charged to the Contractor by deducting inspection or testing charges from the Contract Sum/Price

1.7 QUALIFICATION OF TESTING AGENCY

A. Meet "Recommended Requirements for Independent Laboratory Qualification", published by American Council of Independent Laboratories

B. Meet basic requirements of ASTM E 329, "Standards of Recommended Practice for Inspection and Testing Agencies for Concrete and Steel as Used in Construction" as applicable

C. Authorized to operate in the State in which the Project is located

1.8 TESTING AGENCY DUTIES

A. Cooperate with Engineer and Contractor; provide qualified personnel after due notice

B. Perform specified inspections, sampling, and testing of materials and methods of construction
   1. Comply with specified standards
   2. Ascertain compliance of materials with requirements of Contract Documents

C. Promptly notify Engineer and Contractor of observed irregularities or deficiencies of work or products

1.9 LIMITATIONS OF AUTHORITY OF TESTING AGENCY

A. Testing Agency Is Not Authorized To
   1. Release, revoke, alter or enlarge on requirements of Contract Documents
   2. Approve or accept any portion of the Work
   3. Owner employed testing agency shall not perform any duties of the Contractor

1.10 CONTRACTOR'S RESPONSIBILITIES

A. Cooperate with laboratory and testing agency personnel and provide access to Work

B. Secure and deliver to the laboratory adequate quantities of representative samples of materials proposed to be used and which require testing

C. Provide to the laboratory the preliminary design mix proposed to be used for concrete and other material mixes which require control by the testing laboratory

D. Furnish copies of product test reports as required

E. Furnish Incidental Labor and Facilities
   1. To provide access to Work to be tested
   2. To obtain and handle samples at the project site or at the source of the product to be tested
   3. To facilitate inspections and tests
   4. For storage and curing of test samples

F. Cooperate with testing agency; furnish samples of materials, design mix, equipment, tools, storage and assistance as requested
   1. Notify Engineer and testing agency 24 hours prior to expected time for operations requiring services to allow for scheduling of tests and laboratory assignment of personnel
   2. Make arrangements with testing agency and pay for additional samples and tests required for Contractor's use

1.11 FIELD TESTING

A. Contractor shall pay all costs associated with standard field testing of materials as detailed in these specifications.

B. Provide all required materials, labor, equipment, water, and power required for testing

C. Perform all tests in presence of Engineer and provide one copy of field test results to Engineer same day of tests

D. Repair with no additional compensation all materials and equipment which fail during testing

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION

SECTION 01500

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Temporary Utilities: Electricity, lighting, heating, ventilating, telephone service, water and sanitary facilities

B. Temporary Controls: Barriers, enclosures and fencing, protection of the Work, and water control.

C. Construction Staging Facilities: Access roads, parking areas, progress cleaning, project signage, storage and temporary buildings.

1.2 GENERAL REQUIREMENTS

A. Furnish, install and maintain all temporary utilities to assure continuous service required for the Work, except as allowed herein, and remove on completion of Work. Modify and extend systems, as work progress requires.

B. Furnish, install and maintain all construction aids required for the Work, except as allowed herein, and remove on completion of the Work

C. Furnish, install and maintain fences and barriers as required for protection of the public, property and the Work

D. Contractor may use existing roadways for access and parking only where designated by Owner.

E. Provide a field office for the use of the Contractor's Superintendent, Owner's Representatives, and Engineer in the designated staging area

F. Products may be new or used, but must be serviceable, adequate for the intended purpose, and must not violate the requirements of any applicable codes or standards

G. Clean and repair damage caused by temporary installations or use of temporary facilities. Grade and seed all disturbed areas not detailed on the drawings for other treatment

H. Provide contractor information sign posted at accessible location with contractor name and emergency phone contact information.

1.3 QUALITY ASSURANCE

A. Requirements of Regulatory Agencies

1. Comply with applicable Federal and State rules and regulations, local codes and ordinances
2. Comply with utility company requirements

1.4 TEMPORARY ELECTRICITY

A. Contractor may use existing power outlets as long as the circuits are not overloaded.

B. Provide any additional power outlets need for construction operations, with branch wiring and distribution boxes located at the site. Provide flexible power cords as required

1.5 TEMPORARY LIGHTING

A. Existing lighting systems may be used construction purposes. Contractor shall provide additional lighting as need to complete the work.

1.6 TEMPORARY WATER SERVICE

A. Potable water maybe used from existing spigots without charge.

B. Provide all drinking water required by construction personnel and Owner's representatives.

1.7 TEMPORARY SANITARY FACILITIES

A. Provide sanitary facilities at staging area
1. As required by laws and regulations
2. Not less than 1 facility

B. Service, clean and maintain facilities and enclosures

1.8 CONSTRUCTION AIDS

A. Provide construction aids and equipment required by personnel and to facilitate the execution of the Work: scaffolds staging, ladders, stairs, ramps, runways, platforms, railways, hoists, cranes, chutes and other such facilities and equipment

B. Relocate construction aids as required by progress of construction, by storage or work requirements, and to accommodate legitimate requirements by Owner

C. Completely remove temporary materials, equipment, and services at completion of the Project

D. Clean, repair damage caused by installation or by use of temporary facilities
1. Remove foundations and underground installations for construction aids
2. Grade the areas for the site affected by temporary installations to required elevations and slopes and clean the area and seed unless specified as shown on the drawings to be different

1.9 BARRIERS

A. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations and demolition

B. Provide suitable barriers as required for public protection of Owner's employees

C. Protect non-owned vehicular traffic, stored materials, site and structures from damage

D. Install facilities of a neat and reasonable uniform appearance, structurally adequate for the required purposes

E. Relocate barriers as required by progress of construction

F. Completely remove barriers, including foundations, when construction has progressed to the point that they are no longer needed

G. Clean and repair damage caused by installation, fill and grade the areas of the site to required elevations and slopes and clean the area

1.10 PROTECTION OF INSTALLED WORK

A. Protect installed Work and provide special protection where specified in individual specification Sections

B. Provide temporary and removable protection for installed Products. Control activity in immediate work area to minimize damage

C. Protect finished driving surfaces, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects

D. Prohibit construction traffic from entering future landscaped areas after grades have been established and topsoil restored

1.11 SECURITY

A. Provide security and facilities to protect Work from unauthorized entry, vandalism, or theft

B. Coordinate with Owner's security program

1.12 PARKING

A. Paved and unpaved surfaces adjacent to the project can be used for parking.

1.13 PROGRESS CLEANING

A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition

B. Remove waste materials, debris, and rubbish from site periodically and dispose off-site in accordance with local and state regulations. Due to high winds experienced at the site, waste removal must be done immediately after it is generated

1.14 UTILITIES, FACILITIES, AND CONTROLS

A. Remove temporary above grade or buried utilities, equipment, facilities, materials, prior to Final Application for Payment

B. Clean and repair damage caused by installation or use of temporary work

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION

SECTION 01600

MATERIALS AND EQUIPMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Administrative and procedural requirements governing Contractor's selection of products for use in Project and for Work including, but not limited to, the following:
   1. Definitions
   2. General Requirements for Materials and Equipment
   3. Environmental Conditions
   4. Submittals
   5. Quality Assurance and Qualifications
   6. System Responsibility
   7. Transportation and Shipment
   8. Delivery, Storage and Handling
   9. Maintenance Materials
   10. Warranty
   11. Equipment and Product Selection and Identification
   12. Examination, Installation, Adjusting and Cleaning

1.2 RELATED SECTIONS

A. Section 01010 – Summary of Work

B. Section 01340 – Shop Drawings, Product Data, and Samples

C. Section 01400 – Quality Control

D. Section 01650 – Starting of Systems

E. Section 01730 – Operation and Maintenance Data

F. Section 03000 – Concrete

1.3 REFERENCES

A. American Bearing Manufacturers Association (AFBMA)
   1. Std 9-90 – Load Ratings and Fatigue Life for Ball Bearings
   2. Std 11-90 – Load Ratings and Fatigue Life for Roller Bearings

B. American Gear Manufacturer Association (AGMA)

C. ANSI B1.1-89 – Unified Screw Threads

D. ANSI B 1.20. 1-83-Pipe Threads, General Purpose (Inch)

E. ANSI B16.1-89-Cast Iron Pipe Flanges and Flanged Fittings, Class 125

F. ANSI B18.2.1-81-Square and Hex Bolts and Screws, Including Askew Head Bolts, Hex Cap Screws, and Log Screws

G. ANSI B18.2.2-87-Square and Hex Nuts

H. NSF/ANSI 60-2012 – Drinking Water Treatment Chemicals – Health Effects

I. NSF/ANSI 61-2012 – Drinking Water System Components – Health Effects

J. Hazardous (Classified) Locations: Conform to requirements of NFPA70 Articles 500 through 504

1.4 DEFINITIONS

A. Definitions used in this specification section are not intended to change the meaning of other terms used in the Contract Documents, such as “specialties,” “systems,” “structure,” “finished,” “accessories,” and similar terms. Such terms are self-explanatory and have well-recognized meanings in the construction industry

B. Products: Items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term “product” includes the terms “material”, “equipment”, “system”, and terms of similar intent

C. Named products: Items identified by manufacturer’s product name, including make or model number of other designation, shown or listed in the manufacturer’s published product literature that is current as of date of Contract Documents

D. Foreign products: Distinguished from “domestic products” are items substantially manufactured (50 percent or more of value) outside of the United States and its possessions. Products produced or supplied by entities substantially owned (more than 50 percent) by persons who are not citizens or, nor living within, the United States and its possessions are also considered to be foreign products

E. Materials: Products substantially shaped, cut, worked, mixed, finished, refined, or otherwise fabricated, processed, or installed to form a part of the Work

F. Equipment: Product with operational parts, whether motorized or manually operated, that requires service connections, such as wiring or piping

G. Special tools, instruments, devices, or accessories: Any tools, instruments, devices or accessories required for repair, adjustment or maintenance of equipment which are designed especially for the equipment in question or which are not normally kept in stock by local tool suppliers

H. Responsible manufacturer: Unless otherwise specified, responsible manufacturer shall be manufacturer of driven equipment. Agents, representatives or other entities who are not a direct component of manufacturing corporation will not be acceptable as a substitute for

manufacturer's corporation in meeting this requirement

1.5 GENERAL REQUIREMENTS

A. The section applies to all equipment provided under this contract

B. The requirements of detailed specifications take precedence over this section in the event of an apparent conflict

C. Provide all new equipment and materials, except as specified or required by testing

D. Equipment and materials removed from existing structure: Do not use in completed Work except where specifically indicated or specified

E. Contractor to coordinate equipment with other parts of the Work, including verification or compatibility of structures, piping, wiring and equipment components

F. Contractor is responsible for all alterations in the Work to accommodate equipment differing in dimensions or other characteristics from that contemplated in the Drawings or specifications:
   1. The arrangement of equipment shown on the Drawings is based upon information available to the Owner at the time of the design and is not intended to show exact dimensions unique to a specific manufacturer
   2. More than one manufacturer has been used for mechanical layout and design to accommodate all named manufacturer's
   3. The Drawings are, in part, diagrammatic, and some features of the illustrated equipment installation may require revision to meet actual equipment installation requirements as provided by the Contractor
   4. Structural supports, foundations, connected piping, valves and electrical conduit specified may have to be altered as coordinated by the Contractor during the submittal process to accommodate the actual equipment provided by the Contractor
   5. No additional payment will be made to the Contractor for such revisions and alterations

G. Do not use any material or equipment for any purpose other than that for which is designed or specified

H. Equipment lists presented in these specifications and as specified on the Drawings are included for the convenience of the Engineer and Contractor and are not to be considered as complete listings of all equipment, devices and material to be provided under this contract:
   1. Contractor shall prepare his own material and equipment take-off lists as necessary from the contract Drawings, addenda and this project manual to meet the requirements of this project

1.6 ENVIRONMENTAL CONDITIONS

A. Minimum Design Criteria:

1. Altitude: 5,540 feet above mean sea level
2. Outdoor air temperature: 20 to 85 degrees F
3. Relative Humidity:
    a. Summer time: 65 percent
    b. Winter time: 34 percent

1.7 SUBMITTALS

A. Provide submittals in accordance with Section 01340 – Shop Drawings, Product Data, and Samples

B. Submittals for products are specified in Section 01340 – Shop Drawings, Product Data, and Samples and in Divisions 2 through 16

C. All submittals for each component of multi-component systems shall be compiled and submitted through the Contractor to the Engineer by the manufacturer having system responsibility

D. Provide a copy of this specification section with all addendum updates included, with each paragraph check-marked to indicate specification compliance or marked to indicate the requested deviations from the specification requirements.

E. Provide Certificate of System Responsibility

F. Manufacturer's certified data showing location of critical speeds in relation to operating speeds

1.8 QUALITY ASSURANCE AND QUALIFICATIONS

A. Source limitations and interchangeability: To the fullest extent possible, provide products of the same kind from a single source

B. Nameplates: Except for required labels and operating data, do not attach or imprint manufacturer’s or producer’s nameplate or trademarks on exposed surface of products that will be exposed to view in occupied spaces or on the exterior
    1. Labels: Locate required product labels and stamps on concealed surfaces, or where required for observation after installation, on inconspicuous, accessible surfaces.
    2. Equipment nameplates: Provide a permanent nameplate on each item of service – connected or power-operated equipment. Locate on an easily accessible surface that is inconspicuous in occupied spaces. Nameplate shall contain, but not limited to, the following information and other essential operating data:
        a. Name of product and manufacturer
        b. Model and serial number
        c. Capacity
        d. Speed
        e. Ratings
        f. Operating and power characteristics
        g. Labels of tested compliance with codes and standards

3. Refer to additional requirements specified in Divisions 2 through 16

C. Installers Qualifications:
   1. Equipment and material: Installed and placed in service by or under guidance of qualified personnel having knowledge and experience necessary for proper results
   2. Where Contractor's or subcontractor's employees are not properly qualified, use personnel such as factory authorized field representative of equipment supplier

1.9 SYSTEM RESPONSIBILITY

A. Equipment systems made up of two or more components shall be provided as a single system by the responsible manufacturer. Unless otherwise specified, the Contractor shall assign system responsibility to, and obtain each system from the manufacturer of the driven equipment. The manufacturer shall design and provide all components of the system to enhance proper operation, compatibility of all components, ease of construction and efficient maintenance. The responsible manufacturer shall coordinate selection and design of all system components such that all equipment is compatible and operates properly to achieve the performance requirements specified. The Contractor is responsible to the Owner for performance of all systems as provided in the General and Special Conditions.

B. Nothing in this provision shall be construed as relieving the Contractor of overall responsibility for the Work of this Contract and the performance of all systems as specified under Division 0 - General Conditions.

1.10 TRANSPORTATION AND SHIPMENT

A. Shipment preparation: Contractor shall require manufacturers and suppliers to prepare equipment and materials for shipment in a manner to facilitate unloading and handling, and to protect against damage or unnecessary exposure in transit and storage, for contractor supplied equipment. Provisions for protection shall include the following:
   1. Crates or other suitable packaging materials
   2. Covers and other means to prevent corrosion, moisture damage, mechanical, injury, and accumulation of dirt in motors, electrical equipment, and machinery
   3. Suitable rust-preventive compound on exposed machined surfaces and unpainted iron and steel
   4. Grease packing or oil lubrication in all bearings and similar items

B. Marking
   1. Each item of equipment and material shall be tagged or marked as identified in the delivery schedule or on submittals
   2. Complete packing lists and bills of material shall be included with each shipment.
   3. Each piece of every item need not be marked separately, provided that all pieces of each item are packed or bundled together and the packages or bundles are properly tagged or marked

1.11 DELIVERY, STORAGE, AND HANDLING

A. Delivery
   1. Arrange deliveries of equipment and materials in accordance with construction schedules, in ample time to facilitate inspection prior to installation and to avoid delay of Work. Coordinate to avoid conflict with work and conditions at the site
   2. Deliver products in undamaged condition, in manufacturer's sealed, weather tight, original container or packaging, with identifying labels intact and legible, all in accordance with manufacturer's instructions and recommendations using means and methods that will prevent damage, deterioration, and loss, including theft
   3. Control delivery schedules to minimize long-term storage at the Site and to prevent overcrowding of construction spaces. Coordinate delivery and installation to ensure minimum holding or storage times for items known or recognized to be flammable hazardous, easily damaged, or sensitive to deterioration, theft, and other sources of loss
   4. Products delivered to Work site shall be in undamaged condition, in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing
   5. Mark deliveries of component parts of equipment to identify the equipment, to permit easy accumulation of parts, and to facilitate inspection and measurement of quantity or counting of units
   6. Immediately on delivery, inspect shipment to ensure:
      a. Product complies with requirements of Contract Documents and reviewed Submittals
      b. Quantities are correct
      c. Containers and packages are intact and labels are legible
      d. Equipment and materials are properly protected and undamaged
   7. Include complete packing lists and bills of material with each shipment including equipment identification number assigned by Drawings and Specifications of this Contract
   8. Deliver anchor bolts together with templates sufficiently early to permit setting when structural concrete is placed

B. Storage
   1. If there is no interior space available from the Owner for storage of delivered equipment and material at the project site:
      a. Provide adequate facilities for storage in accordance with Section 01500
      b. Provide off-site storage and protection when site does not permit on-site storage or protection and if acceptable to Owner in accordance with the General Conditions
   2. Submit and maintain insurance for equipment and materials at off-site storage
   3. Requests for payment of stored equipment and materials by the Contractor may be rejected if storage facilities do not conform to these specifications or manufacturer's written recommendations.
   4. Store equipment and materials immediately on delivery, and protect until completion of the Work. Store in accordance with manufacturer’s instructions with seals and labels intact and legible
   5. Store equipment and materials in a manner that will not endanger the supporting construction

6. Store equipment and materials that are subject to damage by elements in weathertight enclosures
7. Maintain temperature and humidity within ranges required by manufacturer
8. Protect motors, electrical equipment, plumbing fixtures, and machinery of all kinds against corrosion, moisture deteriorations, mechanical injury, and accumulation of dirt or other foreign matter
9. Protect electrical equipment, controls, and insulation against moisture, water, and dust damage
10. Immediately after delivery and inspection, connect and operate continuously all space heaters furnished in electrical equipment
11. Protect exposed-machined surfaces and unpainted iron and steel as necessary with suitable rust-preventive compounds
12. Protect bearings and similar items with grease packing or oil lubrication
13. Handle and store steel plate, sheet metal, and similar items in a manner to prevent deformation
14. Exterior storage:
    a. Provide substantial platforms, blocking, or skids to support fabricated products aboveground and to prevent soiling or staining. Cover products subject to discoloration or deterioration from exposure to elements, with impervious sheet coverings. Provide adequate ventilation to avoid condensation
    b. Store loose granular materials on solid surface areas to prevent mixing with foreign matter
    c. Provide surface drainage to prevent flow or ponding of rainwater
15. Equipment and materials shall not show any pitting, rust, decay or other deleterious effects of storage prior to final acceptance of Work
16. Arrange storage in a manner to provide easy access for inspection. Make periodic inspections of stored products to ensure products are maintained under specified conditions and free from damage or deterioration
    a. Prepare stored materials lists with schedules of maintenance activities and frequency of activities required to maintain the quality of the equipment and the warranty from the manufacturer
    b. List dates and activities of storage requirements such as rotating moveable parts
    c. Update lists weekly and include in progress meeting agenda
17. Protect painted surfaces against impact, abrasion, discoloration or other damage:
    a. Repaint any damaged areas with manufacturer provided touch-up paint
18. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation
19. Installed products stored prior to start-up:
    a. Equipment and materials shall not show any pitting, rust, decay or other deleterious effects of storage when installed in the Work
    b. Provide substantial coverings as necessary to protect installed products from damage from traffic and subsequent construction operations, dust, dirt, water and paint. Remove when no longer needed

C. Handling

1. Provide equipment and personnel necessary to unload and handle equipment and materials, by methods to prevent damage or soiling to equipment and materials or packaging
2. Handle by methods to prevent bending or overstressing. Where lifting points are designated, lift components only at those points
3. Provide additional protection to surrounding surfaces as necessary to prevent damage

D. Maintenance of storage
1. Inspect stored equipment and materials on a scheduled basis
2. Verify that storage facilities comply with manufacturer's product storage requirements, including environmental conditions continually maintained
3. Verify that surfaces of products exposed to elements are not adversely affected; that any weathering of finishes is acceptable under requirements of Contract Documents
4. For mechanical and electrical equipment in long-term storage, provide manufacturers service instructions to accompany each item, with notice of enclosed instructions on exterior of package. Service equipment on a regularly scheduled basis.

E. Protection after installation
1. Provide substantial coverings as necessary to protect installed equipment and materials from damage from subsequent construction operations
2. Remove when no longer needed or as specified

1.12 MAINTENANCE MATERIALS

A. Spare Parts:
1. Store spare parts, wherever required by detailed technical specification sections, in accordance with the provisions of this paragraph
2. Tag all spare parts with permanent, labeled tags or packaging by equipment designation number and identified as to part number, equipment manufacturer, and subassembly component (if appropriate)
3. Spare parts subject to deterioration such as ferrous metal items and electrical components shall be properly protected by lubricants or desiccants and encapsulated in hermetically sealed plastic wrapping
4. Unless otherwise specified, spare parts with individual weights less than 50 pounds and dimensions less than 2 feet wide, or 18 inches high, or 3 feet in length shall be stored in a wooden box:
   a. Provide box with a hinged wooden cover and locking hasp
   b. Hinges to be strap type
   c. Paint the box and identify with stenciled lettering stating the name of the equipment, equipment numbers, and the words "spare parts"
5. Prepare and provide a neatly typed inventory of spare parts taped to the underside of the box cover

1.13 WARRANTY

A. Warranty all equipment and materials against faulty or inadequate design, improper assembly or erection, defective workmanship or materials, leakage, breakage or other failure

B. Unless otherwise specified, for all equipment and materials provide manufacturer's warranty for a period of 2 years from the date of Substantial Completion

C. Warranties that begin at the time of shipment, delivery or within a limited time period from date of shipment or delivery or any other qualification that does not conform to the definition of Substantial Completion are not acceptable

D. Cost of all manufacturer warranties are considered as part of the Bid price

PART 2 PRODUCTS

2.1 MATERIALS

A. Suitable for the intended service conditions

B. Structural and miscellaneous fabricated steel in equipment shall conform to American Institute of Steel Construction (AISC) standards, except as otherwise specified

2.2 FABRICATION

A. Design, fabricate, and assemble in accordance with the best modern manufacturing and shop practices

B. Manufacture parts to standard sizes and gages

C. Two or more items of the same type shall be identical by the same manufacturer and interchangeable

2.3 EQUIPMENT AND PRODUCT SELECTION

A. General product requirements: Provide products that comply with the Contract Document, are undamaged, and unless otherwise indicated or specified, are new at time of installation
   1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect
   2. Standard products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects
   3. Continued availability: Where, because of the nature of its application, the Owner is likely to need replacement parts or additional amounts of a product at a later date, either for maintenance and repair or replacement, provide standard, domestically produced product for which the manufacturer has published assurances that the product and its parts shall be available to the Owner at a later date. A reasonable doubt regarding such future availability will be grounds for rejection of products other than named products
   4. As specified in each applicable Specification Sections, Drawings, codes, standards, and regulatory agencies

5. Fabricated products:
    a. Design, fabricate, and assemble products in accordance with best engineering and shop practices
    b. Manufacture like parts of duplicate units to standard interchangeable sizes and gauges. Two or more items of same kind shall be identically made by the same manufacturer
    c. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless variations are specifically accepted in writing by Owner
    d. Ensure that material or equipment are not used for any purpose other than that for which it is designed or is specified
    e. Labels and nameplates shall be provided where required by regulatory agencies or in accordance to state identification and essential operation data
6. Provide products of the same kind from a single source to the fullest extent possible

2.4 EQUIPMENT AND PRODUCT IDENTIFICATION

A. Nametags: Identify all valves, instruments, devices, with the equipment tag designation numbers and prefix and suffix letters as specified and/or shown on the Process and Instrumentation Drawings (P&IDs). Identification shall also be in accordance with Section 01080 – Identification Systems.

B. Nameplates: Identify all pumps and equipment with the equipment tag designation numbers and prefix and suffix letters as specified and/or shown on the Process and Instrumentation Drawings (P&IDs):
    1. Provide engraved or machine stamped non-corrosive metal nameplate fastened to the pump or equipment base plate with screws or drive pins of the same material
    2. Nameplate material shall not corrode or discolor in moist or salt water spray atmosphere
    3. Name plates indicate the following:
        a. Manufacturer
        b. Date of manufacture
        c. Name of product
        d. Model and size
        e. Serial Number
        f. Capacity: Rating in gpm or SCFM (if a fan or blower) and feet of head or inches water column
        g. Impeller or wheel diameter (if a fan)
        h. Impeller diameter
        i. Operating and power characteristics
        j. As specified herein and in Divisions 2 through 16
    4. Motor Nameplates:
        a. All motors for pumps and other equipment having motors shall be identified as specified elsewhere under this Section and in Divisions 2 through 16

PART 3 EXECUTION

3.1 EXAMINATION

A. Inspect equipment for signs of pitting, rust decay, or other deleterious effects of storage. Do not install any equipment showing such effects. Replace damaged equipment with identical new equipment

3.2 INSTALLATION

A. Install all equipment, accessories and materials in accordance with the manufacturer's written recommendations unless otherwise specified in the individual equipment detailed technical specifications

B. Each product shall be securely anchored in place except as required for proper movement and performance

C. Each product shall be located and aligned with other Work

D. Manufacturer’s Instructions
   1. Contractor shall obtain and distribute hard copies and electronic copies of manufacturer’s instructions and recommendations to parties involved in installation including a copy to Engineer
   2. Maintain one (1) set of complete instructions at job site during installation and until completion
   3. Handle, install, connect, clean, conditions, and adjust products in accordance with such instructions and in conformity with specified requirements

3.3 ADJUSTING

A. Perform all required adjustment tests, operation checks, and other startup activities required

3.4 CLEANING

A. Perform under provisions of Section 01700 – Contract Closeout

B. Repaint all painted surfaces which are damaged prior to final equipment acceptance to Owner's satisfaction

C. Clean exposed surfaces and protect as necessary and required to prevent any damage or deterioration at the time of Substantial Completion

END OF SECTION

SECTION 01650

STARTING OF SYSTEMS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Starting systems

B. Demonstration, instructions, and training

1.2 RELATED SECTIONS

A. Section 01730 – Operation and Maintenance Data

1.3 STARTING SYSTEMS

A. Provide Engineer with start-up and training schedule at least 14 days prior to the startup of the equipment

B. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, or other conditions which may cause damage

C. Verify that tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer

D. Verify wiring and support components for the equipment are complete and tested

E. Execute start-up under supervision of responsible manufacturer's representative in accordance with manufacturers' instructions

F. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check and approve equipment or system installation prior to start-up, and supervise placing equipment or system in operation

G. Submit a written report certifying that equipment or system has been properly installed and is functioning correctly

1.4 DEMONSTRATION AND INSTRUCTIONS

A. Demonstrate operation and maintenance of Products to Owner's personnel within 7 days prior to date of Substantial Completion

B. Utilize Operation and Maintenance Manuals as basis for instruction. Review contents of manual with Owner’s personnel in detail to explain all aspects of operation, maintenance,

and troubleshooting

C. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled times, at equipment location

D. Prepare and insert additional data in Operations and Maintenance Manuals when need for additional data becomes apparent during instruction

E. The amount of time required for instruction on each item of equipment and system is that specified in individual sections

F. Owner may videotape training sessions. Contractor and manufacturer's trainer to cooperate with videotaping

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION

SECTION 01700

CONTRACT CLOSEOUT

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Substantial completion

B. Final acceptance

C. Project record documents

D. Closeout procedures

E. Final cleaning

F. Final adjustment of accounts

G. Final application for payment

1.2 RELATED SECTIONS

A. Division 0 – General Conditions

B. Section 01500 – Construction Facilities and Temporary Controls

C. Section 01340 – Shop Drawings and Product Data

1.3 SUBSTANTIAL COMPLETION

A. Preliminary Procedures: Prior to requesting inspection for certification of Substantial Completion, complete the following and list exceptions in the request:
   1. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100% completion for the portion of the Work claimed as Substantially Complete
      a. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Price
      b. If 100% completion cannot be shown, include a list of incomplete items, the value of incomplete Work, and reasons the Work is not complete. All items remaining outstanding on the Contractor's punch list shall include a projected date of completion and/or correction with an explanation of why such item is not presently completed
   2. Advise Owner of pending insurance changeover requirements
   3. Submit specific warranties, workmanship Bonds, maintenance agreements, final certifications, and similar documents

4. Obtain and submit releases enabling Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases
5. Submit record drawings, instruction books and operating manuals, final project photographs, damage or settlement surveys, property surveys, and similar final record information
6. Deliver tools, spare parts, extra stock, and similar items
7. Make final changeover of permanent locks and transmit keys to Owner. Advise Owner's personnel of changeover in security provisions
8. Complete final clean up requirements, including touch-up painting. Touch-up and otherwise repair and restore marred exposed finishes

B. Inspection Procedures: On receipt of a request for inspection, Engineer will either proceed with inspection or advise Contractor of unfilled requirements. Engineer will prepare the Certificate of Substantial Completion following inspection or advise Contractor of construction that must be completed or corrected before the certificate will be issued
1. Engineering will repeat inspection when requested and assured by Contractor that the Work is Substantially Complete.
2. Results of the completed inspection will form the basis of requirements for final acceptance

1.4 FINAL ACCEPTANCE

A. Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the following. List exceptions in the request.
1. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include insurance certificates for products and completed operations where required
2. Submit an updated final statement, accounting for final additional changes to the Contract Price
3. Submit a certified copy of Engineer’s final inspection list of items to be completed or corrected, endorsed and dated by Engineer. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance and shall be endorsed and dated by Engineer.
4. Submit final meter readings for utilities, a measured record of stored fuel, and similar data as of the Date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work
5. Submit consent of surety to final payment
6. Submit evidence of final, continuing insurance coverage complying with insurance requirements

B. Reinspection Procedure: Engineer will reinspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except for items whose completion is delayed under circumstances acceptable to Engineer.

1. Upon completion of reinspection, Engineer will prepare a certificate of final acceptance. If the Work is incomplete, Engineer will advise Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance
2. If necessary, reinspection will be repeated, but at the expense of the Contractor who will reimburse the Owner for these services by the Engineer

1.5 PROJECT RECORD DOCUMENTS

A. General
1. Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to record documents for the Engineer's reference during normal working hours
2. Maintain on site, one set of the following record documents; record actual revisions to the Work:
   a. Contract Drawings
   b. Specifications
   c. Addenda
   d. Change Orders and other Modifications to the Contract
   e. Reviewed shop drawings, product data, and samples
   f. Field test reports
   g. Construction photographs
3. Store Record Documents and samples separate from documents used for construction
   a. Provide files and racks for storage of documents
   b. Provide locked cabinet or secure storage space for samples

B. Record Drawings
1. Maintain a clean, undamaged set of blue or black line white-prints of Contract Drawings and Shop Drawings
2. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown
3. Mark which drawing is most capable of showing conditions fully and accurately. Where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings
4. Give particular attention to concealed elements that would be difficult to measure and record at a later date
   a. Record information concurrently with construction progress
   b. Mark record sets with red erasable pencil. Use other colors to distinguish between variations in separate categories of the Work. Mark each document "Project Record" in neat, large, printed letters
   c. Mark new information that is important to Owner but was not shown on Contract Drawings or Shop Drawings
   d. Note related Change Order numbers where applicable
   e. Organize record drawing sheets into manageable sets. Bind sets with durable-paper cover sheets; print suitable titles, dates, and other identification on the cover of each set

f. Upon completion of the Work, submit record drawings to Engineer for Owner's records

5. Contract Drawings and approved Shop Drawings: Legibly mark each item to record actual construction, including:
   a. Measured depths of elements of foundation in relation to finish grade or first floor datum
   b. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvement
   c. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of construction.
   d. Field changes of dimensions and details
   e. Changes made by Addenda or Change Order(s), if any
   f. Details not on original Contract Drawings
   g. References to related Shop Drawings and Modifications

C. Record Specifications: Maintain one complete copy of the Project Manual including addenda. Include with the Project Manual one copy of other written construction documents, such as Change Orders and Modifications issued in printed form during construction
   1. Mark these documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications.
   2. Give particular attention to substitutions and selection of options and information on concealed construction that cannot otherwise be readily discerned later by direct observation.
   3. Note related record drawing information and product data.
   4. Upon completion of the Work, submit record Specifications to Engineer for Owner's records

D. Record Product Data: Maintain one copy of each product data Submittal. Note related Change Orders and markup of record drawings and specifications.
   1. Mark record documents to show significant variations in actual Work performed in comparison with information submitted. Include variations in products delivered to the Site and from the manufacturer's installation instructions and recommendations.
   2. Give particular attention to concealed products and portions of the Work that cannot otherwise be readily discerned later by direct observation.
   3. Upon completion of markup, submit complete set of record product data to Engineer for Owner's records
   4. Legibly mark and record at each Product section description of actual Products installed, including the following:
      a. Manufacturer's name, product model, number, trade name and supplies
      b. Product substitutions or alternates utilized
      c. Changes made by Addenda, field order or change order

E. Record Samples Submitted: Immediately prior to Substantial Completion, Contractor shall meet with Engineer and Owner's personnel at the Project Site to determine which Samples are to be transmitted to Owner for record purposes. Comply with Owner's instructions regarding packaging, identification, and delivery to Owner.

F. Miscellaneous Record Submittals: Refer to other Specification Sections for requirements of miscellaneous record keeping and Submittals in connection with actual performance of the Work. Immediately prior to the date or dates of Substantial Completion, complete miscellaneous records, and place in good order. Identify miscellaneous records properly and bind or file, ready for continued use and reference. Submit to Engineer for Owner's records

G. Maintenance Manuals: Contractor shall organize operation and maintenance data as specified in Section 01730

H. Submit documents to Engineer with claim for final Application for Payment

I. Maintain documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes

J. Make documents and samples available at all times for inspection by Engineer

K. Label each document "Project Record" in neat, large printed letters

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 CLOSEOUT PROCEDURES

A. General
   1. Comply with requirements stated in the Owner's General Conditions of the Contract and in these specifications for administrative procedures in closing out the Work
   2. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Engineer's inspection
   3. Provide submittals to Engineer/Owner that are required by governing or other authorities
   4. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due

B. Operation and Maintenance Instructions: Arrange for each installer of Equipment that requires regular maintenance to meet with Owner's personnel at Project Site to provide instruction in proper operation and maintenance. Provide instruction by manufacturer's representatives if installers are not experienced in operation and maintenance procedures. Include a detailed review of the following items:
   1. Maintenance manuals
   2. Record documents
   3. Spare parts, materials and tools
   4. Lubricants and fuels
   5. Identification systems

6. Control sequences
7. Hazards, hazardous chemicals data sheets
8. Cleaning
9. Warranties and bonds
10. Maintenance agreements and similar continuing commitments

C. As part of instruction for operating Equipment, demonstrate the following procedures:
1. Startup
2. Shutdown
3. Emergency operations
4. Noise and vibration adjustments
5. Safety procedures
6. Economy and efficiency adjustments
7. Effective energy utilization

3.2 FINAL CLEANING

A. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.
1. Complete the following cleaning operations before requesting inspection for Certification of Substantial Completion
   a. Remove labels that are not permanent labels
   b. Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of stains, films, and similar foreign substances. Restore reflective surfaces to their original condition
   c. Wipe surfaces of mechanical and electrical Equipment. Remove excess lubrication and other substances
2. Removal of Protection: Remove temporary protection and facilities installed for protection of the Work during construction
3. Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from the Site and dispose of lawfully.
   a. Where extra materials of value remaining after completion of associated Work become Owner's property. Dispose of these materials as directed by Owner

3.3 CONTRACTOR'S CLOSEOUT SUBMITTALS

A. Evidence of Payment and Release of Liens: As specified in the General Conditions

B. Final inspection reports by all regulatory agencies demonstrating the agencies' final approval

C. At Contract close-out, deliver Record Documents to Engineer for the Owner

D. Accompany Submittal with Transmittal Letter in Duplicate, Containing

1. Date
2. Project title and number
3. Contractor's name and address
4. Title and number of each Record Document
5. Signature of Contractor or his authorized representative

3.4 FINAL ADJUSTMENTS OF ACCOUNTS

A. Submit a Final Statement of Accounting to Engineer

B. Statement Shall Reflect All Adjustments to the Contract Sum
   1. The original Contract Sum
   2. Additions and deductions resulting from
      a. Previous Change Orders
      b. Deductions for uncorrected Work
      c. Deductions for liquidated damages
      d. Deductions for reinspection payments
      e. Other adjustments
   3. Total Contract Sum, as adjusted
   4. Previous payments
   5. Sum remaining due

3.5 FINAL APPLICATION FOR PAYMENT

A. Contractor shall submit the final Application for Payment in accordance with procedures and requirements stated in the General Conditions of the Contract

END OF SECTION

SECTION 01730

OPERATION AND MAINTENANCE DATA

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Submittals

B. Format

C. Content of each volume

D. Manual for equipment and systems

E. Instruction of Owner's personnel

1.2 QUALITY ASSURANCE

A. Preparation of data shall be done by personnel
   1. Trained and experienced in maintenance and operation of the described products
   2. Completely familiar with requirements of this section
   3. Skilled as a technical writer to the extent required to communicate essential data
   4. Skilled as a draftsman competent to prepare required drawings

B. Manuals for equipment systems shall be prepared by the equipment manufacturer or system supplier

C. Compile product data and related information appropriate for Owner's maintenance and operation of products furnished under the Contract

D. Prepare operating and maintenance data as specified in this Section and as referenced in other pertinent sections of Specifications

1.3 SUBMITTALS

A. Submit under provisions of Section 01340 Shop Drawings, Product Data, and Samples.

B. Manuals for equipment and systems
   1. Submit three (3) preliminary copies prior to the date of shipment of the equipment or system
      a. Engineer will review
      b. If acceptable, one (1) copy will be returned to Contractor, one (1) copy sent Owner, and one (1) copy retained in Engineer's file

c. If unacceptable, two (2) copies will be returned to Contractor with Engineer's comments for revision and one (1) copy retained in Engineer's file. Resubmit three (3) revised preliminary copies for Engineer's review
d. No partial payments will be made for equipment and systems on hand or installed until preliminary manuals are submitted and acceptable
e. See Section 01340 for electronic submittal requirements, for the preliminary copy of the O&M manual an electronic submittal is allowable

C. Submit three (3) final copies no less than 30 days prior to putting the equipment or system in service. If final manuals differ from accepted preliminary manuals, submit two (2) copies of any necessary supplemental material with instructions for insertion for conforming Engineer's and Owner's copies of preliminary manuals to final manuals
1. Engineer will compare with accepted preliminary manual
2. If identical or otherwise acceptable, Contractor will be so notified. Two (2) copies will be transmitted to Contractor, three (3) copies will be held for later transmittal to Owner
3. If not acceptable, four (4) copies will be returned to Contractor for revision or retained by Engineer and the necessary revision data requested from Contractor at Engineer's option
4. No portion of the Work is substantially complete until final equipment and system manuals relating to that portion of the Work are accepted by Engineer
5. Submit three (3) copies of any revisions found desirable during instruction of Owner's personnel with instructions for insertion for revising Owner's and Engineer's copies of manual

D. Manual for materials and finishes
1. Submit two (2) preliminary copies 15 days prior to request for final inspection
a. Engineer will review
b. One copy will be returned to Contractor with comments, one (1) retained in Engineer's file
c. No final inspection shall be conducted until preliminary manuals are submitted
2. Submit three (3) final copies, revised in accordance with Engineer's comments, within 10 days after final inspection
a. One copy will be transmitted to Contractor and two (2) copies retained by Engineer for later transmittal to Owner
b. No final payment shall be made until final manuals are submitted
3. Additional requirements for specialized instruction of Owner's personnel are given in the detailed equipment specifications

1.4 FORMAT

A. Prepare data in the form of an instructional manual for use by Owner's personnel

B. Presentation of Information
1. Size: 8 ½" by 11"
2. Paper: 20 lb weight minimum, white, for typed pages

3. Text: Manufacturer's printed data or neatly typewritten
4. Drawings
   a. Provide reinforced punched binder tab, bind in with text
   b. Reduced to 11" by 17" and folded to 8 ½" by 11"
   c. Where reduction is impractical, folded and placed in 8 ½" by 11" envelopes bound in text
   d. Suitably identified on drawings and envelopes
5. Provide flysheets for each separate product or each piece of operating equipment
   a. Provide typed description of product and major component parts of equipment
   b. Provide indexed tabs, may be in color
6. Spine and cover: identify each volume with typed or printed title "OPERATION AND MAINTENANCE INSTRUCTIONS" preceded by the word. "PRELIMINARY" or "FINAL" as applicable. Final manuals to list information on the cover and the spine. List the following:
   a. Title of project, reference Owner and project location as applicable
   b. Identity of separate structure as applicable
   c. Identity of general subject matter covered in manual and specification section number
7. As much as possible, assemble and bind material in the same order as specified

C. Binders
1. Preliminary manuals: Commercial quality permanent 3-ring or 3-post binders with durable, cleanable, hard plastic covers. GBC bound manual may be accepted upon review by Engineer
2. Final manuals: Commercial quality permanent 3-ring or 3-post binders with durable, cleanable, hard plastic covers with clear plastic cover and spine pockets suitable for title and cover inserts. Manufacturer's pre-printed binder may be accepted upon review by Engineer. "Deluxe Round Ring View Binder" as manufactured by Wilson Jones or accepted substitution
3. Final electronic manual: Provide one copy in digital format, all documents to be in native file format (Word, Excel, AutoCAD, pdf) or converted from native file format into Adobe pdf. Provide one copy on an electronic disk, CD or DVD

D. Arrange content by systems under section numbers and sequence of table of contents of this Project Manual

E. Provide tabbed flyleaf for each separate product and system, with typed description of product and major component parts of equipment

F. Electronic Manual: Compile in an electronic book format with Chapter bookmarks (equal to tabbed fly leafs) and OCR (optical character recognition) to allow for document searches.

1.5 CONTENTS OF EACH VOLUME

A. Neatly typewritten table of contents for each volume, arranged in a systematic order

1. Contractor, name of responsible principal, address and telephone number
2. A list of each product required to be included, indexed to the content of the volume
3. List, with each product, the name, address and telephone number of
    a. Subcontractor or installer
    b. Maintenance contractor, as appropriate
    c. Identify the area of responsibility of each
    d. Local source of supply for parts and replacement
4. Identify each product by product name and other identifying symbols as set forth in Contract Documents

B. Product Data
1. Include only those sheets which are pertinent to the specific product
2. Annotate each sheet to
    a. Clearly identify the specific product of part installed
    b. Clearly identify the data applicable to the installation
    c. Delete references to inapplicable information

C. Drawings
1. Supplement product data with drawings as necessary to clearly illustrate
    a. Relations of component parts of equipment and systems
    b. Control and flow diagrams
2. Coordinate drawings with information in Project Record Documents to assure correct illustration of completed installation
3. Do not use Project Record Documents as maintenance drawings

D. Written text, as required to supplement product data for the particular installation
1. Organize in a consistent format under separate headings for different procedures
2. Provide a logical sequence of instructions for each procedure

E. Copy of each warranty, bond and service contract issued
1. Provide information sheet for Owner's personnel, give
    a. Proper procedures in the event of fracture
    b. Instances which might affect the validity of warranties or bonds

1.6 MANUALS FOR EQUIPMENT AND SYSTEMS

A. Provide an operation and maintenance manual for each item of equipment or system listed in the schedule of manuals in the quantity listed in the submittal schedule

B. Content for each of equipment and system as appropriate
1. Description of unit and component parts
    a. Function, normal operating characteristics and limiting conditions
    b. Performance curves, engineering data and tests
    c. Complete nomenclature and commercial number of all replaceable parts
2. Operating procedures
    a. Startup, break-in, routine and normal operating instructions

b. Regulation, control, stopping, shutdown and emergency instructions
c. Summer and winter operating instructions, as applicable
d. Special operating instructions

3. Maintenance procedures
   a. Routine operations
   b. Guide to "trouble-shooting"
   c. Disassembly, repair and reassembly
   d. Alignment, adjusting and checking
4. Servicing and lubrication schedule
   a. List of lubricants required
5. Manufacturer's printed operating and maintenance instructions
6. Description of sequence of operation by control manufacturer
7. Original manufacturer's parts list, illustrations, assembly drawings and diagrams required for maintenance
   a. Predicted life of parts subject to wear
   b. Items recommended to be stocked as spare parts
8. As-installed control diagrams by controls manufacturer
9. Each contractor's coordination drawings
   a. As-installed color-coded piping diagrams
10. Charts of valve tag numbers with the location and function of each valve
11. List of original manufacturer's spare parts, manufacturer's current prices and recommended quantities to be maintained in storage
12. Other data as required under pertinent sections of specifications

C. Content for each electric and electronic item or system, as appropriate
   1. Description of system and component parts
      a. Function, normal operating characteristics and limiting conditions
      b. Performance curves, engineering data and tests
      c. Complete nomenclature and commercial number of replaceable parts
   2. Circuit directories of panelboards
      a. Electrical service
      b. Controls
      c. Communications
   3. As-installed color-coded wiring diagrams
   4. Operating procedures
      a. Routine and normal operating instructions
      b. Sequences required
      c. Special operating instructions
   5. Maintenance procedures
      a. Routine operations
      b. Guide to "trouble-shooting"
      c. Adjustment and checking
   6. Manufacturer's printed operating and maintenance instructions
   7. List of original manufacturer's spare parts, manufacturer's current prices and recommended quantities to be maintained in storage
   8. Other data as required under pertinent sections of specifications

D. Prepare and include additional data when the need for such data becomes apparent during instruction of Owner's personnel

E. Additional requirements for Operation and Maintenance Data: The respective sections of specifications

1.7 INSTRUCTIONS OF OWNER'S PERSONNEL

A. Prior to final inspection or acceptance, fully instruct Owner's designated operating and maintenance personnel in the operation, adjustment and maintenance of all products, equipment and system

B. Operation and maintenance manual constitutes the basis of instruction
   1. Review contents of manual with personnel in full detail to explain all aspects of operations and maintenance

1.8 Additional requirements for specialized instruction of Owner's personnel are given in the detailed equipment specifications

A. Equipment and systems Operation and Maintenance manuals shall be prepared for all equipment, devices and gates.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

END OF SECTION

SECTION 03300

CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Cast-in-place concrete

B. Reinforcing steel

C. Forms

D. Concrete accessories

1.2 RELATED SECTIONS

A. 03600 - Grout

1.3 REFERENCE STANDARDS AND GUIDES

A. Comply with the following except as modified by supplementary requirements of this Project Specification.

B. American Concrete Institute – ACI:
1. 117 – Standard Specifications for Tolerances for Concrete Construction and Materials
2. 214R – Guide to Evaluation of Strength Test Results of Concrete
3. 301 – Specifications for Concrete Construction
4. 302.1R Guide to Concrete Floor and Slab Construction
5. 304 – Guide for Measuring, Mixing, Transporting, and Placing Concrete
6. 304.2R – Guide to Placing Concrete by Pumping Methods
7. 305.1 – Specification for Hot Weather Concreting
8. 306.1 – Standard Specification for Cold Weather Concreting
9. 308.1 – Specification for Curing Concrete
10. 309 – Guide for Consolidation of Concrete
11. 318 – Building Code Requirements for Structural Concrete
12. 347 – Guide to Formwork for Concrete
13. 350 – Code Requirements for Environmental Engineering Concrete Structures and Commentary

C. American Standards and Testing Materials (ASTM)
1. A615 – Deformed and Plain Carbon Steel Bars for Concrete Reinforcement
2. C31 – Practice for Making and Curing Concrete Test Specimens in the Field
3. C33 – Concrete Aggregates
4. C39 – Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
5. C94 – Specification for Ready-Mixed Concrete

6. C115 – Length Change of Hardened Hydraulic-Cement Mortar and Concrete
7. C143 – Standard Test Method for Slump of Hydraulic-Cement Concrete
8. C150 – Specification for Portland Cement
9. C173 or C231 – Test Methods for Air Content of Freshly Mixed Concrete
10. C260 – Air Entraining Admixtures for Concrete
11. C309 – Liquid Membrane-Forming Compounds for Curing Concrete
12. C452 – Standard Test Method for Potential Expansion of Portland-Cement Mortars Exposed to Sulfate
13. C494 – Chemical Admixtures for Concrete
14. C595 – Standard Specification for Blended Hydraulic Cements
15. C618 – Coal Fly Ash and Raw or Calcined Natural Pozzolan for use in Concrete
16. C989 – Standard Specification for Slag Cement for Use in Concrete and Mortars
17. C1157 – Performance Specification for Hydraulic Cement
18. C1602 – Mixing Water Used in the Production of Hydraulic Cement Concrete
19. D1751 – Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)

D. Concrete Reinforcing Steel Institute (CRSI)
1. Manual of Standard Practice

E. National Institute of Standards and Technology (NIST)
1. PS 1 – Structural Plywood

1.4 PERFORMANCE TOLERANCES

A. Conform to ACI 117, ACI 301, ACI 347 and ACI 350 as modified herein. In case of conflict, ACI 117 governs. ACI 350 governs where ACI 117 does not apply.

1.5 SUBMITTALS

A. Submit under provisions of Division 1 specifications

B. Shop Drawings: Reinforcing bar lists, fabrication and placement drawings
1. Indicated bar sizes, spacing, locations, and quantities of reinforcing steel. Bending and cutting schedules shall be included in all shop drawings.
2. Indicate pertinent dimensions, materials, bracing, arrangement of joints and ties, and exact location of openings, framing, and special conditions affecting work
3. All shop drawings shall be original drawings produced by the supplier and shall not be reproductions of the Contract Documents

C. Product Data: Provide sufficient information on products specified to verify compliance with specifications. Provide data on
1. Admixtures and mixes
2. Curing Compounds
3. Sealers

D. Test Reports

1. Submit reports of tentative concrete mix designs and testing prior to placing any concrete, including
    a. Slump range on which the design is based
    b. Total gal of water per cu yd
    c. Brand, type, composition, and quantity of cement with manufacturer and plant location identified
    d. Brand, type, composition and quantity of fly ash
    e. Specific gravity and gradation of each aggregate
    f. Ratio of fine to total aggregates
    g. Surface-dry weight of each aggregate per cu yd
    h. Brand, type ASTM designation, active chemical ingredients and quantity of each admixture
    i. Air content and tolerance
    j. Water/cementitious material ratio and tolerance
    k. Compressive strength based at 7- and 28-day compression tests
    l. Submit reports of field quality control testing
    m. Time of initial set
2. Submit suppliers certified fly ash test reports for each shipment delivered to concrete supplier
    a. Physical and chemical characteristics
    b. Certification of compliance with the specifications
    c. Signed by Contractor and concrete supplier
3. Existing data on proposed design mixes are acceptable if certified and complete

1.6 QUALITY ASSURANCE

A. Perform work in accordance with ACI 301. Maintain one copy of each document on site.

B. Follow recommendations of ACI 305.1 when concreting in hot weather.

C. Follow recommendations of ACI 306.1 when concreting in cold weather.

D. Acquire cement and aggregate from same source for all work

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, protect and handle materials under provisions of Division 1 Specifications

B. Cement. fly ash, and other cementitious materials: Store in moisture proof enclosures, do not use if caked or lumpy

C. Aggregate: Store to prevent segregation and inclusion of foreign materials, do not use the bottom 6-inch of piles in contact with the ground

D. Reinforcing steel

1. Store on supports 6” minimum above ground, which will keep it from contact with ground and protected from oil or other materials detrimental to steel or bonding capability. Cover to prevent unacceptable surface corrosion and contamination.
2. Tag bundles of reinforcing bars and wire spirals with metal tag showing specification, grade, size, quantity and suitable identification to permit checking, sorting and placing.
3.

E. Rubber and plastic materials: Store in a cool place, do not expose to direct sunlight

F. Prepare a delivery ticket for each load of ready-mixed concrete

G. Truck operator shall hand ticket to Geotechnical Engineer or Third Party Inspector at the time of delivery with ticket to show:
1. Quantity delivered
2. Actual quantity of each material in batch
3. Outdoor temp in the shade
4. Time at which cement was added
5. Numerical sequence of the delivery
6. Quantity of water that can be added in the field based on mix design
7. Free moisture in fine and coarse aggregate in percent by weight
8. Temperature of batch

PART 2 PRODUCTS

2.1 FORMS

A. Prefabricated: Symons "Steel-Ply" or accepted substitution

B. Plywood: PS 1, waterproof resin-bonded, exterior type Douglas Fir; face adjacent to concrete Grade B or better

C. Lumber: Straight, uniform width and thickness; free from knots, offsets, holes, dents, and other surface defects

D. Chamfer strips: Clear, white pine, surface against concrete planed

E. Form coating: Colorless biodegradable oil or water based release agent that will not stain concrete and is VOC compliant. Acceptable products: Nox-Crete "Nox-Crete Form Coating", L & M "Debond", or accepted substitution

F. Form Coating where exposed to potable water: Meets NSF Standard 61, Dayton Superior “Clean Strip J1EF”, Hill and Griffith Company “Grifcote LV-50-Plus”

G. Form ties: Removable end, permanently embedded body types with waterstops not requiring auxiliary spreaders, with cones on both ends, embedded portion 1-inch minimum back from concrete face. If not provided with threaded ends, constructed for breaking off ends without damage to concrete.

2.2 REINFORCING STEEL

A. Bars: ASTM A615, Grade 60

B. Bars to be field bent: ASTM A706, grade 60.

C. Bar supports: CRSI Class 1, fabricated from galvanized wire having PVC coated legs

D. Tie wire: 16 ½ gage or heavier, black annealed wire

E. Form and fabricate reinforcing steel in accordance with ACI 315 and 318 and CRSI DA4 except as specified or indicated on Drawings, free from rust, scale and contaminants which will reduce bond.

F. Dowel Adhesive: Hilti “HIT-RE 500 V3”, Powers “PE 1000+”, Simpson “SET-XP”, or accepted substitution.

2.3 CONCRETE

A. Blended Hydraulic Cement: ASTM C595 Type IL(HS), Type IP(HS), Type IS(HS), or IT(HS). Blended Hydraulic Cements not allowed: Type IS ≥70 and Type IT(S≥70)

B. Fly ash: ASTM C618, Class F

C. Blast Furnace Slag: ASTM C989, Grade 100 or 120

D. Fine aggregate: Clean, natural sand, ASTM C33; no manufactured or artificial sand

E. Coarse aggregate: Crushed rock, natural gravel, or other inert granular material, ASTM C33 except clay and shale particles no more than 1%.
   1. Alkali Silica Reactivity: Aggregate shall be considered non-reactive with a documented satisfactory service record for a minimum ten year period used in concrete with similar cementitious material or with an alkali (Na_2O eq.) content in concrete equal or higher than that in the proposed mixture. In the absence of service record the aggregate shall be tested and will be considered non-reactive if it complies with a) or b)
      a. ASTM C1260 14-day expansion less than or equal to 0.1%, or
      b. ASTM C1293 1-year expansion less than or equal to 0.040%

F. Water: ASTM 1602

G. Admixtures
   1. Chemical Admixtures: ASTM C494, non-corrosive and chloride free.

2.4 ACCESSORIES

A. Membrane Forming Curing Compound: ASTM C309, L&M Construction Materials “Dress & Seal WB30”, BASF "MasterKure CC 200WB”, Euclid “Super Diamond

Clear VOX", Dayton Superior "Cure & Seal 1315 EF", W.R. Meadows "VOCOMP-20", or accepted substitution.

B. Curing Compound for surfaces in contact with potable water: Meets NSF Standard 61, Dayton Superior "Clear Cure VOC J7WB", Atlas Tech Products "Atlas Quantum-Cure NSF",

C. Floor Sealer: L&M Construction Materials " Dress and Seal WB30", BASF "MasterKure CC 200WB" , Euclid "Super Diamond Clear VOX", Dayton Superior "Cure & Seal 1315 EF", or accepted substitution.

D. Epoxy Bonding Agent: ASTM C881, Sika "Sikadur 32 Hi-Mod", Dayton Superior "Sure Bond J58", L&M Construction Materials "Epobond", or accepted substitution. Use when joining new to existing concrete.

E. Non-Epoxy Bonding Agent: ASTM C1059 Type II, BASF "MasterEmaco A 660", L&M Construction Materials "Everbond", Dayton Superior "Acrylic Bonding Agent J40", or accepted substitution. Use when joining new to existing concrete when bonding agent cannot be placed immediately prior to placement of new concrete.

F. Patching Mortar: Sika "Sikatop", L&M Construction Materials "Durapatch VOH", or accepted substitution.

G.

2.5 CONCRETE MIX DESIGN

A. Concrete Mix: Measure and combine cement, aggregate, water, and admixtures in accordance with ASTM C94 and ACI 211.1.
   1. Cementitious materials: When used in exposed concrete shall be one brand from one source. Do not mix different cements in same element of Work unless used in accordance with ASTM C595. Water to Cementitious materials Ratio: 0.45 maximum for 4500 psi and 4000 psi concrete
   2. Chemical Admixtures: Use is optional to aid concrete properties and allow for efficient placement. Manner of use and amount shall be in accordance with manufacturer's written recommendations and as approved by Engineer. Do not use admixtures that increase early shrinkage or negatively affect finishing.
   3. Fly Ash: Use is optional unless otherwise noted. Combine fly ash with cement at a rate of 1 pound fly ash for each pound reduction of cement. Amount of fly ash shall not be less than 15% or more than 25% of weight of cement plus fly ash. When fly ash used, minimum amount of cement designated may be proportionately reduced.
   4. Blast Furnace Slag: Use is optional unless otherwise noted. Combine blast furnace slag with cement at a rate of 1 pound of blast furnace slag for each pound reduction of cement. When blast furnace slag is used as cement replacement, blast furnace slag shall comprise 40-65 percent of the cementitious materials.
   5. Use no admixtures other than specified, unless approved by Engineer.

B. Class of Concrete:

1. Furnish in accordance with table. Cement contents listed are minimum values and shall be increased as required to attain other specified characteristics.
2. Slumps listed are maximum, except when high range water reducer is used. Maximum slump when high-range water reducer is used, 10 inches.
3. Chloride ion content shall not exceed values listed in ACI 318, Table 19.3.2.1.

Use	28-Day Compressive Strength (psi)	Coarse Aggregate (size no.)	Water to Cement ration	Air Content (%)
Interior Concrete	4000	67	0.45	No added air
Interior Equipment Pads	4000	67	0.45	No added air

2.6 FABRICATION

A. Reinforcing Steel: Accurately formed, fabricated in accordance with ACI 315 and 318 except as specified or indicated on drawings, free from rust, scale and contaminants which will reduce bond

2.7 SOURCE QUALITY CONTROL

A. Test the proposed concrete mix for each size and gradation of aggregates and each consistency intended for use in the project

B. Aggregates
1. Sample and test according to ASTM C33
2. Determine bulk specific gravity in accordance with ASTM C127 and C128

C. Fly Ash and Blast Furnace Slag: Supplier's chemical composition and physical analysis test

D. Initial set test
1. In accordance with ASTM C403
2. Test at 70 degrees F and 90 degrees ambient
3. Test at 70 degrees F on mix including specific plasticizing and entraining admixtures
4. Test at 90 degrees F on mix including specified retarding and air entraining admixtures
5. Fly ash and Blast Furnace Slag : Supplier's chemical composition and physical analysis test

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify site conditions in field or under provisions of Division 1 Specifications

B. Verify requirements for concrete cover over reinforcement

C. Verify that anchors, seats, plates, reinforcement and other items to be cast into concrete are accurately placed, positioned securely, and will not cause hardship in placing concrete

3.2 PREPARATION

A. Prepare previously placed concrete by cleaning with steel brush and applying bonding agent in accordance with manufacturer's instructions

B. Remove standing water, mud, and foreign matter before placing concrete

C. In locations where new concrete is dowelled to existing work, drill holes in existing concrete, insert steel dowels with dowel adhesive system.

3.3 FORMS

A. Formwork design, detailing, and installation shall be Contractor’s responsibility and shall conform to ACI 347.

B. Type of forms used is Contractor’s option, except as otherwise indicated or shown. Plywood and other wood forms shall have smooth level surfaces treated with form oil or sealer to produce clean release of concrete from forms.

1. Where wall remain exposed use plywood, prefabricated metal or wood forms; do not use boards. Lay forms out in a uniform pattern with the long dimension of the form placed vertically and joints aligned.
2. Form ties shall be plastic cone snap ties. Cone shall be min ¾ inch diameter by 1 inch deep. Taper tie through-bolt form ties may be used as an alternate to plastic cone snap ties; conform to details shown. Do not use wire ties on exposed concrete.
3. Provide ¾ inch chamfer on external corners of exposed concrete walls, beams, columns, equipment bases and exposed edges of construction joints.

C. Coat plywood and wood forms with non-staining form release agent. Apply release agent before reinforcement is placed.

D. Clean, patch, and repair form material before reuse.

E. Formwork shall prevent leakage of mortar, shall not deflect under weight of concrete and workmen, and shall withstand fluid pressure of concrete. Maximum deviation from a true plane: 1/8 inch within 6 feet

F. Brace or tie forms to maintain desired position, shape, and alignment during and after concrete placement

G. Design to produce hardened concrete to the shape, lines, and dimensions indicated on the drawings

H. Plywood or lined forms are not required for surface normally submerged or not normally exposed to view

I. Other type of forms may be used for surfaces not restricted to plywood or lined forms as backing for form lining

J. Flat segmental forms, 2 foot maximum width, may be used for curved surfaces 25 feet minimum diameter

K. Provide polyethylene film to protect concrete from water loss when placing concrete against gravel or crushed rock not containing 25 percent minimum material passing a No. 4 sieve, lap joint 4 inches

L. When placing concrete against rock, remove all loose pieces of rock and clean exposed surface with high pressure hose

M. Size and space wailers, studs, internal ties and other form supports so proper working stresses are not exceeded

N. Locations to be finished to a specified elevation, slope, or contour, bring form to true line and grade and provide a wooden guide strip at the proper location in the forms for finishing the top surface with a screed or template

O. Provide temporary opening at the bottom of columns and wall forms and wherever necessary for cleaning and inspection

P. Install form ties on exposed surfaces in uniformly spaced vertical and horizontal rows

Q. Do not remove or disturb until concrete has attained sufficient strength to safely support all dead and live loads

R. Leave shoring beneath beams and slabs in place and reinforce as required for construction equipment and materials

S. Maintain forms in place for a minimum of 40 hours for length of curing time in accordance with ACI 306.1 when temperature is 45 deg F and below

T. Remove forms carefully to prevent surface gouging, corner or edge breakage and other damage

3.4 REINFORCING STEEL

A. Accurately position reinforcing steel on supports, spacers, hangers, or other reinforcing steel at maximum intervals of 4 feet on center

B. Secure with wire ties or suitable clips. Tie 50 percent of all reinforcement and reinforcement at intersections for wall and floor construction

C. Except at contact splices, minimum clear distances between bars, the greater of
   1. Nominal diameter of bars
   2. 1.5 times max size of coarse aggregate

D. Splices
   1. As specified or indicated on the drawings
   2. Splices at other locations will be acceptable, if approved by the Engineer
   3. Do not weld or tack weld reinforcing steel
   4. Remove and replace steel upon which any unauthorized welding has been performed

3.5 EMBEDMENTS

A. Accurately position and securely anchor in forms, anchor bolts, steel shapes, conduit, sleeves, masonry anchorages, and other materials to be embedded in concrete

B. Cast pipe and other embedded items into concrete as placement progresses. Do not provide blockouts.

C. Do not place ducts, conduit, and pipes in slabs on grade. Place minimum 4 inches below slab

D. Place items constructed of dissimilar metals to avoid physical contact with reinforcing. Secure item and reinforcing to ensure they will not shift and come into contact during concrete placement. Contact between reinforcing steel and other metal, other than bare, coated, or plated carbon steel not permitted.

E. The following restrictions shall be adhered to, unless otherwise noted
   1. No duct, conduit, pipe, or fitting placed vertically shall be larger in cross-sectional area than 4% oc column into which it is placed.
   2. Duct, conduit, pipe, and fittings, when placed within slabs or walls
      a. Shall not be larger than 1/3 thickness of slab or wall
      b. Shall be placed within the middle 1/3 of slab or wall where possible
      c. Shall not be placed closer than 3 outside diameters clear from each other when parallel
      d. Shall cross each other at right angles
      e. Shall be secured to prevent shifting of “floating” during concrete placement
      f. Multiple conduits shall not cross each other at the same location
      g. Except for conduits that must run up a column, keep conduits a minimum of 2 to 3 feet away from columns

h. Where conditions require conduit to be tied to the inside face of the reinforcing mat, the conduit shall be galvanized steel or PVC, shall be placed 3 outside diameter clear away from the parallel reinforcement bar.

3. Reinforcing steel shall be in place before embedded items placed and reinforcing cut or removed shall be replaced with additional reinforcing as indicated.
4. Do not pass sleeves through columns or beams without Engineer's approval.

F. Anchor bolts
1. Unless installed in pipe sleeves, provide sufficient threads on anchor bolts to permit a nut on the concrete side of the form or template
2. Install a second nut on the other side of the form or template
3. Adjust the nuts to hold the bolt rigidly in the proper position

G. Clean embedments before installation

3.6 TRANSPORTING MIXED CONCRETE

A. Transporting of mixed concrete shall conform to ACI 304R.

B. Maximum delivery time from batch plant is 90 minutes unless stated otherwise by the supplier and approved by the Owner/Engineer.

C. Mix concrete in accordance with ASTM C94.

D. Do not exceed manufacturer's guaranteed capacity of truck agitators. Maintain the mixed concrete in a thoroughly mixed and uniform mass during hauling.

E. Additional mixing water is permitted as long as the specified water cement ratio of the mix is not exceeded. Batched water quantities and added water quantities must be accurately recorded for verification. If additional water is to be incorporated into the concrete, revolve the drum not less than 30 revolutions at mixing speed after the water is added and before placing concrete. Addition of water is not permitted after concrete testing has occurred.

F. Notify Special Inspector of any water added to the concrete mixture

G. A water measuring device in good working condition, mounted on each transit mix truck, shall be used for measuring the water added to the mix on site or in transit.

H. Provide delivery ticket to Special Inspector or Owner and comply with delivery requirements of this section

3.7 PLACING CONCRETE

A. Place concrete in accordance with ACI 304, ACI 301, and ACI 318

B. Schedule and attend pre-pour meeting with Owner at least 7 days before first pour to review requirements of this specification

C. Notify Engineer and Owner not less than 48 hours in advance of the times and places at which contractor intends to place concrete

D. Predetermine limits at each pour and place all concrete within limits of pour in one continuous operation

E. Rigidly secure forms, reinforcing steel, embedment, and anchor bolts in proper position

F. Remove all mud, water, and debris from space to be occupied by concrete

G. Clean surfaces encrusted with dried concrete from previous concrete operations

H. Convey to the point of final deposit by methods which will prevent separation or loss of ingredients

I. Place concrete in final position without being moved laterally more than 5 feet

J. Place concrete in horizontal layers not more than 2 feet of depth to allow for proper consolidation

K. Place subsequent layer while the preceding layer is still plastic

L. Top finish concrete when thoroughly settled

M. Remove all laitance, debris, and surplus water from the tops of the forms by screeding, scraping or other effective means

N. Clean concrete spatter and other foreign substances from surfaces not in contact with concrete.

3.8 BONDING TO HARDENED CONCRETE

A. Place new concrete on rough, clean, damp faces of existing concrete

B. Roughen concrete to be bonded to future concrete to 1/4 inch amplitude

C. Remove surface mortar of smooth surfaces to expose aggregate

D. Clean hardened concrete of all foreign substances, including curing compound, washed with clean water, and keep saturated for 24 hrs preceding placement of fresh concrete

E. Apply epoxy bonding agent for bonding to hardened concrete

3.9 CONSOLIDATION

A. Thoroughly consolidate concrete during and immediately after placement

B. Work concrete around all reinforcements and embedments and into the corners of the forms

C. Use mechanical vibrators which will maintain 9,000 cycles per minutes when immersed in the concrete, 1 ½ hp motor minimum

3.10 COLD WEATHER CONCRETING

A. Conform to ACI 306.1, except as modified herein

B. Minimum concrete temp at the time of mixing: Refer to Table 5.1 of ACI 306R-10

Outdoor Temp at Placement (in shade)	Minimum Concrete Temp at Mixing (Concrete Sections 12" or Greater)
Below 0°F	65°F
Between 0°F & 30°F	60°F
Above 30°F	55°F

C. Do not place heated concrete which is warmer than 80 degrees F

D. If freezing temperatures are expected during curing, maintain the concrete temperature in accordance with ACI 306R-10, Table 7.1

E. Do not allow concrete to cool suddenly.

3.11 HOT WEATHER CONCRETING

A. Conform to ACI 305.1, except as modified herein

B. At air temp of 90 degrees F and above keep concrete as cool as possible during placement and curing

C. Do not allow concrete temperature to exceed 85 deg F at placement

D. Prevent plastic shrinkage cracking due to rapid evaporation of moisture

E. Do not place concrete when the actual or anticipated evaporation rate equals or exceeds 0.2 lbs per sq ft per hr as determined from ACI 305R-10, Fig 4.2

3.12 CONSTRUCTION JOINTS

A. Before concrete placed, construction joints shall be cleaned, laitance removed, and surface wetted. Remove standing water.

B. Construction joints shall have keys or roughened surfaces. Where roughened surfaces are used, surface shall have amplitude of ¼ inch minimum.

3.13 FINISHING SLABS AND FLATWORK

A. Slab Finishes:

Description	Concrete Finish
Sealer Applied Floors and Slabs	3 Trowelings

B. After placement, screed concrete with straightedges, power strike-offs or vibrating screeds.

C. After screeding, bull float or darby surfaces to eliminate ridges and to fill in voids left by screeding.

D. Trowel:
1. Use steel trowels.
2. Use power or hand troweling.
3. Final troweling shall be by hand and continue until concrete surface consolidated to uniform, smooth, dense surface free of trowel marks and irregularities.

E. Floor Sealer:
1. Apply in accordance with manufacturer's written instructions.
2. Apply first coat after final troweling, surface water glaze has dissipated, and when surface is hard enough to sustain foot traffic on same day as pour.
3. When floor has been water cured, apply first coat after curing has been completed. Apply within one day of floor being dry enough for application.
4. Apply second coat after Work completed and ready for occupancy.

F. Tolerances:
1. Concrete slabs shall be within 3/16 inch of 10 foot straightedge in all directions except where slabs are dished for drains. Deviations from elevation indicated shall not exceed 3/4 inch.
2. Pitch floor to floor drains minimum 1/8 inch per foot or as shown. Pitch bottom of slab or beam to match top slope to maintain thickness or depth indicated. As an alternate, bottom of slab or beam may be placed level provided that min thickness or depth is maintained.

3.14 FINISHING FORMED SURFACES

A. Remove fins and other surface projections from all formed surfaces except exterior surfaces that will be in contact with earth backfill and are not specified to be dampproofed

B. Use a power grinder, if necessary, to remove projections and provide a flush surface

C. Remove fins and fill all tie holes on surfaces exposed to view
1. Clean, dry and fill plastic cone snap tie holes with Patching Mortar. Fill taper tie through-bolt form tie holes with Non-Shrink Grout.
2. Finish flush to match the texture of adjacent concrete
3. All surfaces exposed to view shall have grout cleaned rubbed finish

a. Use non-shrink grout mix with bonding agent.
b. Wet surface and scrub grout into voids and remove excess material.
c. Finished surface shall have smooth appearance free of marks, voids, surface glaze, and cement dust.

3.15 CURING AND PROTECTION

A. Protect concrete from frost and keep moist for min curing period of 7 days after placement in accordance with ACI 308.
1. Formed Surfaces:
a. Wet cure by spraying surfaces as frequently as drying conditions may require to keep concrete surfaces moist.
b. Surfaces may be cured by leaving forms in-place. For vertical surfaces, apply water to run down inside of forms, if necessary, to keep concrete moist.
c. After forms are removed, wet cure for remainder of curing period or apply curing compound.
d. Do not use curing compound where mortar, grout, concrete, or other coatings or adhesives will be applied.

B. Curing Compound:
1. Apply curing compound at uniform rate sufficient to comply with requirements for water retention as specified and as measured in accordance with ASTM C156.
2. Cover areas subjected to direct sunlight with ambient temperature expected to exceed 80°F with white pigmented compound, other surfaces may be covered with fugitive dye compound.

C. Water curing
1. Begin water saturation as quickly as possible after initial set
2. Regulate water application to provide complete surface coverage with minimum runoff
3. Interrupt the application of water to walls for grout cleaning only over the area being cleaned at the time and do not permit the surface to become dry during such an interruption

D. Protect from damaging mechanical disturbances, load stresses, heavy shock, and excessive vibration.

E. Protect finished concrete surfaces from damage caused by construction equipment, materials, and methods, and from rain or running water.

F. Do not load self-supporting structures to overstress concrete.

3.16 REMOVAL OF FORMING AND SHORING

A. Do not remove forming or shoring until member supported has acquired sufficient strength to safely support own weight and any imposed loads. Forming shall remain in place for at least min time recommended by ACI 347. In addition, forming for horizontal members shall remain in place minimum 7 days. In no case shall forming for

horizontal members be removed before concrete has reached 85% of specified design strength.

B. Reshore areas as required to carry additional imposed loads.

3.17 DEFECTIVE CONCRETE

A. Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances or specified requirements.

B. General:
1. Prior to starting repair work, obtain Engineer's approval of proposed repair techniques and materials.
2. Method of repair shall not adversely affect the appearance of the finished structure.
3. Develop repair techniques on portion of as-cast surface selected by Engineer. Surface of repair remaining exposed to view shall match color and texture of adjacent surfaces.
4. Prepare surfaces, apply and install materials, and cure as recommended by material manufacturers.

C. Defective Areas:
1. Remove honeycombing, stone packets, spalls, and other defective concrete down to sound concrete. If chipping required, make edges perpendicular to surface. Do not feather edges.
2. Fill defective area with patching mortar

3.18 FIELD QUALITY CONTROL

A. Field inspection and testing will be performed in accordance with ACI 301 under provisions of Section 01400

B. Owner's geotechnical consultant provide field and compressive strength tests to determine compliance of concrete materials in accordance with the specifications except as indicated otherwise under provisions of Section 01400

C. The Owner shall pay for compressive strength tests to determine compliance of concrete material in accordance with the specifications

D. Concrete Field Tests
1. Tests by ACI certified technician
2. Concrete Test Samples: Samples for acceptance tests on concrete shall be obtained in accordance with ASTM C172 at the point of placement or discharge.
3. Provide all equipment, supplies, and the services of one or more employees, as required
4. The test frequencies specified are minimum. Additional tests may be performed as required by the job conditions

E. Slump: Provide a sample from each truck load in accordance with ASTM C143 if requested by Engineer and when making test cylinders

F. Compression Tests
1. Provide one set of 6 cylinders each day when up to 50 cu yds have been placed
2. Make one additional set of 6 cylinders for each additional 50 cu yds or each major pour placed in one day
3. Test two cylinders in each set at 7 days
4. Test two cylinders in each set at 28 days
5. The other two cylinders to be used as directed by Engineer at any time
6. Engineer will evaluate in accordance with ACI 214 and 318
7. Make, cure, store, and deliver cylinders in accordance with ASTM C31
8. Test in accordance with ASTM C39
9. Mark or tag each set of test cylinders with the date and time of day the cylinders were made, the location in the work where the concrete represented by the cylinders was placed, the delivery truck or batch number, the air content, and the slump

G. Storage Facilities for Concrete Test Cylinders
1. Including water necessary, a specially prepared box with high-low thermometer and thermostatically controlled heating devices in accordance with ASTM C31

H. Failure of Test Cylinder Results: Evaluation of concrete structures where laboratory-cured cylinders fail to meet 28-day concrete strength requirements of the contract documents will be subject to, but not limited to, the following measures.
1. Upon failure of 28-day test cylinder results, the Engineer may require the Contractor, at his expense, to obtain and test at least three 4-inch diameter cored samples from area in question
2. Concrete will be considered adequate if average of three core tests is at least 85 percent of, and if no single core is less than 75 percent of, the specified 28-day strength. Where concrete durability is a concern due to freeze thaw or sulfate exposure the Engineer may reject concrete that passes ACI 318 core testing criteria for strength, but fails to meet acceptance criteria for cylinder testing.
3. In the event an area is found to be structurally unsound, the Engineer may order removal and replacement of concrete as required. The cost of the core tests and removal and replacement of defective concrete shall be borne by the Contractor
4. Fill all core holes as specified for repairing defective concrete
5. Additional measures may be required at the direction of the Engineer in accordance with ACI 350

END OF SECTION

SECTION 03600

GROUT

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Patching cavities in concrete

B. Other grouting specified or indicated on Drawings

1.2 REFERENCES

A. ASTM C109 – Test Method for Compressive Strength of Hydraulic Cement Mortar

B. ASTM C157 – Test Method for Length Change of Hardened Hydraulic Cement Mortar and Concrete

C. ASTM C191 – Time of Setting of Hydraulic Cement by Vicat Needle

1.3 SUBMITTALS

A. Submit under provisions of Section 01340

B. Product Data: Provide manufacturer's catalog sheet for material indicating test data and physical properties

1.4 QUALITY ASSURANCE

A. Conform to applicable industry standard, Corps of Engineers, Specification CRD-C 621 - Specification for non-shrink grout

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Epoxy Grout
   1. L&M Inc. - Epogrout
   2. Sika - Sikadur 42, Grout Pack
   3. Or accepted substitution

2.2 MATERIALS

A. Epoxy Grout: Three Component Epoxy Resin System
   1. Two liquid epoxy components
   2. One inert aggregate filtered component
   3. Each component furnished in separate package for mixing at job site

B. Water: Clean and free from deleterious substances

PART 3 EXECUTION

3.1 PREPARATION

A. Epoxy Grout: Apply only to clean, dry, sound surface

3.2 APPLICATION

A. Epoxy Grout
   1. Mix and place in accordance with manufacturer's instructions
   2. Completely fill all cavities and spaces around dowels and anchors without voids
   3. Obtain manufacturer's technical assistance as required to insure proper placement

3.3 SCHEDULE

A. Epoxy Grout
   1. Patching cavities in concrete including, but not limited to, tie holes, and structural and equipment support

END OF SECTION

SECTION 05500

METAL FABRICATIONS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Provide miscellaneous metal work shown on the Drawings, as specified herein, and as needed for a complete and proper installation.

B. Section Includes:
   1. Concrete anchors
   2. Bar grating
   3. Miscellaneous items

1.2 REFERENCES AND STANDARDS

A. AISC: American Institute of Steel Construction

B. AA: Aluminum Association

C. AWS: American Welding Society

D. ASTM: American Society for Testing and Materials

E. AISI: American Iron and Steel Institute

F. OSHA: Occupational Safety and Health Administration

1.3 SUBMITTALS

A. Shop Drawings:
   1. Indicate materials, sizes, connections, anchors, and finishes.

B. Product Data
   1. Manufacturer’s catalog sheets and premanufactured items.

C. Miscellaneous Submittals:
   1. Floor access hatch warranty.

D. Submit in accordance with Section 01340.

1.4 QUALITY ASSURANCE

A. Perform shop and/or field welding required in connection with the work of this Section by certified welders in strict accordance with pertinent recommendation of AWS.

B. Conform to AISC and AA standards.

PART 2 GENERAL

2.1 MATERIALS

A. In fabricating items which will be exposed to view, limit materials to those which are free from surface blemishes, pitting, and roughness.

B. Comply with following standards, as pertinent.
   1. Steel Shapes unless noted otherwise below: ASTM A36
      a. W-Shapes: A992
      b. Steel Plates and Bars: A572
   2. Square or rectangular tubing: ASTM A500, Grade C.
   3. Round tubing: ASTM A500, Grade C.
   4. Pipe: ASTM A53, Grade B
   5. Stainless Steel:
      a. Interior uses: AISI, Type 304 or Type 316
   6. Aluminum shapes and plates: Alloy 6061-T6 or 6063-T6
   7. Connection Bolts:
      a. For steel members: ASTM A325
      b. For aluminum and galvanized steel members: Stainless steel
   8. Cast-in-place anchor bolts:
      a. ½ inch minimum diameter
      b. Nonsubmerged: ASTM A307, galvanized
   9. Cast Aluminum: ASTM B26

2.2 CONCRETE ANCHORS

A. Expansion Anchors:
   1. Manufacturers:
      a. Kwik Bolt 3 or Kwik Bolt TZ by Hilti
      b. Power-Stud+ SD1 or SD2 by Powers Fasteners
      c. Strong-Bolt or Strong-Bolt 2 by Simpson Strong-Tie Co., Inc.
      d. Red Head Trubolt+ or Trubolt Wedge Anchor by ITW Commercial Construction
   2. Usage: In concrete
      a. 316 Stainless Steel
      b. Do not use when submerged or subjected to dynamic loads.

B. Adhesive Anchors:
   1. Manufacturers:
      a. HIT RE-500-V3 or HIT-HY 200-A by Hilti Corp.
      b. AC100+ Gold or PE 1000+ by Powers Fasteners
      c. AT or SET-XP Epoxy Adhesive System by Simpson Strong-Tie Co., Inc.
      d. Red Head Epcon S7, A7, G5 or C6 Adhesives by ITW Commercial Construction
   2. Epoxy adhesive with 316 Stainless steel stud assembly.
   3. Usage:

a. In concrete, submerged
b. In masonry, provide screen tube inserts
c. Do not use in overhead applications

C. Screw Anchors:
1. Manufacturers”
a. Kwik-Con II or Kwik HUS / HUS-EZ by Hilti Corp.
b. Wedge-Bolt+ or Tapper+ by Powers Fasteners
c. Titen or Titen HD by Simpson Strong-Tie CO., Inc.
d. Red Head Tapcon or Large Tapcon (LDT) anchors by ITW Commercial Construction
2. Stainless steel concrete/Masonry screw with hex head.
3. Usage:
a. In concrete

2.3 FINISHES

A. Galvanizing Repair Paint: High zinc-dust content paint complying with MIL-P-21035

2.4 FABRICATION

A. Except as otherwise shown on the Drawings or the approved Shop Drawings, use materials of size, thickness, and type required to produce reasonable strength and durability in the work of this Section.

B. Provide clips, lugs, brackets, straps, plates, bolts, nuts, washers, and similar items, as required for fabrication and erection.

C. Fabricate with accurate angles and surfaces which are true to the required lines and levels, with projecting corners clipped, grinding exposed welds smooth and flush, forming exposed connections with hairline joints, and using concealed fasteners wherever possible.

D. Weld shop connection and bolt or weld field connections.

E. Galvanizing:
1. Galvanize after fabrication.
2. Galvanize by hot-dip process conforming to ASTM A123 and AHDGA specifications.

2.5 ALUMINUM BAR GRATING FOR STAIR AND PLATFORM

A. Manufacturers:
1. McNichols, Type 19-S-4
2. Ohio Grating, Type 19-SG-4
3. Barnett Bates, Type 19-AP-4
4. Klemp Grating, Type KRP-19-4

B. Materials:
   1. Pressure locked serrated grating (expanded tube or swaged type).
   2. Alloy 6061-T6 or 6063-T6
   3. Bearing bars shall be spaced at 1 3/16 inch on center
   4. Cross bars shall be spaced at 4 inch on center
   5. Size bearing bars as follows

Maximum Clear Span (ft - in.)	Bearing Bar Size (depth below serrations) (in.)
3 - 8	1-1/4 x 1/8
in.= inch ft = feet	

C. General
   1. Provide shop-fabricated grating and accessories such as frames, support angles, fasteners, and treads
   2. Grating and treads shall be serrated aluminum
   3. Treads and exposed edges of grating shall have corrugated or cast aluminum abrasive nosing.
   4. Provide fastening devices to firmly anchor grating and treads to supports. Sections designated as removable shall not be attached to supports.
      a. Minimum of 4 per panel
      b. Shall allow for repeated removal
      c. Saddle clip type
      d. "G" clip type
      e. Clamp type
      f. Minimum ¼ inch bolts or self-tapping screws
      g. 316 stainless steel
   5. Provide trim banding or load carrying banding on edges and cutouts welded to grating.
      a. Bearing bars not resting on supports shall have load carrying banding sized to span opening

D. Grating Support angles and framing
   1. Galvanize steel members supporting aluminum grating.

2.6 MISCELLANEOUS ITEMS

A. Fabricate miscellaneous framing, supports, and items of structural shapes, plates, bars, and tubing or sizes and arrangements indicated and as required.

PART 3 EXECUTION

3.1 SURFACE CONDITIONS

A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.2 INSTALLATION

A. General:
   1. Set work accurately into position, plumb, level, true and free from rack.
   2. Tolerance: 1/8 inch in 10 feet
   3. Anchor firmly into position
   4. Where field welding is required, comply with AWS recommended procedures for appearance and quality of weld and for methods to be used in correction welding work.
   5. Grind exposed welds smooth, and touchup shop prime coats.
   6. Do not cut, weld, or abrade surfaces which have been hot-dip galvanized after fabrication and which are intended for proper installation. Drill field holes for bolts, for not burn holes.
   7. Perform cutting, drilling, and fitting as required for proper installation. Drill field holes for bolts, do not burn holes.
   8. Immediately after erection, clean field welds, bolted connections, and abraded areas. Paint the exposed areas with same material used for shop priming.

B. Concrete Anchors:
   1. Do not install until concrete or masonry has reached design strength.
   2. Do not install closer than 6 bolt diameters to edge of concrete of masonry, or closer than 12 bolt diameters to another anchor unless noted otherwise
   3. Minimum embedment shall be 8 bolt diameters unless noted otherwise
   4. Install in accordance with manufacturer’s recommendations.

3.3 ADJUSTING AND CLEANING

A. Clean exposed surfaces, removing dirt, dust, and other foreign matter.

B. Prepare surfaces for finished painting as specified in Section 09900

C. Field repair of damaged galvanized coatings:
   1. Repair surfaces damaged during shipping, erection, or construction operations.
   2. Use zinc rich paint
   3. Prepare surfaces and apply in accordance with ASTM A780, Annex A2.

END OF SECTION

SECTION 06525

FIBERGLASS REINFORCED PLASTIC FABRICATIONS

PART 1 GENERAL

1.1 SUMMARY

A. Provide fiberglass fabrications as shown on the Drawings, as specified herein, and as needed for complete and proper installation.

B. Section Includes:
   1. Design, fabrication, and erection of fiberglass shelves and Unistrut
   2. System accessories.

1.2 REFERENCES

A. ASTM: American Society for Testing and Materials

B. OSHA: Occupational Safety and Health Administration

1.3 SYSTEM DESCRIPTION

A. Design Requirements:
   1. FRP shelving
      a. Conform to manufacturers requirements to support continuously circulating diaphragm pumps as specified in the drawings.
      b. Conform to manufacturers requirements to support water booster pumps as specified in the drawings.
   2. FRP Unistrut
      a. Conform to manufacturer requirements to support piping and shelving as specified in the drawings.

1.4 SUBMITTALS

A. Shop Drawings:
   1. Type, layout, dimensions, fasteners, and locations.

B. Product Data:
   1. Manufacturer’s literature.

C. Submit in accordance with Section 01340.

1.5 QUALITY ASSURANCE

A. FRP shelving and Unistrut shall be end product of one manufacturer to achieve standardization of appearance.

PART 2 PRODUCTS

2.1 GENERAL

A. Provide shop-fabricated shelving and Unistrut and accessories such as frames, support angles, and fasteners.

B. Seal cut edges with compatible resin.

C. Provide fastening devices to firmly anchor grating and treads to supports. Sections designated as removable shall not be attached to supports.

D. Concrete anchors shall conform to requirements of Section 05500.

2.2 SHELVING AND UNISTRUT

A. Manufacturers:
   1. Dynadeck by Fibergrate
   2. SAFPLANK by Strongwell.
   3. Or equal.

B. Materials:
   1. Premium polyester UV inhibited resin with continuous glass filament reinforcement.
   2. Resin rich exterior surfaces free of air bubbles and dry glass.

2.3 ACCESSORIES

A. Bolts, rivets, and other connectors shall be 316 SST.

B. Concrete anchors shall be stainless steel conforming to requirements of Section 05500.

PART 3 EXECUTION

3.1 SURFACE CONDITIONS

A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.2 INSTALLATION

A. Install in accordance with manufacturer’s written instructions.

B. Seal cut edges with compatible resin.

END OF SECTION

SECTION 09900

COATINGS

PART 1 GENERAL

1.1 SUMMARY

A. Coating of surfaces as specified herein, including:
   1. Exposed interior ferrous metal, ductile iron, or cast iron piping, regardless of factory-applied finish.

B. Labeling and directional arrows on piping, equipment, valves, and ducts whether coated or not coated is specified in Section 01080.

C. Do not coat the following unless specifically noted otherwise:
   1. Factory-finished electrical motor control panels (MCC), main instrument panels (MIP), flow indicators, and related equipment.
   2. Moving parts of operating units, electrical parts, linkages, sensing devices, and motor shafts.
   3. Buried equipment and piping.
   4. Surfaces above ceilings.
   5. Factory-finished trim.
   6. Stainless steel, chrome plate, copper, bronze, galvanized surfaces, and similar finished materials.
   7. Aluminum ductwork or aluminum faced insulation.
   8. Aluminum louvers and trim.
   9. Concrete tanks.
   10. Plastic and FRP piping, equipment, and ductwork.

D. Do not coat over any code-required labels such as UL and Factory Mutual, or any equipment identification, performance rating, name, or nomenclature plates.

E. Equipment manufacturers are responsible for surface preparation and coating of equipment, motors, and appurtenances. Equipment to be coated and coating system is identified in the equipment specification sections.

1.2 DEFINITIONS

A. Definitions as used in Coating Schedule included herein.
   1. Coatings: Paint or heavy duty finishes for use on surfaces subject to interior and exterior exposure, submergence, high moisture, splash, or chemical environment, including primers, sealers, fillers, and intermediate and finished coats.
   2. First Coat: Field primer, factory primer, or shop primer. When only one coat is required, first coat is the finished coat.
   3. Second, Third, or Intermediate Coats: Successive finished coats applied over first coat.
   4. DFT: Dry film thickness (mils/coat).

5. sfpg: Square feet per gallon (per coat).

1.3 REFERENCES

A. MSDS: Material Safety Data Sheets

B. ASTM: American Society for Testing and Materials

C. SSPC: The Society for Protective Coatings

D. OSHA: Occupational Safety and Health Administration

E. NSF: National Sanitation Foundation

1.4 SUBMITTALS

A. Product Data:
   1. Manufacturer's literature including application recommendations and generic makeup for each coating scheduled.
   2. Factory or shop-applied primer manufacturer's literature including application recommendations and generic makeup shall be submitted with all material and equipment submittals. All primers shall conform to the requirements of this Section.

B. Samples:
   1. Actual color samples available for each coating scheduled.

C. Miscellaneous:
   1. Schedules:
      a. Schedule of proposed coating systems within 60 days after Notice to Proceed.
      b. Schedule of proposed coating systems shall contain all information as indicated in Coating Schedule included herein.
   2. Submit one copy of manufacturer's MSDS, for each type of coating, to Engineer's field office for information. Contractor shall post copy of MSDS on Site at all times coating is in progress.

D. Submit in accordance with Section 01340.

1.5 QUALITY ASSURANCE

A. Regulatory Requirements:
   1. All coatings shall conform to OSHA requirements for allowable exposure to lead and other hazardous substances.

B. Applicator Qualifications:
   1. Engage an experienced field applicator with a minimum of 5 yrs successful experience and who has successfully completed coating system applications similar in material and extent to those indicated.

C. Single-Scource Responsibility:

1. Provide coating material produced by same manufacturer for each system.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Materials shall be delivered to site in original containers with labels intact and seals unbroken.

B. Protect and heat or cool material storage location to maintain temperature ranges recommended by coating manufacturers, but not less than 55° F.

C. Avoid danger of fire. Oily rags and waste must be removed from buildings each night or kept in appropriate metal containers. Provide fire extinguishers of type recommended by coating manufacturer's in areas of storage and where finishing is occurring. Allow no smoking or open containers of solvent.

D. Empty containers shall have labels canceled and clearly marked as to use.

1.7 PROJECT / SITE CONDITIONS

A. Environmental Requirements:
1. Dry-heat and ventilate areas to obtain conditions recommended by coating manufacturer.
2. Relative humidity conditions as specified by coating manufacturer shall be adhered to.
3. No unprotected, unheated exterior coating shall be undertaken when cold, damp, foggy, or rainy weather appears probable, nor when the temperature of the substrate is below 55° F, unless approved in writing by coating manufacturer.
4. Maintain manufacturer's environmental requirements until coating is fully cured.
5. Apply no coating in areas where dust is being generated.
6. Testing and disposal of any waste and coating shall be the responsibility of the Contactor.

B. Protection:
1. Drop cloths shall be provided in all areas where coating is done to fully protect other surfaces.
2. Remove hardware, accessories, plates, lighting fixtures, and similar items or provide protection by masking. Upon completion, replace items or remove protection and clean.

C. It is the intent of this Section that all ferrous metal items scheduled for coating be shop-primed. If items are not shop-primed, surfaces shall be prepared and coated in the field as specified.

D. Upon Substantial Completion, remaining unused material will become property of Owner. Seal material as required for storage, mark contents with color, type, location, and shelf life, and store on Site where required by Owner. Provide minimum of two gallons of each system component and color used.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Tnemec.

B. Sherwin Williams.

2.2 MATERIALS

A. Coatings shall meet surface burning characteristics as required by code and established by ASTM E84.

B. Coating products of Tnemec or Sherwin Williams, listed in the Coating Schedule, are set as a standard of quality. Coatings of substitute manufacturers shall meet or exceed the characteristics of the products listed as established by the following ASTM standards; B117, C307, C413, C579, C580, C868, D870, D1014, D1653, D2047, D2240, D2370, D2794, D3363, D4060, D4141, D4541, D4585, D4587, and G85.

C. The Contractor and top coat coating manufacturer shall verify the compatibility of their products with the various primers used on shop primed materials and equipment.

2.3 COLORS

A. Color shall be formed of pigments free of lead, lead compounds, or other materials which might be affected by presence of hydrogen sulfide or other gases likely to be present at Site.

B. Colors shall be as selected by Owner. System color-coding shall be as specified in Section 01080.

C. In areas scheduled for finishing, coat exposed piping, conduit, and ducts to match color of adjacent or near surfaces, except for color-coding.

D. In areas where existing surfaces are finished, coat new exposed piping, conduit, and ducts to match color of adjacent or near surfaces, except for color-coding.

2.4 THINNING, MIXING, AND TINTING

A. Where thinning is necessary, only the products of the manufacturer furnishing the coating will be allowed. All such thinning shall be done in strict accordance with coating manufacturer’s recommendations.

B. Mix in accordance with manufacturer’s recommendations.

C. Each coat shall be slightly darker than preceding coat, unless otherwise noted. Tint undercoats similar to finish coat.

PART 3 PART 3 – EXECUTION

3.1 EXAMINATION

A. Examine the areas and conditions under which Work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Materials removed and replaced to correct defects due to Work placed on unsuitable surfaces shall be at Contractor's expense.

3.2 SURFACE PREPARATION

A. All surfaces to be coated shall be prepared as specified herein and in accordance with coating manufacturer's recommendations. The object shall be to obtain a uniform, clean, and dry surface.

B. Quality of surface preparation described herein is considered a minimum. If coating manufacturer requires a higher degree of preparation, comply with coating manufacturer's recommendations.

C. Where surface dryness is questioned, test with dampness indicating instrument. Do not apply coatings over surfaces where moisture content exceeds that permitted by coating manufacturer.

D. Shop primed surfaces shall be scarified before applying top coats. Conform to top coat manufacturers recommendations.

E. If recoat time between application of primer and second coat or between top coats is exceeded, scarify surface before applying coatings. Conform to top coat manufacturers recommendations.

F. Workmanship for surface preparation shall conform to the following SSPC specifications:
   a. Solvent Clean: SP-1.
   b. Hand Tool Cleaning: SP-2.
   c. Power Tool Cleaning: SP-3.
   d. White Metal Blast Cleaning: SP-5.
   e. Commercial Blast Cleaning: SP-6.
   f. Near-White Blast Cleaning: SP-10.

G. Ferrous Metal:
   1. Ferrous metal primed in the shop shall have all rust, dust, scale, and other foreign substances removed by abrasive cleaning conforming to SSPC SP-10. Cleaned metal shall be primed or pretreated immediately after cleaning to prevent new rusting.
   2. Ferrous metal not primed in the shop shall be abrasive blast cleaned in the field prior to application of primer, pretreatment, or coating. Blast cleaning shall conform to SSPC
      SP-10 for submerged service. Blast cleaning shall conform to SSPC SP-6 for non-submerged service.

3. Prior to finish coating, primed areas that are damaged shall be cleaned and spot primed.

3.3 APPLICATION

A. Surfaces shall be dry at time of application.

B. The minimum surface temperature shall be 55°F and rising. Some coatings are modified so that they may be applied at lower temperatures, conform to manufacturer's recommendations.

C. Apply in strict accordance with manufacturer's recommendations by brush, roller, spray, or other application method. The number of coats and thickness required is the same regardless of application method.

D. Each coat shall be allowed to dry in accordance with manufacturer's requirements. Drying time shall be construed to mean "under normal conditions". Where conditions other than normal exist, because of weather or because of confined space, longer times will be necessary. Units shall not be put in service until coatings are thoroughly dry and cured.

E. Surfaces to be coated that will be inaccessible in the completed work shall receive the final coat before enclosure.

F. Coatings shall be applied to provide an opaque, smooth surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, or other surface imperfections will not be acceptable. Areas cut-in by brush prior to rolling shall have uniform appearance in comparison with adjoining surfaces.

G. Make edges of coating adjoining other materials or colors sharp and clean without overlapping.

H. Crevices and other hard-to-apply areas shall be back-rolled/back-brushed in conjunction with application of field applied prime coat or intermediate coat. This includes, but is not limited to: between pipe flanges, pipe flange/barrel joints, equipment fittings, and other narrow openings.

I. Finish edges of doors as specified for faces. Apply first finish coat on edges before fitting. After doors fitted and hung apply second finish coat.

J. Manufacturer-Applied Coatings:
1. Repair abraded areas on factory-finished items in accordance with equipment manufacturer's recommendations.
2. Blend repaired areas into original finish.

3.4 FIELD QUALITY CONTROL

A. Examination of Work on Site by coating manufacturer's representative shall be performed when requested by Engineer.

B. Sampling of Materials:
   1. Engineer reserves the right to select unopened containers of materials furnished for the Project and have the materials tested at an independent laboratory. Owner will pay for first tests.
   2. Retests of rejected materials and tests of replacement materials shall be paid for by Contractor.
   3. Remainder of contents of containers not required for testing will be returned to Contractor.

C. Coverage:
   1. 1. Before beginning Work, finish one complete room, space, surface, and item of each color scheme required, showing selected colors, finished texture, material, and workmanship. After approval, sample room, space, surface, and item shall serve as standard for similar Work.
   2. 2. If coverage is not acceptable to Engineer, Engineer reserves the right to require additional application of coating at no extra cost to Owner.

D. Where coatings are to be applied at the Site, Engineer reserves the right to observe the Work. After surface has been prepared and before application of specified prime coat and each succeeding finish coat, Contractor shall provide three days notice to Engineer to allow the Engineer time to observe the Work. If notification is not provided, no credit for applied coat will be given and Contractor automatically assumes responsibility to recoat Work in question. Surfaces coated without notification shall be abrasive blast cleaned, re-prepared, and recoated at no addition cost to Owner.

3.5 FINAL TOUCH-UP AND CLEANING

A. Prior to Substantial completion, examine coated surfaces and retouch or refinish surfaces to leave in condition acceptable to Engineer.

B. Remove masking, coatings, and other material from floors, glass, and other surfaces not scheduled to be coated.

3.6 COATING SCHEDULE

A. Scheduled thickness or coverage rate is minimum as recommended by Tnemec. If other manufacturer is used, manufacturer's recommendations shall be followed, but in no case shall the thickness or coverage rate be less than scheduled.

B. Coatings shall conform to the following schedule and coating manufacturer's recommendations. Examples of surfaces to be coated may not be all inclusive.

COATINGS SCHEDULE

System No.	Application	Tnemec Coating System	Sherwin Williams Coating System
12	Galvanized Metal, Copper, PVC / Non-Submerged / Interior / Satin	First Coat – Series V69-1255 Beige @ 2 mils DFT, touch-up primer prior to second coat Second Coat – Series V69 @ 3 mils DFT Third Coat – Series V69 @ 3 mils DFT	First Coat – Macropoxy 646 – SW4004 @ 2 mils DFT, touch-up primer prior to second coat Second Coat – Macropoxy 646 @ 3 mils DFT Third Coat – Macropoxy 646 @ 3 mils DFT
13	Galvanized Metal, Copper, PVC / Non-Submerged / Exterior / Gloss	First Coat – Series V69-1255 Beige @ 2 mils DFT, touch-up primer prior to second coat Second Coat – Series V69 @ 3 mils DFT Third Coat – Series 1095 @ 3 mils DFT	First Coat – Macropoxy 646 SW4004 @ 2 mils DFT, touch-up primer prior to second coat Second Coat – Macropoxy 646 @ 3 mils DFT Third Coat – Hi-Solids Polyurethane 250 Gloss @ 3 mils DFT

Foot Notes:

1. Tnemec Series N66HS may be substituted for Series 1.
2. Copper water only – no paint on SCH 40 or 80 PVC

END OF SECTION

SECTION 11321

CHLORINE DIOXIDE GENERATOR SYSTEM – INSTALLATION ONLY

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Installation of the pre-selected Electrochemical Chlorine Dioxide Generator System and associated appurtenances to be supplied by a PureLine.

1.2 RELATED SECTIONS

A. Division 1 – General Conditions

B. Section 01340 – Shop Drawings, Submittals, and Product Data

C. Section 01600 – Materials and Equipment

D. Section 01650 – Starting of Systems

E. Section 01700 – Operation and Maintenance

F. Section 09900 – Coating

G. Section 15060 – Pipe and Pipe Fittings

H. Division 16 – Electrical

1.3 REFERENCES

A. AGMA – American Gear Manufacturers Association

B. ASME – American Society of Mechanical Engineers

C. ASTM – American Society of Testing and Materials

D. ANSI – American National Standards Institute

E. IEEE – Institute of Electrical and Electronics Engineers

F. NEC – National Electrical Code

G. U.L – Underwriters Laboratories

H. AFBMA – Anti-friction Bearing Manufacturers Association

I. AWS – American Welding Society

1.4 QUALITY ASSURANCE

A. Shop drawings and submittals per Section 01340

1.5 OPERATION AND MAINTENANCE DATA

A. Submit under provisions of Section 01730

B. Operation Data: Include manufacturer's instructions, description of system operation, start-up data and trouble-shooting check lists, and repair data for the Electrochemical Chlorine Dioxide Generator system and ancillary equipment specific for the City of Louisville.

C. Maintenance Data: Include manufacturer's literature, cleaning procedures replacement parts lists, wiring diagrams, and repair data for compressors and components

1.6 DELIVERY, STORAGE, AND HANDLING

A. In accordance with Section 01600

PART 2 PRODUCTS

2.1 ELECTROCHEMICAL CHLORINE DIOXIDE GENERATOR SYSTEM AND APPURTENANCES

A. Selected System: PureLine HP-40 Chlorine Dioxide Generator
   1. 40 lbs/day ClO2 Capacity

B. Appurtenances listed in Construction Drawings and O&M manual.

PART 3 EXECUTION

3.1 FIELD PREPARATION

A. Finish field preparation and painting shall be performed as specified in Section 09900.

B. Contractor shall correct any painting or finish defects from shipping damage prior to installation.

3.2 INSTALLATION

A. Electrochemical Chlorine Dioxide Generator System
   1. Install in accordance with Manufacturer’s instructions
   2. Eliminate any strain between Electrochemical Chlorine Dioxide Generator System and attached feed or drain piping
   3. Correct any misalignment, noisy operation, or other signs of improper setting
   4. Provide all necessary lubrication for initial start-up, testing and final acceptance

5. Anchor equipment foundation according to Manufacturer's bolt pattern and specifications.
6. Install all components in accordance with Manufacturer's instructions and per Construction Drawings

B. Electrical and Controls
1. Install all electrical interconnections between Electrochemical Chlorine Dioxide Generator System control panel and associated equipment per Manufacturer's instructions

C. Piping and Valves
1. Install all interconnecting piping and valves per Section 15060, Section 15100, and as shown on the Construction Drawings

3.3 MANUFACTURER'S FIELD SERVICES

A. Provide under provisions of Sections 01400 and 01700

B. Prior to start-up:
1. Test all valves, switches, and gages for proper settings and operation
2. Check completion of all electrical connections
3. Check assembly alignment
4. Check to ensure all rotational parts are properly lubricated
5. Bump motors to check direction or rotation
6. Direct Contractor in necessarily corrections for start-up
7. Provide written approval for start-up when system is satisfactory

3.4 SYSTEM INSPECTION AND START-UP

A. Start-up shall be in accordance with Manufacturer's instructions.

B. Contractor shall refrain from any equipment start-up prior to Manufacturer's inspection

C. Contractor to coordinate all Manufacturer's field services with Owner and Engineer

D. Contractor shall notify the Owner, Engineer, and Manufacturer upon completion of installation or readiness of equipment for testing and inspection a minimum of 10 days prior

E. Contractor shall perform any necessary correction identified by Manufacturer, Owner, or Engineer after inspection and prior to start-up

3.5 PERFORMANCE TESTS

A. The performance test shall consist of two tests that shall last four hours each. Samples shall be collected at the end of every hour. Both tests shall be averaged, and the installed equipment shall demonstrate that it can meet or exceed the specified Performance Criteria.

B. Any components of the pressure in the Electrochemical Chlorine Dioxide Generator System that fail to meet specifications to the Engineer's satisfaction shall be corrected and re-tested by Contractor

C. A test log shall be submitted to Engineer and Owner upon completion of each test. In addition to the manufacturer specified start up tests; performance tests shall record the following:
   1. Electrochemical Chlorine Dioxide Generator System and all ancillary equipment model numbers and facility tag ID
   2. Serial number
   3. Date of testing with time of testing on that day (start and end)
   4. Motor hp and speed, feed rate, water temperature
   5. All other performance documentation parameters specified herein

3.6 MANUFACTURER'S CERTIFICATION

A. Contractor shall provide any necessary testing certifications per Division 1.

END OF SECTION

SECTION 15060

PIPE AND PIPE FITTINGS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Piping complete with all fittings, jointing materials, expansion joints, hangers, supports anchors and necessary appurtenances for interior installations:
   1. Potable Water
   2. Chemical Solution
      i) Sodium Chlorite
      ii) Chlorine Dioxide

1.2 RELATED SECTIONS

A. Section 11321 – Electrochemical Chlorine Dioxide Generator System Installation Only

B. Section 09900 – Coatings

1.3 REFERENCES

A. American National Standards Institute (ANSI)
   1. B1.1 – Unified Inch Screw Threads
   2. B16.1/B16.5 – Pipe Flanges and Fittings Package
   3. B16.24 – Cast Copper Alloy Pipe Flanges and Flanges Fittings
   4. B16.26 – Cast Copper Alloy Fittings for Flared Copper Tubes
   5. B18.2 – Square, Hex, Heavy Hex, and Askew Head Bolts and Hex, Heavy Hex, Hex Flange, Lobed Head, and Lag Screws (Inch Series)
   6. B31.1/B31.3 – Power and Process Piping Package

B. American Society of Mechanical Engineers (ASME)
   1. B16.18 – Cast Copper Alloy Solder Joint Pressure Fittings
   2. B16.22 – Wrought Copper and Copper Alloy Solder-Joint Pressure Fittings
   3. B16.26 – Cast Copper Alloy Fittings for Flared Copper Tubes

C. American Society of Testing and Materials (ASTM)
   1. A53/A53M – Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
   2. A134 – Standard Specification for Pipe, Steel, Electric-Fusion (Arc)-Welded (Sizes NPS 16 and Over)
   3. A135 – Standard Specification for Electric-Resistance-Welded Steel Pipe
   4. A139 – Standard Specification for Electric-Fusion (Arc)-Welded Steel Pipe (NPS 4 and Over)
   5. A181 – Standard Specification for Carbon Steel Forgings for General-Purpose Piping

6. A193 – Standard Specification for Alloy-Steel and Stainless Steel Bolting for High Temperature or High Pressure Service and Other Special Purpose Applications
7. A194 – Standard Specification for Carbon and Alloy Steel Nuts for Bolts for High Pressure or High Temperature Service, or Both
8. A234 – Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service
9. A269 – Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service
10. A283 – Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates
11. A307 – Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength
12. A312 – Standard Specification for Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes
13. A325 – Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength
14. A774 – Standard Specification for As-Welded Wrought Austenitic Stainless Steel Fitting for General Corrosive Service at Low and Moderate Temperatures
15. A778 – Standard Specification for Welded, Unannealed Austenitic Stainless Steel Tubular Products
16. A795 – Standard Specification for Black and Hot-Dipped Zinc-Coated (Galvanized) Welded and Seamless Steel Pipe for Fire Protection Use
17. B32 – Standard Specification for Solder Metal
18. B75 – Standard Specification for Seamless Copper Tube
19. B88 – Standard Specification for Seamless Copper Water Tube
20. D1785 – Standard Specification for Poly Vinyl Chloride (PVC) Plastic Pipe, Schedules 40, 80, and 120
21. D2464 – Standard Specification for Threaded Poly Vinyl Chloride (PVC) Plastic Pipe Fittings, Schedule 80
22. D2466 – Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40
23. D2467 – Standard Specification for Poly Vinyl Chloride (PVC) Plastic Pipe Fittings, Schedule 80
24. D2996 – Standard Specification for Filament-Wound “Fiberglass” (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe
25. D3035 – Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR.) Based on Controlled Outside Diameter
26. D3139 – Standard Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals
27. D3261 – Standard Specification for Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing
28. D3350 – Standard Specification for Polyethylene Plastics Pipe and Fitting Materials
29. F104 – Standard Classification System for Nonmetallic Gasket Materials
30. F412 – Standard Terminology Relating to Plastic Piping Systems
31. F477 – Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe

32. F714 – Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Outside Diameter
33. F2164 – Standard Practice for Field Leak Testing of Polyethylene (PE) and Crosslinked Polyethylene (PEX) Pressure Piping Systems Using Hydrostatic Pressure

D. American Water Works Association (AWWA)
1. C110 – American National Standard for Ductile-Iron and Gray-Iron Fittings, 3-Inch through 48-Inch, for Water
2. C111 – Standard for Rubber Gasket Joints for Ductile-Iron Pressure Pipe and Fittings
3. C115 – Flanged Ductile-Iron Pipe with Ductile-Iron or Gray-Iron Threaded Flanges
4. C150 – American National Standard for Thickness Design of Ductile-Iron Pipe
5. C151 – Standard for Ductile Iron Pipe, Centrifugally Cast, for Water
6. C153 – Standard for Ductile-Iron Compact Fittings
7. C200 – Standard for Steel Water Pipe 6 Inch and Larger
8. C203 – Standard for Coal-Tar Protective Coatings and Linings for Steel Water Pipelines – Enamel and Tape – Hot Applied
9. C206 – Standard for Field Welding of Steel Water Pipe
10. C207 – Standard for Steel Pipe Flanges for Waterworks Service – Sizes 4 Inch Through 144 Inch
11. C209 – Cold-Applied Tape Coatings for the Exterior of Special Sections, Connections, and Fittings for Steel Water Pipelines
12. C219 – Bolted, Sleeve-Type Couplings for Plain-End Pipe
13. C220 – Standard for Stainless Steel Pipe ½ Inch and Larger
14. C606 – Standard for Grooved and Shouldered Joints
15. C900 – Standard for Polyvinyl Chloride (PVC) Pressure Pipe, 4 Inch through 12 Inch, for Water Transmission and Distribution
16. C901 – Standard for Polyethylene (PE) Pressure Pipe and Tubing, 1/2 In. through 3 In., for Water Service
17. C906 – Polyethylene (PE) Pressure Pipe and Fittings 4 Inch Through 63 Inch, for Water Distribution and Transmission
18. C907 – Injection-Molded Polyvinyl Chloride (PVC) Pressure Fittings, 4 Inch through 12 Inch, for Water, Wastewater, and Reclaimed Water Service
19. C950 – Standard for Fiberglass Pressure Pipe
20. M11 – Steel Pipe: A Guide for Design and Installation
21. M23 – PVC Pipe Design and Installation
22. M41 – Ductile-Iron Pipe and Fittings
23. M45 – Fiberglass Pipe Design

E. National Science Foundation (NSF)
1. 61 – Drinking Water System Components – Health Effects

1.4 SUBMITTALS

A. Submit under provisions of Section 01340

B. Shop Drawings:
    1. Provide piping layout fabrication and assembly drawings with fittings dimensions. Provide sufficient information to verify compliance with specification including, but not limited to, the following:
    a. Layout of pipe drawings
    b. Pipe and joint details
    c. Specials, fittings, and coupling details
    d. Specification data sheets
    e. Certificates of compliance with applicable standard and specification and testing certificates
    f. For steel pipe show weld locations and installation of pipe, fittings, specials and connections
        i) Complete data of materials proposed
        ii) Do not manufacture until approved
        iii) Show where each numbered pipe fitting or special is to be installed
        iv) Numbers correspond to those painted on pipe
    2. Provide additional detailed information including elevations, fittings, specialty materials or fabrications for special or custom features, structures, junctions and/or pipes
    3. Specifications, data sheets and affidavits of compliance for coatings and linings
    4. Provide pipe-laying and installation schedule

C. Product Data: Provide sufficient data on features, pipe, joints, gasket material, lubricant and accessories to verify compliance with specifications

D. Manufacturers Certificate and affidavits:
    1. Furnish the following prior to fabrication
    a. Details: Pipe, joint, special, fitting and coupling
    b. Shop coating
    c. Shop coatings and linings: specifications, data sheets, and compliance affidavits
    2. Furnish the following prior to shipment
    a. Compliance affidavit for applicable standards
    b. Test certificates

E. Test Reports: Submit all shop and field test reports in accordance with Division 1 Specifications as Product Data

1.5 PROJECT RECORD DOCUMENTS

A. Submit under provisions of Division 1 Specifications

B. Accurately record actual locations of piping, valves, connections, centerline of pressure pipe elevations, and top of gravity pipe elevations Identify and describe unexpected variations to building conditions or discovery of unknown utilities

1.6 REGULATORY REQUIREMENTS

A. In accordance with all local codes and ordinances, laws and regulations of the State

B. In case of apparent conflict, State and local requirements govern over these specifications

C. In absence of State and local regulations, International Plumbing Code applies

1.7 DELIVERY, STORAGE AND HANDLING

A. For steel pipe with coal tar enamel or hot applied tape: comply with AWWA C203
   1. Handling and Storage:
   a. Use wide canvas slings and wide padded skids.
   b. Do not use bare cables, chains, hooks, metal bars, or narrow skids
   c. Do not store directly on ground, provide proper blocking
   d. Do not roll on enameled or taped surface
   e. Do not expose enameled pipe to temperature below 0 Degrees F
   f. Do not handle enameled pipe below 10 Degrees F
   2. Shipment
   a. Ship steel pipe supported on padded saddles not less than 12-inches wide, securely fasten load to prevent movement in transit. For pipes coated with fusion bonded epoxy use nylon straps
   b. Laterally support ends of pipe, fittings, special, to maintain shape during shipment
   c. Separate materials during shipment to prevent materials bearing against each other
   3. Delivery
   a. Products with dents, kinks, abrupt changes of curvature or other damage shall be rejected upon delivery
   b. Products dropped from truck or crane shall be rejected
   c. Rejected items shall be replaced or reconditioned at the expense of the contractor. Reconditioning shall only be permitted at approval of Engineer and with replacement coatings as originally specified on the reconditioned pipe

B. For all other pipe
   1. Deliver, store, protect and handle products to site under provisions of Division 1 Specifications
   2. Delivery
   a. Ship rubber gaskets in cartons and store in a clean area away from grease, oil, ozone producing electric motors, heat and the direct sunlight
   3. Storage
   a. Store pipe, fittings and gaskets in clean locations protected from environmental conditions such as: direct sunlight, mud, etc.
   b. Do not use pipe and fittings stored in direct sunlight for periods in excess of 18 months
   c. Store pipe on a flat surface which provides even support for the barrel with bell ends overhanging
   d. Do not stack pipe higher than 5 feet
   4. Storage: Use the following precautions for valves, during storage:
   a. Do not remove end protectors unless necessary for inspection; then reinstall for storage
      i) Protect valves from weather by storing indoors or support valves off ground and pavement in watertight enclosures when outdoor storage is necessary

5. Handling
a. Handle so as to insure installation in sound undamaged condition
b. Use equipment, tools and methods for unloading, reloading, hauling and laying that do not damage pipe or cause an impact. Damaged pipe will be cause for rejection
c. Use hooks or straps with broad, well padded contact surfaces for lifting sections of pipe
6. Preparation for Transport:
a. Prepare valves, for shipping as follows:
i) Ensure that valves and pilotry are drained and dry and internally protected against rust and corrosion. Protect valves against damage to threaded ends, flange faces, and weld ends. Set valves in best position for handling. Set valves closed to prevent rattling
7. Deliver and store valves and accessories in shipping containers with labeling in place in accordance with AWWA C500/C504/C509
8. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation
9. Seal pipe and fittings to prevent entry of foreign materials into pipe and fittings
10. During loading, transporting and unloading, exercise care to prevent damage to material
a. Use nylon slings only
b. Do not drop pipe or fittings
c. Do not roll or skid against pipe already on ground
d. Repair any damage done to coating or lining
e. Handle per manufacturer's recommendations
f. Store rubber gaskets in cool dark location
g. Store all material on wood pallets or timbers
11. Adequately tag or otherwise mark all piping and fittings as to size

PART 2 PROCESS PIPING PRODUCTS

2.1 PVC PIPING

A. The following piping shall be PVC pipe as indicated on Drawings and provided for locations specified herein:
1. Chemical service
a. Interior, pressure pipe
2. Drain, waste, vent, and carrier pipe
a. Interior, non-pressure pipe
3. Contractor shall submit complete process piping Drawings and shall include all location and dimensions of piping, fittings, valves, and couplings

B. PVC Process Piping (Pressure)
1. The following piping shall be pressure PVC pipe as indicated on the drawings and as specified herein:
2. As indicated in Piping Schedule below
3. Manufacturers:

a. Cresline Plastic Pipe Co.
b. North American Pipe Corp.
c. Spears Manufacturing Co.
d. Or accepted substitution

4. Pipe and fittings:
5. 1/2 inch to 12 inch, ASTM D1785 [verify size of pipe required for project]
   a. Pipe shall have cast iron pipe equivalent outside diameters
   b. Schedule 40 or 80
6. Fittings: Comply with ASTM D2466 (Schedule 40) or ASTM D2467 (Schedule 80)
7. Joints:
   a. Shall be bell and spigot, push-on type suitable for solvent welding, threading, or flanging
   b. Flanges: Diameter and drilling per ANSA B16.5, 150 lbs
   c. Flange bolts and nuts: ASTM A307, Grade B, galvanized, install such that bolts project 1/8-inch to 3/8-inch beyond the outer face of the nut
   d. Flange gaskets: Full face, minimum 1/8-inch neoprene or plasticized PVC and shall be in conformance with ASTM F104 and F477
8. Designed to hold pipe in alignment, provide flexibility, separate the ends of pipe lengths, resist applied pressures, and provide fluid tightness
9. Solvent welding: ASTM D2672
10. Use recommended solvent primer and cement for the application of fluid to be conveyed in pipeline
11. Provide for sleeves or couplings where indicated.
    a. Expansion joint manufacturers:
       i) Resistoflex "Style R6905"
       ii) Flexicraft “Style TEFLEX-C3’
       iii) Or accepted substitution
    b. Grooved couplings:
       i) Victaulic “Style 75” Style 77” “Style 741” "Style 78"
       ii) Or accepted substitution
12. Furnish pipe ends suitable for receiving style of sleeve or coupling indicated or specified.
13. Provide anchoring where restraint is required to withstand specified operating or hydrostatic test pressure and where indicated

C. PVC Drain, Waste, Vent, or Carrier Pipe (Non-Pressure)
   1. Pipe and fittings: Schedule 40 in accordance with ASTM D2466, ASTM D2122, F412
   2. Joints:
      a. Solvent weld per manufacturer’s recommendation
      b. Threaded: ANSI 82.1

2.2 HIGH DENSITY POLYETHYLENE (HDPE) PESSURE PIPING

A. HDPE pipe shall be as indicated on the drawings and specified herein:
   1. As indicated in Piping Schedule below

B. Manufacturers:
   1. Performance Pipe

2. WL Plastics
3. ISCO Pipe
4. Or accepted substitution

C. Material
1. The pipe shall be manufactured from a PE 4710 resin compound listed with the Plastic Pipe Institute (PPI) as TR-4.
2. The resin material shall be in accordance with ASTM D3350 with a minimum cell classification of 445574C/E.
3. This resin material shall have a Long Term Hydrostatic Strength of 1600 PSI when tested in accordance to ASTM D2837.
4. Pipe dimensions shall be in accordance with ASTM D3035 as a minimum.
5. The final compounded material shall contain a minimum of 2% carbon black
6. The pipe shall contain no recycled material except that generated by the pipe manufacturer in their own plant from resin compound of the same specification and raw material supplier. The pipe shall be homogeneous throughout and free of visible cracks, holes, foreign inclusions, voids, or other injurious defects.
7. Pipe shall have a manufacturing standard of ASTM F714 and be manufactured by an ISO 9001 certified manufacturer.
8. All pipes and fittings shall be suitable for use as pressure conduits, listed as NSF 14, and per AWWA C906 Pressure Class (PC) 100 have a nominal burst value of three and one-half times the Working Pressure Rating (WPR) of the pipe and/or fitting
9. The pipe shall be DR11 unless noted otherwise on the Drawings

D. Fittings
1. All fittings shall be PE 4710 HDPE, minimum Cell Classification of 445574C/E as determined by ASTM D3350, and approved for AWWA use.
2. All fittings shall be of the same base resin as the pipe.
3. All fittings shall have a working pressure rating equal to the pipe unless otherwise specified in the plans.
4. All fittings shall be homogeneous throughout and free of visible cracks, holes, foreign inclusions, voids, or other injurious defects.
5. Butt Fusion Fittings
   a. Molded butt fusion fittings shall be in accordance with ASTM D3261 and shall be manufactured by injection molding, a combination of extrusion and machining, or fabricated from HDPE pipe conforming to this specification.
6. Compression Type Mechanical Coupling
   a. Suitable for joining HDPE to HDPE, HDPE to PVC, or HDPE to DIP
   b. Factory coat coupling internally and externally with a fusion bonded epoxy
   c. Reinforce HDPE pipe with a split ring type stiffener in pipe bore
      i) Size stiffeners for size of HDPE pipe being joined
      ii) Supply feature that prevents stiffener from sliding completely into pipe
      iii) Size stiffeners for length of mechanical coupling and not to extend outside of body of mechanical coupling
      iv) Mark stiffener with pipe diameter
      v) Factory coat stiffeners internally and externally with fusion bonded epoxy
   d. Use seal and restraint type coupling. Requirements for type of couplings are specified herein or shown on Drawings

i) Approved Manufacturers:
   a) JCM Industries
   b) Agru America
   c) Romac Industries
   d) Or accepted substitution

E. Transition Couplings: One piece assembly
   1. One end being HDPE pipe with butt fusion joining technique
   2. Other end being either steel or brass pipe threaded suitable for connecting ductile iron, threaded fittings, or threaded valves
      a. Approved Manufacturers:
         i) Central Plastics Company
         ii) Industrial Pipe Fittings, Inc.
         iii) Or accepted substitution

F. Pipe fittings and flanged connections, to be joined by thermal butt-fusion, shall be of the same type, grade, and class of polyethylene compound and supplied from the same raw material supplier.

G. Sidewall fusions for connections to outlet piping shall be performed in accordance with HDPE pipe and fitting manufacturer's specifications. The heating irons used for sidewall fusion shall have an inside diameter equal to the outside diameter of the HDPE pipe being fused. The size of the heating iron shall be ¼ inch larger than the size of the outlet branch being fused.

H. Socket fusion, hot gas fusion, threading, solvents, and epoxies will not be used to join HDPE pipe

I. Flange Gaskets
   1. Flange gaskets shall be full-faced and shall be in accordance with ASTM D1330
   2. Flange gasket drilling pattern shall conform to ANSI B16.1/B16.5
   3. Flange gaskets shall be 1/16" thick for flanges up to 14" diameter. 1/8" thick gaskets shall be provided for flanges over 14" diameter

J. Gasket material shall be EPDM

2.3 TUBING

A. Provide 3/8 inch polypropylene resin tubing sufficient in length for transport of chemical from each metering pump to application point
   1. Natural translucent
   2. 0.062 inch wall thickness
   3. Pressure: 172 psi (at 73ºF)

B. Manufacturers:
   1. Ryan Herco Flow Solutions "Herco-Pro Polypropylene Tubing"
   2. Or accepted substitution

2.4 COPPER TUBING

A. The following piping shall be copper pipe provided for locations specified herein:
   1. Potable Water
   a. Interior, pressure pipe

B. Water tubing: ASTM B88, Type L, for exposed service

C. Instrument tubing
   1. Provide 1/2-inch copper tubing for air valve actuation piping
   2. Material: ASTM B75, hard-drawn
   3. Minimum wall thickness
   a. ¼ inch O.D.: 0.030 inches
   b. ⅜ inch O.D.: 0.032 inches
   c. ½ inch O.D.: 0.032 inches
   d. ¾ inch O.D.: 0.040 inches
   e. Minimum PVC jacket thickness: 0.032 inches
   4. Air instrument piping shall be painted in accordance with Section 09900

D. Fittings
   1. Flared: ASME B16.26
   2. Solder: ASME B16.18 or B16.22
   3. Compression:
   a. Crawford “Swagelok”
   b. Hoke “Gryolok”
   c. Imperial “Hi-Seal”
   d. Parker-Hannifin “CPI”
   e. Weatherhead “Self Align”
   f. Or accepted substitution
   4. Insulating
   a. Threaded:
      i) PSI “Delrin Insulating Couplings”
      ii) Vallet “V-Line Insulating Couplings”
      iii) Or accepted substitution
   b. Flanged:
      i) Epco “Dielectric Flange Unions”
   c. PSI “Type E Flange Insulation”
   d. Or accepted substitution

E. Solder: Solid wire, ASTM B32, Alloy Grade SN95 Lead Free Solder

F. Soldering flux: Paste Type, ASTM B813

G. Brazing filler metal: ASTM C260, BCuP
   1. Engelhard “Silvaloy 15”
   2. Goldsmith “gb-15”
   3. Handy and Hardman “Sil-Foss”
   4. Or accepted substitution

H. Brazing flux: Paste Type, AWS Standard A5.31, Type FB3-A or FB3-C

I. Flanges: Cast bronze, 150 lb, brazed joints, ASME B16.24

J. Flange bolts and nuts: As specified for steel pipe

K. Flange gaskets: As specified for steel pipe, except full face

L. Expansion joints
   1. Flexonics “Model HB Expansion Compensators”
   2. Mercer
   3. Or accepted substitution

PART 3 EXECUTION

3.1 INSTALLATION

A. Install as specified and indicated on Drawings

B. Remove dirt, rocks, debris, and other foreign materials from all pipelines

C. Keep interior of pipe and fittings thoroughly clean before installation and until work is accepted

D. Take precautions to prevent entrance of foreign material during jointing, lining repair, and inspection operation

E. Seal open end of line with watertight plug if pipe laying stopped

F. Provide and install sufficient copper tubing to run instrument air to all pneumatic actuators

G. Provide a shutoff valve and union at the water and air supply connections to each fixture and unit of equipment, whether shown on the Drawings or not

H. Provide a union within 2 feet of each threaded end valve unless other means for easy removal of the valve are available

I. Provide unions where required for equipment removal, indicated on the Drawing or specified

J. Do not install piping to obstruct openings and passageways

K. Cut pipe to measurement taken at the site, not from the Drawings

L. Layout piping to provide for expansion and contraction

M. Provide taps for pressure gauge connections with a nipple, snubber, and gauge cock

N. Securely anchor piping at the midpoints between expansion joints

O. Provide air supply piping with sectionalizing valves and valved air inlet connections to isolate portions of system for periodic testing

P. Grade all air piping to points of drainage; provide driplegs on drain valves at drainage points

Q. Uniformly grade all piping serving metering equipment and provide complete venting to eliminate air traps

R. Pipe stuffing box leakage from water sealed pumps to nearest point of drainage

S. Provide insulating fittings and dielectric isolation in all piping except air and gas piping wherever copper tubing or fittings are connected to iron or steel pipe or fittings

T. Provide expansion joints at not greater than 60-foot intervals in exposed or submerged piping

3.2 CONNECTION TO EXISTING PIPELINES

A. Make connections between new and existing piping with suitable fittings

B. Schedule connection to minimize inconvenience to the Owner

C. Undertake connections in order to disturb the system as little as possible

D. Where connection involves potable water systems, provide disinfection methods as prescribed in these Specifications

E. Once tie in to existing system is initiated, continue Work continuously until tie-in is made and tested

3.3 JOINTS

A. Make pipe joints carefully and neatly

B. Connect piping in accordance with manufacturer recommendations

C. Threaded
   1. ANSI B2.1, NPT fully and cleanly cut with sharp dies
   2. No more than 3 threads exposed after installation
   3. Ream pipe ends after threading to remove burrs
   4. Apply Teflon thread tape to joints in all plastic and stainless steel piping
   5. Apply thread tape or joint compound to joints in other piping
   6. Apply Teflon thread tape or litharage and glycerine paste to joints on steel piping for chlorine service

D. Compression
   1. Cut pipe ends squarely, remove burrs
   2. Clean contact surfaces with steel wool

E. Flared
    1. Cut tubing ends squarely, remove burrs
    2. Scratches or grooves in flared ends are not allowed

F. Soldered and brazed
    1. Braze joints in 2 inch or larger copper tubing
    2. Solder or braze lines smaller than 2 inch where solder fittings are specified
    3. Thoroughly clean joint surfaces with flint paper and coat with thin film of flux
    4. Install tubing to full depth of socket
    5. Do not overheat metal or flux
    6. Uniformly heat joint to melt filler metal on contact
    7. Remove surplus filler metal and flux while joint is still hot

G. Solvent welded
    1. Cut PVC pipe ends square and smooth, wipe clean
    2. Remove all burrs and filings
    3. Using a small brush, apply cement primer to the outside of pipe and the inside of the fitting socket
    4. Using a small brush, apply solvent cement to outside of pipe and inside of the fitting socket
    a. Solvent cement to be specifically rated for use with chlorine or hypochlorite solutions for piping and fittings that will be used to convey these solutions
    5. To ensure uniform cement distribution, push the coated surface snugly together and rotate approximately 1/2 turn
    6. Remove excess cement by wiping

H. Grooved couplings
    1. Cut grooves with grooving tool
    2. Groove to rigid grooving dimensions
    3. Groove cleanly and sharply without burrs or check marks
    4. Form rounded bottom "radius grooves" in plastic piping

I. Welded: ANSI B31.1, and per applicable Standards for pressure piping

J. Push on
    1. Per recommendations of pipe manufacturer
    2. Bevel each spigot end to facilitate assembly
    3. Lubricate with a heavy vegetable soap solution immediately before joint is completed
    4. Store lubricant in closed containers, keep clean, suitable for use in potable water contact

K. Mechanical Joints
    1. If an effective seal is not obtained, disassemble joint, clean thoroughly, and reassemble
    2. Do not over tighten bolts to compensate for poor installation
    3. Carefully align holes in mechanical joints with restraint device to permit installation of the harness bolts

4. Install flange and mechanical joint pieces so the four mechanical joint holes, as well as the flange holes, straddle the top centerline for horizontal piping, or the side centerline for vertical piping

L. Flanged joints
   1. Take care when bolting flanges to insure that there is no restraint on the opposite end of the pipe which would prevent gasket compression or cause unnecessary stress in flanges
   2. Leave one flange free to move in any direction while tightening flange bolts
   3. Do not pack or assemble bell and spigot joints until all flanges affected thereby have been tightened
   4. Tighten bolts gradually at a uniform rate to compress gaskets uniformly

3.4 COPPER PIPING

A. Install in a neat, workmanship like manner.

B. Follow guidelines of the Copper Tube Handbook and industry practice.

3.5 CHEMICAL PIPING

A. Install so that the lines are readily accessible for cleaning

B. At each point where flexible tubing is connected to rigid piping, provide a union or quick disconnect coupling

C. Provide crosses with threaded plugged openings at changes in direction

3.6 CLEANING

A. General
   1. The inside of all pipe, valves, and fittings shall be smooth, clean, and free from blisters, loose mill scale, sand, and dirt when erected
   2. Immediately prior to pressure testing, clean and remove grease, metal cuttings, dirt, or other foreign materials which may have entered the system
   3. Flush or blow all lines thoroughly before placing in service
   4. At completion of Work and prior to final acceptance, thoroughly clean Work installed under these specifications
   a. Clean equipment, fixtures, pipe, valves, and fittings of grease, metal cuttings, and sand and dirt which may have accumulated by operation of system, from testing, of from other causes
   b. Repair any stoppage or discoloration or other damage to parts of building, its finish, or furnishings, due to failure to properly clean piping system, without cost to Owner

3.7 FIELD QUALITY CONTROL

A. General
   1. Utilize pressures, media, and pressure test durations as specified on Piping Schedules

2. Isolate equipment which may be damaged by the specified pressure test conditions
3. Perform pressure test using calibrated pressure gauges and calibrated volumetric measuring equipment to determine leakage rates. Select each gauge so that the specified test pressure falls within the upper half of the gauge range. Notify Engineer 24 hours prior to each test
4. Completely assemble and test new piping systems prior to connection to existing pipe systems
5. Acknowledge satisfactory performance of tests and inspections in writing to Engineer prior to final acceptance
6. Provide all necessary equipment, materials, tools, appliances, devices, and perform all work required in connection with the tests and inspections
7. Bear the cost of all testing and inspecting, locating and remedying of leaks and any necessary retesting and re-examination

B. Pipe leaks
1. All joints and seams whether tested or not shall be watertight and airtight
2. Inspect all exposed shop and field welded seams
3. Leaks shall be clearly marked
4. Welded joints (steel) shall be repaired by chipping out defective parts and rewelding. Welds shall not be hammered
5. Leaks discovered by Owner within 2-years of final acceptance shall be repaired by the Contractor at no additional expense to the Owner

C. Test each line at the Contractor's expense in the presence and to the satisfaction of Engineer

D. General testing methods and criteria
1. Liquid systems
a. The following liquid piping systems shall have zero allowable leakage at the specified test pressure throughout the specified duration of 2 hours: exposed piping and buried or exposed piping carrying liquid chemicals or water
b. Hydrostatic pressure testing
i) For exposed piping: Prepare each section for testing, using adequate bracing and protect system equipment susceptible to damage by test pressures. Do not paint or insulate exposed piping until successful performance of pressure test.

3.8 DISINFECTION OF WATER PIPING SYSTEM

A. After favorable performance of pressure test and prior to final acceptance, thoroughly flush entire water piping system, including supply, source and any appurtenant devices and perform disinfection as prescribed

B. Flush and disinfect each segment of system in accordance with AWWA C651.

END OF SECTION

SECTION 15090

SUPPORTS AND ANCHORS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Pipe and equipment hangers and supports

B. Equipment bases and supports

C. Flashing and sealing equipment

1.2 RELATED SECTIONS

A. Section 03000 – Cast in Place Concrete

B. Section 05590 – Miscellaneous Metal

C. Section 09900 – Coatings

D. Section 15060 – Pipe and Pipe Fittings

1.3 REFERENCES

A. American Society of Testing and Materials (ASTM)
   1. F708 – Design and Installation of Rigid Pipe Hangers

B. International Building Code (IBC)

C. Manufacturers Standardization Society (MSS)
   1. SP58 – Pipe Hangers and Supports – Materials, Design and Manufacturer
   2. SP69 – Pipe Hangers and Supports – Selection and Application
   3. SP89 – Pipe Hangers and Supports – Fabrication and Installation Practices

1.4 SYSTEM DESCRIPTION

A. Provide complete system of pipe supports and anchors for all piping

B. Support all piping to prevent undue strain on any valve, fitting or piece of equipment

C. Provide support and anchors at changes in direction, change in elevation, adjacent to flexible couplings, and where valve actuators/positioners add additional weight and stresses

D. Do not install in equipment access areas

1.5 PERFORMANCE REQUIREMENTS

A. Pipe support system components to withstand total dead load
   1. Dead load: Weight of pipe filled with water plus any insulation
      a. Dead load defined as weight of pipe filled with water plus any insulation
   2. Factor of safety: 5 minimum

B. Pipe restraint system components to withstand thrusts created by fluid pressure within pipes
   1. Factor of safety: 5 minimum

C. Do not exceed manufacturers' recommended loads

D. Brace all piping 2½ inch and larger for Seismic Design Category B forces in accordance with International Building Code

1.6 SUBMITTALS

A. Submit under provisions of Section 01340

B. Shop drawings: Indicate system layout with location and detail of trapeze hangers. Include location of pipe supports

C. Product data: Provide manufacturers catalog data including load capacity

D. Design data: Indicate load carrying capacity of trapeze, multiple pipe, and riser support hangers

E. Manufacturer's installation instructions: Indicate special procedures and assembly of components

PART 2 PRODUCTS

2.1 MATERIALS

A. Not submerged: Galvanized steel except where otherwise indicated or specified

B. Submerged: Stainless steel, 304L

C. Use stainless steel materials for stainless steel pipe or galvanized steel with non-conductive isolation gaskets to prevent electrolytic corrosion

2.2 PIPE HANGERS AND SUPPORTS

A. Manufacturers:
   1. Anvil International
   2. Unistrut Corporation
   3. Elcen Metal Products Co.
   4. PHD Manufacturing, Inc

5. Or accepted substitution

B. Plumbing piping – water:
   1. Conform to requirements of Section 15060
   2. Hangers for pipe sizes ½ to 1½ inch: Stainless steel, adjustable swivel, split ring
   3. Multiple or trapeze hangers: Steel channels with welded spacers and hanger rods
   4. Wall support for pipe sizes to 3 inches: Cast iron hook
   5. Vertical support: Stainless steel riser clamp
   6. Copper pipe support: Stainless steel ring, adjustable, copper plated

2.3 ACCESSORIES

A. Hanger rods: ASTM A307, Grade R. Mild steel threaded both ends, threaded one end, or continuous threaded

B. Isolation pads: neoprene waffle type
   1. Manufacturers: Mason Industries "Type W", Fabreka Production Company "Fabcel", or accepted substitution

C. Insulation protection shield: ANSI/MSS SP-58

2.4 FLASHING

A. Metal flashing: 26 gauge galvanized steel

B. Metal counter flashing: 22 gauge galvanized steel

C. Flexible flashing: 0.125 inch thick sheet butyl-isoprene; compatible with roofing

D. Caps: Steel, 22 gauge minimum

2.5 SLEEVES

A. Sleeves for round ductwork: Galvanized steel

B. Sleeves for rectangular ductwork: Galvanized steel or wood

C. Sealant: Refer to Section 07900

2.6 FINISHING

A. All hangers, rods, clamps, protective shields, metal framing support components, and hanger accessories: Galvanized Steel unless otherwise indicated or specified

B. For stainless steel components: none required

PART 3 EXECUTION

3.1 INSTALLATION

A. Install in accordance with manufacturer's instructions

B. Pipe supports and anchors are not indicated on drawings in all locations; supports are indicated for most larger pipes

C. Provide system of pipe supports and anchors for all piping

D. Provide additional supports as required adjacent to couplings

E. Pipe supports shall be provided at all changes in direction and adjacent to flexible couplings

3.2 PIPE HANGERS AND SUPPORTS

A. For designated pipe supports located adjacent to equipment and other locations requiring vibration isolation, provide isolation pad

B. Support horizontal piping as scheduled

C. Install hangers to provide minimum ½ inch space between finished covering and adjacent work

D. Brace all piping 2-1/2 inch and larger for Seismic Design Category B forces in accordance with local building codes

E. Place hangers within 12 inches of each horizontal elbow

F. Use hangers with 1½ inch minimum vertical adjustment

G. Where several pipes can be installed in parallel and at same elevation, provide multiple or trapeze hangers

H. Support riser piping independently of connected horizontal piping

I. Design hangers for pipe movement without disengagement of supported pipe

J. Piping connections to equipment: Provide pipe support adjacent to equipment. Pipes shall not be supported on equipment

K. Do not support lower pipe from pipe above

L. Support pipe 1½ inch minimum from walls and 3 inch minimum below ceilings

M. From framing strut systems, cut ends and paint exposed metal with galvanized paint

N. Prime coat exposed steel hangers and supports. Refer to Section 09900. Hangers and supports located in crawl spaces, pipe shafts, and suspended ceiling spaces are not considered exposed

O. Do not install pipe supports in equipment access areas

3.3 EQUIPMENT BASES AND SUPPORTS

A. Provide housekeeping pads of concrete, minimum 4 inches thick and extending 6 inches beyond supported equipment. Refer to Drawings for location of pads

B. Provide templates, anchor bolts, and accessories for mounting and anchoring equipment

C. Construct supports of steel members. Brace and fasten with flanges bolted to structure

D. Provide rigid anchors for pipes after vibration isolation components are installed

3.4 FLASHING

A. Provide flexible flashing and metal counterflashing where piping and ductwork penetrate weather or waterproofed walls, floors, and roofs

B. Adjust storm collars tight to pipe with bolts; caulk around top edge. Use storm collars above roof jacks. Screw vertical flange section to face of curb

3.5 SCHEDULES

A. Maximum hanger spacing and rod size for cast iron, ductile iron, steel and PVC:

Pipe size (inches)	**Max. hanger spacing (feet)**	**Hanger rod diameter (inches)**
1½ and smaller	6	3/8
1 ½ to 2	8	3/8 to 1/2
2 ½ to 3	10	1/2 to 5/8
4	10	5/8
6 and 8	12	3/4
10 and 12	14	7/8
14 and16	16	1
18	16	1-1/8
20 and larger	18	1-1/4
PVC (all sizes)	6	Same as for steel

B. Maximum hanger spacing and rod size for copper and stainless steel piping
   1. Spacing:
      a. 1 inch and smaller: 5 feet maximum
      b. 1¼ inch and larger: 2 feet less than maximum spacing for steel pipe of same size
   2. Hanger rod size: Same as for steel

END OF SECTION

SECTION 15100

VALVES, COCKS, AND HYDRANTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Valves indicated on the drawings, specified, or required for proper operation of equipment or systems

1.2 RELATED SECTIONS

A. Section 01340 – Shop Drawings, Product Data, and Samples

B. Section 01600 – Materials and Equipment

C. Section 01730 – Operation and Maintenance Data

D. Section 09900 – Coatings

E. Section 15060 – Pipe and Pipe Fittings

F. Div 16 – Electrical

1.3 REFERENCES

A. American National Standards Institute (ANSI):
1. B16.1 – Cast Iron Pipe Flanges and Flanged Fittings
2. NSF/ANSI 61 – Testing and Certification

B. American Society for Testing and Materials (ASTM):
3. A48 – Standard Specification for Gray Iron Castings
4. A126 – Standard Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings
5. A216 – Standard Specification for Steel Castings, Carbon, Suitable for Fusion Welding, for High-Temperature Service
6. A536 – Standard Specification for Ductile Iron Castings
7. B62 – Standard Specification for Composition Bronze or Ounce Metal Castings

C. American Water Works Association (AWWA):
8. C111 – Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings
9. C207 – Steel Pipe Flanges for Waterworks Service, Sizes 4 In. Through 144 In.
10. C500 – Metal-Seated Gate Valves for Water Supply Service
11. C502 – Dry-Barrel Fire Hydrants
12. C503 – Wet-Barrel Fire Hydrants
13. C504 – Rubber Seated Butterfly Valves
14. C508 – Swing-Check Valves for Waterworks Service, 2 In. Through 24 In. NPS

15. C509 – Resilient-Seated Gate Valves for Water Supply Service
16. C510 – Double Check Valve Backflow Prevention Assembly
17. C511 – Reduced-Pressure Principal Backflow Prevention Assembly
18. C512 – Air Release, Air/Vacuum, and Combination Air Valves for Waterworks Service
19. C514 – Air Valve and Vent Inflow Preventer Assemblies for Potable Water Distribution System and Storage Facilities
20. C515 – Reduced-Wall, Resilient-Seated Gate Valves for Water Supply Service
21. C517 – Resilient-Seated Cast-Iron Eccentric Plug Valves
22. C518 – Dual-Disc Swing-Check Valves for Waterworks Service
23. C520 – Knife Gate Valves, Sizes 2 In. (50 mm) Through 96 In. (2,400 mm)
24. C530 – Pilot-Operated Control Valves
25. C541 – Hydraulic and Pneumatic Cylinder and Vane-Type Actuators for Valves and Slide Gates
26. C542 – Electric Motor Actuators for Valves and Slide Gates
27. C550 – Protective Interior Coatings for Valves and Hydrants
28. C560 – Cast-Iron Slide Gates
29. C561 – Fabricated Stainless-Steel Slide Gates
30. C562 – Fabricated Aluminum Slide Gates
31. C563 – Fabricated Composite Slide Gates

1.4 SUBMITTALS

A. Submit under provisions of Section 01340

B. Product Data: Provide data on valves and accessories. Provide manufacturer's catalog information with dimensions, materials, and assembled weight. Indicate valve data and pressure ratings

C. Manufacturer's Instructions: Provide complete manufacturer's installation instruction

1.5 PROJECT RECORD DOCUMENTS

A. Record actual size, type and locations of valves

1.6 OPERATION AND MAINTENANCE DATA

A. Submit under provisions of Section 01730

B. Maintenance Data: Include installation instructions, spare parts list, exploded assembly views, maintenance requirements

1.7 QUALITY ASSURANCE

A. Manufacturer's name and pressure rating marked on valve body

1.8 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing the products specified in this section with minimum 10 years documented experience

1.9 REGULATORY REQUIREMENTS

A. Conform to all municipal codes and ordinances, laws and regulations of the State

B. In case of apparent conflict, State and local requirements govern over these specifications

C. In absence of State and local regulations, International Plumbing Code will apply

D. Comply with Federal 2014 Reduction of Lead in Drinking Water Act with regard to pipe, fixtures, and fittings used to convey water for potable use purposes.

1.10 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, protect, and handle products to site under provisions of Section 01600

B. Prepare valves and accessories for shipment according to AWWA C500

C. Accept valves on site in shipping containers with labeling in place. Inspect for damage

D. Provide temporary protective coating on cast iron and steel valves

E. Seal valve ends to prevent entry of foreign matter into valve body

F. Drain valves and pilotry of water prior to shipping and storage

PART 2 PRODUCTS

2.1 GENERAL

A. Construction
   1. Actual valve length within ± 1/16" of specified or theoretical length
   2. Ends, except as otherwise specified
      a. 3" and smaller, threaded or soldered ends
      b. 4" and larger, flanges, ANSI 125 lb
      c. Wafer style valves designed for installation between ANSI 125 lb flanges

B. Actuators
   1. Manual actuators:
      a. Provide manual actuators for all valves not specified to be power actuated or designed for automatic operation
         1) General use: Handwheel
         2) Seven feet or more above the floor or grade unless otherwise indicated: Chain wheel with operating chain

a) Equipped with chain guide to permit rapid chain handling of the chain without “gagging” the wheel and to permit reasonable side pull on the chain
b) With extensions as required to prevent interference with adjacent piping or equipment
c) Chain heavily zinc or cadmium-plated and looped to extend between 3' and 4' off the floor or grade below valve

b. Rotation
1) Counter clockwise (to the left) to open
2) The word “OPEN” and an arrow indicating the direction to open cast on each valve body or operator
3) Position indicator clearly visible from operating floor

c. Extension stems
1) Provide where indicated on drawings, specified, or required for proper operation
2) Non-rising stems
a) Solid steel shafting with O.D. not less than O.D. of valve stem or galvanized steel pipe with I.D. not less than O.D. of valve stem
b) Connected to the valve by a flexible socket coupling
c) All other connections pinned, keyed, or socket
3) Rising stem
a) Stainless steel or carbon steel shafting with O.D. not less than O.D. of valve stem
b) Bronze or stainless steel sleeves securely attached to stem
c) Sleeve length and location to extend through each stem guide throughout the full vertical travel of the stem

d. Stem guides
1) Cast iron, bronze brushed, adjustable in two directions
2) If extension stem length exceeds 10' or the weight exceeds 50 lbs., design top guide to carry the stem weight and provide a collar on the stem to bear against the thrust guide
3) Max spacing
a) Non-rising stems: 100 times stem O.D.
b) Rising stems: 60 times stem O.D.
c) Ten-foot maximum

e. Operating Stands
1) Provide as indicated on Drawings
2) Fabricated steel or cast iron
3) Support the handwheel or lever approximately 36" above the floor
4) Handwheel diameter: 8" minimum
5) Provide a standard weight galvanized pipe sleeve for opening in the floor
6) For longer than 10' and without stem guides with thrust bearings, provide a suitable thrust bearing in each stand to carry extension stem weight

2. Electric Actuators (Operators)
a. Provide motor actuators as indicated on Drawings
b. Each motor actuator to consist of motor, actuator unit gearing, handwheel, limit and torque switches, mechanical position indicator, lubricants, heating element,

wiring, terminals and integral reversing controller on capacitance starter as indicated, constructed as a self-contained unit

c. Housing: Cast, weatherproof, NEMA 4 unless indicated otherwise
    1) Operating time from fully open to fully closed or the reverse:
    2) For open/close valves: 30 seconds
    3) For modulating valves: adjustable from 15 seconds to two minutes
d. Motors
    1) Mounted horizontally adjacent to or vertically above gearing
    2) Do not mount with motor vertical below gearing
    3) Totally enclosed, high torque, designed expressly for valve operator service
    4) Service rating:
        a) Open/close service motors shall be rated for 15-minute continuous duty
        b) Modulating service motors shall be rated for a minimum of 600 starts/hour
        c) Designed in accordance with NEMA Standards
        d) Insulation: Class F or better
        e) Bearings: Permanently lubricated
        f) Voltage tolerance: +/- 10 percent
        g) Voltage rating: 480 Volt, 60 Hz, 3 phase
        h) Conform to AWWA C542
    5) Gearing
        a) All grease lubricated
        b) Service factor: 2.0
        c) Effectively sealed against entrance of foreign material
        d) AGMA nameplate not required
        e) Supported by anti-friction bearings
    6) Designed so motor comes up to speed before stem load is encountered in opening and closing direction
    7) Self-locking worm gear drive with alloy bronze worm gear and hardened steel worm
    8) Handwheel/Chainwheel mechanism
        a) Designed to handwheel/chainwheel does not operate during motor operation
        b) Designed so motor does not rotate when handwheel/chainwheel is rotated after declutching
        c) Provide declutching extensions to allow declutching of all electric actuators from floor level
        d) Actuator responsive to electrical power and control at all times, instantly disengaging handwheel/chainwheel
        e) Shall meet all requirements for manual actuator
    9) Torque switches
        a) Provide opening and closing torque and thrust limit switches
        b) Micrometer adjustment on each switch
        c) Reference setting indicator
        d) Variability 40 percent
        e) Contact rating: 6 amp inductive at 120 Vac
    10) Geared limit switches
        a) Space for 4 geared limit switch assemblies

b) Each assembly with 2 sets of NO contacts and 2 sets of NC contacts
c) Each assembly geared to driving mechanism and independently adjustable to transfer at any point between fully open and fully closed valve position
d) Contact rating: 6 amp inductive at 120 Vac
e) Provide three limit switch assemblies

11) Heating element
a) Provide in actuator housing
b) Rated 120 Vac
c) Continuously energized

12) Terminal facilities: Provide for connection to motor leads, switches, heating elements, control and power supply

13) Controller
a) Integrally mounted solid state reversing controller for modulating operators, integrally mounted electromechanical controller for open-close operators
b) Motor overload protective device
c) Electrically interlocked
d) Provided with the necessary direct operated auxiliary contacts for required interlocking and control

14) Pilot devices, Modulating Service
a) In a weatherproof enclosure close-coupled to actuator housing
b) Open-stop-close maintained contact push buttons
c) Hand-Auto maintained selector switch
d) Red “Open” and green “Closed” indicating lights
e) Auto position of selector allows 4-20 ma input proportional to required valve position

15) Pilot Devices, Open/Close Service
a) In a weatherproof enclosure close-coupled to actuator housing
b) Local Open/Close maintained pushbuttons
c) Local Hand-Auto maintained selector switch
d) Local red “Open” and green “Closed” indicating light
e) Auto position of selector allows open or close operation from remote un-powered contact from maximum distance of 300 feet

16) NEMA Size 1 minimum

17) Action on loss of command signal shall be selectable to include open, close, or last position

18) Controller for modulating service shall include provisions for zero, span gain, opening and closing speed potentiometer and deadband adjustment

19) Acceptable Manufacturers:
a) Rotork
b) Bray
c) Auma
d) Limitorque

2.2 BUTTERFLY VALVES (WATER AND PROCESS SERVICE)

A. Manufacturers:

1. DeZurik
2. Milliken
3. Val-Matic
4. Or Engineer accepted substitution

B. Valve Design and Conditions
   1. Bi-directional pressure rating: 150 psi for 3 inch through 24 inch valves
   2. Temperature rating: 250°F
   3. Bi-directional and tested to 110% of full rating
   4. Shall be in conformance with AWWA C504 and C542
   5. Conform to Valve Schedule in this section
   6. Valve ends:
      a. Shall be ANSI B16.1 Class 125 for cast-iron body valves Class 25A through Class 150B
      b. Shall be ANSI B16.1 Class 125 for ductile iron body Class 250 valves
      c. Shall be AWWA C207 Class D with ANSI B16.1 Class 125 drilling for steel body Class 25A through Class 150B valves
      d. Shall be AWWA C207 Class E for steel body Class 250 valves
   7. Joints:
      a. Shall be mechanical or push-on type rubber-gasket joint ends
      b. Shall conform to AWWA C111
   8. The use of a stop or lug cast integrally with or mechanically secured to the body for the purpose of limiting disc travel by means of direct contact or interference with the valve disc (in either the open or closed position) will not be acceptable

C. Materials
   1. Body:
      a. Cast iron for Class 25A through Class 150B valves
      b. Ductile iron for Class 250
   2. Disc:
      a. Cast iron or ductile iron for Class 25A through Class 150B valves
      b. Ductile iron for Class 250
   3. Seats:
      a. NBR for services up to 180 Deg F
      b. Shall be body mounted
      c. Shall be resilient type
      d. Mating seat surface shall be stainless steel or Monel
         1) Sprayed or plated mating surfaces are not acceptable
   4. Shaft: 316 stainless steel
   5. Shaft seals:
      a. Shall be designed for use of standard self-adjusting split-V-type packing or Viton O-ring seals
      b. Pull down packing is not acceptable

D. Valve position indicators
   1. Provide position indicators on all exposed operators
   2. Provide handwheel with an arrow with the word open on handwheel rim specifying opening direction

a. Arrow shall be cast on rim and raised
3. Identify open position of valve, 0 - 100%

E. Operator locking devices
1. Modulating service: Infinitely variable locking device or a totally enclosed geared operator as indicated

2.3 BUTTERFLY VALVES (WATER AND PROCESS SERVICE)

A. Manufacturers:
1. Bray
2. Pentair
3. Or Engineer accepted substitution

B. Valve Design and Conditions
1. Bi-directional pressure rating:
a. 175 psi for 2 inch through 12 inch valves
b. 150 psi for 14 inch to 20 inch valves
2. Temperature rating: 180°F with BUNA seat
3. Bi-directional and tested to 110% of full rating
4. Conform to Valve Schedule in this section
5. Valve ends:
a. Shall be wafer or lug design with extended neck as shown on Valve Schedule
6. Joints:
a. Shall be installed between piping flanges
b. Flange locating holes to be provided on wafer bodies

C. Materials
1. Body:
a. Cast iron or ductile iron
b. Polyester coating standard
2. Disc:
a. Nylon coated (gray) ductile iron
3. Seats:
a. BUNA for services up to 180 Deg F
b. Shall be body mounted
c. Shall be resilient type
4. Shaft: 316 stainless steel
5. Shaft seals:
a. Double "U" cup seal design self-adjusting and with positive sealing in both directions.

D. Valve position indicators and actuator
1. Handle and notch plate manual lever operator with disc position indicator
2. Handwheel manual gear operator type with disc position indicator and with an arrow with the word OPEN on handwheel rim specifying opening direction
3. Identify open position of valve, 0 - 100%
4. Manual valve actuator type to be specified in Valve Schedule

E. Operator locking devices
   1. Modulating service: Variable notched locking device or a totally enclosed geared operator as indicated

2.4 BALL CHECK VALVE

A. Manufacturers
   1. Flomatic Valves, Type 408
   2. Flygt Corporation, Type 5087
   3. AVK, Series 53
   4. Or Engineer accepted substitution

B. Design
   1. Ball check valves shall be designed to be non-clog, fully automatic, maintenance free, and specifically suited for operation in wastewater where solids, fibers, grit or highly viscous materials are encountered
   2. Ball check valves are designed to be maintenance-free and suited for installation in the horizontal or vertical position
   3. Ball check valves will have one moving part, the ball, which automatically rolls out of the path of flow, thus providing an unobstructed and "full flow" equal to nominal size. Upon discontinuation of flow, the ball shall automatically roll back to the closed position providing a positive seal against back pressure or backflow
   4. Ball shall have an exterior coating of vulcanized nitrile rubber resistant to grease, petroleum products, animal and vegetable fats, dilute concentrations of acids and alkalines, tearing and abrasion
   5. Valve shall be constructed so that by unbolting and lifting off the cover, the ball may be removed and replaced without removing the valve from the line
   6. Ball check valves will be available with either a floating or sinking ball.
   7. Suitable for 150 psi working pressure (all sizes)
   8. Conform to Valve Schedule criteria in this section
   9. Body and Cover: Flanged iron body shall be nodular cast iron type
   10. Flanges: Shall be ANSI B16.1 Class 125

2.5 SWING CHECK VALVES

A. Manufacturers
   1. APCO (DeZurik), Series 6000 with Oil Control/Bottom Buffer
   2. CCNE (Millikin Co), Model 9001
   3. GA Industries, Model 250D
   4. Val-Matic Valve and Manufacturing Corp, Series 7900
   5. Or Engineer accepted substitution

B. Design
   1. 175 psi working pressure (general). 250 psi working pressure (special case).
   2. Conform to AWWA C508
   3. Conform to Valve Schedule criteria in this section
   4. Unobstructed waterway, quick-closing, spring-loaded, horizontal swing

5. Stainless steel shaft with both ends extending through bronze bushed bearings and outside stuffing boxes
6. Body and Cover: Shall be cast iron, bronze mounted, full opening
7. Flanges: Shall be ANSI B16.1 Class 125
8. Furnish with extended stainless steel hinge with outside lever and weight
9. For vertical installations, adjust lever angle accordingly

2.6 BALL VALVES (BRONZE OR STAINLESS STEEL)

A. Manufacturers for air and water service 2-inches and larger:
1. Jamesbury (Metso)
2. Jenkins (Crane)
3. Crane
4. Nibco
5. Or Engineer accepted substitution

B. Manufacturers for air and water service 2-inches and smaller:
1. Crane
2. Jamesbury (Metso)
3. Jenkins (Crane)
4. Nibco
5. Or Engineer accepted substitution

C. Application
1. Except as otherwise indicated or specified, provide ball valves for all 2-1/2" or smaller shutoff valves
2. Provide additional ball valves as indicated on Drawings or as specified

D. Fabrication
1. Handles showing direction of opening
2. Ball design which does not allow media contact with stem
3. Balancing stop for all applications

2.7 AIR RELEASE AND VACUUM RELIEF VALVES

A. Manufacturer
1. APCO (DeZurik)
2. A.R.I.
3. Val-Matic
4. GA
1. Crispin
2. Or Engineer accepted substitution

B. General
1. Provide as indicated on Drawings
2. Water working pressure: 50 psi
3. Provide a shutoff valve: Ball valve, gate valve, butterfly valve, eccentric action handle

a. Manufacturers:
   1) Nibco
   2) Dyna-Quip
   3) Or Engineer accepted substitution

C. Clean Water Service
   4. Individual air release valves:
      a. Provide air release valves at process piping locations as indicated on the Drawings
      b. Inlet and outlet size as indicated on Valve Schedule
      c. Manufacturers:
         1) GA "Figure AR"
         2) Val-Matic "Model 15-38S"
         3) APCO "200A"
         4) A.R.I.
         5) Or Engineer accepted substitution
   5. Combination air release and vacuum relief valves: 3-inches and smaller
      a. Provide integral type that functions as both an air vacuum valve and an air release valve
      b. Inlet and outlet size as indicated on Drawings
      c. Manufacturers:
         1) GA "Figure CAV"
         2) Val-Matic "200C Series"
         3) APCO "140C Series"
         4) A.R.I.
         5) Or Engineer accepted substitution
   6. Combination air release and vacuum relief valves: 4-inches and larger
      a. Provide air and vacuum valve with externally mounted air release valve
      b. Inlet and outlet size as indicated on Drawings
      c. Manufacturers:
         1) GA "Figure CAV"
         2) Val-Matic "Combination Air Valve"
         3) APCO “Custom Combination Air Release"
         4) A.R.I.
         5) Or accepted substitution

2.8 PRESSURE RELIEF

A. Manufacturers
   1. Cla-Val
   2. Singer Valve
   3. Bermad Valve
   4. Or Engineer accepted substitution

B. Performance
   1. Provide quick opening at pre-set (adjustable) over pressure and dissipate surge
   2. Close slowly when normal line pressure is restored
   3. Anticipate surge and open quickly on pre-set duration and then close slowly

4. Provide time delay pilot to close main valve after surge is dissipated to prevent dewatering of system

C. Materials
1. End Connections: Flanged ANSI B16.1 125 lb
2. Valve body and cover:
   a. Cast Steel, ASTM A216-WCB
   b. Cast iron, ASTM A536
   c. Cast Bronze, ASTM B62
3. Trim: Bronze ASTM B62
4. Pilot Control: Bronze, ASTM B62 with Stainless Steel 303 Trim
5. Rubber and Disc: Buna-N synthetic
6. Stem, Nut & Spring: Stainless Steel
7. Diaphragm: Nylon Reinforces Buna-N rubber
8. 1-1/2 inch and Larger: Cla-Val "50-01" or accepted substitution
9. 3/4 inch and smaller: Cla-Val "55F" or accepted substitution

D. Construction
1. Cast iron, conforming to ASTM A126 Class B
2. Bronze mounted
3. Shall be of 10 degrees offset seat design with offset single pivoted hinge
4. Length suitable for concrete wall thickness

2.9 BACKFLOW PREVENTER (DC)

A. Provide a testable dual check (DC) valve assembly and inlet and outlet isolation valves for low hazard backflow prevention

B. Manufacturers:
1. Watts-Febco “DC Type 850”
2. Zurn-Wilkins “DC Type 350XL”
3. Or Engineer accepted substitution

C. Design
1. 1/2 inch to 2 inch
2. Provide bronze body, bronze mounted isolation valves

2.10 BACKFLOW PREVENTER (RPZ)

A. Provide a testable dual check valve assembly with reduced pressure zone (RPZ) and inlet and outlet isolation valves for high hazard backflow prevention

B. Manufacturers:
1. Watts-Febco "RPZ Type 825Y"
2. Zurn-Wilkins “RPZ Type 975XL”
3. Or Engineer accepted substitution

C. Design
1. 3/4 inch to 2 inch size

2. Provide bronze body, bronze mounted isolation valves

2.11 BALL AND BUTTERFLY VALVES (PVC OR CPVC BODY)

A. Use ball and butterfly valves for low pressure small diameter pipe locations
   1. 3” and less in size
   2. Type as shown on Drawings
   3. PVC or CPVC, as indicated on the valve schedule
   4. Valve ends as required by piping with ability to remove valve with unions or flanges
   5. Handle or lever operator, quarter turn

B. Manufacturers
   1. NIBCO
   2. Asahi
   3. Or Engineer accepted substitution

2.12 DIAPHRAGM VALVES (PLASTIC BODY)

A. Use plastic body diaphragm valves in the following services
   1. Sodium hypochlorite
   2. Sodium bisulfite
   3. Sodium hydroxide

B. Manufacturers
   1. Simtech, DVA Series
   2. Asahi America, Type 14
   3. Or Engineer accepted substitution

C. Materials
   1. Body: PVC with reinforcing ribs at body and end connections.
   2. Diaphragm: Unless otherwise specified below, provide 2 diaphragm layers - Teflon diaphragm with EPDM backing or other material suitable for the intended use
      a. For sodium hypochlorite service: 3 diaphragm layers, Teflon (PTFE), PVDF, and ethylene propylene diene monomer (EPDM) or Viton backing cushion
   3. Bonnet: Reinforced polypropylene with cast iron or silicon bronze drive nut, double lead acme stem threads, acrylic protective cap and visual position indicator
      a. Adjustable travel stop: Stainless steel
      b. Compressor: PVDF or cast iron
   4. Handwheel: Polypropylene
   5. Sleeve: Bronze or cast iron
   6. Stem: Stainless steel
   7. Bolt, nut and washer: Stainless steel
   8. Thrust bearing: Teflon disc or carbon steel
   9. End connector: PVC
   10. End connector seal (flange gasket): Suitable for the intended use unless otherwise specified below
      a. For sodium hypochlorite and sodium bisulfite solution service: Hypalon 1/8-inch thick gaskets

11. O-rings: Viton
12. Position indicator: Carbon steel

D. Valve design
1. End connections: Flanged
2. Operator handle: Handwheel, with position indicator and adjustable travel stop to prevent overtightening. Provide acrylic stem cap
3. Diaphragm valves: Weir type
4. Pressure:
a. 150 pound per square inch gauge at 70 degrees Fahrenheit

PART 3 EXECUTION

3.1 INSTALLATION

A. General:
1. Carefully inspect valve before installation. Clean interior. Operate valve to determine parts in proper working order, with valves seating and drain valve operating properly
2. Install valves and accessories in accordance with the manufacturer's recommendation and in accordance with referenced standards and specifications and shown on Drawings
3. Provide a union or flanged connection within 2 feet of each threaded end valve unless the valve can otherwise be easily removed from piping
4. Set valve level and plumb. Actuator to be set plumb or actuator can be set at 90 degrees to valve body if required for proper actuation
5. Install valve in proper orientation for flow and disc seating
6. Test valves installed with piping for hydrostatic testing, ensure each valve is operated and able to maintain test pressure and seal tight to isolate each piping section

B. Check valves: Install ball check valves in vertical piping

C. Air release and Vacuum-Relief Valves:
1. Provide exhaust piping to a suitable disposal point

3.2 ADJUSTMENT

A. Check and adjust valves, actuators, pilotry, and accessories for smooth operation in accordance with manufacturer's instructions

3.3 TRAINING

A. Provide manufacturer certified training on-site for valves and actuators

B. Training to consist of field training and classroom training for valves and actuators as required
a. Minimum of 4 hours training for valves with pilotry and/or electric/pneu actuators
b. Minimum of 4 hours training for valves with replaceable seats and seals, or are testable backflow preventers

END OF SECTION

SECTION 16050

BASIC ELECTRICAL MATERIALS AND METHODS

PART 1 GENERAL

1.1 SUMMARY

A. This section includes basic electrical requirements for materials and methods applicable to electrical equipment specified under this section and other related sections.
   1. Conduit
   2. Boxes
   3. Duct Bank
   4. Wire and Cable
   5. Maintenance Materials

B. Related Sections:
   1. Section 01340 – Shop Drawings and Product Data
   2. Section 01500 – Construction Facilities and Temporary Controls
   3. Section 01730 – Operation & Maintenance Data
   4. Section 02300 – Earthwork
   5. Section 03300 – Cast-In-Place Concrete
   6. Section 09900 – Coatings

1.2 REFERENCES

A. UL – All applicable standards

B. IEEE – All applicable standards

C. IPCEA – All applicable standards

D. NEMA – All applicable standards

E. ANSI/NFPA 70 – National Electrical Code

F. ANSI C2 – National Electrical Safety Code

G. ANSI/NEMA FB 1 – Fittings and Supports for Conduit and Cable Assemblies

H. ANSI/NEMA OS 1 – Sheet-steel Outlet Boxes, Device Boxes, Covers, and Box Supports

I. ANSI/NEMA OS 2 – Nonmetallic Outlet Boxes, Device Boxes, Covers and Box Supports

J. NEMA 250 – Enclosures for Electrical Equipment (1000 Volts Maximum)

1.3 SUBMITTALS

A. Information covering all material that is to be used on this project shall be submitted.

B. Each sheet of descriptive literature shall be clearly marked to identify the material or equipment for which it pertains.

C. Equipment on submitted sheets that is not for this project shall be crossed out.

D. As a minimum the following information shall be submitted:
   1. Equipment sheets shall identify what the equipment refers to by calling out the name of the equipment on the sheet.
   2. Schematics and connection diagrams for all electrical equipment shall be submitted.
   3. Submit all types of conduit and cables with manufacturer and sizes as well as all appurtenances.
   4. Submit shop drawing detailing conduit runs for any new or modified structure for the facility.

1.4 QUALITY ASSURANCE

A. Supplier's qualifications
   1. The entire system shall be designed, coordinated, and supplied by a qualified Electrical Contractor who is regularly engaged in the business of building electrical systems for water and wastewater projects. The Electrical Contractor shall provide a "Statement of Qualifications" indicating that they have successfully provided similar work for at least 5 years.

B. Coordination
   1. The electrical equipment shall be designed and coordinated for proper operation with related equipment and materials furnished by other suppliers under other sections of these specifications. All devices shall be applied in full conformity with the drawings, specifications, engineering data, instructions, and recommendations of the instrument or device manufacturer and the manufacturer of related equipment.
   2. Installation drawings shall be prepared for interconnecting wiring and piping between the related equipment and the equipment furnished under this section. All interconnecting wiring shall be appropriate for the service and shall result in a properly functioning system.
   3. The Contractor shall provide coordination with other contractors and supervision of installation as required during construction.
   4. Accurately record actual locations of conduit, duct banks, panels, and accessories.

1.5 REGULATORY REQUIREMENTS

A. Conform to applicable Building Code.

B. Electrical: Conform to latest version of NFPA 70.

C. Coordinate, obtain and pay for all permits, inspections and approvals of authority having jurisdiction.

D. Comply with local electrical codes in force or in the absence of local electrical code, the latest edition of the National Electrical Code, ANSI C1.

1.6 WARRANTY

A. The electrical contractor shall warrant the supplied equipment and labor for a period of two years from the date of system acceptance.

PART 2 PRODUCTS

2.1 GENERAL REQUIREMENTS

A. The work for this project is for a functioning city building. All new work shall be done in a way that allows the existing facility to maintain its operation.

B. All equipment furnished under this Section shall be selected by the Contractor for its superior quality and intended performance. Unless indicated otherwise, all equipment and material shall be new, undamaged, and meet the requirements of UL. Where UL requirements are not applicable, equipment and material shall be identified as such by the supplier and approved by the Engineer before purchase and installation. Equipment and materials used shall be subject to review and shall comply with the following requirements.
   1. Conduit
      a. Minimum Size: ¾ inch unless otherwise specified
      b. Underground Installations:
         i) Over 100V: More than five feet from foundation wall: Use thick wall nonmetallic conduit.
         ii) Within five feet from foundation wall: Use rigid steel conduit
         iii) Under 100V: Use rigid steel conduit
         iv) Minimum size: 1 inch.
      c. Outdoor Locations, Above Grade: Use rigid steel conduit.
      d. In Slab Above Grade:
         i) Use rigid steel conduit for circuits that are 24V or less.
         ii) Use rigid thick wall non-metallic conduit for 120V to 480V circuits.
         iii) Maximum Size Conduit in Slab: 2 inch, 1 inch for conduits that cross over each other, or with structural engineer's approval.
         iv) Conduits shall not be spaced closer than 3 conduit widths on center.
         v) Aluminum conduit shall not be embedded in concrete.
         vi) Conduits shall not pass through a structural concrete beam without the structural engineer's approval.
      e. In or under slab on grade:
         i) Use rigid steel conduit for circuits that are 24V or less.
         ii) Use rigid thick wall non-metallic conduit for 120V to 480V circuits.
      f. Wet and damp locations: Use rigid steel conduit or aluminum conduit.
      g. Dry locations:
         i) Concealed: In walls or above ceilings, use rigid steel or aluminum conduit.
         ii) Exposed: Use rigid steel conduit or aluminum conduit.

h. Rigid Steel Conduit.
    i) Rigid steel conduit shall be heavy wall, hot-dipped galvanized, and shall conform to Fed Spec WW-C-581 and ANSI C80.1, and shall be manufactured in accordance with UL 6.
i. Rigid Nonmetallic Conduit (PVC).
    i) PVC conduit shall be heavy wall, schedule 40, shall be UL labeled for aboveground and underground uses.
j. PVC-Coated Rigid Steel Conduit.
    i) The conduit shall be rigid steel and before the PVC coating is applied, the hot-dipped galvanized surfaces shall be coated with a primer to ensure a bond between the steel substrate and the coating. The PVC coating shall be bonded to the primed outer surface of the conduit at a thickness of at least 40 mils. A two part urethane chemically cured coating shall be applied at a nominal 2 mil thickness to the interior of all conduit and fittings.
    ii) Manufacturers: Ocal, PermaCote, or Robroy Industries.
k. Rigid Aluminum Conduit.
    i) Rigid aluminum conduit shall be heavy wall and shall conform to Fed Spec WW-C-581 and ANSI C80.1, and shall be manufactured in accordance with UL 6.
l. Flexible connections
    i) Conduit: Moisture proof vinyl jacketed, liquid-tight, hot-dipped galvanized flexible steel and shall be UL labeled.
    ii) Connectors: Watertight, Appleton Type ST or STB, Crouse-Hinds Type LT or LTC, or equal.

2. Pull and Junction
    a. Sheet Metal Boxes: NEMA OS 1, Galvanized Steel.
    b. Surface-Mounted Cast Metal Box: NEMA 250, Type 4 flat-flanged, surface-mounted junction box.
        i) Material: Galvanized cast iron Cast aluminum in corrosive areas.
        ii) Cover: Furnish with ground flange, neoprene gasket, and stainless steel cover screws.
        iii) Model: WCB as manufactured by Crouse-Hinds.
    c. In-Ground Cast Metal Box: NEMA 250, Type 6, outside flanged, recessed cover box for flush mounting.
        i) Material: Galvanized cast iron.
        ii) Cover: Nonskid cover with neoprene gasket and stainless steel cover screws.
        iii) Cover Legend: ELECTRIC.
        iv) Model: WPD as manufactured by Crouse-Hinds.
3. Large Junction Boxes and Wiring Gutters
    a. Indoor Locations:
        i) Steel, NEMA 12.
    b. Outdoors:
        i) Stainless steel.
        ii) Weather-tight NEMA 4.
    c. Construction.

i) Provide rigid handles for box covers larger than 9 sq. ft. or heavier than 25 lbs.
ii) Provide split covers for covers larger than 12 sq. ft.
iii) Aluminum boxes in concrete not allowed.

4. Seal Fittings
   a. Model ESU with Apelco sealing cement and fiber, as manufactured by Appleton.
   b. Model EZS with Chico X Fiber and Chico A compound as manufactured by Crouse-Hinds.
5. Deflection Fittings
   a. Locations:
      i) Underground conduit runs.
      ii) Runs between concrete sections subject to relative movement.
   b. Material:
      i) Ferroalloy hubs.
      ii) Neoprene outer jacket.
      iii) Stainless steel jacket clamps.
      iv) Molded plastic inner sleeve.
      v) Tinned copper braid grounding strap.
   c. Model XD as Manufactured by Crouse-Hinds.
6. Expansion Fittings
   a. Locations:
      i) In long conduit runs, to permit linear movement caused by thermal expansion and contraction.
      ii) In long conduit runs to prevent conduit from buckling.
      iii) Indoors and outdoors, where conduit expansion occurs or where there is a wide temperature range.
      iv) At structural expansion joints.
   b. Material:
      i) End fittings: Ferroalloy.
      ii) Body: Steel conduit.
   c. Provide Bonding Strap When Used Outdoors.
   d. Model XJ, as Manufactured by Appleton and Crouse-Hinds.
7. Flexible Sealing Compound
   a. “Duxseal” as Manufactured by Johns-Manville.
   b. “Permagum” as Manufactured by In mount.
8. Coal Tar Epoxy Paint
9. Wire and Cable
   a. 600 Volt Power Cable
      i) General Use:
         a) Conductors: Single, copper, 12 AWG minimum.
         b) All conductors shall be stranded.
         c) Insulation: 600V thermoplastic, UL Type THWN/THHN.
         d) Suitability: Wet or dry locations at 75° C and 90° C copper temperature.
         e) Or as specified for service entrances.
      ii) Service entrance and 4 AWG and above:
         a) Conductors: Single, stranded, copper.

b) Insulation: 600V cross-linked polyethylene, UL Type XHHW/USE or THHN.
c) Suitability: Wet or dry locations at 75°C and 90° C copper temperature.

iii) Terminations
a) Lugs, cup washers or pressure type; do not use wire nuts on stranded cable or wrap standard cable around screw type terminals

b. Lighting Circuits
i) General Use:
a) Conductors: Single, copper, 12 AWG minimum.
b) Conductors may be solid or stranded.
c) Insulation: 600V thermoplastic, UL Type THWN/THHN.
d) Suitability: Wet or dry locations at 75° C and 90° C copper temperature.

ii) Terminations:
a) Lugs, cup washers or pressure type; do not use wire nuts on stranded cable or wrap stranded cable around screw type terminals.

c. Control circuits
i) General Use:
a) Conductors: Single, tinned copper, 14 AWG
b) All conductors shall be stranded
c) Insulation: 600V thermoplastic, UL Type THWN/THHN.

ii) Millivolt or Milliampere Instrumentation and Control.
a) Conductors: 18 AWG stranded copper, 2 or 3 as required.
b) Insulation: 15 mils, minimum, 90°C PVC.
c) Shield: Mylar aluminum tape with 20 AWG copper drain wire, fully covering conductors.
d) Jacket: 20 mils, minimum, 80°C PVC.
e) Suitability: Wet or dry steel conduit.

iii) Manufacturers: Belden "UL Instrumentation Cable – 1032A", Samuel Moore "Dekoron ICMX" No. 1852-686 and 1862-686, or equal.

d. Telephone and Networking
i) Cable.
a) The cables shall be rated for use in communications circuits.
b) The cables shall be rated for riser applications.
c) The cables shall be rated for 75 degrees Celsius applications.
d) The cables shall be free of defects and splices.
e) The cables shall be rated for outdoor applications.
f) The cables shall be rated for P-MSHA applications.
g) The cables shall pass a -40 degree Celsius cold bend test per UL 1581.
h) The cables must be UL third party verified to ANSI/TIA/EIA-586-B.2 Category 5e.
i) The cable shall be ROHS compliant.
j) The cable shall be CE compliant.
k) Conductors
1) The conductors shall be solid, bare copper per ASTM B-3.
2) The conductors shall be #24 AWG (.20 sq mm).
l) Insulation
1) The insulation shall be polyolefin.

2) The insulation shall be free of defects and splices.

m) Pairs
   1) The cable shall contain four pairs.
   2) The insulated conductors shall be bonded together down the entire length of the pair.
   3) The pairs shall be marked with a permanent, extruded stripe identification of tip and ring insulated conductors.
   4) Each pair shall have a unique twist length to minimize pair to pair coupling.

n) Shielding
   1) Shielding shall be an aluminized foil with the foil facing inward, where required.
   2) Unshielded cables shall be acceptable except where shielding is required for the system.

o) Jacket.
   1) All cables shall have a continuous jacket of Polyvinyl Chloride (PVC).
   2) Jacket thickness: The jackets shall be .030" (.75 mm) nominal thickness.
   3) The jackets shall be ultraviolet (UV) radiation and sunlight resistant per UL 1581.
   4) The jackets shall be oil resistant per UL 1581 Class 43.

p) Manufacturer: Belden "Industrial Data Solutions – 7923A" or equal.

10. Grounding and Bonding
    a. Other ground cable shall be as noted on the drawings.
11. Lighting Panels
    a. General:
       i) Circuit breaker panel board.
       ii) With neutral.
       iii) Dead front.
    b. Enclosure:
       i) NEMA 1 or as indicated on the drawings.
       ii) Door with latch and lock.
       iii) Typewritten circuit directory.
       iv) Ground stud bolt through cabinet with removable 1/0 AWG bond to the panel ground bus and an external clamp connector for a station ground conductor.
    c. Circuit Breakers:
       i) Molded case thermal magnetic.
       ii) Multiple pole breakers shall be common trip.
       iii) Bolt-in or plug-in.
       iv) Individually front replaceable.
       v) Indicating "On", "Off", and "Tripped".
       vi) 10,000 amp RMS symmetrical interrupting capacity at 240 V.
       vii) Handle clips to prevent casual operation for circuit breakers indicated on drawings.
       viii) Ground fault interrupting breakers with a sensitivity of 5mA for receptacle branch circuit and where indicated on drawings.

ix) Breakers, trip ratings, and number of poles as indicated on the drawings.

d. Buses:
   i) Two phase and neutral bus insulated from cabinet.
   ii) Ground bus.
      a) Connected to cabinet.
      b) Clamp type lug for supply circuit and each load circuit.
      c) Removable bond to neutral bus.
   iii) Copper.
   iv) Ampere and voltage ratings as indicated on the drawings.
   v) Bracing coordinated with circuit breakers interrupting capacity.

2.2 SPARE PARTS

A. The Supplier shall furnish and deliver the following spare parts.

B. The following spare parts to be furnished as a minimum:
   1. 25% replacement lamps for lighting fixtures.
   2. 25% replacement lamps for pilot light.
   3. Two (2) sets of each type of fuse used in the project.
   4. Two (2) spare ballast of each type specified.

C. All of the above parts shall be provided as spare parts and shall be packaged new in the original manufacturer's packaging. A list of spare parts shall be provided.

PART 3 EXECUTION

3.1 INSTALLATION REQUIREMENTS

A. General Requirements
   1. The instrumentation equipment shall be installed by the Contractor or his subcontractors in accordance with the manufacturers' instructions. The services of the system supplier's technical representative shall be provided as necessary to calibrate, test, and advise others of procedures for adjustment and operation.

B. Inspection
   1. Inspect materials and equipment for signs of damage, deterioration or other deleterious effects of storage, transportation, handling, or defects in manufacture or assembly.
      a. Replace with identical new materials or equipment or repair to like new condition any materials or equipment showing such effects to the satisfaction of the Engineer and Owner.

C. Equipment Installation
   1. Handle, install, connect, clean, condition, align and adjust products and equipment in strict accordance with manufacturer's instructions and in conformity with specification requirements.

a. Separate sheet metal junction boxes, equipment enclosures, sheet metal raceways, etc., mounted on water or earth-bearing walls or wall-mounted outdoors ¼" from wall be corrosion resistant spacer.
b. Seal the base of all outdoor switchgear, motor control center, and similar equipment with grout.
c. Screen or seal with flexible sealing compound all openings into outdoor equipment to prevent the entrance of rodents, wasps, and mud-daubers.
d. Electrical work shall conform to the construction schedule and progress of other trades.
e. Maintain one complete set of manufacturer's installation instructions at the jobsite during installation and until installation is accepted by the Engineer and Owner.
f. Perform all work in accordance with manufacturer's instructions.
    i) Do not omit any preparatory step or installation procedure unless specifically modified or exempted by contract documents.
    ii) Should job conditions or specification requirements conflict with manufacturer's instructions, consult with Engineer prior to proceeding.
g. Field Wiring. Field wiring materials and installation shall conform to the requirements of the electrical section.

D. Identification:
1. Conduit. All conduits shall be provided with identification tags. Tags shall be brass nameplates with 3/8" high lettering and attached to the conduits by means of stainless steel wire. Conduits shall be identified at both ends with the same identification number.
2. Cable. Except for lighting and receptacle circuits, each individual wire in power, control, indication, and instrumentation circuits shall be provided with identification markers at the point of termination. Power wires without individualized identification numbers shall be color coded with electrical tape or colored wire jacket. The wire markers shall be of the heat-shrinkable tube type.
3. Control Stations. Control stations shall be provided with nameplates identifying the related equipment. Pilot controls and indicating lights shall have engraved or etched legends ("start", "stop", etc.) as indicated on the drawings. Nameplates shall be laminated plastic, with 1/8 inch engraved letters, and shall be securely fastened to the control stations.
4. Circuit Breakers. Circuit breakers shall be provided with nameplates identifying related equipment. Nameplates shall be laminated plastic, with 1/8 inch engraved letters, and shall be securely fastened to the circuit breakers.

E. Raceways:
1. General:
    a. Except as otherwise indicated on drawings, conduit shall be concealed in finished areas and exposed in unfinished areas.
    b. Rigid steel conduit and aluminum conduit connections and terminations shall be reamed, de-burred, threaded and provided with bushings.
    c. Securely fasten conduit connections to sheet metal enclosures with locknuts inside and out. Conduit hubs outdoors and in wet locations.

d. Provide deflection fittings across structural joints where structural movement is allowed.
e. Keep conduit clear of structural openings and indicated future openings.
f. Provide flashing and seal watertight conduits through roofs and metal walls.
g. Neatly grout conduit into any opening cut into structure.
h. Cap or plug conduits during construction to prevent the entrance of trash, dirt and water.
i. Minimum conduit size shall be ¾", except ½" for luminaries pendants or as noted on drawings.
j. Seal conduits with flexible sealing compound forced to a minimum depth equal to the conduit diameter after cable is installed.
    i) At handholes, manholes, and vaults.
    ii) Building entrance junction boxes.
    iii) One inch or larger connections to equipment.
k. Provide flexible conduit where flexible connections are necessary, including each motor without flexible cord.
    i) Keep length to a minimum, not to exceed 6' maximum.
    ii) No sharp bends.
l. Provide suitable pull string in each empty or spare conduit.

2. Conduit exposed in structures:
    a. Install parallel to structural members and surface.
    b. Install conduits of the same general routing parallel with symmetrical bends.
    c. Arrange supports to prevent misalignment during wiring installation.
    d. Support conduit using coated steel or malleable iron straps, lay-in adjustable hangers, clevis hangers, and split hangers.
    e. Group related conduits; support using conduit rack. Construct rack using steel channel provide space on each for 25 percent additional conduits.
    f. Install no more than equivalent of three 90° bends between boxes. Use conduit bodies to make sharp changes in direction, as around beams. Use factory elbows for bends in metal conduit larger than 2 inch size.
    g. Provide suitable pull string in each empty conduit except sleeves and nipples.
    h. Maintain 6" clearance to ducts, piping and flues.
    i. Support rigidly with galvanized or cadmium-plated hardware and framing materials, including nuts and bolts.
    j. Provide expansion fittings at 100' centers outdoors, 200' centers indoors; in each conduit run longer than 100' outdoors, 200' indoors.
    k. Provide galvanized pipe caps on conduit stubs for future use.
    l. Allow 7' headroom for horizontal conduit runs, except along structures, piping equipment or where not possible.
    m. Except as otherwise indicated, do not install exposed conduit in water chambers.
    n. Where allowed, coat conduit exposed in water chambers with 2 coats of coal tar paint with paint injuries repaired or use PVC coated conduit.

3. Conduit concealed in structure:
    a. Install between reinforcing steel in slabs with reinforcing in both faces.
    b. Install under reinforcing steel in slabs where only a single layer is provided.
    c. Terminate conduit for future use in equipment or by galvanized couplings and conduit plugs flush with structural surfaces. Seal plugs with self-leveling caulk.

d. Maximum of two conduits crossing each other in slab.

4. Underground:
   a. One inch minimum.
   b. Encased in concrete.
      i) Two inches between conduits.
      ii) Three inches over conduit where not reinforced.
      iii) Three inches over reinforcing.
      iv) Reinforced at and 5’ past portion on disturbed earth or subject to traffic.
      v) Reinforced within 5’ of a structure, manhole or vault.
      vi) Reinforced for entire length and 2’ beyond each adapter to steel conduit if non-metallic is used in duct bank.
      vii) Where capped underground, reinforce the last 2’ and extend steel and conduit 2’ past end of duct bank. Paint all un-encased metal with 2 coats of coal tar paint.
      viii) Continue encasement on outdoor risers to 3” above grade and crown and chamfer top.
   c. Two foot minimum bend radius at vertical risers, 3 foot elsewhere.
   d. Install underground conduit so that it does not drain to cable pulling access in buildings; where necessary, provide a handhole or manhole near or adjacent to building.
   e. Provide 3 foot minimum earth cover.
   f. Install underground conduits through buildings, manhole, handhole and vault walls in box outs as indicated on the drawings.
   g. All steel inside manholes, handholes and vaults shall be galvanized with bared spots treated with zinc rich paint.
   h. Provide ¾” galvanized steel pulling eyes on opposite walls below the centerline of each duct bank.
   i. Provide end bells at wall terminations and adapters for steel conduit continuations for non-metallic duct systems.
   j. Isolate intercommunication and milliampere level instrumentation circuits from all power wiring raceways, conduits, boxes, vaults, manhole and handhole.
   k. Provide a full-size extension for each underground conduit entering a building.
   l. Rigid nonmetallic conduit (PVC) shall be fastened no less than every 4 feet.

5. Junction boxes and wiring gutters:
   a. Install electrical boxes as shown on drawings and as required for splices, taps, wire pulling, equipment connections and compliance with regulatory requirements.
   b. Install pull boxes and junction boxes to maintain headroom and to present neat mechanical appearance.
   c. Install level and plumb.
   d. Where indicated, provide a removable side opposite underground duct banks.
   e. At least code size including space for full size continuation of any conduit not originally continued.
   f. Arrange conduit for maximum space for future conduits.
   g. Support boxes independently of conduit except cast box that is connected to rigid metal conduits both supported within 12 inches of box.

F. Wire and Cable
1. General:
a. Protect the cable and avoid kinking conductors, cutting or puncturing jackets, contaminating by oil or grease or damaging in any manner.
b. Terminate stranded cable with lugs, cup washers, or pressure type connectors; do not wrap stranded cable around screw type terminals.
c. Splice stranded cable with pressure type connectors; do not use wire nut type connectors on stranded cable.
d. Splice cables only at readily accessible locations.
e. Do not pull cable tight against bushings or press heavily against enclosures.
f. Use cable pulling lubricants as recommended by the cable manufacturer.
g. Use swab to clean conduits and ducts before pulling cables.
h. Install cable and accessories in accordance with manufacturer's instructions.
i. Where necessary to prevent heavy loading of cable connectors due to cable weight, support cables in vertical risers with woven cable grips.
j. Coil and tape spare cable ends.
k. Support each 250 MCM or larger cable, and each conduit group of smaller cables from manholes, handholes or vault walls.
l. Use Stranded conductor for feeders and branch circuits.
m. Use stranded conductors for control circuits.
n. Use conductor not smaller than 12 AWG for power and lighting circuits.
o. Use conductor not smaller than 16 AWG for control circuits.
p. Use 10 AWG conductors for 20 ampere, 120 Volt branch circuits longer than 100 feet.
q. Pull all conductors into raceway at same time.
r. Use suitable wire pulling lubricant for building wire 8 AWG and larger.
s. Protect exposed cable from damage.
t. Neatly train and lace wiring inside boxes, equipment, and panel boards.
u. Clean conductor surfaces before installing lugs and connectors.
v. Make splices, taps, and terminations to carry full ampacity of conductors.
2. Special cables:
a. Isolate networking and milliampere level instrumentation cables from all power circuits.
3. Conductor identification:
a. Color code all service, feeder, and branch circuit conductors, 277/480 VAC and above as follow:
i) Phase A: Brown
ii) Phase B: Orange
iii) Phase C: Yellow
iv) Neutral: White
v) Ground: Bare or Green
b. Color code all feeder, and branch circuit conductors, 120/208 VAC as follows:
i) Phase A: Red.
ii) Phase B: Black.
iii) Phase C: Blue.
iv) Neutral: White.
v) Ground: Bare or Green.

c. Identify single control conductors by color coding orange and by labeling each end of conductors by color coding orange and by labeling each end of conductor with heat shrink-tube type wire markers.
d. Identify multi-conductor instrumentation and control cables with heat shrink-tube type wire markers.
e. Contractor shall establish a control and instrumentation conductor and cable identification system acceptable to Engineer.

G. Grounding Materials:
1. Coordinate installation with other disciplines.
2. Install Products in accordance with manufacturer's instructions.
3. Provide bonding to meet Regulatory Requirements.
4. All branch circuit and feeder circuits to include a copper ground conductor in addition to the conduit ground connection.
5. Connect ground conductors to equipment by ground lugs or clamps.
a. If no ground bus or terminal is provided and enclosure is not explosion-proof or submersible provide a clamp type lug under a permanent assembly bolt or by grounding locknuts or bushings.
b. If an explosion-proof or submersible enclosure is not provided with grounding means, provide an adjacent junction box with a ground lug.
c. Bond grounding system to station piping by connection to the first flange inside the building on either a suction or discharge pipe which will form a good ground connection:
i) Drill and tap the flange.
ii) Provide a bolted connection.
iii) Bond with a copper bar or strap.
d. Form ground conductors on equipment to the contours of the equipment.
e. Install main ground cables with encased underground conduit banks in earth at least 3" below 1 corner of the duct bank.
f. Bond ground cables in underground circuits to main ground cables at each manhole, handhole, and vault.

H. Networking – EtherNet/IP cabling
1. Install sufficient networking cable, as shown in the contract drawings, to provide a complete networked system.
2. Terminate all wiring with RJ-45 connectors rated for Cat 5e cable transmissions.
3. Test every communication cable, and provide a testing certificate with the results.

3.2 FIELD QUALITY CONTROL

A. Low Voltage Cable Testing
1. Test 600 V power cables for continuity and freedom from short circuits and ground, except where grounding is intentional immediately after installation.
2. Test all circuits with a 500 V megger or its equivalent.
3. Replace conductors which read less than 1.5 Megohms between conductors and ground.

3.3 PROTECTION AND STORAGE

A. Protection of equipment during storage:
   1. During construction, all electrical equipment shall be protected against absorption of moisture, and metallic components shall be protected against corrosion. This protection shall be provided immediately upon receipt of the equipment and shall be maintained continuously. Any means necessary shall be used to protect the equipment at the Contractor's expense.

END OF SECTION

RESOLUTION NO. 45
SERIES 2025

A RESOLUTION APPROVING A PROPOSAL AND PURCHASE AGREEMENT WITH PURELINE TREATMENT SYSTEMS

WHEREAS, a proposal and Purchase Agreement between the City and PureLine Treatment Systems, Inc. has been prepared for the purchase of equipment for the Howard Berry and the Sid Copeland Water Treatment Plants Chlorine Dioxide Feed Systems Replacement Project (the "Project"); and

WHEREAS, by this resolution the City Council desires to approve the proposal and contract and to authorize additional contingency for the Project.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO:

Section 1. The City Council hereby approves the proposal and Purchase Agreement by and between the City of Louisville and PureLine Treatment Systems, Inc. for the Project (the "Agreement") in substantially the same form as the copy of such Agreement accompanying this Resolution.

Section 2. The Mayor and City Clerk are hereby authorized to execute the Agreement on behalf of the City, and the Mayor is hereby further authorized to negotiate and approve such revisions to the Agreement as the Mayor determines are necessary or desirable for the protection of the City, so long as the essential terms and conditions of the Agreement are not altered.

PASSED AND ADOPTED this 8th day of July, 2025.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Genny Kline, Interim City Clerk

PureLine

Proposal

City of Louisville

March 31, 2025

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1.0 ClO_2 Introduction

Chlorine dioxide (ClO_2) is a powerful oxidizing, bleaching and disinfecting agent. Originally discovered in 1811 by Sir Humphrey Davis, chlorine dioxide did not really come into commercial use until the mid-1940's, mainly to supplement chlorine in wood pulp bleaching, water disinfection, and some specialty bleaching processes.

The sudden increase in ClO_2 use in the mid-1980's prompted investigation into other applications and uses. It was discovered (or reconfirmed) that:

- ClO_2 is a powerful oxidizer with 2.5 times the oxidizing power of chlorine, hydrogen peroxide and sodium hypochlorite.
- ClO_2 is very effective at breaking down inorganic sulfur and nitrogen-based compounds, in particular hydrogen sulfide (H2S), iron sulfide (FeS), nitrates (NO2-), nitrites (NO3-), and nitrogen oxides (NOX).
- ClO_2 is specific in its action with the ability to break down unsaturated hydrocarbons, aldehydes, mercaptans, disulfides, and certain polymer gels without destroying saturated hydrocarbons or carboxyl acids.
- ClO_2 acts as a free radical (like hydrogen peroxide) making it both very reactive and very fast reacting.
- ClO_2 is a very powerful biocide that attacks and kills microorganisms on a cellular level.

What Is Chlorine Dioxide Used For

Chlorine dioxide is environmentally friendly. In fact, chlorine dioxide technology protects the environment and human health from bacteria and by-products formed by other disinfection methods. For example, in the pulp and paper industry, the use of ClO_2 has virtually eliminated dioxin in mill wastewater and has led to significant improvements in surrounding ecosystems. As a result, the Federal government is phasing out the use of chlorine in pulp mills over the next few years.

Advantages

PureLine exclusive patented ClO_2 technology offers many benefits:

- Environmentally Friendly
- EPA/RMP & OSHA PSM Compliance
- Efficacy Over Broad pH Range
- Requires a shorter contact time (approx. 7-10 min.)
- Iron & Manganese Reduction
- Taste & Odor Control
- Turbidity and Color removal
- TOC Reduction
- CT Credit (EPA gives CT of 0.25 ppm@ 20 secs= 99.99% pathogens kill)
- Low Capital & Operating Costs
- Dependable operation
- Low maintenance

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Properties

Although chlorine dioxide (ClO_2) contains a chlorine atom, its chemistry and properties make it more similar to oxygen that chlorine-making it an effective and environmentally safe biocide ideal for disinfecting vital water supplies to exacting standards.

Chlorine dioxide is an oxidizing biocide that kills microorganisms by disrupting nutrients across the cell rather than disrupting the metabolic process. While non-oxidizing biocides also kill microorganisms, they can only kill them when the microorganisms are active. Since microorganisms spend most of their time in a dormant state, non-oxidizing biocides must be used at much higher concentrations and more frequently to effectively kill microbial pollutants. In addition, microorganisms become resistant to non-oxidizing biocides over time. Chlorine dioxide is an especially effective disinfectant because bacteria can not develop a resistance to it.

Ozone and chlorine are very reactive and will react with most organic compounds. As a result, they must be used in much larger doses to maintain a residual effect sufficient to kill microorganisms. But their greatest drawback is that they produce dangerous disinfection by-products (DBPs) which are unacceptable according to new standards established by the Environmental Protection Agency. In contrast, ClO_2 is far less reactive. Regardless of its concentration or contact time, chlorine dioxide reacts immediately with the cell walls of microorganisms.

Chlorine dioxide is soluble as a true gas. The ClO_2 molecule remains a true gas in solution-making it more energetic and able to reach all points in a system. Because it is a true gas and soluble in virtually anything, it can penetrate bacterial slime layers-biofilm.

Finally, chlorine dioxide and its primary by-products-chlorite and chlorate-all break down to sodium chloride. This, along with failure to form toxic and carcinogenic chlorination by-products and produce a build-up of toxic organic or inorganic by-products like bromates, makes chlorine dioxide the most eco-friendly biocide that can be used.

Uses

A growing number of industries are relying on the superior disinfection and environmentally-friendly properties of chlorine dioxide. Chlorine dioxide is quickly becoming the preferred bleaching agent in the pulp and paper industry because it minimizes the environmental impact of the bleaching process. ClO_2 is also used to not only disinfect municipal and drinking water supplies, but also control the water's taste, odor and color. In the food industry, chlorine dioxide disinfects water used to sanitize equipment and preparation surfaces, wash fruits and vegetables, and prevent salmonella and e-coli from contaminating meat and poultry. In commercial and institutional applications, ClO_2 is used to prevent the spread of legionella in hotels, hospitals and universities. Industrially, chlorine dioxide is an effective membrane treatment, as well as a biocide for cooling and wastewater. It is used in the production of ethanol, microelectronics, nitrogen and ammonia. Discover why a growing number of businesses and communities trust PureLine to disinfect their water supplies safely, effectively and affordably.

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Generation

ClO_2 can be generated by combining gaseous chlorine and sodium chlorite or sodium hypochlorite and acids and other variations. Although effective in producing ClO_2, these processes require the transportation, storage and mixing of these hazardous chemicals. These safety issues have been one of the significant barriers for more widespread use of ClO_2.

PureLine has a patented process to generate ClO_2 on site using common salts, water, and electricity. The PureLine process virtually eliminates all transportation, storage and handling of hazardous chemicals (whether one uses traditionally generated ClO_2 or other traditional biocides like chlorine) while delivering the significant advantages of ClO_2.

Applications

More and more companies are discovering the advantages of onsite ClO_2 generation. Why? Because there is just no more cost-efficient way to use this powerful disinfectant and biocide simply and successfully.

PureLine ClO_2 generators combat legionnaires disease in major hospitals. We eradicate stubborn biofilm everywhere from municipal water facilities to industrial cooling towers. Food and beverage processors rely on us for preventive maintenance as well as cleaning up contamination outbreaks.

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2.0 ClO2 HP Generator System Description

The HP Series utilizes a patented electrolytic generation process that utilizes a single non-hazardous pre-cursor to create 99.5% pure ClO_2

- No consumable cartridges or electrodes to replace
- No reaction bi-products
- Scalable: Our common platform grows with your business without costly re-capitalization
- Easy to customize: Many accessories available to customize your solution to fit your safety, performance, and communication needs
- <1# – over 500 lbs. per day with no on-site ClO2 storage required
- Water Quality Association (WQA) certifies that Pureline's HP generators meet NSF/ANSI61 standards.

PURE ADVANTAGES

- Single- liquid precursor $NaClO_2$ (no acid)
- Produces 99.5% pure ClO_2
- pH neutral solution
- Long life electrolytic cells (no cartridges)
- Multiple control options (flow, residual, permissive, timers, manual)
- Customizable and scalable to 40 lbs/day
- Expert engineering and technical support
- Low operating cost – enhanced ROI

The PureLine HP line is an electrochemical ClO_2 generation and delivery system for higher pressure systems

- The system operates at atmospheric and slight vacuum conditions except for transfer and recirculation piping.
- ClO_2 is a reactive and toxic gas which is soluble in water
- Safety measures are in place to prevent the system from operating at unsafe conditions including excessive concentration, atmospheric leaks, high temperature and general out of spec operation limits.
- The solubility which is discussed later is one of the keys to the system safety

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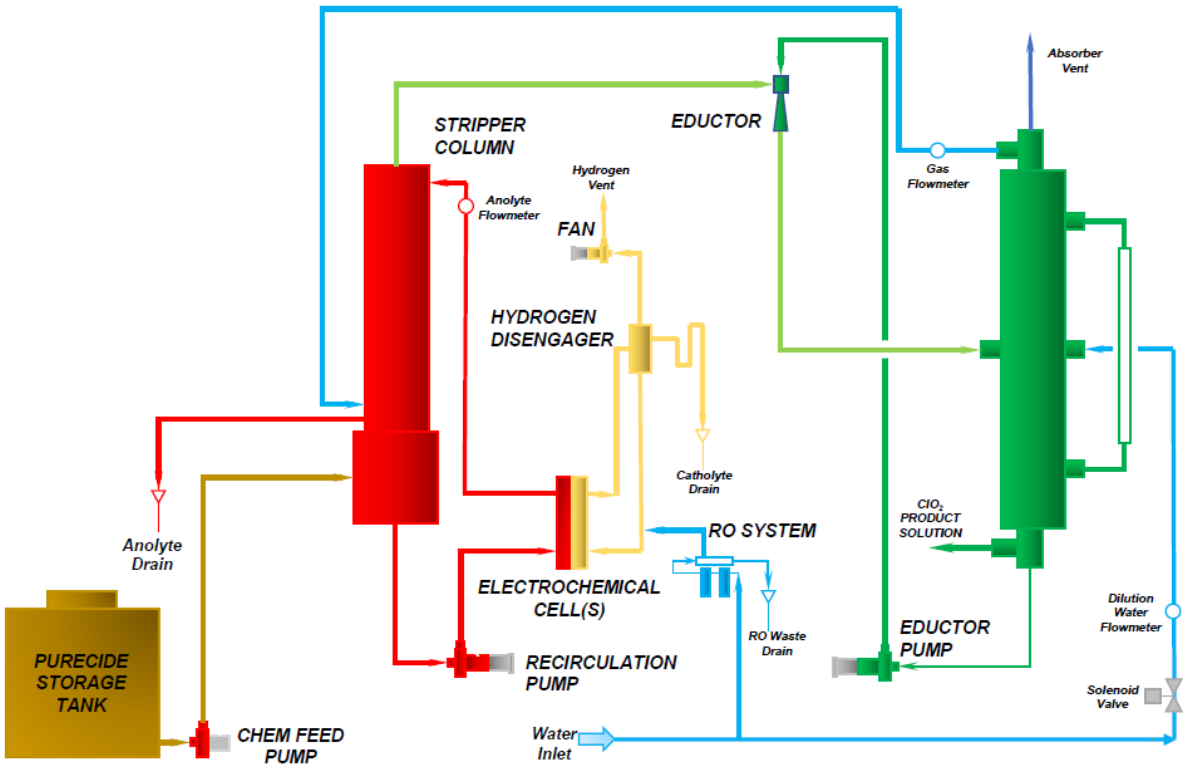
- Typical ClO_2 concentration in the absorber column is 700 to 3100 ppm
  - The concentration in the absorber and the capacity of the distribution pump determines the ClO_2 output
  - Number of cells and current through those cells dictate lbs of ClO_2 produced and enable higher absorber concentrations

Reaction Chemistries

- **$2NaClO_2 + 2H_2O$ —> $2ClO_2 + 2NaOH + H_2$**
- 6 Kg (NaClO2) per Kg ClO2
- pH Neutral ClO_2 Solution
- 99.5% Pure ClO_2 (% of chlorine dioxide to chlorine species in product)
- 700-3100ppm ClO_2 solution

Process Flow Diagram



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Control Panel

The generator's control panel seen below provides the location where the switches and controls are placed on the control panel door. Visual feedback that power is on will be the HMI (Human Machine Interface) is powered up and displaying the home screen.

Control Panel Layout:

- The cell power lamp indicates the generator is making chlorine dioxide solution.
- The alarm lamp, when flashing, indicates that an alarm has occurred.
- The HMI is the operator-controlling contact to the process.
- The emergency stop button is used to disconnect control power to all external devices, and the generation of chlorine dioxide will stop. The generator does not lose power, since the operator may need to review the status of the various systems using the HMI. This button should only be used in the event of an emergency. For non-emergency stopping of the generator use the stop buttons on the home page of the HMI.
- The main AC power disconnect switch is used to turn on and shut off power to the generator. The units are supplied with a Local, color touchscreen HMI for control and monitoring.

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3.0 Design Data & Equipment Details

PureLine offers to Design, Supply, Supervision of Installation, testing and commissioning of Series HP (Electro Chemical Single Precursor) Chlorine Dioxide Generators as follow:

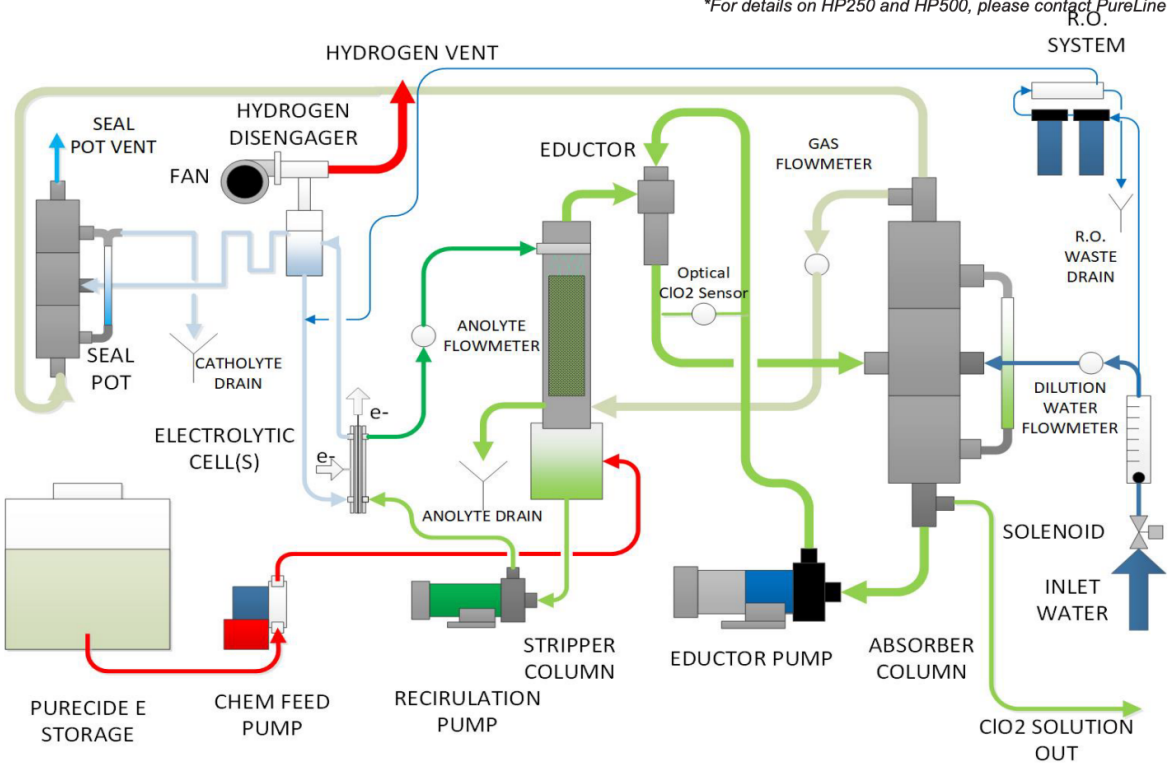
3.1 Design Data

- $ClO_{2\,R}$ Capacity /Day : 40lbs
- System Configuration : :Treating MAX 3m MGD
- Injection Units Configuration : Dose goal .5-.8ppm
- Treatment Protocol : 24/7
- Installation : Inside A Building (No Container)
- Chemical Usage : Per History

HS Code 8421.21.000

Process Flow Diagram

*For details on HP250 and HP500, please contact PureLine



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3.2 Main Equipment Details

1. **HP20 Package**
    a. 40lb/Day ClO2 Generator
    b. 1 Distribution Pump
    c. 2.5 Days of Training and Commissioning
    d. Emergency Gas Monitor
    e. Freight and Crating
    f. Travel, single trip
    g. 5 Years Monitoring

2. **Optional Remote monitoring, Samsara or equivalent**

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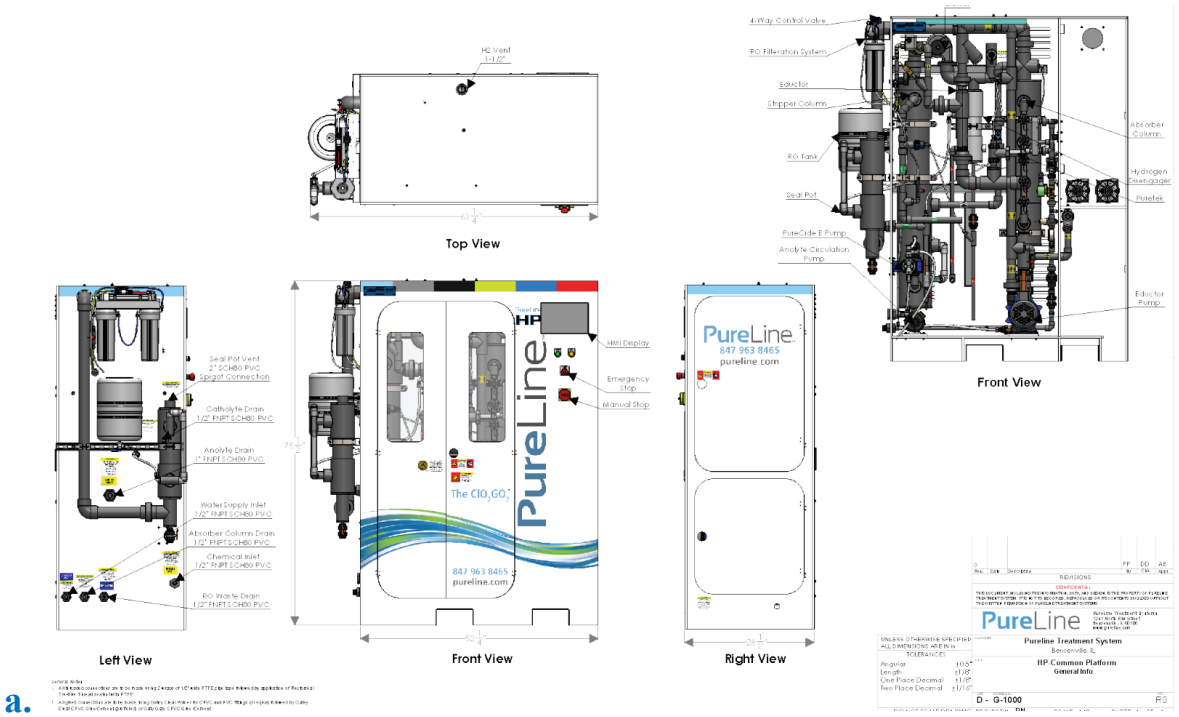
a.



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4.0 Terms & Conditions

PureLine offers to Design, Supply, Supervision of Installation, testing and commissioning the systems described here in this proposal for the following prices:

Quantity	Description – Main Items	MSRP	Total Price (USD)
1	On-site HP Chlorine Dioxide Generation System as detailed under **Section 3.2 (Main Equipment Details)**. HP40	**$137,482**	**$127,978**
1	Distribution Pump		**Included**
1	Supervision of Training & Commissioning (2.5 DAYS)		**Included**
1	Freight & Crating		**Included**
1	Emergency Monitor		**Included**
	Travel, One Technician, Commissioning & Training		**Included**
		Total	**$127,978**

- Additional service days if required, it will be available at a rate of **USD 1,700.00/day** (8 Working hours/day).
- Prices do not included Sales Tax. Client to provide applicability of sales tax.

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4.1 Validity

PureLine warrants that the pricing provided above is the lowest price offered to government or public institutions.

4.2 Delivery

The equipment offered above will be delivered to and commissioned by 6 weeks after the PO and the Engineering Meeting.

4.4 Warranty

PureLine warrants the supplied equipment under this contract for **12 Months** from the date of start-up or **18 Months** from the date of delivery, whichever is earlier. This warranty does not cover Normal wear and tear items.

4.5 Payment Terms

Upon receipt of the PO, 50% of the total project will be invoiced, due in 30days. The balance of 50% will be invoiced upon receipt of equipment. Payment terms for the second 50% are due within 30days. The extended terms allow for commissioning of the unit.

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5.0 Exclusions

The following are excluded from the scope of our offer:

- Safety showers & eye wash.
- Sales Tax, Applicability TBD
- Recommended spare parts.
- Any works, Piping & Cabling between the generator room & ClO2 injection units.
- Any consumable such as, but not limited to, chemicals, water, power for commissioning or running of the plant.
- chemical (NaClO2)
- Storage, Loading and offloading of equipment.
- Crane and lifting tackles if required.
- Field erection
- Taping points on the main pipeline.
- Power supplies to PureLine local panels.
- Connection cable to BMS or SCADA system.
- Internet connection.
- Operation and Maintenance.
- Gate Passes & Employee security charges.
- All costs and expenses incurred to and in connection with the inspection and test witnessed by representative and/or agent of the Purchaser.
- Any item not specifically described in PureLine specification.

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RESOLUTION NO. 46
SERIES 2025

A RESOLUTION APPROVING AN AGREEMENT WITH JVA, INC. FOR CONSTRUCTION MANAGEMENT SERVICES

WHEREAS, an Agreement has been proposed between the City and JVA, Inc. for construction management services for the Howard Berry and the Sid Copeland Water Treatment Plants Chlorine Dioxide Feed Systems Replacement Project (the "Project"); and

WHEREAS, by this resolution the City Council desires to approve the Agreement and to authorize additional contingency for the Project.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO:

Section 1. The City Council hereby approves the Agreement by and between the City of Louisville and JVA, Inc. for the Project (the "Agreement") in substantially the same form as the copy of such Agreement accompanying this Resolution.

Section 2. The City Council hereby approves an additional fifteen percent (15%) contingency in the amount of $4,000. The City Manager and/or Public Works Director are authorized to execute change orders to the Agreement in a total amount not to exceed $4,000 if deemed necessary for the Project.

Section 3. The Mayor and City Clerk are hereby authorized to execute the Agreement on behalf of the City, and the Mayor is hereby further authorized to negotiate and approve such revisions to the Agreement as the Mayor determines are necessary or desirable for the protection of the City, so long as the essential terms and conditions of the Agreement are not altered.

PASSED AND ADOPTED this 8th day of July, 2025.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Genny Kline, Interim City Clerk

AN AGREEMENT BY AND BETWEEN THE CITY OF LOUISVILLE AND JVA, INC FOR CONSULTING SERVICES

1.0 PARTIES

This AGREEMENT FOR CONSULTING SERVICES (this "Agreement") is made and entered into this **8th** day of **July**, **2025** (the "Effective Date"), by and between the **City of Louisville**, a Colorado home rule municipal corporation, hereinafter referred to as the "City", and **JVA, Inc**, a **Colorado Corporation** referred to as the "Consultant".

2.0 RECITALS AND PURPOSE

2.1 The City desires to engage the Consultant for the purpose of providing professional engineering services as further set forth in the Consultant's Scope of Services (which services are hereinafter referred to as the "Services").

2.2 The Consultant represents that it has the special expertise, qualifications and background necessary to complete the Services.

3.0 SCOPE OF SERVICES

The Consultant agrees to provide the City with the specific Services and to perform the specific tasks, duties and responsibilities set forth in Scope of Services attached hereto as Exhibit "A" and incorporated herein by reference.

4.0 COMPENSATION

4.1 The City shall pay the Consultant for services under this agreement a total not to exceed the amounts set forth in Exhibit "B" attached hereto and incorporated herein by this reference. The City shall not pay mileage and other reimbursable expenses (such as meals, parking, travel expenses, necessary memberships, etc.), unless such expenses are (1) clearly set forth in the Scope of Services, and (2) necessary for performance of the Services ("Pre-Approved Expenses"). The foregoing amounts of compensation shall be inclusive of all costs of whatsoever nature associated with the Consultant's efforts, including but not limited to salaries, benefits, overhead, administration, profits, expenses, and outside consultant fees. The Scope of Services and payment therefor shall only be changed by a properly authorized amendment to this Agreement. No City employee has the authority to bind the City with regard to any payment for any services which exceeds the amount payable under the terms of this Agreement.

4.2 The Consultant shall submit monthly an invoice to the City for Services rendered and a detailed expense report for Pre-Approved Expenses incurred during the

previous month. The invoice shall document the Services provided during the preceding month, identifying by work category and subcategory the work and tasks performed and such other information as may be required by the City. The Consultant shall provide such additional backup documentation as may be required by the City. The City shall pay the invoice within thirty (30) days of receipt unless the Services or the documentation therefor are unsatisfactory. Payments made after thirty (30) days may be assessed an interest charge of one percent (1%) per month unless the delay in payment resulted from unsatisfactory work or documentation therefor.

5.0 PROJECT REPRESENTATION

5.1 The City designates **Justin Ferron** as the responsible City staff to provide direction to the Consultant during the conduct of the Services. The Consultant shall comply with the directions given by **Justin Ferron** and such person's designees.

5.2 The Consultant designates **Robert Anderson** as its project manager and as the principal in charge who shall be providing the Services under this Agreement. Should any of the representatives be replaced, particularly **Robert Anderson**, and such replacement require the City or the Consultant to undertake additional reevaluations, coordination, orientations, etc., the Consultant shall be fully responsible for all such additional costs and services.

6.0 TERM

6.1 The term of this Agreement shall be from the Effective Date to **January 31th**, **2026**, unless sooner terminated pursuant to Section 13, below. The Consultant's Services under this Agreement shall commence on the Effective Date and Consultant shall proceed with diligence and promptness so that the Services are completed in a timely fashion consistent with the City's requirements.

6.2 Nothing in this Agreement is intended or shall be deemed or construed as creating any multiple-fiscal year direct or indirect debt or financial obligation on the part of the City within the meaning of Colorado Constitution Article X, Section 20 or any other constitutional or statutory provision. All financial obligations of the City under this Agreement are subject to annual budgeting and appropriation by the Louisville City Council, in its sole discretion. Notwithstanding anything in this Agreement to the contrary, in the event of non-appropriation, this Agreement shall terminate effective December 31 of the then-current fiscal year.

7.0 INSURANCE

7.1 The Consultant agrees to procure and maintain, at its own cost, the policies of insurance set forth in Subsections 7.1.1 through 7.1.4. The Consultant shall not be relieved of any liability, claims, demands, or other obligations assumed pursuant

to this Agreement by reason of its failure to procure or maintain insurance, or by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types. The coverages required below shall be procured and maintained with forms and insurers acceptable to the City. All coverages shall be continuously maintained from the date of commencement of services hereunder. The required coverages are:

7.1.1 Workers' Compensation insurance as required by the Labor Code of the State of Colorado and Employers Liability Insurance. Evidence of qualified self-insured status may be substituted.

7.1.2 General Liability insurance with minimum combined single limits of ONE MILLION DOLLARS ($1,000,000) each occurrence and TWO MILLION DOLLARS ($2,000,000) aggregate. The policy shall include the City of Louisville, its officers and its employees, as additional insureds, with primary coverage as respects the City of Louisville, its officers and its employees, and shall contain a severability of interests provision.

7.1.3 Comprehensive Automobile Liability insurance with minimum combined single limits for bodily injury and property damage of not less than FOUR HUNDRED THOUSAND DOLLARS ($400,000) per person in any one occurrence and ONE MILLION DOLLARS ($1,000,000) for two or more persons in any one occurrence, and auto property damage insurance of at least FIFTY THOUSAND DOLLARS ($50,000) per occurrence, with respect to each of Consultant's owned, hired or non-owned vehicles assigned to or used in performance of the services. The policy shall contain a severability of interests provision. If the Consultant has no owned automobiles, the requirements of this paragraph shall be met by each employee of the Consultant providing services to the City of Louisville under this Agreement.

7.1.4 Professional Liability coverage with minimum combined single limits of ONE MILLION DOLLARS ($1,000,000) each occurrence and ONE MILLION DOLLARS ($1,000,000) aggregate.

7.2 The Consultant's general liability insurance, automobile liability and physical damage insurance, and professional liability insurance shall be endorsed to include the City, and its elected and appointed officers and employees, as additional insureds, unless the City in its sole discretion waives such requirement. Every policy required above shall be primary insurance, and any insurance carried by the City, its officers, or its employees, shall be excess and not contributory insurance to that provided by the Consultant. Such policies shall contain a severability of interests provision. The Consultant shall be solely responsible for any deductible losses under each of the policies required above.

7.3 Certificates of insurance shall be provided by the Consultant as evidence that policies providing the required coverages, conditions, and minimum limits are in full force and effect, and shall be subject to review and approval by the City. No required coverage shall be cancelled, terminated or materially changed until at least 30 days' prior written notice has been given to the City. The City reserves the right to request and receive a certified copy of any policy and any endorsement thereto.

7.4 Failure on the part of the Consultant to procure or maintain policies providing the required coverages, conditions, and minimum limits shall constitute a material breach of contract upon which the City may immediately terminate this Agreement, or at its discretion may procure or renew any such policy or any extended reporting period thereto and may pay any and all premiums in connection therewith, and all monies so paid by the City shall be repaid by Consultant to the City upon demand, or the City may offset the cost of the premiums against any monies due to Consultant from the City.

7.5 The parties understand and agree that the City is relying on, and does not waive or intend to waive by any provision of this Agreement, the monetary limitations or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, § 24-10-101 et seq., C.R.S., as from time to time amended, or otherwise available to the City, its officers, or its employees.

8.0 INDEMNIFICATION

To the fullest extent permitted by law, the Consultant agrees to indemnify and hold harmless the City, and its elected and appointed officers and its employees, from and against all liability, claims, and demands, on account of any injury, loss, or damage, which arise out of or are connected with the services hereunder, if and to the extent such injury, loss, or damage is caused by the negligent act, omission, or other fault of the Consultant or any subcontractor of the Consultant, or any officer, employee, or agent of the Consultant or any subcontractor, or any other person for whom Consultant is responsible. The Consultant shall investigate, handle, respond to, and provide defense for and defend against any such liability, claims, and demands. The Consultant shall further bear all other costs and expenses incurred by the City or Consultant and related to any such liability, claims and demands, including but not limited to court costs, expert witness fees and attorneys' fees if the court determines that these incurred costs and expenses are related to such negligent acts, errors, and omissions or other fault of the Consultant. Notwithstanding the foregoing, Consultant's duty to defend, indemnify and hold harmless the City, and its elected and appointed officials and employees as set forth in this section shall only arise upon determination, by adjudication, alternative dispute resolution, or mutual agreement between Consultant and the City, of the Consultant's liability or fault. The City shall be entitled to its costs and attorneys' fees incurred in any action to enforce the provisions of this Section 8.0. The Consultant's indemnification obligation shall not be

construed to extend to any injury, loss, or damage which is caused by the act, omission, or other fault of the City.

9.0 QUALITY OF WORK

Consultant's professional services shall be in accordance with the prevailing standard of practice normally exercised in the performance of services of a similar nature in the Denver metropolitan area.

10.0 INDEPENDENT CONTRACTOR

It is the expressed intent of the parties that the Consultant is an independent contractor and not the agent, employee or servant of the City, and that:

10.1. Consultant shall satisfy all tax and other governmentally imposed responsibilities including but not limited to, payment of state, federal, and social security taxes, unemployment taxes, worker's compensation and self-employment taxes. No state, federal or local taxes of any kind shall be withheld or paid by the City.

10.2. **Consultant is not entitled to worker's compensation benefits except as may be provided by the Consultant nor to unemployment insurance benefits unless unemployment compensation coverage is provided by the Consultant or some entity other than the City.**

10.3. Consultant does not have the authority to act for the City, or to bind the City in any respect whatsoever, or to incur any debts or liabilities in the name of or on behalf of the City.

10.4. Consultant has and retains control of and supervision over the performance of Consultant's obligations hereunder and control over any persons employed by Consultant for performing the Services hereunder.

10.5. The City will not provide training or instruction to Consultant or any of its employees regarding the performance of the Services hereunder.

10.6. Neither the Consultant nor any of its officers or employees will receive benefits of any type from the City.

10.7. Consultant represents that it is engaged in providing similar services to other clients and/or the general public and is not required to work exclusively for the City.

10.8. All Services are to be performed solely at the risk of Consultant and Consultant shall take all precautions necessary for the proper and sole performance thereof.

10.9. Consultant will not combine its business operations in any way with the City's business operations and each party shall maintain their operations as separate and distinct.

11.0 ASSIGNMENT

Consultant shall not assign or delegate this Agreement or any portion thereof, or any monies due or to become due hereunder without the City's prior written consent.

12.0 DEFAULT

Each and every term and condition hereof shall be deemed to be a material element of this Agreement. In the event either party should fail or refuse to perform according to the terms of this Agreement, such party may be declared in default.

13.0 TERMINATION

13.1 This Agreement may be terminated by either party for material breach or default of this Agreement by the other party not caused by any action or omission of the other party by giving the other party written notice at least thirty (30) days in advance of the termination date. Termination pursuant to this subsection shall not prevent either party from exercising any other legal remedies which may be available to it.

13.2 In addition to the foregoing, this Agreement may be terminated by the City for its convenience and without cause of any nature by giving written notice at least fifteen (15) days in advance of the termination date. In the event of such termination, the Consultant will be paid for the reasonable value of the services rendered to the date of termination, not to exceed a pro-rated daily rate, for the services rendered to the date of termination, and upon such payment, all obligations of the City to the Consultant under this Agreement will cease. Termination pursuant to this subsection shall not prevent either party from exercising any other legal remedies which may be available to it.

14.0 INSPECTION AND AUDIT

The City and its duly authorized representatives shall have access to any books, documents, papers, and records of the Consultant that are related to this Agreement for the purpose of making audits, examinations, excerpts, and transcriptions.

15.0 DOCUMENTS

All computer input and output, analyses, plans, documents photographic images, tests, maps, surveys, electronic files and written material of any kind generated in the performance of this Agreement or developed for the City in performance of the Services are and shall remain the sole and exclusive property of the City. All such materials shall be promptly provided to the City upon request therefor and at the time of termination of this Agreement, without further charge or expense to the City. Consultant shall not provide copies of any such material to any other party without the prior written consent of the City.

16.0 ENFORCEMENT

16.1 In the event that suit is brought upon this Agreement to enforce its terms, the prevailing party shall be entitled to its reasonable attorneys' fees and related court costs.

16.2 This Agreement shall be deemed entered into in Boulder County, Colorado, and shall be governed by and interpreted under the laws of the State of Colorado. Any action arising out of, in connection with, or relating to this Agreement shall be filed in the District Court of Boulder County of the State of Colorado, and in no other court. Consultant hereby waives its right to challenge the personal jurisdiction of the District Court of Boulder County of the State of Colorado over it.

17.0 COMPLIANCE WITH LAWS

17.1 Consultant shall be solely responsible for compliance with all applicable federal, state, and local laws, including the ordinances, resolutions, rules, and regulations of the City; for payment of all applicable taxes; and obtaining and keeping in force all applicable permits and approvals.

17.2 Consultant acknowledges that the City of Louisville Code of Ethics provides that independent contractors who perform official actions on behalf of the City which involve the use of discretionary authority shall not receive any gifts seeking to influence their official actions on behalf of the City, and that City officers and employees similarly shall not receive such gifts. Consultant agrees to abide by the gift restrictions of the City's Code of Ethics.

18.0 INTEGRATION AND AMENDMENT

This Agreement represents the entire Agreement between the parties and there are no oral or collateral agreements or understandings. This Agreement may be amended only by an instrument in writing signed by the parties.

19.0 NOTICES

All notices required or permitted under this Agreement shall be in writing and shall be given by hand delivery, by United States first class mail, postage prepaid, registered or certified, return receipt requested, by national overnight carrier, or by facsimile transmission, addressed to the party for whom it is intended at the following address:

If to the City:

City of Louisville
Attn: Justin Ferron
749 Main Street
Louisville, Colorado 80027
Telephone: (303) 335-4607
Email: jferron@louisvilleco.gov

If to the Consultant:

JVA, Inc.
Attn: Robert Anderson
1319 Spruce St.
Boulder, Colorado 80302
Telephone: 303-444-1951
Email: randerson@jvajva.com

Any such notice or other communication shall be effective when received as indicated on the delivery receipt, if by hand delivery or overnight carrier; on the United States mail return receipt, if by United States mail; or on facsimile transmission receipt. Either party may by similar notice given, change the address to which future notices or other communications shall be sent.

20.0 EQUAL OPPORTUNITY EMPLOYER

20.1 Consultant will not discriminate against any employee or applicant for employment because of race, color, religion, age, sex, disability or national origin. Consultant will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, color, religion, age, sex, disability, or national origin. Such action shall include but not be limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Consultant agrees to post in conspicuous places, available to employees and applicants for employment, notice to be provided by an agency of the federal government, setting forth the provisions of the Equal Opportunity Laws.

20.2 Consultant shall be in compliance with the applicable provisions of the American with Disabilities Act of 1990 as enacted and from time to time amended and any other applicable federal, state, or local laws and regulations. A signed, written certificate stating compliance with the Americans with Disabilities Act may be requested at any time during the life of this Agreement or any renewal thereof.

21.0 NO THIRD PARTY BENEFICIARIES

It is expressly understood and agreed that enforcement of the terms and conditions of this Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to City and Consultant, and nothing contained in this Agreement shall give or allow any such claim or right of action by any other third party on such Agreement. It is the express intention of the parties that any person other than City or Consultant receiving services or benefits under this Agreement shall be deemed to be an incidental beneficiary only.

22.0 SUBCONTRACTORS

Consultant may utilize subcontractors identified in its qualifications submittal to assist with non-specialized works as necessary to complete projects. Consultant will submit any proposed subcontractor and the description of its services to the City for approval. The City will not work directly with subcontractors.

23.0 AUTHORITY TO BIND

Each of the persons signing below on behalf of any party hereby represents and warrants that such person is signing with full and complete authority to bind the party on whose behalf of whom such person is signing, to each and every term of this Agreement.

In witness whereof, the parties have executed this Agreement to be effective on the date first above written.

CITY OF LOUISVILLE,
a Colorado Municipal Corporation

By:_____
Christopher M. Leh, Mayor

Attest:_____
Genny Kline, City Clerk

CONSULTANT:

JVA, Inc.
By:_____
Title:_____

Exhibit A – Scope of Services

Construction administration services for the Howard Berry and Sid Copeland Water Treatment Plants Chlorine Dioxide Systems Replacement Project. The project includes the final installation of temporarily plumbed Pureline chlorine dioxide units and ancillary pumping and piping connections and HVAC.

Assumptions:

1. Construction Administration
   a. 6-month construction contract to final completion
   b. Coordinate Preconstruction Meeting
   c. Attendance at biweekly meetings/field observation – 12 meetings
   d. Assume City staff will provide additional field observation support
   e. Review submittals and/or shop drawings
   f. Answer request for information (RFI's)
   g. Review pay applications
   h. Evaluate Change Orders and provide recommendations to the City
   i. Prepare As-Builts from contractor mark-ups
   j. Assist with final close-out documentation

Scope of Services:

The scope of services for Construction Administration (CA) are detailed in the following. The CA includes both office and field engineering services during construction and project closeout.

1. JVA will coordinate a pre-construction meeting. We will prepare an agenda and distribute minutes following the meeting.
2. JVA will review product and material submittals (chemical pump, potable water booster pump, piping, HVAC and electrical) for conformance with the construction documents. Submittals will be received, reviewed and returned electronically with an electronic submittal review stamp. JVA will maintain and update the submittal review log accordingly.
3. JVA will attend biweekly construction meetings and review construction progress while on site. JVA will prepare site observation reports for distribution to the City for every site visit. Contractor is required to administer the meetings.
4. JVA has subcontracted with MEC Inc for HVAC shop review and a rough in inspection.
5. JVA will review monthly pay applications, construction progress and provide a recommendation of approval or corrections to the City.
6. JVA will prepare responses to Request for Information (RFI). The intent of the RFI is to provide clarification and detail to facilitate construction progress. JVA will notify the City of any RFI project cost implications.

7. If there is a change in contract price or contract schedule, the contractor will submit the change request in writing for JVA to review. If accepted by the City, JVA will prepare a Work Change Directive (WCD) documenting the change in contract conditions. Once a certain number of WCDs are accumulated, JVA will prepare a formal Change Order that will combine the WCD's to date. The Change Order will be sent to the City and contractor for signature.
8. Following project completion, JVA will prepare record drawings of the "as-built conditions" based on the contractor mark-ups. Two hard copies along with electronic pdf and AutoCAD drawings will be submitted to the City.
9. JVA will attend the substantial completion walk through and generate a punch list and Certificate for Substantial Completion. JVA will coordinate with the contractor for completing the punch list items for Final Completion. Once all the punch list items are completed, JVA will recommend to the City final payment and release of retainage for project closeout. JVA will provide the City with closeout documentation.
10. JVA will document the start of equipment which will be included in applicable O&M manuals provided by the contractor. SCADA control integration is not included.
11. JVA will review and assemble two hard copy O&M manuals for all the process equipment, and electrical and miscellaneous items provided by the contractor. An electronic copy will also be produced and provided to the City.

Schedule:

JVA can begin immediately upon authorization. Estimated 6 month construction schedule.

EXHIBIT B

Not to Exceed $27,000

The proposed fee for engineering services is $27,000 and includes reimbursables and subconsultants. The basis of payment will be monthly billings based on the work completed to date. Services shall be billed on the basis of the following rates:

Civil Engineering
2025 Hourly Billing Rate Schedule

POSITION	RATE
Principal	$216 – $260
Expert Witness	$264 – $352
Senior Project Manager	$188 – $192
Senior Engineer	$152 – $168
Project Manager	$168 – $180
Senior Project Engineer	$156 – $160
Project Engineer	$148 – $152
Design Engineer	$136 – $144
Senior Designer	$156 – $160
CAD Designer	$136 – $144
Administrative Support	$116 – $136

Auto travel shall be reimbursed at a rate set by the IRS. Costs for express delivery, airfare, car rental, meals, lodging, printing, copying, and shipping shall be reimbursed at 1.1 times direct cost.

City of Louisville
COLORADO • SINCE 1878

Parks and Recreation Month Designation
July 2025

WHEREAS, parks, recreation, open space, and golf is an integral part of communities throughout this country, including the City of Louisville; and

WHEREAS, parks via its 37 designated parks and 350 acres of maintained park land, recreation via the world class Louisville Recreation & Senior Center serving over 400,000 guests annually, open space via its 2,000 acres of open space designated land and 32 miles of developed trail system, and golf via the Coal Creek Golf Course and the nearly 50,000 rounds played and top enrollment junior golf program in the state of Colorado, promotes health and wellness, improving the physical and mental health of people who live near Louisville and its public lands and recreation facilities; and

WHEREAS, parks, recreation, open space and golf promotes time spent in nature, which positively impacts mental health by increasing cognitive performance and well-being, and alleviating illnesses such as depression, attention deficit disorders, and Alzheimer's Disease; and

WHEREAS, parks, recreation, open space and golf encourages physical activities by providing space for popular sports, hiking trails, walking, swimming pools and many other activities designed to promote active lifestyles; and

WHEREAS, parks and recreation is a leading provider of healthy meals, nutrition services and education; and

WHEREAS, parks, recreation, open space and golf programming and education activities, such as out-of-school time programming, youth sports, junior golf and environmental education, are critical to childhood development; and

WHEREAS, parks, recreation, open space and golf increases a community's economic prosperity through increased property values, expansion of the local tax base, increased tourism, the attraction and retention of businesses, and crime reduction; and

WHEREAS, parks, recreation, open space and golf is fundamental to the environmental well-being of our community; and

WHEREAS, parks, recreation, open space and golf is essential and adaptable infrastructure that makes our communities resilient in the face of natural disasters and climate change; and

WHEREAS, our parks, open space, golf course and natural recreation areas ensure the ecological beauty of our community and provide a place for children and adults to connect with nature and recreate outdoors; and

WHEREAS, the U.S. House of Representatives has designated July as Parks and Recreation Month; and

WHEREAS, the City of Louisville recognizes the benefits derived from parks, recreation, open space, and golf resources.

NOW THEREFORE, BE IT RESOLVED BY the City Council of Louisville that July 2025 is recognized as **Parks and Recreation Month** in the City of Louisville.

Dated this 8th day of July 2025

_____
Christopher M. Mayor Leh, Mayor

ATTEST:

_____
Genny Kline, Interim City Clerk

City of Louisville
COLORADO • SINCE 1878

CITY COUNCIL COMMUNICATION
AGENDA ITEM 10B

SUBJECT: **ORDINANCE NO. 1898, SERIES 2025 – AN ORDINANCE APPROVING THE GRANT OF A CABLE FRANCHISE TO COMCAST OF CALIFORNIA / COLORADO / FLORIDA / OREGON, INC., AND APPROVING A CABLE FRANCISE AGREEMENT BETWEEN COMCAST OF CALIFORNIA / COLORADO / FLORIDA / OREGON, INC. AND THE CITY OF LOUISVILLE, COLORADO**

DATE: **JULY 08, 2025**

PREPARED BY: **SAMMA FOX, DEPUTY CITY MANAGER**
WILSON SCARBEARY, ATTORNEY, WILSON WILLIAMS FELLMAN DITTMAN LLP

PRESENTED BY: **WILSON SCARBEARY, ATTORNEY, WILSON WILLIAMS FELLMAN DITTMAN LLP**

SUMMMARY:
Comcast Cable is currently the only source of cable television services in Louisville and operates under a *non-exclusive* franchise agreement in effect since 2015. The agreement allows Comcast to use the City's rights-of-way (ROW) in return for the payment of certain rental fees - known as franchise fees.

The City of Louisville has support for this type of work through the Colorado Communications and Utility Alliance (CCUA) and has hired legal counsel, Wilson Scarbeary of Wilson Williams Fellman Dittman, who specialize in this work, to support the renewal. Mr. Scarbeary and a representative from Comcast will be in attendance for second reading, currently proposed July 22, 2025 to provide a presentation and answer questions.

BACKGROUND/PRIOR DISCUSSIONS:
City Council held a discussion/direction on the Comcast Franchise Renewal March 18, 2025. The Comcast Franchise agreement was last renewed in 2015.

ANALYSIS:
Cable franchises are non-exclusive. Should another cable provider want to offer cable service in Louisville the City would offer that company the same franchise opportunity Comcast now has. To date, no other service providers have asked for a franchise.

The proposed franchise agreement is based on the model franchise currently in use in the metro area.

Items of Note:

- The City cannot negotiate the content of cable package offerings or the pricing of those services under existing Federal law.
- The City can negotiate the fees charged to Comcast for the use of the City's ROW. 5% of gross revenue is the current fee and also the fee proposed in the new franchise. Comcast is allowed to, and typically does, pass those on to the customers.
- The franchise also includes two Public, Education, and Government (PEG) channels which include Channel 8. The franchise provides for Comcast to pay the City 0.48 of one percent (0.0048%) of gross revenues to help pay for capital costs related to broadcasting. As with the franchise fee, Comcast generally passes this charge on to the customers. This is a change from the prior agreement, which had 0.50 cent per customer charge, and inline with the approach being taken regionally.
- Although Comcast provides broadband internet access, under the Federal regulations governing these franchise agreements, broadband service is not eligible for negotiation under the franchise agreement.
- The attached franchise agreement proposes a term of ten years, 2025 through 2035, consistent with prior and regional agreements. Whether the franchise lasts 10 years or not may be dependent on factors outside of the City's control such as changes in technology and in law.

2025 COUNCIL WORK PLAN:
The Comcast Franchise Fee is called out as an item under the Core Services priority of the City Council's 2025 council work plan.

FISCAL IMPACT:
Budgeted?: Yes
In 2024 Comcast paid the City approximately $200,000 in franchise fees, down approximately $60,000 from 2014. That money goes into the General Fund. That number is likely to continue to slowly decrease as people continue to "cut the cord" and choose alternative sources such as streaming.

2024 PEG fees totaled approximately $14,000, down approximately $11,000 from 2014. Those funds must be dedicated to capital costs for Channel 8.

The proposed 0.48 of one percent (0.0048%) is anticipated to yield a comparable amount and was calculated based on the City's last five years of PEG fees.

ALTERNATIVE(S):
Council may direct staff to work with legal counsel and comcast to renegotiate items such as PEG fees and the term. If directed, this may be a costly endeavor as the City would need to pay for the additional time and negotiations. This may also have unintended impacts as the current proposed agreement mirrors agreements within the region.

Under federal law, Comcast is entitled to a franchise renewal if it offers and has the legal, technical, and financial ability to comply with a franchise agreement that meets the future cable-related needs of the City. If the City and Comcast are unable to informally negotiate an acceptable franchise, under the federal Cable Act, either party may pursue a formal franchise renewal.

To commence a formal franchise renewal proceeding, a cable operator may make a written demand for formal proceedings. Within a very structured and limited time period, the franchising authority determines its future cable-related needs and submits that information to the cable operator. The cable operator then submits a proposed franchise. The franchising authority, within four months of the submission date, must make a preliminary assessment of whether it will accept or deny the cable operator's offered franchise. If the franchising authority does not accept the proposed franchise, the end result, in all likelihood, is federal court litigation. It is not uncommon however, that even when the parties are proceeding through a "formal" renewal process, they will continue to negotiate informally, and the threat of litigation at the end of the process often leads to an eventual "informal" resolution.

RECOMMENDATION:
Staff recommends council support the proposed franchise agreement on first reading and set the second reading and public hearing for July 22.

ATTACHMENT(S):
1. Ordinance No. 1898, Series 2025
2. Proposed 2025 Franchise Agreement

ORDINANCE NO. 1898
SERIES 2025

AN ORDINANCE APPROVING THE GRANT OF A CABLE FRANCHISE TO COMCAST OF CALIFORNIA/COLORADO/FLORIDA/OREGON, INC., AND APPROVING A CABLE FRANCHISE AGREEMENT BETWEEN COMCAST OF CALIFORNIA/COLORADO/FLORIDA/OREGON, INC. AND THE CITY OF LOUISVILLE, COLORADO

WHEREAS, pursuant to the Charter of the City of Louisville, Colorado (the "Charter"), the Louisville Municipal Code (the "Code"), and the authority granted to home-rule municipalities under the Colorado Constitution, the City of Louisville (the "City") may adopt and amend ordinances; and

WHEREAS, pursuant to Article 14 of the Code, the City may grant nonexclusive franchises to cable television providers; and

WHEREAS, City is authorized generally pursuant to Article XX of the Colorado Constitution, as well as C.R.S § 31-15-702, to regulate and manage the use, maintenance, and repair of public streets, roads, sidewalks, and public places under its jurisdiction; and

WHEREAS, the City previously granted a non-exclusive franchise for the construction, maintenance, and operation of a cable television system within the City to Comcast of Colorado I, LLC, locally known as Comcast ("Comcast"); and

WHEREAS, Comcast of California/Colorado/Florida/Oregon, Inc., is the successor in interest to Comcast of Colorado I, referred to herein as Comcast, is agreeable to continue providing cable television service in the City; and

WHEREAS, Comcast seeks a new cable television franchise, and a proposed new Cable Franchise Agreement acceptable to both the City and Comcast has been prepared (the "Agreement"), a copy of which is attached hereto as **Exhibit A** and incorporated herein by this reference; and

WHEREAS, the City has reviewed Comcast's performance under the prior franchise and the quality of service during the prior franchise term, has identified the future cable-related needs and interests of the City and its citizens, has considered the financial, technical, and legal qualifications of Comcast, and has determined that Comcast's plans for operating and maintaining its Cable Systems are adequate, in a full public proceeding affording due process to all parties; and

WHEREAS, the public has had adequate notice and opportunity to comment on Comcast's proposal to provide cable television service within the City; and

WHEREAS, the City has a legitimate and necessary regulatory role in ensuring the availability of cable communications service, and reliability of cable systems in its jurisdiction, the availability of local programming and quality customer service; and

WHEREAS, diversity in cable service programming is an important policy goal and Comcast's cable system should offer a wide range of programming services; and

WHEREAS, the City Council for the City of Louisville (the "Council") has considered this Ordinance authorizing the cable television system franchise and the Agreement; and

WHEREAS, the Council hereby finds that the public has had adequate notice and opportunity to comment upon the proposed cable television system franchise and the Agreement; and

WHEREAS, the Council hereby finds that it serves the public interest of the citizens of the City to grant a cable television franchise to Comcast pursuant to the terms of the Agreement; and

WHEREAS, the Council hereby finds, determines, and declares that this Ordinance is promulgated under the general police power of the City, that it is promulgated for the health, safety, and welfare of the public, and that this Ordinance is necessary for the preservation of health and safety and for the protection of public convenience and welfare.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO:

Section 1. Grant of Franchise. The City of Louisville hereby grants to Comcast of California/Colorado/Florida/Oregon, Inc., effective July 22, 2025, a nonexclusive Cable Franchise subject to the terms and conditions set forth in the attached Cable Franchise Agreement between Comcast of California/Colorado/Florida/Oregon, Inc., and the City of Louisville, Colorado.

Section 2. Franchise Agreement. The City of Louisville hereby approves and adopts the attached Cable Franchise Agreement Comcast of California/Colorado/Florida/Oregon, Inc., and the City of Louisville, Colorado. The Cable Franchise Agreement shall be available for public inspection during normal business hours from the City Clerk at the offices of the City of Louisville, Colorado.

Section 3. Severability. If any part or provision of this Ordinance, or its application to any person or circumstance, is adjudged to be invalid or unenforceable, the invalidity or unenforceability of such part, provision, or application shall not affect any of the remaining parts, provisions or applications of

this Ordinance that can be given effect without the invalid provision, part or application, and to this end the provisions and parts of this Ordinance are declared to be severable.

Section 4. To the extent only that they conflict with this ordinance, the Council repeals any conflicting ordinances or parts of ordinances. The provisions of this ordinance are severable, and invalidity of any part shall not affect the validity or effectiveness of the rest of this ordinance.

INTRODUCED, READ, PASSED ON FIRST READING, AND ORDERED PUBLISHED this 8th day of July, 2025.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Genny Kline, Interim City Clerk

APPROVED AS TO FORM:
Kelly PC

_____
Kathleen Kelly, City Attorney

PUBLIC HEARING AND SECOND READING WILL BE THE ____ DAY OF _____, 2025, AT 6:00 P.M. AT LOUISVILLE CITY HALL, 749 MAIN STREET, LOUISVILLE, CO 80027.

PASSED AND ADOPTED ON SECOND AND FINAL READING this ____ day of _____, 2025.

CITY OF LOUISVILLE, COLORADO

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Genny Kline, Interim City Clerk

COMCAST OF CALIFORNIA/COLORADO/FLORIDA/OREGON INC. AND THE CITY OF LOUISVILLE, COLORADO

CABLE FRANCHISE AGREEMENT

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COMCAST OF CALIFORNIA/COLORADO/FLORIDA/OREGON INC. AND CITY OF LOUISVILLE, COLORADO CABLE FRANCHISE AGREEMENT

SECTION 1. DEFINITIONS AND EXHIBITS

(A) DEFINITIONS

For the purposes of this Franchise, the following terms, phrases, words and their derivations shall have the meaning given herein. When not inconsistent with the context, words used in the present tense include the future, words in the plural include the singular, and words in the singular include the plural. Words not defined shall be given their common and ordinary meaning. The word "shall" is always mandatory and not merely directory.

1.1 "Access" means the availability for noncommercial use by various agencies, institutions, organizations, groups and individuals in the community, including the Town and its designees, of the Cable System to acquire, create, receive, and distribute video Cable Services and other services and signals as permitted under Applicable Law including, but not limited to:

a. "Public Access" means Access where community-based, noncommercial organizations, groups or individual members of the general public, on a nondiscriminatory basis, are the primary users.

b. "Educational Access" means Access where schools are the primary users having editorial control over programming and services. For purposes of this definition, "school" means any State-accredited educational institution, public or private, including, for example, primary and secondary schools, colleges and universities.

c. "Government Access" means Access where governmental institutions or their designees are the primary users having editorial control over programming and services.

1.2 "Access Channel" means any Channel, or portion thereof, designated for Access purposes or otherwise made available to facilitate or transmit Access programming or services.

1.3 "Activated" means the status of any capacity or part of the Cable System in which any Cable Service requiring the use of that capacity or part is available without further installation of system equipment, whether hardware or software.

1.4 "Affiliate," when used in connection with Grantee, means any Person who owns or controls, is owned or controlled by, or is under common ownership or control with, Grantee.

1.5 "Applicable Law" means any statute, ordinance, judicial decision, executive order or regulation having the force and effect of law, that determines the legal standing of a case or issue.

1.6 "Bad Debt" means amounts lawfully billed to a Subscriber and owed by the Subscriber for Cable Service and accrued as revenues on the books of Grantee, but not collected after reasonable

efforts have been made by Grantee to collect the charges.

1.7 "Basic Service" is the level of programming service which includes, at a minimum, all Broadcast Channels, all PEG SD Access Channels required in this Franchise, and any additional Programming added by the Grantee, and is made available to all Cable Services Subscribers in the Franchise Area.

1.8 "Broadcast Channel" means local commercial television stations, qualified low power stations and qualified local noncommercial educational television stations, as referenced under 47 USC §§ 534 and 535.

1.9 "Broadcast Signal" means a television or radio signal transmitted over the air to a wide geographic audience, and received by a Cable System by antenna, microwave, satellite dishes or any other means.

1.10 "Cable Act" means the Title VI of the Communications Act of 1934, as amended.

1.11 "Cable Operator" means any Person or groups of Persons, including Grantee, who provide(s) Cable Service over a Cable System and directly or through one or more affiliates owns a significant interest in such Cable System or who otherwise control(s) or is (are) responsible for, through any arrangement, the management and operation of such a Cable System.

1.12 "Cable Service" means the one-way transmission to Subscribers of video programming or other programming service, and Subscriber interaction, if any, which is required for the selection or use of such video programming or other programming service.

1.13 "Cable System" means any facility, including Grantee's, consisting of a set of closed transmissions paths and associated signal generation, reception, and control equipment that is designed to provide Cable Service which includes video programming and which is provided to multiple Subscribers within a community, but such term does not include (A) a facility that serves only to retransmit the television signals of one or more television broadcast stations; (B) a facility that serves Subscribers without using any Right-of-Way; (C) a facility of a common carrier which is subject, in whole or in part, to the provisions of Title II of the federal Communications Act (47 U.S.C. §§ 201 *et seq*.), except that such facility shall be considered a Cable System (other than for purposes of Section 621(c) (47 U.S.C. § 541(c)) to the extent such facility is used in the transmission of video programming directly to Subscribers, unless the extent of such use is solely to provide interactive on-demand services; (D) an open video system that complies with federal statutes; or (E) any facilities of any electric utility used solely for operating its electric utility systems.

1.14 "Channel" means a portion of the electromagnetic frequency spectrum which is used in the Cable System and which is capable of delivering a television channel (as television channel is defined by the FCC by regulation).

1.15 "City" is the City of Louisville, Colorado, a body politic and corporate under the laws of the State of Colorado.

1.16 "City Council" means the City Council or its successor, the governing body of the City of Louisville, Colorado.

1.17 "Colorado Communications and Utility Alliance" or "CCUA" means the non-profit entity formed by franchising authorities or local governments in Colorado or its successor entity, whose purpose is, among other things, to communicate with regard to franchising matters collectively and cooperatively.

1.18 "Commercial Subscribers" means any Subscribers other than Residential Subscribers.

1.19 "Designated Access Provider" means the entity or entities designated now or in the future by the City to manage or co-manage Access Channels and facilities. The City may be a Designated Access Provider.

1.20 "Digital Starter Service" means the Tier of optional video programming services, which is the level of Cable Service received by most Subscribers above Basic Service, and does not include Premium Services.

1.21 "Downstream" means carrying a transmission from the Headend to remote points on the Cable System or to Interconnection points on the Cable System.

1.22 "Dwelling Unit" means any building, or portion thereof, that has independent living facilities, including provisions for cooking, sanitation and sleeping, and that is designed for residential occupancy. Buildings with more than one set of facilities for cooking shall be considered Multiple Dwelling Units unless the additional facilities are clearly accessory.

1.23 "FCC" means the Federal Communications Commission.

1.24 "Fiber Optic" means a transmission medium of optical fiber cable, along with all associated electronics and equipment, capable of carrying Cable Service by means of electric lightwave impulses.

1.25 "Franchise" means the document in which this definition appears, *i.e.*, the contractual agreement, executed between the City and Grantee, containing the specific provisions of the authorization granted, including references, specifications, requirements and other related matters.

1.26 "Franchise Area" means the area within the jurisdictional boundaries of the City, including any areas annexed by the City during the term of this Franchise.

1.27 "Franchise Fee" means that fee payable to the City described in subsection 3.1 (A).

1.28 "Grantee" means Comcast of California/Colorado/Florida/Oregon Inc. or its lawful successor, transferee or assignee.

1.29 "Gross Revenues" means, and shall be construed broadly to include all revenues derived

directly or indirectly by Grantee or an Affiliated Entity that is the cable operator of the Cable System, from the operation of Grantee's Cable System to provide Cable Services within the City. Gross revenues include, by way of illustration and not limitation:

- monthly fees for Cable Services, regardless of whether such Cable Services are provided to residential or commercial customers, including revenues derived from the provision of all Cable Services (including but not limited to pay or premium Cable Services, digital Cable Services, pay-per-view, pay-per-event and video-on-demand Cable Services);

- installation, reconnection, downgrade, upgrade or similar charges associated with changes in subscriber Cable Service levels;

- fees paid to Grantee for channels designated for commercial/leased access use and shall be allocated on a pro rata basis using total Cable Service subscribers within the City;

- converter, remote control, and other Cable Service equipment rentals, leases, or sales;

- Advertising Revenues as defined herein;

- late fees, convenience fees and administrative fees which shall be allocated on a pro rata basis using Cable Services revenue as a percentage of total subscriber revenues within the City;

- revenues from program guides;

- Franchise Fees;

- FCC Regulatory Fees; and,

- commissions from home shopping channels and other Cable Service revenue sharing arrangements which shall be allocated on a pro rata basis using total Cable Service subscribers within the City.

(A) "Advertising Revenues" shall mean revenues derived from sales of advertising that are made available to Grantee's Cable System subscribers within the City and shall be allocated on a pro rata basis using total Cable Service subscribers reached by the advertising. Additionally, Grantee agrees that Gross Revenues subject to franchise fees shall include all commissions, rep fees, Affiliated Entity fees, or rebates paid to National Cable Communications ("NCC") and Comcast Spotlight ("Spotlight") or their successors associated with sales of advertising on the Cable System within the City allocated according to this paragraph using total Cable Service subscribers reached by the advertising.

(B) "Gross Revenues" shall not include:

- actual bad debt write-offs, except any portion which is subsequently collected which shall be allocated on a *pro rata* basis using Cable Services revenue as a percentage of total subscriber revenues within the City;

- any taxes or fees on services furnished by Grantee imposed by any municipality, State or other governmental unit, provided that Franchise Fees and the FCC regulatory fee shall not be regarded as such a tax or fee;

- fees imposed by any municipality, State or other governmental unit on Grantee including but not limited to Public, Educational and Governmental (PEG) Fees;

- launch fees and marketing co-op fees; and,

- unaffiliated third-party advertising sales agency fees which are reflected as a deduction from revenues.

(C) To the extent revenues are received by Grantee for the provision of a discounted bundle of services which includes Cable Services and non-Cable Services, Grantee shall calculate revenues to be included in Gross Revenues using a methodology that allocates revenue on a *pro rata* basis when comparing the bundled service price and its components to the sum of the published rate card, except as required by specific federal, State or local law, it is expressly understood that equipment may be subject to inclusion in the bundled price at full rate card value. This calculation shall be applied to every bundled service package containing Cable Service from which Grantee derives revenues in the City. The City reserves its right to review and to challenge Grantee's calculations.

(D) Grantee reserves the right to change the allocation methodologies set forth in this Section 1.28 in order to meet the standards required by governing accounting principles as promulgated and defined by the Financial Accounting Standards Board ("FASB"), Emerging Issues Task Force ("EITF") or the U.S. Securities and Exchange Commission ("SEC"). Grantee will explain and document the required changes to the City within three months of making such changes, and as part of any audit or review of franchise fee payments, and any such changes shall be subject to 1.29(E) below.

(E) Resolution of any disputes over the classification of revenue should first be attempted by agreement of the Parties, but should no resolution be reached, the Parties agree that reference shall be made to generally accepted accounting principles ("GAAP") as promulgated and defined by the Financial Accounting Standards Board ("FASB"), Emerging Issues Task Force ("EITF") or the U.S. Securities and Exchange Commission ("SEC"). Notwithstanding the forgoing, the City reserves its right to challenge Grantee's calculation of Gross Revenues, including the interpretation of GAAP as promulgated and defined by the FASB, EITF or the SEC.

1.30 "Headend" means any facility for signal reception and dissemination on a Cable System, including cables, antennas, wires, satellite dishes, monitors, switchers, modulators, processors for

Broadcast Signals, equipment for the Interconnection of the Cable System with adjacent Cable Systems and Interconnection of any networks which are part of the Cable System, and all other related equipment and facilities.

1.31 "Leased Access Channel" means any Channel or portion of a Channel commercially available for video programming by Persons other than Grantee, for a fee or charge.

1.32 "Manager" means the City Manager of the City or designee.

1.33 "Person" means any individual, sole proprietorship, partnership, association, or corporation, or any other form of entity or organization.

1.34 "Premium Service" means programming choices (such as movie Channels, pay-per-view programs, or video on demand) offered to Subscribers on a per-Channel, per-program or per-event basis.

1.35 "Residential Subscriber" means any Person who receives Cable Service delivered to Dwelling Units or Multiple Dwelling Units, excluding such Multiple Dwelling Units billed on a bulk-billing basis.

1.36 "Right-of-Way" means each of the following which have been dedicated to the public or are hereafter dedicated to the public and maintained under public authority or by others and located within the City: streets, roadways, highways, avenues, lanes, alleys, bridges, sidewalks, easements, rights-of-way and similar public property and areas.

1.37 "State" means the State of Colorado.

1.38 "Subscriber" means any Person who or which elects to subscribe to, for any purpose, Cable Service provided by Grantee by means of or in connection with the Cable System and whose premises are physically wired and lawfully Activated to receive Cable Service from Grantee's Cable System, and who is in compliance with Grantee's regular and nondiscriminatory terms and conditions for receipt of service.

1.39 "Subscriber Network" means that portion of the Cable System used primarily by Grantee in the transmission of Cable Services to Residential Subscribers.

1.40 "Telecommunications" means the transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received (as provided in 47 U.S.C. Section 153(43)).

1.41 "Telecommunications Service" means the offering of Telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used (as provided in 47 U.S.C. Section 153(46)).

1.42 "Tier" means a group of Channels for which a single periodic subscription fee is charged.

1.43 "Two-Way" means that the Cable System is capable of providing both Upstream and Downstream transmissions.

1.44 "Upstream" means carrying a transmission to the Headend from remote points on the Cable System or from Interconnection points on the Cable System.

(B) EXHIBITS

The following documents, which are occasionally referred to in this Franchise, are formally incorporated and made a part of this Franchise by this reference:

(1) ***Exhibit A,*** titled Report Form.

(2) ***Exhibit B***, titled Customer Service Standards

SECTION 2. GRANT OF FRANCHISE

2.1 Grant

(A) The City hereby grants to Grantee a nonexclusive authorization to make reasonable and lawful use of the Rights-of-Way within the City to construct, operate, maintain, reconstruct and rebuild a Cable System for the purpose of providing Cable Service subject to the terms and conditions set forth in this Franchise and in any prior utility or use agreements entered into by Grantee with regard to any individual property. This Franchise shall constitute both a right and an obligation to provide the Cable Services required by, and to fulfill the obligations set forth in, the provisions of this Franchise.

(B) Nothing in this Franchise shall be deemed to waive the lawful requirements of any generally applicable City ordinance existing as of the Effective Date, as defined in subsection 2.3.

(C) Every term, provision or condition herein is subject to the provisions of State law, federal law, the Charter of the City, and the ordinances and regulations enacted pursuant thereto. The Charter and Municipal Code of the City, as the same may be amended from time to time, are hereby expressly incorporated into this Franchise as if fully set out herein by this reference. Notwithstanding the foregoing, the City may not unilaterally alter the material rights and obligations of Grantee under this Franchise.

(D) This Franchise shall not be interpreted to prevent the City from imposing additional lawful conditions, including additional compensation conditions, for use of the Rights-of-Way.

(E) Grantee promises and guarantees, as a condition of exercising the privileges granted by this Franchise, that any Affiliate of the Grantee directly involved in the offering of Cable Service in the Franchise Area, or directly involved in the management or operation of the Cable System in the Franchise Area, will also comply with the obligations of this Franchise.

(F) No rights shall pass to Grantee by implication. Without limiting the foregoing, by way of example and not limitation, this Franchise shall not include or be a substitute for:

(1) Any other permit or authorization required for the privilege of transacting and carrying on a business within the City that may be required by the City's ordinances and laws;

(2) Any permit, agreement, or authorization required by the City for Right-of-Way users in connection with operations on or in Rights-of-Way or public property including, by way of example and not limitation, street cut permits; or

(3) Any permits or agreements for occupying any other property of the City or private entities to which access is not specifically granted by this Franchise including, without limitation, permits and agreements for placing devices on poles, in conduits or in or on other structures.

(G) This Franchise is intended to convey limited rights and interests only as to those Rights-of-Way in which the City has an actual interest. It is not a warranty of title or interest in any Right-of-Way; it does not provide the Grantee with any interest in any particular location within the Right-of-Way; and it does not confer rights other than as expressly provided in the grant hereof.

2.2 Use of Rights-of-Way

(A) Subject to the City's supervision and control, Grantee may erect, install, construct, repair, replace, reconstruct, and retain in, on, over, under, upon, across, and along the Rights-of-Way within the City such wires, cables, conductors, ducts, conduits, vaults, manholes, amplifiers, pedestals, attachments and other property and equipment as are necessary and appurtenant to the operation of a Cable System within the City. Grantee, through this Franchise, is granted extensive and valuable rights to operate its Cable System for profit using the City's Rights-of-Way in compliance with all applicable City construction codes and procedures. As trustee for the public, the City is entitled to fair compensation as provided for in Section 3 of this Franchise to be paid for these valuable rights throughout the term of the Franchise.

(B) Grantee must follow City-established nondiscriminatory requirements for placement of Cable System facilities in Rights-of-Way, including the specific location of facilities in the Rights-of-Way, and must in any event install Cable System facilities in a manner that minimizes interference with the use of the Rights-of-Way by others, including others that may be installing communications facilities. Within limits reasonably related to the City's role in protecting public health, safety and welfare, the City may require that Cable System facilities be installed at a particular time, at a specific place or in a particular manner as a condition of access to a particular Right-of-Way; may deny access if Grantee is not willing to comply with the City's requirements; and may remove, or require removal of, any facility that is not installed by Grantee in compliance with the requirements established by the City, or which is installed without prior City approval of the time, place or manner of installation, and charge Grantee for all the costs associated with removal; and may require Grantee to cooperate with others to minimize adverse

impacts on the Rights-of-Way through joint trenching and other arrangements.

2.3 Effective Date and Term of Franchise

This Franchise and the rights, privileges and authority granted hereunder shall take effect on July 22nd, 2025 (the "Effective Date"), and shall terminate on July 22, 2035, unless terminated sooner as hereinafter provided.

2.4 Franchise Nonexclusive

This Franchise shall be nonexclusive, and subject to all prior rights, interests, easements or licenses granted by the City to any Person to use any property, Right-of-Way, right, interest or license for any purpose whatsoever, including the right of the City to use same for any purpose it deems fit, including the same or similar purposes allowed Grantee hereunder. The City may at any time grant authorization to use the Rights-of-Way for any purpose not incompatible with Grantee's authority under this Franchise and for such additional franchises for Cable Systems as the City deems appropriate.

2.5 Police Powers

Grantee's rights hereunder are subject to the police powers of the City to adopt and enforce ordinances necessary to the safety, health, and welfare of the public, and Grantee agrees to comply with all laws and ordinances of general applicability enacted, or hereafter enacted, by the City or any other legally constituted governmental unit having lawful jurisdiction over the subject matter hereof. The City shall have the right to adopt, from time to time, such ordinances as may be deemed necessary in the exercise of its police power. The Grantee reserves the right to challenge any ordinance(s) it believes are not a generally applicable exercise of City's police powers. Any conflict between the provisions of this Franchise and any other present or future lawful exercise of the City's police powers shall be resolved in favor of the latter.

2.6 Competitive Equity

(A) The Grantee acknowledges and agrees that the City reserves the right to grant one or more additional franchises or other similar lawful authorization to provide Cable Services within the City. If the City grants such an additional franchise or other similar lawful authorization containing material terms and conditions that differ from Grantee's material obligations under this Franchise, then the City agrees that the obligations in this Franchise will, pursuant to the process set forth in this Section, be amended to include any material terms or conditions that it imposes upon the new entrant, or provide relief from existing material terms or conditions, so as to insure that the regulatory and financial burdens on each entity are materially equivalent. "Material terms and conditions" include, but are not limited to: Franchise Fees and Gross Revenues; insurance; System build-out requirements; security instruments; Public, Education and Government Access Channels and support; customer service standards; required reports and related record keeping; competitive equity (or its equivalent); audits; dispute resolution; remedies; and notice and opportunity to cure breaches. The parties agree that this provision shall not require a word-for-word identical franchise or authorization for a competitive

entity so long as the regulatory and financial burdens on each entity are materially equivalent. Video programming services (as defined in the Cable Act) delivered over wireless broadband networks are specifically exempted from the requirements of this Section.

(B) The modification process of this Franchise as provided for in Section 2.6 (A) shall only be initiated by written notice by the Grantee to the City regarding specified franchise obligations. Grantee's notice shall address the following: (1) identifying the specific terms or conditions in the competitive cable services franchise which are materially different from Grantee's obligations under this Franchise; (2) identifying the Franchise terms and conditions for which Grantee is seeking amendments; (3) providing text for any proposed Franchise amendments to the City, with a written explanation of why the proposed amendments are necessary and consistent.

(C) Upon receipt of Grantee's written notice as provided in Section 2.6 (B), the City and Grantee agree that they will use best efforts in good faith to negotiate Grantee's proposed Franchise modifications, and that such negotiation will proceed and conclude within a 90-day time period, unless that time period is reduced or extended by mutual agreement of the parties. If the City and Grantee reach agreement on the Franchise modifications pursuant to such negotiations, then the City shall amend this Franchise to include the modifications.

(D) In the alternative to Franchise modification negotiations as provided for in Section 2.6 (C), or if the City and Grantee fail to reach agreement in such negotiations, Grantee may, at its option, elect to replace this Franchise by opting into the franchise or other similar lawful authorization that the City grants to another provider of Cable Services, with the understanding that Grantee will use its current system design and technology infrastructure to meet any requirements of the new franchise so as to insure that the regulatory and financial burdens on each entity are equivalent. If Grantee so elects, the City shall immediately commence proceedings to replace this Franchise with the franchise issued to the other Cable Services provider.

(E) Notwithstanding anything contained in this Section 2.6 (A) through (D) to the contrary, the City shall not be obligated to amend or replace this Franchise unless the new entrant makes Cable Services available for purchase by Subscribers or customers under its franchise agreement with the City.

(F) Notwithstanding any provision to the contrary, at any time that a wireline facilities-based entity, legally authorized by State or federal law, makes available for purchase by Subscribers or customers, Cable Services or multiple Channels of video programming within the Franchise Area without a franchise or other similar lawful authorization granted by the City, then:

(1) Grantee may negotiate with the City to seek Franchise modifications as per Section 2.6(C) above; or

(a) the term of Grantee's Franchise shall, upon ninety (90) days written notice from Grantee, be shortened so that the Franchise shall be deemed to expire

on a date eighteen (18) months from the first day of the month following the date of Grantee's notice; or,

(b) Grantee may assert, at Grantee's option, that this Franchise is rendered "commercially impracticable," and invoke the modification procedures set forth in Section 625 of the Cable Act.

2.7 Familiarity with Franchise

The Grantee acknowledges and warrants by acceptance of the rights, privileges and agreements granted herein, that it has carefully read and fully comprehends the terms and conditions of this Franchise and is willing to and does accept all lawful and reasonable risks of the meaning of the provisions, terms and conditions herein. The Grantee further acknowledges and states that it has fully studied and considered the requirements and provisions of this Franchise, and finds that the same are commercially practicable at this time, and consistent with all local, State, and federal laws and regulations currently in effect, including the Cable Act.

2.8 Effect of Acceptance

By accepting the Franchise, the Grantee: (1) acknowledges and accepts the City's legal right to issue and enforce the Franchise; (2) accepts and agrees to comply with every provision of this Franchise subject to Applicable Law; and (3) agrees that the Franchise was granted pursuant to processes and procedures consistent with Applicable Law, and that it will not raise any claim to the contrary.

SECTION 3. FRANCHISE FEE PAYMENT AND FINANCIAL CONTROLS

3.1 Franchise Fee

As compensation for the benefits and privileges granted under this Franchise and in consideration of permission to use the City's Rights-of-Way, Grantee shall continue to pay as a Franchise Fee to the City, throughout the duration of and consistent with this Franchise, an amount equal to 5% of Grantee's Gross Revenues.

3.2 Payments

Grantee's Franchise Fee payments to the City shall be computed quarterly for the preceding calendar quarter ending March 31, June 30, September 30, and December 31. Each quarterly payment shall be due and payable no later than 45 days after said dates.

3.3 Acceptance of Payment and Recomputation

No acceptance of any payment shall be construed as an accord by the City that the amount paid is, in fact, the correct amount, nor shall any acceptance of payments be construed as a release of any claim the City may have for further or additional sums payable or for the performance of any other obligation of Grantee.

3.4 Quarterly Franchise Fee Reports

Each payment shall be accompanied by a written report to the City, or concurrently sent under separate cover, verified by an authorized representative of Grantee, containing an accurate statement in summarized form, as well as in detail, of Grantee's Gross Revenues and the computation of the payment amount. Such reports shall detail all Gross Revenues of the Cable System.

3.5 Annual Franchise Fee Reports

Grantee shall, within 60 days after the end of each year, furnish to the City a statement stating the total amount of Gross Revenues for the year and all payments, deductions and computations for the period.

3.6 Audits

On an annual basis, upon 30 days prior written notice, the City, including the City's Auditor or their authorized representative, shall have the right to conduct an independent audit/review of Grantee's records reasonably related to the administration or enforcement of this Franchise. Pursuant to subsection 1.29, as part of the Franchise Fee audit/review the City shall specifically have the right to review relevant data related to the allocation of revenue to Cable Services in the event Grantee offers Cable Services bundled with non-Cable Services. For purposes of this section, "relevant data" shall include, at a minimum, Grantee's records, produced and maintained in the ordinary course of business, showing the subscriber counts per package and the revenue allocation per package for each package that was available for City subscribers during the audit period. To the extent that the City does not believe that the relevant data supplied is sufficient for the City to complete its audit/review, the City may require other relevant data. For purposes of this Section 3.6, the "other relevant data" shall generally mean all: (1) billing reports, (2) financial reports (such as General Ledgers) and (3) sample customer bills used by Grantee to determine Gross Revenues for the Franchise Area that would allow the City to recompute the Gross Revenue determination. If the audit/review shows that Franchise Fee payments have been underpaid by five percent 5% or more (or such other contract underpayment threshold as set forth in a generally applicable and enforceable regulation or policy of the City related to audits), Grantee shall pay the total cost of the audit/review, such cost not to exceed $7,500 for each year of the audit period. The City's right to audit/review and the Grantee's obligation to retain records related to this subsection shall expire three years after each Franchise Fee payment has been made to the City.

3.7 Late Payments

In the event any payment due quarterly is not received within 45 days from the end of the calendar quarter, Grantee shall pay interest on the amount due (at the prime rate as listed in the Wall Street Journal on the date the payment was due), compounded daily, calculated from the date the payment was originally due until the date the City receives the payment.

3.8 Underpayments

If a net Franchise Fee underpayment is discovered as the result of an audit, Grantee shall pay interest at the rate of the 8% per annum, compounded quarterly, calculated from the date each portion of the underpayment was originally due until the date Grantee remits the underpayment to the City.

3.9 Alternative Compensation

In the event the obligation of Grantee to compensate the City through Franchise Fee payments is lawfully suspended or eliminated, in whole or part, then Grantee shall comply with any other Applicable Law related to the right to occupy the City's Rights-of-Way and compensation therefor.

3.10 Maximum Legal Compensation

The Parties acknowledge that, at present, applicable federal law limits the City to collection of a maximum permissible Franchise Fee of 5% of Gross Revenues. In the event that at any time during the duration of this Franchise, the City is authorized to collect an amount in excess of 5% of Gross Revenues, then the City and Grantee may enter into negotiations to amend this Franchise pursuant to Section 4.7.

3.11 Additional Commitments Not Franchise Fee Payments

(A) The PEG Capital Contribution pursuant to Section 9.6, as well as any charges incidental to the awarding or enforcing of this Franchise (including, without limitation, payments for bonds, security funds, letters of credit, insurance, indemnification, penalties or liquidated damage) and Grantee's costs of compliance with Franchise obligations (including, without limitation, compliance with customer service standards and build out obligations) shall not be offset against Franchise Fees. Furthermore, the City and Grantee agree that any local tax of general applicability shall be in addition to any Franchise Fees required herein, and there shall be no offset against Franchise Fees. Notwithstanding the foregoing, Grantee reserves all rights to offset cash or non-cash consideration or obligations from Franchise Fees, consistent with Applicable Law. The City likewise reserves all rights it has under Applicable Law. Should Grantee elect to offset the items set forth herein, or other Franchise commitments such as complimentary Cable Service, against Franchise Fees in accordance with Applicable Law, including any

Orders resulting from the FCC's 621 proceeding, MB Docket No. 05-311, Grantee shall provide the City with advance written notice. Such notice shall document the proposed offset or service charges so that the City can make an informed decision as to its course of action. Upon receipt of such notice, the City shall have up to 120 days to either (1) maintain the commitment with the understanding that the value shall be offset from Franchise Fees; (2) relieve Grantee from the commitment obligation under the Franchise; or (3) pay for the services rendered pursuant to the commitment in accordance with Grantee's regular and nondiscriminatory term and conditions.

(B) Grantee's notice pursuant to Section 3.11(A) shall, at a minimum, address the following: (1) identify the specific cash or non-cash consideration or obligations that must be offset from Grantee's Franchise Fee obligations; (2) identify the Franchise terms and conditions for which Grantee is seeking amendments; (3) provide text for any proposed Franchise amendments to the City, with a written explanation of why the proposed amendments are necessary and consistent with Applicable Law; (4) provide all information and documentation reasonably necessary to address how and why specific offsets are to be calculated and (5) if applicable, provide all information and documentation reasonably necessary to document how Franchise Fee offsets may be passed through to Subscribers in accordance with 47 U.S.C. § 542(e). Nothing in this Section 3.11(B) shall be construed to extend the 120-day time period for the City to make its election under Section 3.11(A); provided, however, that any disagreements or disputes over whether sufficient information has been provided pursuant to this Paragraph (B) may be addressed under Sections 13.1 or 13.2 of this Franchise.

(C) Upon receipt of Grantee's written notice as provided in Section 3.11 (B), the City and Grantee agree that they will use best efforts in good faith to negotiate Grantee's proposed Franchise modifications and agree to what offsets, if any, are to be made to the Franchise Fee obligations. Such negotiation will proceed and conclude within a 120-day time period, unless that time period is reduced or extended by mutual agreement of the parties. If the City and Grantee reach agreement on the Franchise modifications pursuant to such negotiations, then the City shall amend this Franchise to include those modifications.

(D) If the parties are unable to reach agreement on any Franchise Fee offset issue within 120 days or such other time as the parties may mutually agree, each party reserves all rights it may have under Applicable Law to address such offset issues.

(E) The City acknowledges that Grantee currently provides one outlet of Basic Service and Digital Starter Service and associated equipment to certain City-owned and occupied or leased and occupied buildings, and fire stations located in areas where Grantee provides Cable Service. Outlets of Basic and Digital Starter Service provided in accordance with this subsection may be

used to distribute Cable Services throughout such buildings, provided such distribution can be accomplished without causing Cable System disruption and general technical standards are maintained. Grantee's commitment to provide this service is voluntary and may be terminated by Grantee at its sole discretion.

(1) Grantee's termination of complimentary services provided shall be pursuant to the provisions of Section 3.11(A)-(E) above. The City may make a separate election for each account or line of service identified in the notice (for example, the City may choose to accept certain services or accounts as offsets to Franchise Fees and discontinue other services or accounts), so long as all elections are made within 120 days. Grantee shall also provide written notice to each entity that is currently receiving complimentary services with copies of those notice(s) sent to the City.

(2) Notwithstanding the foregoing, Grantee reserves all rights to offset cash or non-cash consideration or obligations from Franchise Fees, consistent with Applicable Law. The City likewise reserves all rights it has under Applicable Law.

(F) The parties understand and agree that offsets may be required and agreed to as a result of the FCC's Order in what is commonly known as the 621 Proceeding, MB Docket No. 05-311. Should there be a new Order in the 621 Proceeding, or any other change in Applicable Law, which would permit any cash or non-cash consideration or obligations to be required by this Franchise without being offset from Franchise Fees, or would change the scope of the City's regulatory authority over the use of the rights-of-way by the Grantee, the parties shall, within 120 days of written notice from the City, amend this Franchise to reinstate such consideration or obligations without offset from Franchise Fees, and to address the full scope of the City's regulatory authority.

3.12 Tax Liability

The Franchise Fees shall be in addition to any taxes or other levies or assessments which are now or hereafter required to be paid by businesses in general by any law of the City, the State or the United States including, without limitation, sales, use and other taxes, business license fees or other payments. Payment of the Franchise Fees under this Franchise shall not exempt Grantee from the payment of any other license fee, permit fee, tax or charge on the business, occupation, property or income of Grantee that may be lawfully imposed by the City. Any other license fees, taxes or charges shall be of general applicability in nature and shall not be levied against Grantee solely because of its status as a Cable Operator, or against Subscribers, solely because of their status as such.

3.13 Financial Records

Grantee agrees to meet with a representative of the City upon request to review Grantee's methodology of record-keeping, financial reporting, the computing of Franchise Fee obligations and other procedures, the understanding of which the City deems necessary for reviewing reports

and records.

3.14 Payment on Termination

If this Franchise terminates for any reason, the Grantee shall file with the City within 90 calendar days of the date of the termination, a financial statement, certified by an independent certified public accountant, showing the Gross Revenues received by the Grantee since the end of the previous fiscal year. The City reserves the right to satisfy any remaining financial obligations of the Grantee to the City by utilizing the funds available in the letter of credit or other security provided by the Grantee.

SECTION 4. ADMINISTRATION AND REGULATION

4.1 Authority

(A) The City shall be vested with the power and right to reasonably regulate the exercise of the privileges permitted by this Franchise in the public interest, or to delegate that power and right, or any part thereof, to the extent permitted under federal, State and local law, to any agent including, but not limited to, the CCUA, in its sole discretion.

(B) Nothing in this Franchise shall limit nor expand the City's right of eminent domain under State law.

4.2 Rates and Charges

All of Grantee's rates and charges related to or regarding Cable Services shall be subject to regulation by the City to the full extent authorized by applicable federal, State, and local laws.

4.3 Rate Discrimination

All of Grantee's rates and charges shall be published (in the form of a publicly-available rate card) and be non-discriminatory as to all Persons and organizations of similar classes, under similar circumstances and conditions. Grantee shall apply its rates in accordance with Applicable Law, with identical rates and charges for all Subscribers receiving identical Cable Services, without regard to race, color, ethnic or national origin, religion, age, sex, sexual orientation, marital, military or economic status, or physical or mental disability or geographic location within the City. Grantee shall offer the same Cable Services to all Residential Subscribers at identical rates to the extent required by Applicable Law and to Multiple Dwelling Unit Subscribers to the extent authorized by FCC rules or applicable federal law. Grantee shall permit Subscribers to make any lawful in-residence connections the Subscriber chooses without additional charge nor penalizing the Subscriber therefor. However, if any in-home connection requires service from Grantee due to signal quality, signal leakage or other factors, caused by improper installation of such in-home wiring or faulty materials of such in-home wiring, the Subscriber may be charged reasonable service charges by Grantee. Nothing herein shall be construed to prohibit:

(A) The temporary reduction or waiving of rates or charges in conjunction with valid

promotional campaigns; or,

(B) The offering of reasonable discounts to senior citizens or economically disadvantaged citizens; or,

(C) The offering of rate discounts for Cable Service; or,

(D) The Grantee from establishing different and nondiscriminatory rates and charges and classes of service for Commercial Subscribers, as allowable by federal law and regulations.

4.4 Filing of Rates and Charges

(A) Throughout the term of this Franchise, Grantee shall maintain on file with the City a complete schedule of applicable rates and charges for Cable Services provided under this Franchise. Nothing in this subsection shall be construed to require Grantee to file rates and charges under temporary reductions or waivers of rates and charges in conjunction with promotional campaigns.

(B) Upon request of the City, Grantee shall provide a complete schedule of current rates and charges for any Leased Access Channels, or portions of such Channels, provided by Grantee. The schedule shall include a description of the price, terms, and conditions established by Grantee for Leased Access Channels.

4.5 Cross Subsidization

Grantee shall comply with all Applicable Laws regarding rates for Cable Services and all Applicable Laws covering issues of cross subsidization.

4.6 Reserved Authority

Both Grantee and the City reserve all rights they may have under the Cable Act and any other relevant provisions of federal, State, or local law.

4.7 Franchise Amendment Procedure

Either party may at any time seek an amendment of this Franchise by so notifying the other party in writing. Within 30 days of receipt of notice, the City and Grantee shall meet to discuss the proposed amendment(s). If the parties reach a mutual agreement upon the suggested amendment(s), such amendment(s) shall be submitted to the City Council for its approval. If so approved by the City Council and the Grantee, then such amendment(s) shall be deemed part of this Franchise. If mutual agreement is not reached, there shall be no amendment.

4.8 Late Fees

(A) For purposes of this subsection, any assessment, charge, cost, fee or sum, however characterized, that the Grantee imposes upon a Subscriber solely for late payment of a bill is a late

fee and shall be applied in accordance with the City's Customer Service Standards, as the same may be amended from time to time by the City Council acting by ordinance or resolution, or as the same may be superseded by Applicable Law.

(B) Nothing in this subsection shall be deemed to create, limit or otherwise affect the ability of the Grantee, if any, to impose other assessments, charges, fees or sums other than those permitted by this subsection, for the Grantee's other services or activities it performs in compliance with Applicable Law, including FCC law, rule or regulation.

(C) The Grantee's late fee and disconnection policies and practices shall be consistent with Applicable Law.

4.9 Force Majeure

In the event Grantee is prevented or delayed in the performance of any of its obligations under this Franchise by reason beyond the control of Grantee, Grantee shall have a reasonable time, under the circumstances, to perform the affected obligation under this Franchise or to procure a substitute for such obligation which is satisfactory to the City. Those conditions which are not within the control of Grantee include, but are not limited to, natural disasters, civil disturbances, work stoppages or labor disputes, power outages, telephone network outages, and severe or unusual weather conditions which have a direct and substantial impact on the Grantee's ability to provide Cable Services in the City and which was not caused and could not have been avoided by the Grantee which used its best efforts in its operations to avoid such results.

If Grantee believes that a reason beyond its control has prevented or delayed its compliance with the terms of this Franchise, Grantee shall provide documentation as reasonably required by the City to substantiate the Grantee's claim. If Grantee has not yet cured the deficiency, Grantee shall also provide the City with its proposed plan for remediation, including the timing for such cure.

4.10 Time Limits Strictly Construed

Whenever this Franchise sets forth a time for any act to be performed by Grantee, such time shall be deemed to be of the essence, and any failure of Grantee to perform within the allotted time may be considered a breach of this Franchise, and sufficient grounds for the City to invoke any relevant remedy in accordance with Section 13.1 of this Franchise.

SECTION 5. FINANCIAL AND INSURANCE REQUIREMENTS

5.1 Indemnification

(A) General Indemnification. Grantee shall indemnify, defend and hold the City, its officers, officials, boards, commissions, agents and employees, harmless from any action or claim for injury, damage, loss, liability, cost or expense, including court and appeal costs and reasonable attorneys' fees or reasonable expenses, arising from any casualty or accident to Person or property, including, without limitation, copyright infringement, defamation, and all other damages in any

way arising out of, or by reason of, any construction, excavation, operation, maintenance, reconstruction, or any other act done under this Franchise, by or for Grantee, its agents, or its employees, or by reason of any neglect or omission of Grantee. Grantee shall consult and cooperate with the City while conducting its defense of the City. Grantee shall not be obligated to indemnify the City to the extent of the City's negligence or willful misconduct.

(B) Indemnification for Relocation. Grantee shall indemnify the City for any damages, claims, additional costs or reasonable expenses assessed against, or payable by, the City arising out of, or resulting from, directly or indirectly, Grantee's failure to remove, adjust or relocate any of its facilities in the Rights-of-Way in a timely manner in accordance with any relocation required by the City.

(C) Additional Circumstances. Grantee shall also indemnify, defend and hold the City harmless for any claim for injury, damage, loss, liability, cost or expense, including court and appeal costs and reasonable attorneys' fees or reasonable expenses in any way arising out of:

(1) The lawful actions of the City in granting this Franchise to the extent such actions are consistent with this Franchise and Applicable Law.

(2) Damages arising out of any failure by Grantee to secure consents from the owners, authorized distributors, or licensees/licensors of programs to be delivered by the Cable System, whether or not any act or omission complained of is authorized, allowed or prohibited by this Franchise.

(D) Procedures and Defense. If a claim or action arises, the City or any other indemnified party shall promptly tender the defense of the claim to Grantee, which defense shall be at Grantee's expense. The City may participate in the defense of a claim, but if Grantee provides a defense at Grantee's expense, then Grantee shall not be liable for any attorneys' fees, expenses or other costs that the City may incur if it chooses to participate in the defense of a claim, unless and until separate representation as described below in Paragraph 5.1(F) is required. In that event the provisions of Paragraph 5.1(F) shall govern Grantee's responsibility for the City's attorney's fees, expenses or other costs. In any event, Grantee may not agree to any settlement of claims affecting the City without the City's approval.

(E) Non-waiver. The fact that Grantee carries out any activities under this Franchise through independent contractors shall not constitute an avoidance of or defense to Grantee's duty of defense and indemnification under this subsection.

(F) Expenses. If separate representation to fully protect the interests of both parties is or becomes necessary, such as a conflict of interest between the City and the counsel selected by Grantee to represent the City, Grantee shall pay, from the date such separate representation is required forward, all reasonable expenses incurred by the City in defending itself with regard to any action, suit or proceeding indemnified by Grantee. Provided, however, that in the event that such separate representation is or becomes necessary, and the City desires to hire counsel or any other outside experts or consultants and desires Grantee to pay those expenses, then the City shall be required to obtain Grantee's consent to the engagement of such counsel, experts or consultants,

such consent not to be unreasonably withheld. The City's expenses shall include all reasonable out-of-pocket expenses, such as consultants' fees, and shall also include the reasonable value of any services rendered by the City Attorney or his/her assistants or any employees of the City or its agents but shall not include outside attorneys' fees for services that are unnecessarily duplicative of services provided the City by Grantee.

5.2 Insurance

(A) Grantee shall maintain in full force and effect at its own cost and expense each of the following policies of insurance, but in no event shall occurrence basis minimum limits be less than provided for by C.R.S. § 24-10-114(1)(b):

(1) Commercial General Liability insurance with limits of no less than $2 million per occurrence and $5 million general aggregate. Coverage shall be at least as broad as that provided by ISO CG 00 01 1/96 or its equivalent and include severability of interests. Such insurance shall name the City, its officers, officials and employees as additional insureds per ISO CG 2026 or its equivalent. There shall be a waiver of subrogation and rights of recovery against the City, its officers, officials and employees. Coverage shall apply as to claims between insureds on the policy, if applicable.

(2) Commercial Automobile Liability insurance with minimum combined single limits of $1 million each occurrence with respect to each of Grantee's owned, hired and non-owned vehicles assigned to or used in the operation of the Cable System in the City. The policy shall contain a severability of interests provision.

(3) Statutory workers' compensation and employer's liability insurance in an amount of five hundred thousand ($500,000) each accident/disease/policy limit.

(B) The insurance shall not be canceled or materially changed so as to be out of compliance with these requirements without 30 days' written notice first provided to the City, via certified mail, and 10 days' notice for nonpayment of premium. If the insurance is canceled or materially altered so as to be out of compliance with the requirements of this subsection within the term of this Franchise, Grantee shall provide a replacement policy. Grantee agrees to maintain continuous uninterrupted insurance coverage, in at least the amounts required, for the duration of this Franchise and, in the case of the Commercial General Liability, for at least one year after expiration of this Franchise.

5.3 Deductibles / Certificate of Insurance

Any deductible of the policies shall not in any way limit Grantee's liability to the City.

(A) Endorsements.

(1) All policies shall contain, or shall be endorsed so that:

(a) The City, its officers, officials, boards, commissions, employees and

agents are to be covered as, and have the rights of, additional insureds with respect to liability arising out of activities performed by, or on behalf of, Grantee under this Franchise or Applicable Law, or in the construction, operation or repair, or ownership of the Cable System;

(b) Grantee's insurance coverage shall be primary insurance with respect to the City, its officers, officials, boards, commissions, employees and agents. Any insurance or self-insurance maintained by the City, its officers, officials, boards, commissions, employees and agents shall be in excess of the Grantee's insurance and shall not contribute to it; and

(c) Grantee's insurance shall apply separately to each insured against whom a claim is made or lawsuit is brought, except with respect to the limits of the insurer's liability.

(B) Acceptability of Insurers. The insurance obtained by Grantee shall be placed with insurers with a Best's rating of no less than "A VII."

(C) Verification of Coverage. The Grantee shall furnish the City with certificates of insurance and endorsements or a copy of the page of the policy reflecting blanket additional insured status. The certificates and endorsements for each insurance policy are to be signed by a Person authorized by that insurer to bind coverage on its behalf. The certificates and endorsements for each insurance policy are to be on standard forms or such forms as are consistent with standard industry practices.

(D) Self-Insurance. In the alternative to providing a certificate of insurance to the City certifying insurance coverage as required above, Grantee may provide self-insurance in the same amount and level of protection for Grantee and the City, its officers, agents and employees as otherwise required under this Section. The adequacy of self-insurance shall be subject to the periodic review and approval of the City.

5.4 Letter of Credit

(A) If there is a claim by the City of an uncured breach by Grantee of a material provision of this Franchise or pattern of repeated violations of any provision(s) of this Franchise, then the City may require and Grantee shall establish and provide, within 30 days from receiving notice from the City, to the City as security for the faithful performance by Grantee of all of the provisions of this Franchise, a letter of credit from a financial institution satisfactory to the City in the amount of $25,000.

(B) In the event that Grantee establishes a letter of credit pursuant to the procedures of this Section, then the letter of credit shall be maintained at $50,000 until the allegations of the uncured breach have been resolved.

(C) As an alternative to the provision of a Letter of Credit to the City as set forth in Subsections 5.4 (A) and (B) above, if the City is a member of CCUA, and if Grantee provides a Letter of Credit to CCUA in an amount agreed to between Grantee and CCUA for the benefit of

its members, in order to collectively address claims referenced in 5.4 (A), Grantee shall not be required to provide a separate Letter of Credit to the City.

(D) After completion of the procedures set forth in Section 13.1 or other applicable provisions of this Franchise, the letter of credit may be drawn upon by the City for purposes including, but not limited to, the following:

(1) Failure of Grantee to pay the City sums due under the terms of this Franchise;

(2) Reimbursement of costs borne by the City to correct Franchise violations not corrected by Grantee;

(3) Monetary remedies or damages assessed against Grantee due to default or breach of Franchise requirements; and,

(4) Failure to comply with the Customer Service Standards of the City, as the same may be amended from time to time by the City Council acting by ordinance or resolution.

(E) The City shall give Grantee written notice of any withdrawal under this subsection upon such withdrawal. Within 7 days following receipt of such notice, Grantee shall restore the letter of credit to the amount required under this Franchise.

(F) Grantee shall have the right to appeal to the City Council for reimbursement in the event Grantee believes that the letter of credit was drawn upon improperly. Grantee shall also have the right of judicial appeal if Grantee believes the letter of credit has not been properly drawn upon in accordance with this Franchise. Any funds the City erroneously or wrongfully withdraws from the letter of credit shall be returned to Grantee with interest, from the date of withdrawal at a rate equal to the prime rate of interest as quoted in the Wall Street Journal.

SECTION 6. CUSTOMER SERVICE

6.1 Customer Service Standards

Grantee shall comply with Customer Service Standards of the City, as the same may be amended from time to time by the City Council in its sole discretion acting by ordinance or resolution. Any requirement in Customer Service Standards for a "local" telephone number may be met by the provision of a toll-free number. The Customer Services Standards in effect as of the Effective Date of this Franchise are attached as Exhibit B. Grantee reserves the right to challenge any customer service standards which it believes is inconsistent with its contractual rights under this Franchise.

6.2 Subscriber Privacy

Grantee shall fully comply with any provisions regarding the privacy rights of Subscribers

contained in Applicable Law.

6.3 Subscriber Contracts

Grantee shall not enter into a contract with any Subscriber which is in any way inconsistent with the terms of this Franchise, or any Exhibit hereto, or the requirements of any applicable Customer Service Standard. Upon request, Grantee will provide to the City a sample of the Subscriber contract or service agreement then in use.

6.4 Advance Notice to City

The Grantee shall use reasonable efforts to furnish information provided to Subscribers or the media in the normal course of business to the City in advance.

6.5 Identification of Local Franchise Authority on Subscriber Bills

Within 60 days after written request from the City, Grantee shall place the City's phone number on its Subscriber bills, to identify where a Subscriber may call to address escalated complaints.

SECTION 7. REPORTS AND RECORDS

7.1 Open Records

Grantee shall manage all of its operations in accordance with a policy of keeping its documents and records open and accessible to the City. The City, including the City's Auditor or his/her authorized representative, shall have access to, and the right to inspect, any books and records of Grantee, its parent corporations and Affiliates which are reasonably related to the administration or enforcement of the terms of this Franchise. Grantee shall not deny the City access to any of Grantee's records on the basis that Grantee's records are under the control of any parent corporation, Affiliate or a third party. The City may, in writing, request copies of any such records or books and Grantee shall provide such copies within 30 days of the transmittal of such request. One copy of all reports and records required under this or any other subsection shall be furnished to the City, at the sole expense of Grantee. If the requested books and records are too voluminous, or for security reasons cannot be copied or removed, then Grantee may request, in writing within 10 days, that the City inspect them at Grantee's local offices. If any books or records of Grantee are not kept in a local office and not made available in copies to the City upon written request as set forth above, and if the City determines that an examination of such records is necessary or appropriate for the performance of any of the City's duties, administration or enforcement of this Franchise, then all reasonable travel and related expenses incurred in making such examination shall be paid by Grantee.

7.2 Confidentiality

The City agrees to treat as confidential any books or records that constitute proprietary or confidential information under federal or State law, to the extent Grantee makes the City aware of such confidentiality. Grantee shall be responsible for clearly and conspicuously stamping the word

"Confidential" on each page that contains confidential or proprietary information, and shall provide a brief written explanation as to why such information is confidential under State or federal law. If the City believes it must release any such confidential books and records in the course of enforcing this Franchise, or for any other reason, it shall advise Grantee in advance so that Grantee may take appropriate steps to protect its interests. If the City receives a demand from any Person for disclosure of any information designated by Grantee as confidential, the City shall, so far as consistent with Applicable Law, advise Grantee and provide Grantee with a copy of any written request by the party demanding access to such information within a reasonable time. Until otherwise ordered by a court or agency of competent jurisdiction, the City agrees that, to the extent permitted by State and federal law, it shall deny access to any of Grantee's books and records marked confidential as set forth above to any Person. Grantee shall reimburse the City for all reasonable costs and attorneys fees incurred in any legal proceedings pursued under this Section.

7.3 Records Required

(A) Grantee shall at all times maintain, and shall furnish to the City upon 30 days written request and subject to Applicable Law:

(1) A complete set of maps showing the exact location of all Cable System equipment and facilities in the Right-of-Way but excluding detail on proprietary electronics contained therein and Subscriber drops. As-built maps including proprietary electronics shall be available at Grantee's offices for inspection by the City's authorized representative(s) or agent(s) and made available to such during the course of technical inspections as reasonably conducted by the City. These maps shall be certified as accurate by an appropriate representative of the Grantee;

(2) A copy of all FCC filings on behalf of Grantee, its parent corporations or Affiliates which relate to the operation of the Cable System in the City;

(3) Current Subscriber Records and information;

(4) A log of Cable Services added or dropped, Channel changes, number of Subscribers added or terminated, all construction activity, and total homes passed for the previous 12 months; and

(5) A list of Cable Services, rates and Channel line-ups.

(B) Subject to subsection 7.2, all information furnished to the City is public information, and shall be treated as such, except for information involving the privacy rights of individual Subscribers.

7.4 Annual Reports

Within 60 days of the City's written request, Grantee shall submit to the City a written report, in a form acceptable to the City, which shall include, but not necessarily be limited to, the following information for the City:

(A) A Gross Revenue statement, as required by subsection 3.5 of this Franchise;

(B) A summary of the previous year's activities in the development of the Cable System, including, but not limited to, Cable Services begun or discontinued during the reporting year, and the number of Subscribers for each class of Cable Service (*i.e.*, Basic, Digital Starter, and Premium);

(C) The number of homes passed, beginning and ending plant miles, any services added or dropped, and any technological changes occurring in the Cable System;

(D) A statement of planned construction, if any, for the next year; and,

(E) A copy or hyperlink of the most recent annual report Grantee filed with the SEC or other governing body.

The parties agree that the City's request for these annual reports shall remain effective, and need only be made once. Such a request shall require the Grantee to continue to provide the reports

annually, until further written notice from the City to the contrary.

7.5 Copies of Federal and State Reports

Within 30 days of a written request, Grantee shall submit to the City copies of all pleadings, applications, notifications, communications and documents of any kind, submitted by Grantee or its parent corporation(s), to any federal, State or local courts, regulatory agencies and other government bodies if such documents directly relate to the operations of Grantee's Cable System within the City. Grantee shall not claim confidential, privileged or proprietary rights to such documents unless under federal, State, or local law such documents have been determined to be confidential by a court of competent jurisdiction, or a federal or State agency.

7.6 Complaint File and Reports

(A) Grantee shall keep an accurate and comprehensive file of any complaints regarding the Cable System, in a manner consistent with the privacy rights of Subscribers, and Grantee's actions in response to those complaints. These files shall remain available for viewing to the City during normal business hours at Grantee's local business office.

(B) Within 30 days of a written request, Grantee shall provide the City a quarterly executive summary in the form attached hereto as **Exhibit A**, which shall include the following information from the preceding quarter:

(1) A summary of service calls, identifying the number and nature of the requests and their disposition;

(2) A log of all service interruptions;

(3) A summary of customer complaints referred by the City to Grantee; and,

(4) Such other information as reasonably requested by the City.

The parties agree that the City's request for these summary reports shall remain effective, and need only be made once. Such a request shall require the Grantee to continue to provide the reports quarterly, until further written notice from the City to the contrary.

7.7 Failure to Report

The failure or neglect of Grantee to file any of the reports or filings required under this Franchise or such other reports as the City may reasonably request (not including clerical errors or errors made in good faith), may, at the City's option, be deemed a breach of this Franchise.

7.8 False Statements

Any false or misleading statement or representation in any report required by this Franchise (not including clerical errors or errors made in good faith) may be deemed a material breach of

this Franchise and may subject Grantee to all remedies, legal or equitable, which are available to the City under this Franchise or otherwise.

SECTION 8. PROGRAMMING

8.1 Broad Programming Categories

Grantee shall provide or enable the provision of at least the following initial broad categories of programming to the extent such categories are reasonably available:

(A) Educational programming;

(B) Colorado news, weather & information;

(C) National and international news, weather and information;

(D) Colorado sports;

(E) National and international sports;

(F) General entertainment (including movies);

(G) Children/family-oriented;

(H) Arts, culture and performing arts;

(I) Foreign language;

(J) Science/documentary;

(K) Public, Educational and Government Access, to the extent required by this Franchise.

8.2 Deletion or Reduction of Broad Programming Categories

(A) Grantee shall not delete or so limit as to effectively delete any broad category of programming within its control without the prior written consent of the City.

(B) In the event of a modification proceeding under federal law, the mix and quality of Cable Services provided by Grantee on the Effective Date of this Franchise shall be deemed the mix and quality of Cable Services required under this Franchise throughout its term.

8.3 Obscenity

Grantee shall not transmit, or permit to be transmitted over any Channel subject to its editorial control, any programming which is obscene under, or violates any provision of,

Applicable Law relating to obscenity, and is not protected by the Constitution of the United States. Grantee shall be deemed to have transmitted or permitted a transmission of obscene programming only if a court of competent jurisdiction has found that any of Grantee's officers or employees or agents have permitted programming which is obscene under, or violative of, any provision of Applicable Law relating to obscenity, and is otherwise not protected by the Constitution of the United States, to be transmitted over any Channel subject to Grantee's editorial control. Grantee shall comply with all relevant provisions of federal law relating to obscenity.

8.4 Parental Control Device

Upon request by any Subscriber, Grantee shall make available a parental control or lockout device, traps or filters to enable a Subscriber to control access to both the audio and video portions of any or all Channels. Grantee shall inform its Subscribers of the availability of the lockout device at the time of their initial subscription and periodically thereafter. Any device offered shall be at a rate, if any, in compliance with Applicable Law.

8.5 Continuity of Service Mandatory

(A) It shall be the right of all Subscribers to continue to receive Cable Service from Grantee insofar as their financial and other obligations to Grantee are honored. The Grantee shall act so as to ensure that all Subscribers receive continuous, uninterrupted Cable Service regardless of the circumstances. For the purposes of this subsection, "uninterrupted" does not include short-term outages of the Cable System for maintenance or testing.

(B) In the event of a change of grantee, or in the event a new Cable Operator acquires the Cable System in accordance with this Franchise, Grantee shall cooperate with the City, new franchisee or Cable Operator in maintaining continuity of Cable Service to all Subscribers. During any transition period, Grantee shall be entitled to the revenues for any period during which it operates the Cable System, and shall be entitled to reasonable costs for its services when it no longer operates the Cable System.

(C) In the event Grantee fails to operate the Cable System for four consecutive days without prior approval of the Manager, or without just cause, the City may, at its option, operate the Cable System itself or designate another Cable Operator until such time as Grantee restores service under conditions acceptable to the City or a permanent Cable Operator is selected. If the City is required to fulfill this obligation for Grantee, Grantee shall reimburse the City for all reasonable costs or damages that are the result of Grantee's failure to perform.

8.6 Services for People With Disabilities

Grantee shall comply with the Americans with Disabilities Act and any amendments thereto.

SECTION 9. ACCESS

9.1 Designated Access Provider

(A) The City shall have the sole and exclusive responsibility for identifying the Designated Access Providers, including itself for Access purposes, to control and manage the use of any or all Access Facilities provided by Grantee under this Franchise. As used in this Section, such "Access Facilities" includes the Channels, services, facilities, equipment, technical components or financial support provided under this Franchise, which is used or useable by and for Public Access, Educational Access, and Government Access ("PEG" or "PEG Access").

(B) Grantee shall cooperate with City in City's efforts to provide Access programming, but will not be responsible or liable for any damages resulting from a claim in connection with the programming placed on the Access Channels by the Designated Access Provider.

9.2 Channel Capacity and Use

(A) Grantee shall make available to City two (2) Downstream Channels for PEG use as provided for in this Section.

(B) Grantee shall have the right to temporarily use any Channel, or portion thereof, which is allocated under this Section for Public, Educational, or Governmental Access use, within sixty (60) days after a written request for such use is submitted to City, if such Channel is not "fully utilized" as defined herein. A Channel shall be considered fully utilized if substantially unduplicated programming is delivered over it more than an average of 38 hours per week over a six (6) month period. Programming that is repeated on an Access Channel up to two times per day shall be considered "unduplicated programming." Character-generated programming shall be included for purposes of this subsection, but may be counted towards the total average hours only with respect to three (3) Channels provided to City. If a Channel allocated for Public, Educational, or Governmental Access use will be used by Grantee in accordance with the terms of this subsection, the institution to which the Channel has been allocated shall have the right to require the return of the Channel or portion thereof. City shall request return of such Channel space by delivering written notice to Grantee stating that the institution is prepared to fully utilize the Channel, or portion thereof, in accordance with this subsection. In such event, the Channel or portion thereof shall be returned to such institution within sixty (60) days after receipt by Grantee of such written notice.

(C) Standard Definition ("SD") Digital Access Channels.

(1) Grantee shall continue provide one (1) Activated Downstream Channel for PEG Access use in a standard definition ("SD") digital format in Grantee's Basic Service ("SD Access Channel"). Grantee shall carry all components of the SD Access Channel Signals provided by a Designated Access Provider including, but not limited to, closed captioning, stereo audio and other elements associated with the Programming. A Designated Access Provider shall be responsible for providing the SD Access Channel Signal in an SD format to the demarcation point at the designated point of origination for

the SD Access Channel. Grantee shall transport and distribute the SD Access Channel signal on its Cable System and shall not unreasonably discriminate against SD Access Channels with respect to accessibility, functionality and to the application of any applicable Federal Communications Commission Rules & Regulations, including without limitation Subpart K Channel signal standards.

(2) With respect to signal quality, Grantee shall not be required to carry a SD Access Channel in a higher quality format than that of the SD Access Channel signal delivered to Grantee, but Grantee shall distribute the SD Access Channel signal without degradation. Upon reasonable written request by a Designated Access Provider, Grantee shall verify signal delivery to Subscribers with the Designated Access Provider, consistent with the requirements of this Section 9.2(C).

(3) Grantee shall be responsible for costs associated with the transmission of SD Access signals on its side of the demarcation point which for the purposes of this Section 9.2 (C)(3), shall mean up to and including the modulator where the City signal is converted into a format to be transmitted over a fiber connection to Grantee. The City or Designated Access Provider shall be responsible for costs associated with SD Access signal transmission on its side of the demarcation point.

(4) The SD Access Channel may require Subscribers to buy or lease special equipment, available to all Subscribers, and subscribe to those tiers of Cable Service, upon which SD channels are made available. Grantee is not required to provide free SD equipment to Subscribers, including complimentary government and educational accounts, nor modify its equipment or pricing policies in any manner.

(D) High Definition ("HD") Digital Access Channels.

(1) Grantee shall continue to provide one (1) activated HD Access Channel.

(2) The City shall be responsible for providing the HD Access Channel signal in an HD digital format to the demarcation point at the designated point of origination for the HD Access Channel. For purposes of this Franchise, an HD signal refers to a television signal delivering picture resolution of either 720p or 1080i, or such other resolution in this same range that Grantee utilizes for other similar non-sport, non-movie programming channels on the Cable System, whichever is greater.

(3) Grantee shall transport and distribute the HD Access Channel signal on its Cable System and shall not unreasonably discriminate against HD Access Channels with respect to accessibility, functionality and to the application of any applicable Federal Communications Commission Rules & Regulations, including without limitation Subpart K Channel signal standards. With respect to signal quality, Grantee shall not be required to carry a HD Access Channel in a higher quality format than that of the HD Access Channel signal delivered to Grantee, but Grantee shall distribute the HD Access Channel signal without degradation. Grantee shall carry all components of the HD Access Channel signals provided by the Designated Access Provider including, but not limited to, closed

captioning, stereo audio and other elements associated with the Programming. Upon reasonable written request by the City, Grantee shall verify signal delivery to Subscribers with the City, consistent with the requirements of this Section 9.2(D).

(4) The HD Access Channel may require Subscribers to buy or lease special equipment, available to all Subscribers, and subscribe to those tiers of Cable Service, upon which HD channels are made available. Grantee is not required to provide free HD equipment to Subscribers, including complimentary government and educational accounts, nor modify its equipment or pricing policies in any manner.

(5) The City or any Designated Access Provider is responsible for acquiring all equipment necessary to produce programming in HD.

(6) Grantee shall cooperate with the City to procure and provide, at City's cost, all necessary transmission equipment from the Designated Access Provider channel origination point, at Grantee's headend and through Grantee's distribution system, in order to deliver the HD Access Channels. The City shall be responsible for the costs of all transmission equipment, 3 including HD modulator and demodulator, and encoder or decoder equipment, and multiplex equipment, required in order for Grantee to receive and distribute the HD Access Channel signal, or for the cost of any resulting upgrades to the video return line. The City and Grantee agree that such expense of acquiring and installing the transmission equipment or upgrades to the video return line qualifies as a capital cost for PEG Facilities within the meaning of the Cable Act 47 U.S.C.A. Section 542(g)(20)(C), and therefore is an appropriate use of revenues derived from those PEG Capital fees provided for in this Franchise.

(E) Grantee shall simultaneously carry the one (1) HD Access Channels provided for in Section 9.2(D) in high definition format on the Cable System, in addition to simultaneously carrying in standard definition format the SD Access Channels provided pursuant to Subsection 9.2(C).

(F) There shall be no restriction on Grantee's technology used to deploy and deliver SD or HD signals so long as the requirements of the Franchise are otherwise met. Grantee may implement HD carriage of the PEG channel in any manner (including selection of compression, utilization of IP, and other processing characteristics) that produces a signal quality for the consumer that is reasonably comparable and functionally equivalent to similar commercial HD channels carried on the Cable System. In the event the City believes that Grantee fails to meet this standard, City will notify Grantee of such concern, and Grantee will respond to any complaints in a timely manner.

9.3 Access Channel Assignments

Grantee will use reasonable efforts to minimize the movement of SD and HD Access Channel assignments. Grantee shall also use reasonable efforts to institute common SD and HD Access Channel assignments among the CCUA members served by the same Headend as City for compatible Access programming, for example, assigning all Educational Access Channels programmed by higher education organizations to the same Channel number. In addition, Grantee

will make reasonable efforts to locate HD Access Channels provided pursuant to Subsection 9.2(D) in a location on its HD Channel line-up that is easily accessible to Subscribers.

9.4 Relocation of Access Channels

Grantee shall provide City a minimum of sixty (60) days' notice, and use its best efforts to provide one hundred and twenty (120) days notice, prior to the time Public, Educational, and Governmental Access Channel designations are changed.

9.5 Support for Access Costs

During the term of this Franchise, within one hundred twenty (120) days of a written request from the City, Grantee shall provide to the City up to 0.48 of one percent (0.0048%) of Grantee's Gross Revenues per month (the "Access Contribution") to be used solely for capital costs related to Public, Educational and Governmental Access, or as may be permitted by Applicable Law. Grantee shall make Access Contribution payments quarterly, following the effective date of this Franchise for the preceding quarter ending March 31, June 30, September 30, and December 31. Each payment shall be due and payable no later than forty-five (45) days following the end of the quarter. The City shall have sole discretion to allocate the expenditure of such payments for any capital costs related to Access.

9.6 Access Support Not Franchise Fees

Grantee agrees that capital support for Access Costs arising from or relating to the obligations set forth in this Section shall in no way modify or otherwise affect Grantee's obligations to pay Franchise Fees to City. Grantee agrees that although the sum of Franchise Fees plus the payments set forth in this Section may total more than five percent (5%) of Grantee's Gross Revenues in any 12-month period, the additional commitments shall not be offset or otherwise credited in any way against any Franchise Fee payments under this Franchise Agreement so long as such support is used for capital Access purposes consistent with this Franchise and federal law.

9.7 Access Channels On Basic Service or Lowest Priced HD Service Tier

All SD Access Channels under this Franchise Agreement shall be included by Grantee, without limitation, as part of Basic Service. All HD Access Channels under this Franchise Agreement shall be included by Grantee, without limitation, as part of the lowest priced tier of HD Cable Service upon which Grantee provides HD programming content.

9.8 Change In Technology

In the event Grantee makes any change in the Cable System and related equipment and Facilities or in Grantee's signal delivery technology, which directly or indirectly affects the signal quality or transmission of Access services or programming, Grantee shall at its own expense take necessary technical steps or provide necessary technical assistance, including the acquisition of all necessary equipment, and full training of City's Access personnel to ensure that the capabilities of Access services are not diminished or adversely affected by such change. If the City implements

a new video delivery technology that is currently offered and can be accommodated on the Grantee's local Cable System then the same provisions above shall apply. If the City implements a new video delivery technology that is not currently offered on and/or that cannot be accommodated by the Grantee's local Cable System, then the City shall be responsible for acquiring all necessary equipment, facilities, technical assistance, and training to deliver the signal to the Grantee's headend for distribution to subscribers.

9.9 Technical Quality

Grantee shall maintain all upstream and downstream Access services and Channels on its side of the demarcation point at the same level of technical quality and reliability required by this Franchise Agreement and all other applicable laws, rules and regulations for Residential Subscriber Channels. Grantee shall provide routine maintenance for all transmission equipment on its side of the demarcation point, including modulators, decoders, multiplex equipment, and associated cable and equipment necessary to carry a quality signal to and from City's facilities for the Access Channels provided under this Franchise Agreement, including the business class broadband equipment and services necessary for the video on demand and streaming service described in Section 9.5. Grantee shall also provide, if requested in advance by the City, advice and technical expertise regarding the proper operation and maintenance of transmission equipment on the City's side of the demarcation point. The City shall be responsible for all initial and replacement costs of all HD modulator and demodulator equipment. The City shall also be responsible, at its own expense, to replace any of the Grantee's equipment that is damaged by the gross negligence or intentional acts of City staff. The Grantee shall be responsible, at its own expense, to replace any of the Grantee's equipment that is damaged by the gross negligence or intentional acts of Grantee's staff. The City will be responsible for the cost of repairing and/or replacing any HD PEG Access and web-based video on demand transmission equipment that Grantee maintains that is used exclusively for transmission of the City's and/or its Designated Access Providers' HD Access programming.

9.10 Return Lines/Access Origination

(A) Grantee shall continuously maintain the return lines previously constructed to the City Hall at 749 Main Street, the City Police Department at 992 West Via Appia, the City's Recreation Center at 900 West Via Appia, and the City Library Building at 951 Spruce Street throughout the Term of the Franchise, in order to enable the distribution of Access programming to Residential Subscribers on the Access Channels; provided however that Grantee's maintenance obligations with respect to either of these locations shall cease if a location is no longer used in the future by the City to originate Access programming.

(B) Grantee shall construct and maintain new Fiber Optic return lines to the Headend from production facilities of new or relocated Designated Access Providers delivering Access programming to Residential Subscribers as requested in writing by the City. All actual construction costs incurred by Grantee from the nearest interconnection point to the Designated Access Provider shall be paid by the City or the Designated Access Provider. New return lines shall be completed within one (1) year from the request of the City or its Designated Access Provider, or as otherwise agreed to by the parties. If an emergency situation necessitates movement of production facilities

to a new location, the parties shall work together to complete the new return line as soon as reasonably possible.

SECTION 10. GENERAL RIGHT-OF-WAY USE AND CONSTRUCTION

10.1 Right to Construct

Subject to Applicable Law, regulations, rules, resolutions and ordinances of the City and the provisions of this Franchise, Grantee may perform all construction in the Rights-of-Way for any facility needed for the maintenance or extension of Grantee's Cable System.

10.2 Right-of-Way Meetings

Grantee will regularly attend and participate in meetings of the City, of which the Grantee is made aware, regarding Right-of-Way issues that may impact the Cable System.

10.3 Joint Trenching/Boring Meetings

Grantee will regularly attend and participate in planning meetings of the City, of which the Grantee is made aware, to anticipate joint trenching and boring. Whenever it is possible and reasonably practicable to joint trench or share bores or cuts, Grantee shall work with other providers, licensees, permittees, and franchisees so as to reduce so far as possible the number of Right-of-Way cuts within the City.

10.4 General Standard

All work authorized and required hereunder shall be done in a safe, thorough and workmanlike manner. All installations of equipment shall be permanent in nature, durable and installed in accordance with good engineering practices.

10.5 Permits Required for Construction

Prior to doing any work in the Right-of Way or other public property, Grantee shall apply for, and obtain, appropriate permits from the City. As part of the permitting process, the City may impose such conditions and regulations as are necessary for the purpose of protecting any structures in such Rights-of-Way, proper restoration of such Rights-of-Way and structures, the protection of the public, and the continuity of pedestrian or vehicular traffic. Such conditions may also include the provision of a construction schedule and maps showing the location of the facilities to be installed in the Right-of-Way. Grantee shall pay all applicable fees for the requisite City permits received by Grantee.

10.6 Emergency Permits

In the event that emergency repairs are necessary, Grantee shall immediately notify the City of the need for such repairs. Grantee may initiate such emergency repairs, and shall apply for appropriate permits within 48 hours after discovery of the emergency.

10.7 Compliance with Applicable Codes

(A) City Construction Codes. Grantee shall comply with all applicable City construction codes, including, without limitation, the International Building Code and other building codes, the International Fire Code, the National Electrical Code, the Electronic Industries Association Standard for Physical Location and Protection of Below-Ground Fiber Optic Cable Plant, and zoning codes and regulations.

(B) Tower Specifications. Antenna supporting structures (towers) shall be designed for the proper loading as specified by the Electronics Industries Association (EIA), as those specifications may be amended from time to time. Antenna supporting structures (towers) shall be painted, lighted, erected and maintained in accordance with all applicable rules and regulations of the Federal Aviation Administration and all other applicable federal, State, and local codes or regulations.

(C) Safety Codes. Grantee shall comply with all federal, State and City safety requirements, rules, regulations, laws and practices, and employ all necessary devices as required by Applicable Law during construction, operation and repair of its Cable System. By way of illustration and not limitation, Grantee shall comply with the National Electric Code, National Electrical Safety Code and Occupational Safety and Health Administration (OSHA) Standards.

10.8 GIS Mapping

Grantee shall comply with any generally applicable ordinances, rules and regulations of the City regarding geographic information mapping systems for users of the Rights-of-Way.

10.9 Minimal Interference

Work in the Right-of-Way, on other public property, near public property, or on or near private property shall be done in a manner that causes the least interference with the rights and reasonable convenience of property owners and residents. Grantee's Cable System shall be constructed and maintained in such manner as not to interfere with sewers, water pipes, or any other property of the City, or with any other pipes, wires, conduits, pedestals, structures, or other facilities that may have been laid in the Rights-of-Way by, or under, the City's authority. The Grantee's Cable System shall be located, erected and maintained so as not to endanger or interfere with the lives of Persons, or to interfere with new improvements the City may deem proper to make or to unnecessarily hinder or obstruct the free use of the Rights-of-Way or other public property, and shall not interfere with the travel and use of public places by the public during the construction, repair, operation or removal thereof, and shall not obstruct or impede traffic. In the event of such interference, the City may require the removal or relocation of Grantee's lines, cables, equipment and other appurtenances from the property in question at Grantee's expense.

10.10 Prevent Injury/Safety

Grantee shall provide and use any equipment and facilities necessary to control and carry Grantee's signals so as to prevent injury to the City's property or property belonging to any Person. Grantee, at its own expense, shall repair, renew, change and improve its facilities to keep them in good repair, and safe and presentable condition. All excavations made by Grantee in the Rights-of-Way shall be properly safeguarded for the prevention of accidents by the placement of adequate barriers, fences or boarding, the bounds of which, during periods of dusk and darkness, shall be clearly designated by warning lights.

10.11 Hazardous Substances

(A) Grantee shall comply with all Applicable Laws, statutes, regulations and orders concerning hazardous substances relating to Grantee's Cable System in the Rights-of-Way.

(B) Upon reasonable notice to Grantee, the City may inspect Grantee's facilities in the Rights-of-Way to determine if any release of hazardous substances has occurred, or may occur, from or related to Grantee's Cable System. In removing or modifying Grantee's facilities as provided in this Franchise, Grantee shall also remove all residue of hazardous substances related thereto.

(C) Grantee agrees to indemnify the City against any claims, costs, and expenses, of any kind, whether direct or indirect, incurred by the City arising out of a release of hazardous substances caused by Grantee's Cable System.

10.12 Locates

Prior to doing any work in the Right-of-Way, Grantee shall give appropriate notices to the City and to the notification association established in C.R.S. § 9-1.5-105, as such may be amended from time to time.

Within 48 hours after any City bureau or franchisee, licensee or permittee notifies Grantee of a proposed Right-of-Way excavation, Grantee shall, at Grantee's expense:

(A) Mark on the surface all of its located underground facilities within the area of the proposed excavation;

(B) Notify the excavator of any unlocated underground facilities in the area of the proposed excavation; or

(C) Notify the excavator that Grantee does not have any underground facilities in the vicinity of the proposed excavation.

10.13 Notice to Private Property Owners

Grantee shall give notice to private property owners of work on or adjacent to private property in accordance with the City's Customer Service Standards, as the same may be amended from time to time by the City Council acting by ordinance or resolution.

10.14 Underground Construction and Use of Poles

(A) When required by general ordinances, resolutions, regulations or rules of the City or applicable State or federal law, Grantee's Cable System shall be placed underground at Grantee's expense unless funding is generally available for such relocation to all users of the Rights-of-Way. Placing facilities underground does not preclude the use of ground-mounted appurtenances.

(B) Where electric, telephone, and other above-ground utilities are installed underground at the time of Cable System construction, or when all such wiring is subsequently placed underground, all Cable System lines shall also be placed underground with other wireline service at no expense to the City or Subscribers unless funding is generally available for such relocation to all users of the Rights-of-Way. Related Cable System equipment, such as pedestals, must be placed in accordance with the City's applicable code requirements and rules. In areas where either electric or telephone utility wiring is aerial, the Grantee may install aerial cable, except when a property owner or resident requests underground installation and agrees to bear the additional cost in excess of aerial installation.

(C) The Grantee shall utilize existing poles and conduit wherever possible.

(D) In the event Grantee cannot obtain the necessary poles and related facilities pursuant to a pole attachment agreement, and only in such event, then it shall be lawful for Grantee to make all needed excavations in the Rights-of-Way for the purpose of placing, erecting, laying, maintaining, repairing, and removing poles, supports for wires and conductors, and any other facility needed for the maintenance or extension of Grantee's Cable System. All poles of Grantee shall be located as designated by the proper City authorities.

(E) This Franchise does not grant, give or convey to the Grantee the right or privilege to install its facilities in any manner on specific utility poles or equipment of the City or any other Person. Copies of agreements for the use of poles, conduits or other utility facilities must be provided upon request by the City.

10.15 Undergrounding of Multiple Dwelling Unit Drops

In cases of single site Multiple Dwelling Units, Grantee shall minimize the number of individual aerial drop cables by installing multiple drop cables underground between the pole and Multiple Dwelling Unit where determined to be technologically feasible in agreement with the owners and/or owner's association of the Multiple Dwelling Units.

10.16 Burial Standards

(A) Depths. Unless otherwise required by law, Grantee, and its contractors, shall comply with the following burial depth standards. In no event shall Grantee be required to bury its cable deeper than electric or gas facilities, or existing telephone facilities in the same portion of the Right-of-Way, so long as those facilities have been buried in accordance with Applicable Law:

> Underground cable drops from the curb shall be buried at a minimum depth of twelve (12) inches, unless a sprinkler system or other construction concerns preclude it, in which case, underground cable drops shall be buried at a depth of at least six (6) inches.
>
> Feeder lines shall be buried at a minimum depth of eighteen (18) inches.
>
> Trunk lines shall be buried at a minimum depth of thirty-six (36) inches.
>
> Fiber Optic cable shall be buried at a minimum depth of thirty-six (36) inches.

In the event of a conflict between this subsection and the provisions of any customer service standard, this subsection shall control.

(B) Timeliness. Cable drops installed by Grantee to residences shall be buried according to these standards within one calendar week of initial installation, or at a time mutually-agreed upon between the Grantee and the Subscriber. When freezing surface conditions prevent Grantee from achieving such timetable, Grantee shall apprise the Subscriber of the circumstances and the revised schedule for burial, and shall provide the Subscriber with Grantee's telephone number and instructions as to how and when to call Grantee to request burial of the line if the revised schedule is not met.

10.17 Cable Drop Bonding

Grantee shall ensure that all cable drops are properly bonded at the home, consistent with applicable code requirements.

10.18 Prewiring

Any ordinance or resolution of the City which requires prewiring of subdivisions or other developments for electrical and telephone service shall be construed to include wiring for Cable Systems.

10.19 Repair and Restoration of Property

(A) The Grantee shall protect public and private property from damage. If damage occurs, the Grantee shall promptly notify the property owner within 24 hours in writing.

(B) Whenever Grantee disturbs or damages any Right-of-Way, other public property or

any private property, Grantee shall promptly restore the Right-of-Way or property to at least its prior condition, normal wear and tear excepted, at its own expense.

(C) Rights-of-Way and Other Public Property. Grantee shall warrant any restoration work performed by or for Grantee in the Right-of-Way or on other public property in accordance with Applicable Law. If restoration is not satisfactorily performed by the Grantee within a reasonable time, the City may, after prior notice to the Grantee, or without notice where the disturbance or damage may create a risk to public health or safety, cause the repairs to be made and recover the cost of those repairs from the Grantee. Within 30 days of receipt of an itemized list of those costs, including the costs of labor, materials and equipment, the Grantee shall pay the City.

(D) Private Property. Upon completion of the work which caused any disturbance or damage, Grantee shall promptly commence restoration of private property, and will use best efforts to complete the restoration within 72 hours, considering the nature of the work that must be performed. Grantee shall also perform such restoration in accordance with the City's Customer Service Standards, as the same may be amended from time to time by the City Council acting by ordinance or resolution.

10.20 Acquisition of Facilities

Upon Grantee's acquisition of Cable System-related facilities in any City Right-of-Way, or upon the addition to the City of any area in which Grantee owns or operates any such facility, Grantee shall, at the City's request, submit to the City a statement describing all such facilities involved, whether authorized by franchise, permit, license or other prior right, and specifying the location of all such facilities to the extent Grantee has possession of such information. Such Cable System-related facilities shall immediately be subject to the terms of this Franchise.

10.21 Discontinuing Use/Abandonment of Cable System Facilities

Whenever Grantee intends to discontinue using any facility within the Rights-of-Way, Grantee shall submit for the City's approval a complete description of the facility and the date on which Grantee intends to discontinue using the facility. Grantee may remove the facility or request that the City permit it to remain in place. Notwithstanding Grantee's request that any such facility remain in place, the City may require Grantee to remove the facility from the Right-of-Way or modify the facility to protect the public health, welfare, safety, and convenience, or otherwise serve the public interest. The City may require Grantee to perform a combination of modification and removal of the facility. Grantee shall complete such removal or modification in accordance with a schedule set by the City. Until such time as Grantee removes or modifies the facility as directed by the City, or until the rights to and responsibility for the facility are accepted by another Person having authority to construct and maintain such facility, Grantee shall be responsible for all necessary repairs and relocations of the facility, as well as maintenance of the Right-of-Way, in the same manner and degree as if the facility were in active use, and Grantee shall retain all liability for such facility. If Grantee abandons its facilities, the City may choose to use such facilities for any purpose whatsoever including, but not limited to, Access purposes.

10.22 Movement of Cable System Facilities For City Purposes

The City shall have the right to require Grantee to relocate, remove, replace, modify or disconnect Grantee's facilities and equipment located in the Rights-of-Way or on any other property of the City for public purposes, in the event of an emergency, or when the public health, safety or welfare requires such change (for example, without limitation, by reason of traffic conditions, public safety, Right-of-Way vacation, Right-of-Way construction, change or establishment of Right-of-Way grade, installation of sewers, drains, gas or water pipes, or any other types of structures or improvements by the City for public purposes). Such work shall be performed at the Grantee's expense. Except during an emergency, the City shall provide reasonable notice to Grantee, not to be less than forty-five (45) business days or as otherwise required by Applicable Law, and allow Grantee with the opportunity to perform such action. In the event of any capital improvement project exceeding $500,000 in expenditures by the City which requires the removal, replacement, modification or disconnection of Grantee's facilities or equipment, the City shall provide at least sixty (60) days' written notice to Grantee. Following notice by the City, Grantee shall relocate, remove, replace, modify or disconnect any of its facilities or equipment within any Right-of-Way, or on any other property of the City. If the City requires Grantee to relocate its facilities located within the Rights-of-Way, the City shall make a reasonable effort to provide Grantee with an alternate location within the Rights-of-Way. If funds are generally made available to users of the Rights-of-Way for such relocation, Grantee shall be entitled to its pro rata share of such funds.

If the Grantee fails to complete this work within the time prescribed and to the City's satisfaction, the City may cause such work to be done and bill the cost of the work to the Grantee, including all costs and expenses incurred by the City due to Grantee's delay. In such event, the City shall not be liable for any damage to any portion of Grantee's Cable System. Within thirty (30) days of receipt of an itemized list of those costs, the Grantee shall pay the City.

10.23 Movement of Cable System Facilities for Other Franchise Holders

If any removal, replacement, modification or disconnection of the Cable System is required to accommodate the construction, operation or repair of the facilities or equipment of another City franchise holder, Grantee shall, after at least thirty (30) days' advance written notice, take action to effect the necessary changes requested by the responsible entity. Grantee shall require that the costs associated with the removal or relocation be paid by the benefited party.

10.24 Temporary Changes for Other Permittees

At the request of any Person holding a valid permit and upon reasonable advance notice, Grantee shall temporarily raise, lower or remove its wires as necessary to permit the moving of a building, vehicle, equipment or other item. The expense of such temporary changes must be paid by the permit holder, and Grantee may require a reasonable deposit of the estimated payment in advance.

10.25 Reservation of City Use of Right-of-Way

Nothing in this Franchise shall prevent the City or public utilities owned, maintained or operated by public entities other than the City from constructing sewers; grading, paving, repairing or altering any Right-of-Way; laying down, repairing or removing water mains; or constructing or establishing any other public work or improvement. All such work shall be done, insofar as practicable, so as not to obstruct, injure or prevent the use and operation of Grantee's Cable System.

10.26 Tree Trimming

Grantee may prune or cause to be pruned, using proper pruning practices, any tree in the City's Rights-of-Way which interferes with Grantee's Cable System. Grantee shall comply with any general ordinance or regulations of the City regarding tree trimming. Except in emergencies, Grantee may not prune trees at a point below thirty (30) feet above sidewalk grade until one (1) week written notice has been given to the owner or occupant of the premises abutting the Right-of-Way in or over which the tree is growing. The owner or occupant of the abutting premises may prune such tree at his or her own expense during this one (1) week period. If the owner or occupant fails to do so, Grantee may prune such tree at its own expense. For purposes of this subsection, emergencies exist when it is necessary to prune to protect the public or Grantee's facilities from imminent danger only.

10.27 Inspection of Construction and Facilities

The City may inspect any of Grantee's facilities, equipment or construction at any time upon at least twenty-four (24) hours' notice, or, in case of emergency, upon demand without prior notice. The City shall have the right to charge generally applicable inspection fees therefore. If an unsafe condition is found to exist, the City, in addition to taking any other action permitted under Applicable Law, may order Grantee, in writing, to make the necessary repairs and alterations specified therein forthwith to correct the unsafe condition by a time the City establishes. The City has the right to correct, inspect, administer and repair the unsafe condition if Grantee fails to do so, and to charge Grantee therefore.

10.28 Stop Work

(A) On notice from the City that any work is being performed contrary to the provisions of this Franchise, or in an unsafe or dangerous manner as determined by the City, or in violation of the terms of any applicable permit, laws, regulations, ordinances, or standards, the work may immediately be stopped by the City.

(B) The stop work order shall:

(1) Be in writing;

(2) Be given to the Person doing the work, or posted on the work site;

(3) Be sent to Grantee by overnight delivery at the address given herein;

(4) Indicate the nature of the alleged violation or unsafe condition; and

(5) Establish conditions under which work may be resumed.

10.29 Work of Contractors and Subcontractors

Grantee's contractors and subcontractors shall be licensed and bonded in accordance with the City's ordinances, regulations and requirements. Work by contractors and subcontractors is subject to the same restrictions, limitations and conditions as if the work were performed by Grantee. Grantee shall be responsible for all work performed by its contractors and subcontractors and others performing work on its behalf as if the work were performed by it, and shall ensure that all such work is performed in compliance with this Franchise and other Applicable Law, and shall be jointly and severally liable for all damages and correcting all damage caused by them. It is Grantee's responsibility to ensure that contractors, subcontractors or other Persons performing work on Grantee's behalf are familiar with the requirements of this Franchise and other Applicable Law governing the work performed by them.

SECTION 11. CABLE SYSTEM, TECHNICAL STANDARDS AND TESTING

11.1 Subscriber Network

(A) Grantee's Cable System shall consist of a mix of fiber to the premises and HFC and shall provide Activated Two-Way capability. The Cable System shall be capable of supporting video and audio. The Cable System shall deliver the greater of one hundred (100) Channels or the maximum number of Channels of digital video programming services to Subscribers that Grantee provides to any other jurisdiction in Colorado, provided that the Grantee reserves the right to seek modification of this obligation based on changes in consumer behavior, programming availability, or response to competition, which modification shall not be unreasonably denied upon Grantee showing it continues to provide broad categories of video programming and other services.

(B) Equipment must be installed so that all closed captioning programming received by the Cable System shall include the closed caption signal so long as the closed caption signal is provided consistent with FCC standards. Equipment must be installed so that all local signals received in stereo or with secondary audio tracks (broadcast and Access) are retransmitted in those same formats.

(C) All construction shall be subject to the City's permitting process.

(D) Grantee and City shall meet, at the City's request, to discuss the progress of the design plan and construction.

(E) Grantee will take prompt corrective action if it finds that any facilities or equipment on the Cable System are not operating as expected, or if it finds that facilities and equipment do not comply with the requirements of this Franchise or Applicable Law.

(F) Grantee's construction decisions shall be based solely upon legitimate engineering decisions and shall not take into consideration the income level of any particular community within the Franchise Area.

11.2 Technology Assessment

(A) The City may notify Grantee on or after five years after the Effective Date, that the City will conduct a technology assessment of Grantee's Cable System. The technology assessment may include, but is not limited to, determining whether Grantee's Cable System technology and performance are consistent with current technical practices and range and level of services existing in the 15 largest U.S. cable systems owned and operated by Grantee's Parent Corporation or Affiliates pursuant to franchises that have been renewed or extended since the Effective Date.

(B) Grantee shall cooperate with the City to provide necessary non-confidential and proprietary information upon the City's reasonable request as part of the technology assessment.

(C) At the discretion of the City, findings from the technology assessment may be included in any proceeding commenced for the purpose of identifying future cable-related community needs and interests undertaken by the City pursuant to 47 U.S.C. § 546.

11.3 Standby Power

Grantee's Cable System Headend shall be capable of providing at least 12 hours of emergency operation. In addition, throughout the term of this Franchise, Grantee shall have a plan in place, along with all resources necessary for implementing such plan, for dealing with outages of more than four hours. This outage plan and evidence of requisite implementation resources shall be presented to the City no later than 30 days following receipt of a request.

11.4 Emergency Alert Capability

Grantee shall provide an operating Emergency Alert System ("EAS") throughout the term of this Franchise in compliance with FCC standards. Grantee shall test the EAS as required by the FCC. Upon request, the City shall be permitted to participate in or witness the EAS testing up to twice a year on a schedule formed in consultation with Grantee. If the test indicates that the EAS is not performing properly, Grantee shall make any necessary adjustment to the EAS, and the EAS shall be retested.

11.5 Technical Performance

The technical performance of the Cable System shall meet or exceed all applicable federal (including, but not limited to, the FCC), State and local technical standards, as they may be amended from time to time, regardless of the transmission technology utilized. The City shall have the full authority permitted by Applicable Law to enforce compliance with these technical standards.

11.6 Cable System Performance Testing

(A) Grantee shall provide to the City a copy of its current written process for resolving complaints about the quality of the video programming services signals delivered to Subscriber and shall provide the City with any amendments or modifications to the process at such time as they are made.

(B) Grantee shall, at Grantee's expense, maintain all aggregate data of Subscriber complaints related to the quality of the video programming service signals delivered by Grantee in the City for a period of at least one year, and individual Subscriber complaints from the City for a period of at least three years, and make such information available to the City upon reasonable request.

(C) Grantee shall maintain written records of all results of its Cable System tests, performed by or for Grantee. Copies of such test results will be provided to the City upon reasonable request.

(D) Grantee shall perform any tests required by the FCC.

11.7 Additional Tests

Where there exists other evidence which in the judgment of the City casts doubt upon the reliability or technical quality of Cable Service, the City shall have the right and authority to require Grantee to test, analyze and report on the performance of the Cable System. Grantee shall fully cooperate with the City in performing such testing and shall prepare the results and a report, if requested, within 30 days after testing. Such report shall include the following information:

(A) the nature of the complaint or problem which precipitated the special tests;

(B) the Cable System component tested;

(C) the equipment used and procedures employed in testing;

(D) the method, if any, in which such complaint or problem was resolved; and

(E) any other information pertinent to said tests and analysis which may be required.

SECTION 12. SERVICE AVAILABILITY

(A) In General. Except as otherwise provided in herein, Grantee shall provide Cable Service within seven days of a request by any Person within the City. For purposes of this Section, a request shall be deemed made on the date of signing a service agreement, receipt of funds by Grantee, receipt of a written request by Grantee or receipt by Grantee of a verified verbal request. Except as otherwise provided herein, Grantee shall provide such service:

(1) With no line extension charge except as specifically authorized elsewhere

in this Franchise Agreement.

(2) At a non-discriminatory installation charge for a standard installation, consisting of a 125 foot drop connecting to an inside wall for Residential Subscribers, with additional charges for non standard installations computed according to a non discriminatory methodology for such installations, adopted by Grantee and provided in writing to the City;

(3) At non discriminatory monthly rates for Residential Subscribers.

(B) Service to Multiple Dwelling Units. Consistent with this Section 12.1, the Grantee shall offer the individual units of a Multiple Dwelling Unit all Cable Services offered to other Dwelling Units in the City and shall individually wire units upon request of the property owner or renter who has been given written authorization by the owner; provided, however, that any such offering is conditioned upon the Grantee having legal access to said unit. The City acknowledges that the Grantee cannot control the dissemination of particular Cable Services beyond the point of demarcation at a Multiple Dwelling Unit.

(C) Customer Charges for Extensions of Service. Grantee agrees to extend its Cable System to all persons living in areas with a residential density of 35 residences per mile of Cable System plant. If the residential density is less than 35 residences per 5,280 cable-bearing strand feet of trunk or distribution cable, service may be made available on the basis of a capital contribution in aid of construction, including cost of material, labor and easements. For the purpose of determining the amount of capital contribution in aid of construction to be borne by the Grantee and customers in the area in which service may be expanded, the Grantee will contribute an amount equal to the construction and other costs per mile, multiplied by a fraction whose numerator equals the actual number of residences per 5,280 cable-bearing strand feet of its trunk or distribution cable and whose denominator equals 35. Customers who request service hereunder will bear the remainder of the construction and other costs on a pro-rata basis. The Grantee may require that the payment of the capital contribution in aid of construction borne by such potential customers be paid in advance.

SECTION 13. FRANCHISE VIOLATIONS

13.1 Procedure for Remedying Franchise Violations

(A) If the City reasonably believes that Grantee has failed to perform any obligation under this Franchise or has failed to perform in a timely manner, the City shall notify Grantee in writing, stating with reasonable specificity the nature of the alleged default. Grantee shall have thirty (30) days from the receipt of such notice to:

(1) respond to the City, contesting the City's assertion that a default has occurred, and requesting a meeting in accordance with subsection (B), below;

(2) cure the default; or,

(3) notify the City that Grantee cannot cure the default within the thirty (30) days, because of the nature of the default. In the event the default cannot be cured within

thirty (30) days, Grantee shall promptly take all reasonable steps to cure the default and notify the City in writing and in detail as to the exact steps that will be taken and the projected completion date. In such case, the City may set a meeting in accordance with subsection (B) below to determine whether additional time beyond the thirty (30) days specified above is indeed needed, and whether Grantee's proposed completion schedule and steps are reasonable.

(B) If Grantee does not cure the alleged default within the cure period stated above, or by the projected completion date under subsection (A)(3), or denies the default and requests a meeting in accordance with (A)(1), or the City orders a meeting in accordance with subsection (A)(3), the City shall set a meeting to investigate said issues or the existence of the alleged default. The City shall notify Grantee of the meeting in writing and such meeting shall take place no less than thirty (30) days after Grantee's receipt of notice of the meeting. At the meeting, Grantee shall be provided an opportunity to be heard and to present evidence in its defense.

(C) If, after the meeting, the City determines that a default exists, the City reserves the right to seek any remedy that may be available at law or in equity, including without limitation, revocation, and Grantee reserves the right to assert any defenses it may have to the City's position.

(D) No provision of this Franchise shall be deemed to bar the right of the City to seek or obtain judicial relief from a violation of any provision of the Franchise or any rule, regulation, requirement or directive promulgated thereunder. Neither the existence of other remedies identified in this Franchise nor the exercise thereof shall be deemed to bar or otherwise limit the right of the City to recover monetary damages for such violations by Grantee, or to seek and obtain judicial enforcement of Grantee's obligations by means of specific performance, injunctive relief or mandate, or any other remedy at law or in equity.

13.2 Procedures in the Event of Termination or Revocation

(A) If this Franchise expires without renewal after completion of all processes available under this Franchise and federal law or is otherwise lawfully terminated or revoked, the City may, subject to Applicable Law:

(1) Allow Grantee to maintain and operate its Cable System on a month-to-month basis or short-term extension of this Franchise for not less than six (6) months, unless a sale of the Cable System can be closed sooner or Grantee demonstrates to the City's satisfaction that it needs additional time to complete the sale; or

(2) Purchase Grantee's Cable System in accordance with the procedures set forth in subsection 13.3, below.

(B) In the event that a sale has not been completed in accordance with subsections (A)(1) or (A)(2) above, the City may order the removal of the above-ground Cable System facilities and such underground facilities from the City at Grantee's sole expense within a reasonable period of time as determined by the City. In removing its plant, structures and equipment, Grantee shall refill, at is own expense, any excavation that is made by it and shall leave all Rights-of-Way, public places and private property in as good condition as that prevailing prior to Grantee's removal of its equipment without affecting the electrical or telephone cable wires or attachments. The

indemnification and insurance provisions and the letter of credit shall remain in full force and effect during the period of removal, and Grantee shall not be entitled to, and agrees not to request, compensation of any sort therefore.

(C) If Grantee fails to complete any removal required by subsection 13.2 (B) to the City's satisfaction, after written notice to Grantee, the City may cause the work to be done and Grantee shall reimburse the City for the costs incurred within 30 days after receipt of an itemized list of the costs, or the City may recover the costs through the letter of credit provided by Grantee.

(D) The City may seek legal and equitable relief to enforce the provisions of this Franchise.

13.3 Purchase of Cable System

(A) If at any time this Franchise is revoked, terminated, or not renewed upon expiration in accordance with the provisions of federal law, the City shall have the option to purchase the Cable System.

(B) The City may, at any time thereafter, offer in writing to purchase Grantee's Cable System. Grantee shall have 30 days from receipt of a written offer from the City within which to accept or reject the offer.

(C) In any case where the City elects to purchase the Cable System, the purchase shall be closed within 120 days of the date of the City's audit of a current profit and loss statement of Grantee. The City shall pay for the Cable System in cash or certified funds, and Grantee shall deliver appropriate bills of sale and other instruments of conveyance.

(D) For the purposes of this subsection, the price for the Cable System shall be determined as follows:

(1) In the case of the expiration of the Franchise without renewal, at fair market value determined on the basis of Grantee's Cable System valued as a going concern, but with no value allocated to the Franchise itself. In order to obtain the fair market value, this valuation shall be reduced by the amount of any lien, encumbrance, or other obligation of Grantee which the City would assume.

(2) In the case of revocation for cause, the equitable price of Grantee's Cable System.

13.4 Receivership and Foreclosure

(A) At the option of the City, subject to Applicable Law, this Franchise may be revoked 120 days after the appointment of a receiver or trustee to take over and conduct the business of Grantee whether in a receivership, reorganization, bankruptcy or other action or proceeding, unless:

(1) The receivership or trusteeship is vacated within 120 days of appointment; or

(2) The receivers or trustees have, within 120 days after their election or appointment, fully complied with all the terms and provisions of this Franchise, and have remedied all defaults under the Franchise. Additionally, the receivers or trustees shall have executed an agreement duly approved by the court having jurisdiction, by which the receivers or trustees assume and agree to be bound by every term, provision and limitation of this Franchise.

(B) If there is a foreclosure or other involuntary sale of the whole or any part of the plant, property and equipment of Grantee, the City may serve notice of revocation on Grantee and to the purchaser at the sale, and the rights and privileges of Grantee under this Franchise shall be revoked thirty (30) days after service of such notice, unless:

(1) The City has approved the transfer of the Franchise, in accordance with the procedures set forth in this Franchise and as provided by law; and

(2) The purchaser has covenanted and agreed with the City to assume and be bound by all of the terms and conditions of this Franchise.

13.5 No Monetary Recourse Against the City

Grantee shall not have any monetary recourse against the City or its officers, officials, boards, commissions, agents or employees for any loss, costs, expenses or damages arising out of any provision or requirement of this Franchise or the enforcement thereof, in accordance with the provisions of applicable federal, State and local law. The rights of the City under this Franchise are in addition to, and shall not be read to limit, any immunities the City may enjoy under federal, State or local law.

13.6 Effect of Abandonment

If the Grantee abandons its Cable System during the Franchise term, or fails to operate its Cable System in accordance with its duty to provide continuous service, the City, at its option, may operate the Cable System; designate another entity to operate the Cable System temporarily until the Grantee restores service under conditions acceptable to the City, or until the Franchise is revoked and a new franchisee is selected by the City; or obtain an injunction requiring the Grantee to continue operations. If the City is required to operate or designate another entity to operate the Cable System, the Grantee shall reimburse the City or its designee for all reasonable costs, expenses and damages incurred.

13.7 What Constitutes Abandonment

The City shall be entitled to exercise its options in subsection 13.6 if:

(A) The Grantee fails to provide Cable Service in accordance with this Franchise over a substantial portion of the Franchise Area for 4 consecutive days, unless the City authorizes a longer interruption of service; or

(B) The Grantee, for any period, willfully and without cause refuses to provide Cable Service in accordance with this Franchise.

SECTION 14. FRANCHISE RENEWAL AND TRANSFER

14.1 Renewal

(A) The City and Grantee agree that any proceedings undertaken by the City that relate to the renewal of the Franchise shall be governed by and comply with the provisions of Section 626 of the Cable Act, unless the procedures and substantive protections set forth therein shall be deemed to be preempted and superseded by the provisions of any subsequent provision of federal or State law.

(B) In addition to the procedures set forth in said Section 626(a), the City agrees to notify Grantee of the completion of its assessments regarding the identification of future cable-related community needs and interests, as well as the past performance of Grantee under the then-current Franchise term. Notwithstanding anything to the contrary set forth herein, Grantee and the City agree that at any time during the term of the then current Franchise, while affording the public adequate notice and opportunity for comment, the City and Grantee may agree to undertake and finalize negotiations regarding renewal of the then current Franchise and the City may grant a renewal thereof. Grantee and the City consider the terms set forth in this subsection to be consistent with the express provisions of Section 626 of the Cable Act.

(C) Should the Franchise expire without a mutually agreed upon renewed Franchise Agreement and Grantee and the City are engaged in an informal or formal renewal process, the Franchise shall continue on a month-to-month basis so long as consistent with the City Charter, with the same terms and conditions as provided in the Franchise, and the Grantee and the City shall continue to comply with all obligations and duties under the Franchise.

14.2 Transfer of Ownership or Control

(A) The Cable System and this Franchise shall not be sold, assigned, transferred, leased or disposed of, either in whole or in part, either by involuntary sale or by voluntary sale, merger or consolidation; nor shall title thereto, either legal or equitable, or any right, interest or property therein pass to or vest in any Person or entity without the prior written consent of the City, which consent shall be by the City Council, acting by ordinance.

(B) The Grantee shall promptly notify the City of any actual or proposed change in, or transfer of, or acquisition by any other party of control of the Grantee. The word "control" as used herein is not limited to majority stockholders but includes actual working control in whatever manner exercised. Every change, transfer or acquisition of control of the Grantee shall make this Franchise subject to cancellation unless and until the City shall have consented in writing thereto.

(C) The parties to the sale or transfer shall make a written request to the City for its approval of a sale or transfer and furnish all information required by law and the City.

(D) In seeking the City's consent to any change in ownership or control, the proposed transferee shall indicate whether it:

(1) Has ever been convicted or held liable for acts involving deceit including

any violation of federal, State, or local law or regulations, or is currently under an indictment, investigation or complaint charging such acts;

(2) Has ever had a judgment in an action for fraud, deceit, or misrepresentation entered against the proposed transferee by any court of competent jurisdiction;

(3) Has pending any material legal claim, lawsuit, or administrative proceeding arising out of or involving a cable system or a broadband system;

(4) Is financially solvent, by submitting financial data including financial statements that are audited by a certified public accountant who may also be an officer of the transferee, along with any other data that the City may reasonably require; and

(5) Has the financial, legal and technical capability to enable it to maintain and operate the Cable System for the remaining term of the Franchise.

(E) The City shall act by ordinance on the request within 120 days of the request, provided it has received all information required by this Franchise or by Applicable Law. The City and the Grantee may by mutual agreement, at any time, extend the 120-day period. Subject to the foregoing, if the City fails to render a final decision on the request within 120 days, such request shall be deemed granted unless the requesting party and the City agree to an extension of time.

(F) Within 30 days of any transfer or sale, if approved or deemed granted by the City, Grantee shall file with the City a copy of the deed, agreement, lease or other written instrument evidencing such sale or transfer of ownership or control, certified and sworn to as correct by Grantee and the transferee, and the transferee shall file its written acceptance agreeing to be bound by all of the provisions of this Franchise, subject to Applicable Law. In the event of a change in control in which the Grantee is not replaced by another entity, the Grantee will continue to be bound by all of the provisions of the Franchise, subject to Applicable Law, and will not be required to file an additional written acceptance.

(G) In reviewing a request for sale or transfer, the City may inquire into the legal, technical and financial qualifications of the prospective controlling party or transferee, and Grantee shall assist the City in so inquiring. The City may condition said sale or transfer upon such terms and conditions as it deems reasonably appropriate, in accordance with Applicable Law.

(H) Notwithstanding anything to the contrary in this subsection, the prior approval of the City shall not be required for any sale, assignment or transfer of the Franchise or Cable System to an entity controlling, controlled by or under the same common control as Grantee, provided that the proposed assignee or transferee must show financial responsibility as may be determined necessary by the City and must agree in writing to comply with all of the provisions of the Franchise. Further, Grantee may pledge the assets of the Cable System for the purpose of financing without the consent of the City; provided that such pledge of assets shall not impair or mitigate Grantee's responsibilities and capabilities to meet all of its obligations under the provisions of this Franchise.

SECTION 15. SEVERABILITY

If any Section, subsection, paragraph, term or provision of this Franchise is determined to be illegal, invalid or unconstitutional by any court or agency of competent jurisdiction, such determination shall have no effect on the validity of any other Section, subsection, paragraph, term or provision of this Franchise, all of which will remain in full force and effect for the term of the Franchise.

SECTION 16. MISCELLANEOUS PROVISIONS

16.1 Preferential or Discriminatory Practices Prohibited

NO DISCRIMINATION IN EMPLOYMENT. In connection with the performance of work under this Franchise, the Grantee agrees not to refuse to hire, discharge, promote or demote, or discriminate in matters of compensation against any Person otherwise qualified, solely because of race, color, religion, national origin, gender, age, military status, sexual orientation, marital status, or physical or mental disability; and the Grantee further agrees to insert the foregoing provision in all subcontracts hereunder. Throughout the term of this Franchise, Grantee shall fully comply with all equal employment or non-discrimination provisions and requirements of federal, State and local laws, and in particular, FCC rules and regulations relating thereto.

16.2 Notices

Throughout the term of the Franchise, each party shall maintain and file with the other a local address for the service of notices by mail. All notices shall be sent overnight delivery postage prepaid to such respective address and such notices shall be effective upon the date of mailing. These addresses may be changed by the City or the Grantee by written notice at any time. At the Effective Date of this Franchise:

Grantee's address shall be:

COMCAST OF COLORADO IX, LLC
8000 E. Iliff Ave.
Denver, CO 80231
Attn: Government Affairs

With a copy to:

Comcast Cable
Attn: Government Affairs Department
1701 JFK Blvd, 49th Floor
Philadelphia, PA 19103

The City's address shall be:

City of Louisville
749 Main Street
Louisville, CO 80027
Attn: City Manager
Cc: City Attorney

16.3 Descriptive Headings

The headings and titles of the Sections and subsections of this Franchise are for reference purposes only, and shall not affect the meaning or interpretation of the text herein.

16.4 Publication Costs to be Borne by Grantee

Grantee shall reimburse the City for all costs incurred in publishing this Franchise, if such publication is required.

16.5 Binding Effect

This Franchise shall be binding upon the parties hereto, their permitted successors and assigns.

16.6 No Joint Venture

Nothing herein shall be deemed to create a joint venture or principal-agent relationship between the parties, and neither party is authorized to, nor shall either party act toward third Persons or the public in any manner which would indicate any such relationship with the other.

16.7 Waiver

The failure of the City at any time to require performance by the Grantee of any provision hereof shall in no way affect the right of the City hereafter to enforce the same. Nor shall the waiver by the City of any breach of any provision hereof be taken or held to be a waiver of any succeeding breach of such provision, or as a waiver of the provision itself or any other provision.

16.8 Reasonableness of Consent or Approval

Whenever under this Franchise "reasonableness" is the standard for the granting or denial of the consent or approval of either party hereto, such party shall be entitled to consider public and governmental policy, moral and ethical standards as well as business and economic considerations.

16.9 Entire Agreement

This Franchise and all Exhibits represent the entire understanding and agreement between the parties hereto with respect to the subject matter hereof and supersede all prior oral negotiations between the parties.

16.10 Jurisdiction

Venue for any judicial dispute between the City and Grantee arising under or out of this Franchise shall be in Boulder County District Court, Colorado, or in the United States District Court in Denver.

IN WITNESS WHEREOF, this Franchise is signed in the name of the City of Louisville, Colorado this 22nd day of July, 2025.

ATTEST:

CITY OF LOUISVILLE, COLORADO:

_____
City Clerk

_____
Mayor

Accepted and approved this __ day of _____, 2025.

COMCAST OF CALIFORNIA/COLORADO/FLORIDA/OREGON INC.

_____

Name/Title: _____

EXHIBIT A: REPORT FORM

Comcast
Quarterly Executive Summary - Escalated Complaints
Section 7.6 (B) of our Franchise Agreement
Quarter Ending _____, Year
LOUISVILLE, COLORADO

Type of Complaint	Number of Calls
Accessibility	0
Billing, Credit and Refunds	0
Courtesy	0
Drop Bury	0
Installation	0
Notices/Easement Issues (Non-Rebuild)	0
Pedestal	0
Problem Resolution	0
Programming	0
Property Damage (Non-Rebuild)	0
Rates	0
Rebuild/Upgrade Damage	0
Rebuild/Upgrade Notices/Easement Issues	0
Reception/Signal Quality	0
Safety	0
Service and Install Appointments	0
Service Interruptions	0
Serviceability	0
TOTAL	**0**

Compliments	

EXHIBIT B: CUSTOMER SERVICE STANDARDS

Introduction

The purpose of the Standards is to establish uniform requirements for the quality of service cable operators are expected to offer their customers in the City of Louisville (the "City" or "Franchise Authority") area. The Standards are subject to change from time to time.

The Franchise Authority encourages the Cable Operator to exceed these standards in their day-to-day operations and as such, understands that the Cable Operator may modify their operations in exceeding these standards.

The Standards incorporate the Customer Service Obligations published by the Federal Communications Commission (Section 76.309), April, 1993 and customer service standards of cable television service providers operating in Colorado. Based upon the City's assessment of the needs of citizens, the City has adopted, modified and created standards specially tailored to the City, based upon the model standards adopted by the Colorado Communications and Utility Alliance (the "CCUA").

The Standards require the cable operator, in certain circumstances, to post a security fund or letter of credit ensuring Customer Service. The security fund is to be used when the cable company fails to respond to a citizen complaint that the franchising authority determines is valid, and to provide a mechanism by which to impose remedies for noncompliance. It is the sincere hope and intention of the City that the security fund will never need to be drawn upon; however, the City believes that some enforcement measures are necessary.

CITY OF LOUISVILLE

CUSTOMER SERVICE STANDARDS

I. POLICY

The Cable Operator should resolve citizen complaints without delay and interference from the Franchising Authority.

Where a given complaint is not addressed by the Cable Operator to the citizen's satisfaction, the Franchising Authority should intervene. In addition, where a pattern of unremedied complaints or noncompliance with the Standards is identified, the Franchising Authority should prescribe a cure and establish a reasonable deadline for implementation of the cure. If the noncompliance is not cured within established deadlines, monetary sanctions should be imposed to encourage compliance and deter future non-compliance.

These Standards are intended to be of general application, and are expected to be met under normal operating conditions; however, the Cable Operator shall be relieved of any obligations hereunder if it is unable to perform due to a region-wide natural emergency or in the event of force majeure affecting a significant portion of the franchise area. The Cable Operator is free to exceed these

Standards to the benefit of its Customers and such shall be considered performance for the purposes of these Standards.

These Standards supersede any contradictory or inconsistent provision in federal, state or local law (Source: 47 U.S.C. § 552(a)(1) and (d)), provided, however, that any provision in federal, state or local law, or in any original franchise agreement or renewal agreement, that imposes a higher obligation or requirement than is imposed by these Standards, shall not be considered contradictory or inconsistent with these Standards. In the event of a conflict between these Standards and a Franchise Agreement, the Franchise Agreement shall control.

These Standards apply to the provision of any Cable Service, provided by a Cable Operator over a Cable System, within the City of Louisville.

II. DEFINITIONS

When used in these Customer Service Standards (the "Standards"), the following words, phrases, and terms shall have the meanings given below.

"Adoption" shall mean the process necessary to formally enact the Standards within the Franchising Authority's jurisdiction under applicable ordinances and laws.

"Affiliate" shall mean any person or entity that is owned or controlled by, or under common ownership or control with, a Cable Operator, and provides any Cable Service or Other Service.

"Applicable Law" means, with respect to these standards and any Cable Operator's privacy policies, any statute, ordinance, judicial decision, executive order or regulation having the force and effect of law, that determines the legal standing of a case or issue.

"Cable Operator" shall mean any person or group of persons (A) who provides Cable Service over a Cable System and directly or through one or more affiliates owns a significant interest in such cable system, or (B) who otherwise controls or is responsible for, through any arrangement, the management and operation of such a Cable System. Source: 47 U.S.C. § 522(5).

"Cable Service" shall mean (A) the one-way transmission to subscribers of (i) video programming, or (ii) other programming service, and (B) subscriber interaction, if any, which is required for the selection or use of such video programming or other programming service. Source: 47 U.S.C. § 522(6). For purposes of this definition, "video programming" is programming provided by, or generally considered comparable to programming provided by a television broadcast station. Source: 47 U.S.C. § 522(20). "Other programming service" is information that a Cable Operator makes available to all subscribers generally. Source: 47 U.S.C. § 522(14).

"Cable System" shall mean a facility, consisting of a set of closed transmission paths and associated signal generation, reception, and control equipment that is designed to provide Cable Service which includes video programming and which is provided to multiple subscribers within a community, but such term does not include: (A) a facility that serves only to retransmit the televisions signals of one or more television broadcast stations, or (B) a facility that serves subscribers without using any public right of way. Source: 47 U.S.C. § 522(7).

“Colorado Communications and Utilities Alliance” or “CCUA” shall mean an association comprised primarily of local governmental subdivisions of the State of Colorado, or any successor entity. The CCUA may, on behalf of its members, be delegated the authority to review, investigate or otherwise take some related role in the administration or enforcement of any functions under these Standards.

“Contractor” shall mean a person or entity that agrees by contract to furnish materials or perform services for another at a specified consideration.

“Customer” shall mean any person who receives any Cable Service from a Cable Operator.

“Customer Service Representative” (or “CSR”) shall mean any person employed with or under contract or subcontract to a Cable Operator to assist, or provide service to, customers, whether by telephone, writing service or installation orders, answering customers' questions in person, receiving and processing payments, or performing any other customer service-related tasks.

“Escalated complaint” shall mean a complaint that is referred to a Cable Operator by the Franchising Authority.

“Franchising Authority” shall mean the City.

“Necessary” shall mean required or indispensable.

“Non-cable-related purpose” shall mean any purpose that is not necessary to render or conduct a legitimate business activity related to a Cable Service or Other Service provided by a Cable Operator to a Customer. Market research, telemarketing, and other marketing of services or products that are not related to a Cable Service or Other Service provided by a Cable Operator to a Customer shall be considered Non-cable-related purposes.

“Normal business hours” shall mean those hours during which most similar businesses in the community are open to serve customers. In all cases, “normal business hours” must include at least some evening hours one night per week, and include some weekend hours. Source: 47 C.F.R. § 76.309.

“Normal operating conditions” shall mean those service conditions which are within the control of a Cable Operator. Conditions which are not within the control of a Cable Operator include, but are not necessarily limited to, natural disasters, civil disturbances, power outages, telephone network outages, and severe or unusual weather conditions. Conditions which are ordinarily within the control of a Cable Operator include, but are not necessarily limited to, special promotions, pay-per-view events, rate increases, regular peak or seasonal demand periods and maintenance or upgrade to the Cable System.

“Other Service(s)” shall mean any wire or radio communications service provided using any of the facilities of a Cable Operator that are used in the provision of Cable Service.

“Personally Identifiable Information” shall mean specific information about an identified Customer, including, but not be limited to, a Customer's (a) login information for the use of Cable Service and management of a Customer’s Cable Service account, (b) extent of viewing of video

programming or Other Services, (c) shopping choices, (d) interests and opinions, (e) energy uses, (f) medical information, (g) banking data or information, or (h) any other personal or private information. "Personally Identifiable Information" shall not mean any aggregate information about Customers which does not identify particular persons, or information gathered by a Cable Operator necessary to install, repair or service equipment or Cable System facilities at a Customer's premises.

"Service interruption" or "interruption" shall mean the loss or substantial impairment of picture or sound on one or more cable television channels.

"Service outage" or "outage" shall mean a loss or substantial impairment in reception on all channels.

"Subcontractor" shall mean a person or entity that enters into a contract to perform part or all of the obligations of another's contract.

"City" shall mean the City of Louisville, Colorado.

"Writing" or "written" as the term applies to notification shall include electronic communications.

Any terms not specifically defined in these Standards shall be given their ordinary meaning, or where otherwise defined in applicable federal law, such terms shall be interpreted consistent with those definitions.

III. CUSTOMER SERVICE

A. Courtesy

Cable Operator employees, contractors and subcontractors shall be courteous, knowledgeable and helpful and shall provide effective and satisfactory service in all contacts with customers.

B. Accessibility

1. A Cable Operator shall provide customer service centers/business offices ("Service Centers") which are conveniently located, and which are open during Normal Business Hours. Service Centers shall be fully staffed with Customer Service Representatives offering the following services to Customers who come to the Service Center: bill payment, equipment exchange, processing of change of service requests, and response to Customer inquiries and request.

Unless otherwise requested by the City, a Cable Operator shall post a sign at each Service Center, visible from the outside of the Service Center, advising Customers of its hours of operation and of the telephone number at which to contact the Cable Operator if the Service Center is not open at the times posted.

The Cable Operator shall use commercially reasonable efforts to implement and promote "self-help" tools and technology, in order to respond to the growing demand of Customers who wish to interact with the Cable Operator on the Customer's own terms and timeline and at their own

convenience, without having to travel to a Service Center. Without limitation, examples of self-help tools or technology may include self-installation kits to Customers upon request; pre-paid mailers for the return of equipment upon Customer request; an automated phone option for Customer bill payments; and equipment exchanges at a Customer's residence in the event of damaged equipment. A Cable Operator shall provide free exchanges of faulty equipment at the customer's address if the equipment has not been damaged in any manner due to the fault or negligence of the customer.

2. A Cable Operator shall maintain local telephone access lines that shall be available twenty-four (24) hours a day, seven (7) days a week for service/repair requests and billing/service inquiries.

3. A Cable Operator shall have dispatchers and technicians on call twenty-four (24) hours a day, seven (7) days a week, including legal holidays.

4. If a customer service telephone call is answered with a recorded message providing the customer with various menu options to address the customer's concern, the recorded message must provide the customer the option to connect to and speak with a CSR within sixty (60) seconds of the commencement of the recording. During Normal Business Hours, a Cable Operator shall retain sufficient customer service representatives and telephone line capacity to ensure that telephone calls to technical service/repair and billing/service inquiry lines are answered by a customer service representative within thirty (30) seconds or less from the time a customer chooses a menu option to speak directly with a CSR or chooses a menu option that pursuant to the automated voice message, leads to a direct connection with a CSR. Under normal operating conditions, this thirty (30) second telephone answer time requirement standard shall be met no less than ninety (90) percent of the time measured quarterly.

5. Under normal operating conditions, a customer shall not receive a busy signal more than three percent (3%) of the time. This standard shall be met ninety (90) percent or more of the time, measured quarterly.

C. Responsiveness

1. Guaranteed Seven-Day Residential Installation

a. A Cable Operator shall complete all standard residential installations or modifications to service requested by customers within seven (7) business days after the order is placed, unless a later date for installation is requested. "Standard" residential installations are those located up to one hundred twenty five (125) feet from the existing distribution system. If the customer requests a nonstandard residential installation, or the Cable Operator determines that a nonstandard residential installation is required, the Cable Operator shall provide the customer in advance with a total installation cost estimate and an estimated date of completion.

b. All underground cable drops to the home shall be buried at a depth of no less than twelve inches (12"), or such other depth as may be required by the Franchise Agreement or local code provisions, or if there are no applicable Franchise or code requirements, at such other depths as may be agreed to by the parties if other construction concerns preclude the twelve inch

requirement , and within no more than one calendar week from the initial installation, or at a time mutually agreed upon between the Cable Operator and the customer.

2. Residential Installation and Service Appointments

a. The "appointment window" alternatives for specific installations, service calls, or other installation activities will be either a specific time, or at a maximum, a four (4) hour time block between the hours of 8:00 a.m. and 6:00 p.m., six (6) days per week. A Cable Operator may schedule service calls and other installation activities outside of the above days and hours for the express convenience of customers. For purposes of this subsection "appointment window" means the period of time in which the representative of the Cable Operator must arrive at the customer's location.

b. A Cable Operator may not cancel an appointment with a customer after the close of business on the business day prior to the scheduled appointment, unless the customer's issue has otherwise been resolved.

c. If a Cable Operator is running late for an appointment with a customer and will not be able to keep the appointment as scheduled, the Cable Operator shall take reasonable efforts to contact the customer promptly, but in no event later than the end of the appointment window. The appointment will be rescheduled, as necessary at a time that is convenient to the customer, within Normal Business Hours or as may be otherwise agreed to between the customer and Cable Operator.

d. A Cable Operator shall be deemed to have responded to a request for service under the provisions of this section when a technician arrives within the agreed upon time, and, if the customer is absent when the technician arrives, the technician leaves written notification of arrival and return time, and a copy of that notification is kept by the Cable Operator. In such circumstances, the Cable Operator shall contact the customer within forty-eight (48) hours.

3. Residential Service Interruptions

a. In the event of system outages resulting from Cable Operator equipment failure, the Cable Operator shall correct such failure within 2 hours after the 3rd customer call is received.

b. All other service interruptions resulting from Cable Operator equipment failure shall be corrected by the Cable Operator by the end of the next calendar day.

c. Records of Complaints.

i. A Cable Operator shall keep an accurate and comprehensive file of any complaints regarding the cable system or its operation of the cable system, in a manner consistent with the privacy rights of customers, and the Cable Operator's actions in response to those complaints. These files shall remain available for viewing by the Franchising Authority during normal business hours at the Cable Operator's business office, and shall be retained by the Cable Operator for a period of at least three (3) years.

ii. Upon written request a Cable Operator shall provide the Franchising Authority an executive summary quarterly, which shall include information concerning customer complaints referred by the Franchising Authority to the Grantee and any other requirements of a Franchise Agreement but no personally identifiable information. These summaries shall be provided within fifteen (15) days after the end of each quarter. Once a request is made, it need not be repeated and quarterly executive summaries shall be provided by the Cable Operator until notified in writing by the Franchising Authority that such summaries are no longer required.

iii. Upon written request a summary of service requests, identifying the number and nature of the requests and their disposition, shall also be completed by the Cable Operator for each quarter and submitted to the Franchising Authority by the fifteenth (15th) day of the month after each calendar quarter. Once a request is made, it need not be repeated and quarterly summary of service requests shall be provided by the Cable Operator until notified in writing by the Franchising Authority that such summaries are no longer required. Complaints shall be broken out by the nature of the complaint and the type of Cable service subject to the complaint.

d. Records of Service Interruptions and Outages. A Cable Operator shall maintain records of all outages and reported service interruptions. Such records shall indicate the type of cable service interrupted, including the reasons for the interruptions. A log of all service interruptions shall be maintained and provided to the Franchising Authority quarterly, upon written request, within fifteen (15) days after the end of each quarter. Such records shall be submitted to the Franchising Authority with the records identified in Section 3.c.ii above if so requested in writing, and shall be retained by the Cable Operator for a period of three (3) years.

e. All service outages and interruptions for any cause beyond the control of the Cable Operator shall be corrected within thirty-six (36) hours, after the conditions beyond its control have been corrected.

4. TV Reception

a. A Cable Operator shall provide clear television reception that meets or exceeds technical standards established by the United States Federal Communications Commission (the "FCC"). A Cable Operator shall render efficient service, make repairs promptly, and interrupt service only for good cause and for the shortest time possible. Scheduled interruptions shall be preceded by notice and shall occur during periods of minimum use of the system, preferably between midnight and six a.m. (6:00 a.m.).

b. If a customer experiences poor video or audio reception attributable to a Cable Operator's equipment, the Cable Operator shall:

i. Assess the problem within one (1) day of notification;

ii. Communicate with the customer regarding the nature of the problem and the expected time for repair;

iii. Complete the repair within two (2) days of assessing the problem unless circumstances exist that reasonably require additional time.

c. If an appointment is necessary to address any video or audio reception problem, the customer may choose a block of time described in Section III.C.2.a. At the customer's request, the Cable Operator shall repair the problem at a later time convenient to the customer, during Normal Business Hours or at such other time as may be agreed to by the customer and Cable Operator. A Cable Operator shall maintain periodic communications with a customer during the time period in which problem ascertainment and repair are ongoing, so that the customer is advised of the status of the Cable Operator's efforts to address the problem.

5. Problem Resolution

A Cable Operator's customer service representatives shall have the authority to provide credit for interrupted service, to waive fees, to schedule service appointments and to change billing cycles, where appropriate. Any difficulties that cannot be resolved by the customer service representative shall be referred to the appropriate supervisor who shall contact the customer within four (4) hours and resolve the problem within forty eight (48) hours or within such other time frame as is acceptable to the customer and the Cable Operator.

6. Billing, Credits, and Refunds

a. In addition to other options for payment of a customer's service bill, a Cable Operator shall make available a telephone payment option where a customer without account irregularities can enter payment information through an automated system, without the necessity of speaking to a CSR.

b. A Cable Operator shall allow at least thirty (30) days from the beginning date of the applicable service period for payment of a customer's service bill for that period. If a customer's service bill is not paid within that period of time the Cable Operator may apply an administrative fee to the customer's account. The administrative fee must reflect the average costs incurred by the Cable Operator in attempting to collect the past due payment in accordance with applicable law. If the customer's service bill is not paid within forty-five (45) days of the beginning date of the applicable service period, the Cable Operator may perform a "soft" disconnect of the customer's service. If a customer's service bill is not paid within fifty-two (52) days of the beginning date of the applicable service period, the Cable Operator may disconnect the customer's service, provided it has provided two (2) weeks notice to the customer that such disconnection may result.

c. The Cable Operator shall issue a credit or refund to a customer within 30 days after determining the customer's entitlement to a credit or refund.

d. Whenever the Cable Operator offers any promotional or specially priced service(s) its promotional materials shall clearly identify and explain the specific terms of the promotion, including but not limited to manner in which any payment credit will be applied.

7. Treatment of Property

To the extent that a Franchise Agreement does not contain the following procedures for treatment of property, Operator shall comply with the procedures set forth in this Section.

a. A Cable Operator shall keep tree trimming to a minimum; trees and shrubs or other landscaping that are damaged by a Cable Operator, any employee or agent of a Cable Operator during installation or construction shall be restored to their prior condition or replaced within seven (7) days, unless seasonal conditions require a longer time, in which case such restoration or replacement shall be made within seven (7) days after conditions permit. Trees and shrubs on private property shall not be removed without the prior permission of the owner or legal tenant of the property on which they are located. This provision shall be in addition to, and shall not supersede, any requirement in any franchise agreement.

b. A Cable Operator shall, at its own cost and expense, and in a manner approved by the property owner and the Franchising Authority, restore any private property to as good condition as before the work causing such disturbance was initiated. A Cable Operator shall repair, replace or compensate a property owner for any damage resulting from the Cable Operator's installation, construction, service or repair activities. If compensation is requested by the customer for damage caused by any Cable Operator activity, the Cable Operator shall reimburse the property owner one hundred (100) percent of the actual cost of the damage.

c. Except in the case of an emergency involving public safety or service interruption to a large number of customers, a Cable Operator shall give reasonable notice to property owners or legal tenants prior to entering upon private premises, and the notice shall specify the work to be performed; provided that in the case of construction operations such notice shall be delivered or provided at least twenty-four (24) hours prior to entry, unless such notice is waived by the customer. For purposes of this subsection, “reasonable notice” shall be considered:

i. For pedestal installation or similar major construction, seven (7) days.

ii. For routine maintenance, such as adding or dropping service, tree trimming and the like, reasonable notice given the circumstances. Unless a Franchise Agreement has a different requirement, reasonable notice shall require, at a minimum, prior notice to a property owner or tenant, before entry is made onto that person’s property.

iii. For emergency work a Cable Operator shall attempt to contact the property owner or legal tenant in person, and shall leave a door hanger notice in the event personal contact is not made. Door hangars must describe the issue and provide contact information where the property owner or tenant can receive more information about the emergency work.

Nothing herein shall be construed as authorizing access or entry to private property, or any other property, where such right to access or entry is not otherwise provided by law.

d. Cable Operator personnel shall clean all areas surrounding any work site and ensure that all cable materials have been disposed of properly.

D. Services for Customers with Disabilities

1. For any customer with a disability, a Cable Operator shall deliver and pick up equipment at customers' homes at no charge unless the malfunction was caused by the actions of the customer. In the case of malfunctioning equipment, the technician shall provide replacement equipment, hook it up and ensure that it is working properly, and shall return the defective equipment to the Cable Operator.

2. A Cable Operator shall provide either TTY, TDD, TYY, VRS service or other similar service that are in compliance with the Americans With Disabilities Act and other applicable law, with trained operators who can provide every type of assistance rendered by the Cable Operator's customer service representatives for any hearing-impaired customer at no charge.

3. A Cable Operator shall provide free use of a remote control unit to mobility-impaired (if disabled, in accordance with Section III.D.4) customers.

4. Any customer with a disability may request the special services described above by providing a Cable Operator with a letter from the customer's physician stating the need, or by making the request to the Cable Operator's installer or service technician, where the need for the special services can be visually confirmed.

E. Cable Services Information

1. At any time a customer or prospective customer may request, a Cable Operator shall provide the following information, in clear, concise written form, easily accessible and located on Cable Operator’s website (and in Spanish, when requested by the customer):

a. Products and services offered by the Cable Operator, including its channel lineup;

b. The Cable Operator's complete range of service options and the prices for these services;

c. The Cable Operator's billing, collection and disconnection policies;

d. Privacy rights of customers;

e. All applicable complaint procedures, including complaint forms and the telephone numbers and mailing addresses of the Cable Operator, and the FCC;

f. Use and availability of parental control/lock out device;

g. Special services for customers with disabilities;

h. Days, times of operation, and locations of the service centers;

2. At a Customer’s request, a Cable Operator shall make available either a complete copy of these Standards and any other applicable customer service standards, or a summary of these Standards, in a format to be approved by CCUA and the Franchising Authority, which shall include

at a minimum, the URL address of a website containing these Standards in their entirety; provided however, that if the CCUA or Franchising Authority does not maintain a website with a complete copy of these Standards, a Cable Operator shall be under no obligation to do so;

If acceptable to a customer, Cable Operator may fulfill customer requests for any of the information listed in this Section by making the requested information available electronically, such as on a website or by electronic mail.

3. Upon written request, a Cable Operator shall meet annually with the Franchising Authority to review the format of the Cable Operator's bills to customers. Whenever the Cable Operator makes substantial changes to its billing format, it will contact the Franchising Authority at least thirty (30) days prior to the time such changes are to be effective, in order to inform the Franchising Authority of such changes.

4. Copies of notices provided to the customer in accordance with subsection 5 below shall be filed (by fax or email acceptable) concurrently with the Franchising Authority and the CCUA.

5. A Cable Operator shall provide customers with written notification of any change in rates for nondiscretionary cable services, and for service tier changes that result in a deletion of programming from a customer's service tier, at least thirty (30) days before the effective date of change. For purposes of this section, "nondiscretionary" means the subscribed tier and any other Cable Services that a customer has subscribed to, at the time the change in rates are announced by the Cable Operator.

6. All officers, agents, and employees of the Cable Operator or its contractors or subcontractors who are in personal contact with customers or when working on public property, shall wear on their outer clothing identification cards bearing their name and photograph and identifying them as representatives of the Cable Operator. The Cable Operator shall account for all identification cards at all times. Every vehicle of the Cable Operator shall be clearly visually identified to the public as working for the Cable Operator. Whenever a Cable Operator work crew is in personal contact with customers or public employees, a supervisor must be able to communicate clearly with the customer or public employee. Every vehicle of a subcontractor or contractor shall be labeled with the name of the contractor and further identified as contracting or subcontracting for the Cable Operator.

7. Each CSR, technician or employee of the Cable Operator in each contact with a customer shall state the estimated cost of the service, repair, or installation orally prior to delivery of the service or before any work is performed, and shall provide the customer with an oral statement of the total charges before terminating the telephone call or before leaving the location at which the work was performed. A written estimate of the charges shall be provided to the customer before the actual work is performed.

F. Customer Privacy

1. Cable Customer Privacy. In addition to complying with the requirements in this subsection, a Cable Operator shall fully comply with all obligations under 47 U.S.C. Section 551.

2. Collection and Use of Personally Identifiable Information.

a. A Cable Operator shall not use the Cable System to collect, monitor or observe Personally Identifiable Information without the prior affirmative written or electronic consent of the Customer unless, and only to the extent that such information is: (i) used to detect unauthorized reception of cable communications, or (ii) necessary to render a Cable Service or Other Service provided by the Cable Operator to the Customer and as otherwise authorized by applicable law.

b. A Cable Operator shall take such actions as are necessary using then-current industry standard practices to prevent any Affiliate from using the facilities of the Cable Operator in any manner, including, but not limited to, sending data or other signals through such facilities, to the extent such use will permit an Affiliate unauthorized access to Personally Identifiable Information on equipment of a Customer (regardless of whether such equipment is owned or leased by the Customer or provided by a Cable Operator) or on any of the facilities of the Cable Operator that are used in the provision of Cable Service. This subsection F.2.b shall not be interpreted to prohibit an Affiliate from obtaining access to Personally Identifiable Information to the extent otherwise permitted by this subsection F.

c. A Cable Operator shall take such actions as are necessary using then-current industry standard practices to prevent a person or entity (other than an Affiliate) from using the facilities of the Cable Operator in any manner, including, but not limited to, sending data or other signals through such facilities, to the extent such use will permit such person or entity unauthorized access to Personally Identifiable Information on equipment of a Customer (regardless of whether such equipment is owned or leased by the Customer or provided by a Cable Operator) or on any of the facilities of the Cable Operator that are used in the provision of Cable Service.

3. Disclosure of Personally Identifiable Information. A Cable Operator shall not disclose Personally Identifiable Information without the prior affirmative written or electronic consent of the Customer, unless otherwise authorized by applicable law.

a. A minimum of thirty (30) days prior to making any disclosure of Personally Identifiable Information of any Customer for any Non-Cable related purpose as provided in this subsection F.3.a, where such Customer has not previously been provided the notice and choice provided for in subsection III.F.9, the Cable Operator shall notify each Customer (that the Cable Operator intends to disclose information about) of the Customer's right to prohibit the disclosure of such information for Non-cable related purposes. The notice to Customers may reference the Customer to his or her options to state a preference for disclosure or non-disclosure of certain information, as provided in subsection III.F.10.

b. A Cable Operator may disclose Personally Identifiable Information only to the extent that it is necessary to render, or conduct a legitimate business activity related to, a Cable Service or Other Service provided by the Cable Operator to the Customer.

c. To the extent authorized by applicable law, a Cable Operator may disclose Personally Identifiable Information pursuant to a subpoena, court order, warrant or other valid legal process authorizing such disclosure.

4. Access to Information. Any Personally Identifiable Information collected and maintained by a Cable Operator shall be made available for Customer examination within thirty (30) days of receiving a request by a Customer to examine such information about themselves at the local offices of the Cable Operator or other convenient place within the City designated by the Cable Operator, or electronically, such as over a website. Upon a reasonable showing by the Customer that such Personally Identifiable Information is inaccurate, a Cable Operator shall correct such information.

5. Privacy Notice to Customers

a. A Cable Operator shall annually mail or provide a separate, written or electronic copy of the privacy statement to Customers consistent with 47 U.S.C. Section 551(a)(1), and shall provide a Customer a copy of such statement at the time the Cable Operator enters into an agreement with the Customer to provide Cable Service. The written notice shall be in a clear and conspicuous format, which at a minimum, shall be in a comparable font size to other general information provided to Customers about their account as it appears on either paper or electronic Customer communications.

b. In or accompanying the statement required by subsection F.5.a, a Cable Operator shall state substantially the following message regarding the disclosure of Customer information: "Unless a Customer affirmatively consents electronically or in writing to the disclosure of personally identifiable information, any disclosure of personally identifiable information for purposes other than to the extent necessary to render, or conduct a legitimate business activity related to, a Cable Service or Other Service, is limited to:

i. Disclosure pursuant to valid legal process authorized by applicable law.

ii. Disclosure of the name and address of a Customer subscribing to any general programming tiers of service and other categories of Cable Services provided by the Cable Operator that do not directly or indirectly disclose: (A) A Customer's extent of viewing of a Cable Service or Other Service provided by the Cable Operator; (B) The extent of any other use by a Customer of a Cable Service; (C) The nature of any transactions made by a Customer over the Cable System; or (D) The nature of programming or websites that a Customer subscribes to or views (i.e., a Cable Operator may only disclose the fact that a person subscribes to a general tier of service, or a package of channels with the same type of programming), provided that with respect to the nature of websites subscribed to or viewed, these are limited to websites accessed by a Customer in connection with programming available from their account for Cable Services.

The notice shall also inform the Customers of their right to prohibit the disclosure of their names and addresses in accordance with subsection F.3.a. If a Customer exercises his or her right to prohibit the disclosure of name and address as provided in subsection F.3.a or this subsection, such prohibition against disclosure shall remain in effect, unless and until the Customer subsequently changes their disclosure preferences as described in subsection F.9 below.

6. Privacy Reporting Requirements. The Cable Operator shall include in its regular periodic reports to the Franchising Authority required by its Franchise Agreement information summarizing:

a. The type of Personally Identifiable Information that was actually collected or disclosed by Cable Operator during the reporting period;

b. For each type of Personally Identifiable Information collected or disclosed, a statement from an authorized representative of the Cable Operator certifying that the Personally Identifiable Information collected or disclosed was: (A) collected or disclosed to the extent Necessary to render, or conduct a legitimate business activity related to, a Cable Service or Other Service provided by the Cable Operator; (B) used to the extent Necessary to detect unauthorized reception of cable communications: (C) disclosed pursuant to valid legal process authorized by applicable law; or (D) a disclosure of Personally Identifiable Information of particular subscribers, but only to the extent affirmatively consented to by such subscribers in writing or electronically, or as otherwise authorized by applicable law.

c. The standard industrial classification (SIC) codes or comparable identifiers pertaining to any entities to whom such Personally Identifiable Information was disclosed, except that a Cable Operator need not provide the name of any court or governmental entity to which such disclosure was made pursuant to valid legal process authorized by applicable law;

d. The general measures that have been taken to prevent the unauthorized access to Personally Identifiable Information by a person other than the Customer or the Cable Operator. A Cable Operator shall meet with Franchising Authority if requested to discuss technology used to prohibit unauthorized access to Personally Identifiable Information by any means.

7. Nothing in this subsection III.F shall be construed to prevent the Franchising Authority from obtaining Personally Identifiable Information to the extent not prohibited by Section 631 of the Communications Act, 47 U.S.C. Section 551 and applicable laws.

8. Destruction of Personally Identifiable Information. A Cable Operator shall destroy any Personally Identifiable Information if the information is no longer necessary for the purpose for which it was collected and there are no pending requests or orders for access to such information under subsection 4 of this subsection III.F, pursuant to a court order or other valid legal process, or pursuant to applicable law.

9. Notice and Choice for Customers. The Cable Operator shall at all times make available to Customers one or more methods for Customers to use to prohibit or limit disclosures, or permit or release disclosures, as provided for in this subsection III.F. These methods may include, for example, online website "preference center" features, automated toll-free telephone systems, live toll-free telephone interactions with customer service agents, in-person interactions with customer service personnel, regular mail methods such as a postage paid, self-addressed post card, an insert included with the Customer's monthly bill for Cable Service, the privacy notice specified in subsection III.F.5, or such other comparable methods as may be provided by the Cable Operator. Website "preference center" features shall be easily identifiable and navigable by Customers, and shall be in a comparable size font as other billing information provided to Customers on a Cable

Operator's website. A Customer who provides the Cable Operator with permission to disclose Personally Identifiable Information through any of the methods offered by a Cable Operator shall be provided follow-up notice, no less than annually, of the Customer's right to prohibit these disclosures and the options for the Customer to express his or her preference regarding disclosures. Such notice shall, at a minimum, be provided by an insert in the Cable Operator's bill (or other direct mail piece) to the Customer or a notice or message printed on the Cable Operator's bill to the Customer, and on the Cable Operator's website when a Customer logs in to view his or her Cable Service account options. The form of such notice shall also be provided on an annual basis to the Franchising Authority. These methods of notification to Customers may also include other comparable methods as submitted by the Cable Operator and approved by the Franchising Authority in its reasonable discretion.

G. Safety

A Cable Operator shall install and locate its facilities, cable system, and equipment in compliance with all federal, state, local, and company safety standards, and in such manner as shall not unduly interfere with or endanger persons or property. Whenever a Cable Operator receives notice that an unsafe condition exists with respect to its equipment, the Cable Operator shall investigate such condition immediately, and shall take such measures as are necessary to remove or eliminate any unsafe condition.

H. Cancellation of New Services

In the event that a new customer requests installation of Cable Service and is unsatisfied with their initial Cable Service, and provided that the customer so notifies the Cable Operator of their dissatisfaction within 30 days of initial installation, then such customer can request disconnection of Cable Service within 30 days of initial installation, and the Cable Operator shall provide a credit to the customer's account consistent with this Section. The customer will be required to return all equipment in good working order; provided such equipment is returned in such order, then the Cable Operator shall refund the monthly recurring fee for the new customer's first 30 days of Cable Service and any charges paid for installation. This provision does not apply to existing customers who request upgrades to their Cable Service, to discretionary Cable Service such as PPV or movies purchased and viewed On Demand, or to customer moves or transfers of Cable Service. The service credit shall be provided in the next billing cycle.

IV. COMPLAINT PROCEDURE

A. Complaints to a Cable Operator

1. A Cable Operator shall establish written procedures for receiving, acting upon, and resolving customer complaints, and crediting customer accounts and shall have such procedures printed and disseminated at the Cable Operator's sole expense, consistent with Section III.E.1.e of these Standards.

2. Said written procedures shall prescribe a simple manner in which any customer may submit a complaint by telephone or in writing to a Cable Operator that it has violated any provision of these Customer Service Standards, any terms or conditions of the customer's contract with the Cable Operator, or reasonable business practices. If a representative of the Franchising Authority

notifies the Cable Operator of a customer complaint that has not previously been made by the customer to the Cable Operator, the complaint shall be deemed to have been made by the customer as of the date of the Franchising Authority's notice to the Cable Operator.

3. At the conclusion of the Cable Operator's investigation of a customer complaint, but in no more than ten (10) calendar days after receiving the complaint, the Cable Operator shall notify the customer of the results of its investigation and its proposed action or credit.

4. A Cable Operator shall also notify the customer of the customer's right to file a complaint with the Franchising Authority in the event the customer is dissatisfied with the Cable Operator's decision, and shall thoroughly explain the necessary procedures for filing such complaint with the Franchising Authority.

5. A Cable Operator shall immediately report all customer Escalated complaints that it does not find valid to the Franchising Authority.

6. A Cable Operator's complaint procedures shall be filed with the Franchising Authority prior to implementation.

B. Complaints to the Franchising Authority

1. Any customer who is dissatisfied with any proposed decision of the Cable Operator or who has not received a decision within the time period set forth below shall be entitled to have the complaint reviewed by the Franchising Authority.

2. The customer may initiate the review either by calling the Franchising Authority or by filing a written complaint together with the Cable Operator's written decision, if any, with the Franchising Authority.

3. The customer shall make such filing and notification within twenty (20) days of receipt of the Cable Operator's decision or, if no decision has been provided, within thirty (30) days after filing the original complaint with the Cable Operator.

4. If the Franchising Authority decides that further evidence is warranted, the Franchising Authority shall require the Cable Operator and the customer to submit, within ten (10) days of notice thereof, a written statement of the facts and arguments in support of their respective positions.

5. The Cable Operator and the customer shall produce any additional evidence, including any reports from the Cable Operator, which the Franchising Authority may deem necessary to an understanding and determination of the complaint.

6. The Franchising Authority shall issue a determination within fifteen (15) days of receiving the customer complaint, or after examining the materials submitted, setting forth its basis for the determination.

7. The Franchising Authority may extend these time limits for reasonable cause and may intercede and attempt to negotiate an informal resolution.

C. Security Fund or Letter of Credit

A Cable operator shall comply with any Franchise Agreement regarding Letters of Credit. If a Franchise Agreement is silent on Letter of Credit the following shall apply:

1. Within thirty (30) days of the written notification to a Cable Operator by the Franchising Authority that an alleged Franchise violation exists, a Cable Operator shall deposit with an escrow agent approved by the Franchising Authority fifty thousand dollars ($50,000) or, in the sole discretion of the Franchising Authority, such lesser amount as the Franchising Authority deems reasonable to protect subscribers within its jurisdiction. Alternatively, at the Cable Operator's discretion, it may provide to the Franchising Authority an irrevocable letter of credit in the same amount. A letter of credit or cash deposit, with the approval of the Franchising Authority, may be posted jointly for more than one member of the CCUA, and may be administered, and drawn upon, jointly by the CCUA or drawn upon individually by each member; provided however that if such letter of credit or cash deposit is provided to CCUA on behalf of more than one of its members, the letter of credit or cash deposit may, in the sole discretion of CCUA and its effected members, be required in an amount not to exceed one hundred thousand dollars ($100,000).

The escrowed funds or letter of credit shall constitute the "Security Fund" for ensuring compliance with these Standards for the benefit of the Franchising Authority. The escrowed funds or letter of credit shall be maintained by a Cable Operator at the amount initially required, even if amounts are withdrawn pursuant to any provision of these Standards, until any claims related to the alleged Franchise violation(s) are paid in full.

2. The Franchising Authority may require the Cable Operator to increase the amount of the Security Fund, if it finds that new risk factors exist which necessitate such an increase.

3. The Security Fund shall serve as security for the payment of any penalties, fees, charges or credits as provided for herein and for the performance by a Cable Operator of all its obligations under these Customer Service Standards.

4. The rights reserved to the Franchising Authority with respect to the Security Fund are in addition to all other rights of the Franchising Authority, whether reserved by any applicable franchise agreement or authorized by law, and no action, proceeding or exercise of a right with respect to same shall in any way affect, or diminish, any other right the Franchising Authority may otherwise have.

D. Verification of Compliance

A Cable Operator shall establish its compliance with any or all of the standards required through annual reports that demonstrate said compliance, or as requested by the Franchising Authority.

E. Procedure for Remedying Violations

1. If the Franchising Authority has reason to believe that a Cable Operator has failed to comply with any of these Standards, or has failed to perform in a timely manner, the Franchising Authority may pursue the procedures in its Franchise Agreement to address violations of these Standards in a like manner as other franchise violations are considered.

2. Following the procedures set forth in any Franchise Agreement governing the manner to address alleged Franchise violations, if the Franchising Authority determines in its sole discretion that the noncompliance has been substantiated, in addition to any remedies that may be provided in the Franchise Agreement, the Franchising Authority may:

a. Impose assessments of up to one thousand dollars ($1,000.00) per day, to be withdrawn from the Security Fund in addition to any franchise fee until the non-compliance is remedied;

b. Order such rebates and credits to affected customers as in its sole discretion it deems reasonable and appropriate for degraded or unsatisfactory services that constituted noncompliance with these Standards;

c. Reverse any decision of the Cable Operator in the matter;

d. Grant a specific solution as determined by the Franchising Authority; or

e. Except for in emergency situations, withhold licenses and permits for work by the Cable Operator or its subcontractors in accordance with applicable law.

V. MISCELLANEOUS

A. Severability

Should any section, subsection, paragraph, term, or provision of these Standards be determined to be illegal, invalid, or unconstitutional by any court or agency of competent jurisdiction with regard thereto, such determination shall have no effect on the validity of any other section, subsection, paragraph, term, or provision of these Standards, each of the latter of which shall remain in full force and effect.

B. Non-Waiver

Failure to enforce any provision of these Standards shall not operate as a waiver of the obligations or responsibilities of a Cable Operator under said provision, or any other provision of these Standards.

City of Louisville
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CITY COUNCIL COMMUNICATION
AGENDA ITEM 10C

SUBJECT: **ORDINANCE NO. 1899, SERIES 2025 – AN ORDINANCE AMENDING TITLES 4 AND 14 OF THE LOUISVILLE MUNICIPAL CODE TO ESTABLISH A MAXIMUM SPEED LIMIT FOR BICYCLES ON BIKEPATHS AND TRAILS WITHIN THE CITY**

DATE: **JULY 8, 2025**

PREPARED BY: **RAFAEL GUTIERREZ, CHIEF OF POLICE**

PRESENTED BY: **RAFAEL GUTIERREZ, CHIEF OF POLICE**

SUMMARY:
As a means to promote safe and responsible riding, the proposed ordinance amendment seeks to establish a maximum speed limit of 15 miles per hour for bicycles or electric bicycles (a.k.a. E-bikes) on bike paths and trails within the City. The proposed amendment would prohibit riders from operating a bicycle or electric bicycle on City owned and officially designated bike paths and trails at speeds in excess of 15 miles per hour. The proposed amendment also aligns speed limits on the City of Louisville bike paths and trails with speed limits that have been imposed in neighboring jurisdictions.

BACKGROUND / PRIOR DISCUSSIONS:
Bicycle, Electric Bicycle, and Pedestrian safety is a topic of concern and the Police Department, Parks and Recreation/Open Space, and Public Works Department participated in City Council special meetings on May 28, 2024 and August 27, 2024 to discuss development of a strategy to address these concerns. During those meetings several possible options were discussed specific to bicycle safety, including imposing speed limits on paths and trails, creation of additional dismount zones, requiring e-bike rider licensing, prohibiting bicycles and electric bicycles from being on sidewalks, and developing a more robust educational campaign.

After those initial discussions, staff created a safety campaign that engaged multiple stakeholders including local bicycle vendors, community and student groups, the Boulder Valley School District (BVSD) schools, and various City departments. Focused police education and enforcement efforts were also increased to encourage responsible and safe riding habits for all. No additional sidewalk dismount zones were recommended beyond what currently exists in designated business districts due to concerns of moving child aged riders to the roadways. Licensing and age restrictions was also found to be impractical to implement for our municipality and perhaps should occur at the State level through revision of the State Traffic Code.

ANALYSIS:

The proposed ordinance amendment will establish a maximum speed limit of 15 miles per hour for bicycles or electric bicycles (E-bikes) on bike paths and trails within the City.

Council should consider the enforceability of this amendment, alignment with neighboring jurisdictions, the potential costs and staff time associated with posting of new signage and markings, staff time spent on the development of a public education campaign to inform riders of the speed limit, and the relatively low percentage (approximately 3%) of current incidents involving roadway conflict/crashes encountered within our community involving bicycles. There is no available data on pedestrian and bicycle crashes or conflicts within our parks systems or trails because the State does not require reporting of those incidents occurring in those areas.

2025 COUNCIL WORK PLAN:
This proposed amendment to Titles 4 and 14 of the Louisville Municipal Code aligns with the 2025 Council Work Plan - Safety/Traffic Safety priority. It also supports the City's Environmental Sustainability lens by encouraging multimodal forms of transportation and offering safeguards for both bicyclists and pedestrians who utilize parks, paths, and trails in our City.

FISCAL IMPACT:
Budgeted?: **Yes**
The implementation of this ordinance will, at minimum, require the posting of signs, path and trail markings, and perhaps acquiring some speed detection equipment. There is no current cost estimate available and that would have to be determined upon passage of this amendment by Parks and Public Works. The potential costs also have not been assigned to specific departments but may come from either the Police, Parks-Recreation and Open Space, Public Works budgets, or some combination of the three.

ALTERNATIVE(S):
Alternatives to the passage of this amendment could include allowing staff to continue with the current safety campaign and focused education on safe riding habits and additional collaborative work with stakeholders.

RECOMMENDATION:
Staff is uncertain of the benefits gained through the passage of this amendment, however, it does align with other neighboring communities who have adopted path and trail speed limits and as such, staff does support the approval of the ordinance amending Titles 4 and 14 of the Louisville Municipal Code to Establish a Maximum Speed Limit for Bicycles and Electrical Assisted Bikes on Bike paths and Trails within the City.

ATTACHMENT(S):
1. Ordinance No. 1899, Series 2025
2. August 2024 Traffic Safety: Bicycles and E-Bikes Update

ORDINANCE NO. 1899
SERIES 2025

AN ORDINANCE AMENDING TITLES 4 AND 14 OF THE LOUISVILLE MUNICIPAL CODE TO ESTABLISH A MAXIMUM SPEED LIMIT FOR BICYCLES ON BIKEPATHS AND TRAILS WITHIN THE CITY

WHEREAS, the City Council finds that bicycles, and in particular electrical assisted bikes "(e-bikes"), promote physical activity while reducing travel time and cost and offer other numerous benefits, including environmentally friendly transportation with lower emissions, increased accessibility for riders of varying fitness levels, and enhanced convenience for commuting and recreational activities; and

WHEREAS, the City Council finds that setting a maximum speed limit for bicycles, including e-bikes, being operated or ridden on the City's bikepaths and trails will support safe riding habits throughout the City and facilitate the use of the City's bikepaths and trails by a wide range of users.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO:

Section 1. Section 4.04.010.D.3 of the Louisville Municipal Code (Use Regulations – City Open Space – Compliance Required) is hereby amended to read as follows (words to be deleted ~~stricken~~; words to be added underlined):

Sec. 4.04.010 Compliance required.

Except as otherwise indicated, this Chapter shall apply to open space lands, whether owned solely or jointly by the City, and to all public lakes, ponds, streams, reservoirs, or other bodies of water within or bordering such lands. In the use of such lands or bodies of water, it shall be unlawful for any person to:

D. *Vehicles and bicycles.*

3. Operate or ride a bicycle or electrical assisted bicycle (e-bike), except on officially designated roads, bikepaths, and trails, or to operate or ride a bicycle or e-bike on such officially designated bikepaths and trails in excess of fifteen miles per hour (15 MPH).

Section 2. Section 14.12.010.D.3 of the Louisville Municipal Code (Parks and Recreation – Use Regulations – City-owned Lands and Bodies of Water – Compliance Required) is hereby amended to read as follows (words to be deleted ~~stricken~~; words to be added underlined):

Sec. 14.12.010 Compliance required.

Except as otherwise indicated, this Section shall apply to all City-owned lands including but not limited to parks, City-owned paths or trails, and the Louisville Cemetery, and all buildings, recreation facilities, and lakes, reservoirs, or other bodies of water within the City; except that, this Section shall not apply to lands or bodies of water regulated under Chapter 4.04 of the Code. In the use of such lands, buildings, facilities, paths, trails, or bodies of water it shall be unlawful for any person to:

D. *Vehicles and bicycles.*

3. Operate or ride a bicycle or electrical assisted bicycle (e-bike), except on officially designated roads, bikepaths, and trails, or to operate or ride a bicycle or e-bike on such officially designated bikepaths and trails in excess of fifteen miles per hour (15 MPH).

Section 3. If any portion of this ordinance is held to be invalid for any reason, such decision shall not affect the validity of the remaining portions of this ordinance. The City Council hereby declares it would have passed and approved this ordinance and each part hereof irrespective of the fact that any one part be declared invalid.

Section 4. The repeal or modification of any provision of the Municipal Code of the City of Louisville by this ordinance shall not release, extinguish, alter, modify, or change in whole or in part any penalty, forfeiture, or liability, either civil or criminal, which shall have been incurred under such provision, and each provision shall be treated and held as still remaining in force for the purpose of sustaining any and all proper actions, suits, proceedings, and prosecutions for the enforcement of the penalty, forfeiture, or liability, as well as for the purpose of sustaining any judgment, decree, or order which can or may be rendered, entered, or made in such actions, suits, proceedings, or prosecutions.

Section 5. All other ordinances or portions thereof inconsistent or conflicting with this ordinance or any portion hereof are hereby repealed to the extent of such inconsistency or conflict.

Section 6. Except as otherwise set forth herein, any person convicted of violating this ordinance may be punished as set forth in 1.28.010 of the Louisville Municipal Code, as may be amended but which currently provides violations shall be punished by a fine of not more than $2,650.00, as shall be adjusted for inflation on January 1, 2014 and on January 1 of each year thereafter, or by imprisonment not to exceed 364 days, or by both such fine and imprisonment.

INTRODUCED, READ, PASSED ON FIRST READING, AND ORDERED PUBLISHED this ____ day of _____, 2025.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Genny Kline, Interim City Clerk

APPROVED AS TO FORM:
Kelly PC

_____
Kathleen Kelly, City Attorney

PUBLIC HEARING AND SECOND READING WILL BE THE ____ DAY OF _____, 2025, AT 6:00 P.M. AT LOUISVILLE CITY HALL, 749 MAIN STREET, LOUISVILLE, CO 80027.

PASSED AND ADOPTED ON SECOND AND FINAL READING, this ____ day of _____, 2025.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Genny Kline, Interim City Clerk

City of Louisville
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Traffic Safety: Bicycles and E-Bikes Update **August 27, 2024**

In response to questions relayed to staff during a previously held special meeting in May 2024, related to traffic safety and bicycles/ E-bikes, the follow up and action item responses are below:

Accident Report Data on age or injury: 1485 traffic accidents that occurred between May 2019 and May 2024 were reviewed. Of the 1485 accidents 41 (2.7%) accidents involved a bicycle and 26 (1.7%) accidents involved a pedestrian. Of those accidents 18 bicyclists were under the age of 18 and 3 pedestrians were under the age of 18. Five of the bicyclists sustained serious bodily injury (1 under the age of 18) and there were no fatalities. Six pedestrians sustained serious bodily injury (1 under the age of 18) and there were two fatalities involving pedestrians (none involving people under age 18).

Seek feedback from other cities about ordinances/approach/licensing/code language: Neighboring police jurisdictions were contacted and asked about E-bike specific municipal ordinances or codes. These cities included Broomfield, Boulder, Erie, and Lafayette. As is done in Louisville, most of these jurisdictions primarily utilize the state model traffic code for how they address E-bikes and bicycles in general. Boulder and Lafayette have some additional provisions in their code that relate to dismount zones and speed limits (with signage) on their paths and trails. In our region we found no additional requirements for helmets or licensing outside of what the state traffic code requires. We also reached out to agencies outside of our region and found Steamboat Springs does have a helmet requirement for anyone 15 years of age or younger operating or riding on a bicycle or E-bike.

Enforcement contact/citation process for juveniles: The police department process already includes notification of parent/guardian when a juvenile is issued a summons for a violation. In the event a verbal warning or educational contact is initiated we are, at minimum, required to provide the person with the officer's business card. This process would continue to be followed during a verbal warning or educational contact with adding a request to have the parent or guardian contact the officer. In addition, we do have the capability of issuing a formal written warning to the juvenile operating the bicycle/ E-bike and can require follow up on the parent's part. As mentioned in the special meeting, priority will be made on education rather than the issuance of a citation in most cases.

Community Outreach to Rider groups: Parks, Recreation, and Open Space have several initiatives already in place. Over the summer, the Rangers completed a total of 13 Trail Etiquette Booths and provided educational materials and stickers to nearly 500 community members. Booths were located near school zones and high volume user areas. Rangers and the Police Department Crime Prevention Specialist, together with local Girl Scouts attended the Touch-a-truck event to support the Girl Scout's bike safety peer contract and provide Trail Etiquette Campaign and E-Bike safety educational materials. The Rangers and PD also participated in the Bike to Work Day event and provided the same safety material. Local bicycle vendors continue to support the City's bicycle and E-bike safety campaign and received Trail Etiquette materials to distribute to their customers. More materials can be provided as needed.

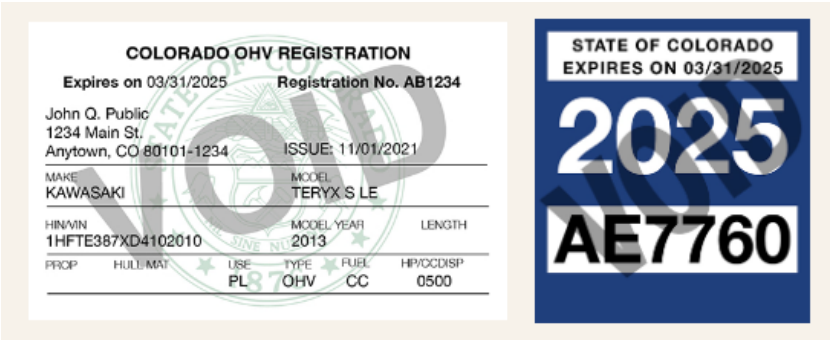
E-bike of Colorado and Louisville Cyclery received E-bike bookmarks (with trail etiquette tips), the E-biker "I share the trail" stickers, and other informational items. They will include those items with the information they provide with each E-bike they sell and have placed these items for customers near the front of the business. Customers have already provided positive feedback about the materials.

Community messaging: Materials have been and continue to be developed to use on social media channels and the City website, City correspondence to residents, and community newsletters.

Bike Safety events: Police and Open Space Rangers will collaborate on bike safety events/bike rodeo event(s). Additional planning to occur with more specific information on when and where. In the past, we have participated in HOA bike safety events in the Coal Creek Ranch subdivision and will be seeking those opportunities again moving forward. We will also engage the schools and the BVSD in planning and supporting events for young riders.

Online Bike Sales: We have learned there are other outlets, such as through online sales, where certain electric powered bikes with capabilities that exceed or fall outside the classifications established by the state for E-bikes, are being purchased. Per the Colorado Revised Statutes definition, these bicycles are not considered E-bikes and have a different classification with additional requirements. They are classified as either low power scooters, off-highway vehicles/bikes (OHV), or motor vehicles depending on capabilities, engine wattage or size. Low power scooters and motor vehicles are allowed on roadways and both have driver's licensing, registration, and insurance requirements. Low Power Scooter registration is required through the State of Colorado and is valid for a 3-year period. OHV registration is required annually. Motorcycles must follow the Colorado Department of Revenue registration regulations to be plated for use on highways or roadways. Violating any of these provisions may result in a summons for offenses ranging from a Traffic Misdemeanor to a Class B Traffic Infraction

See example of State of CO Low Power Scooter and Off-Highway Vehicle registration:



BVSD engagement: Staff met with BVSD Safety and Security personnel and asked to partner with them in distributing safety information to schools in our city to enhance awareness of this issue and to help educate riders, staff, and students about responsible use of E-bikes and other vehicles. City Communications Staff created material that was included in back to school information packets distributed to students. Staff will continue to work with BVSD and other local schools to reinforce safety messaging and look for opportunities to collaborate on events such as bike rodeos and safety events.

Engineering- Protected Bike lanes/signage/lane markings: As with any roadway safety initiative, Engineering plays a large role. Depending on what course of action the City Council deems is appropriate the possibility of installing signage on paths and trails or creating other engineered solutions can be further explored if appropriate.

Council may consider development of municipal codes or ordinances related to wearing of helmets, speed limits, dismount zones, increasing signage, seeking roadway engineering options, or taking no action. Staff seeks additional direction and is also available to clarify or engage in additional research if need be.

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CITY COUNCIL COMMUNICATION
AGENDA ITEM 10D

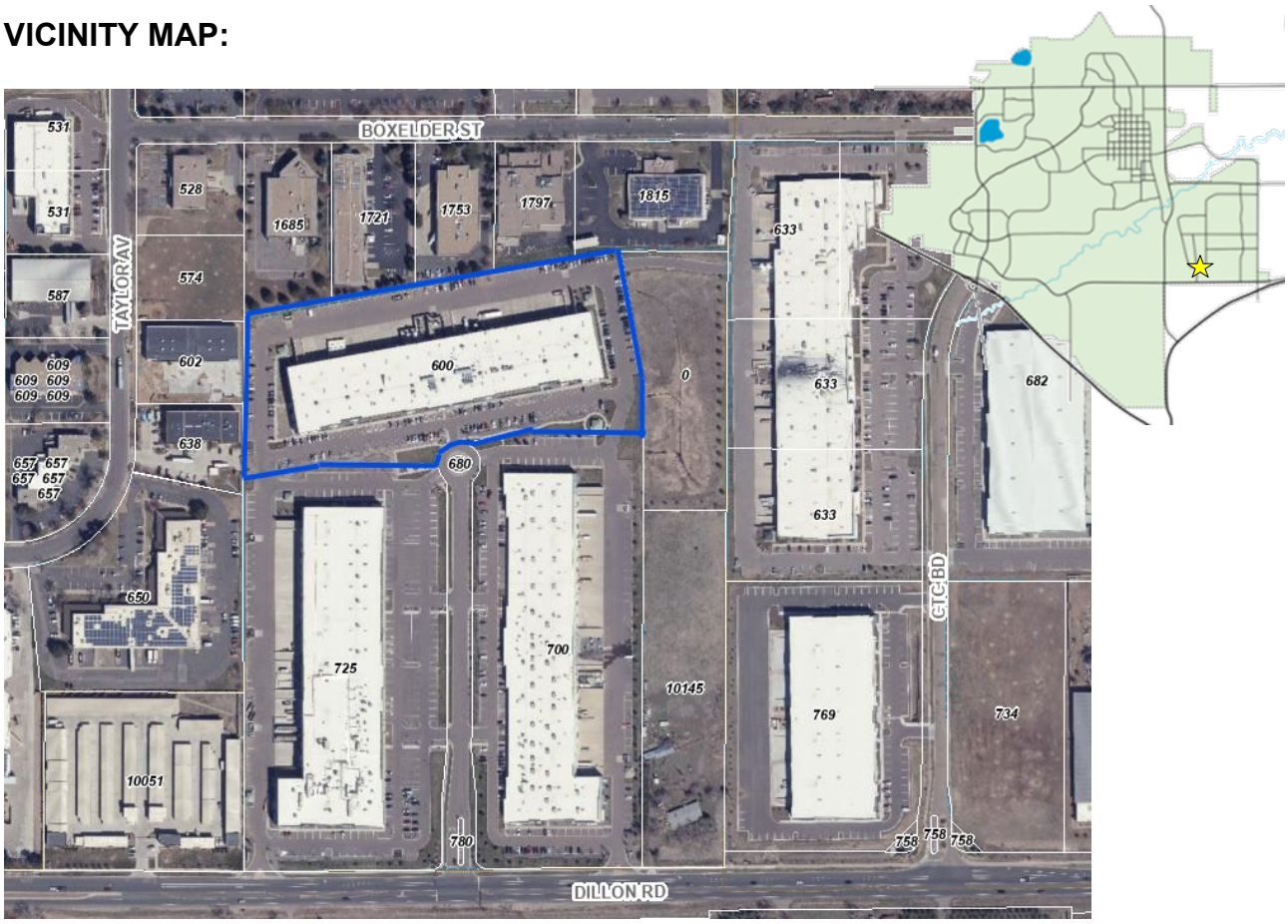
SUBJECT: RESOLUTION NO. 47, SERIES 2025 – A RESOLUTION APPROVING THE LOUISVILLE CORPORATE CAMPUS AT CTC PLANNED UNIT DEVELOPMENT AMENDMENT #2

DATE: JULY 8, 2025

PREPARED BY: EMILY CLINE-GIBSON, PLANNER II

PRESENTED BY: EMILY CLINE-GIBSON, PLANNER II

VICINITY MAP:



SUMMARY:
The applicant, Bill Smith, Intergroup Architects, is requesting approval of a Planned Unit Development (PUD) Amendment with waivers to allow for the installation of solar canopies in the western front and side parking lot and along the northern rear truck court. The request also includes the expansion of the existing mechanical yard, adding two 45-foot-tall storage tanks, and the installation of a four-foot-tall wall sign.

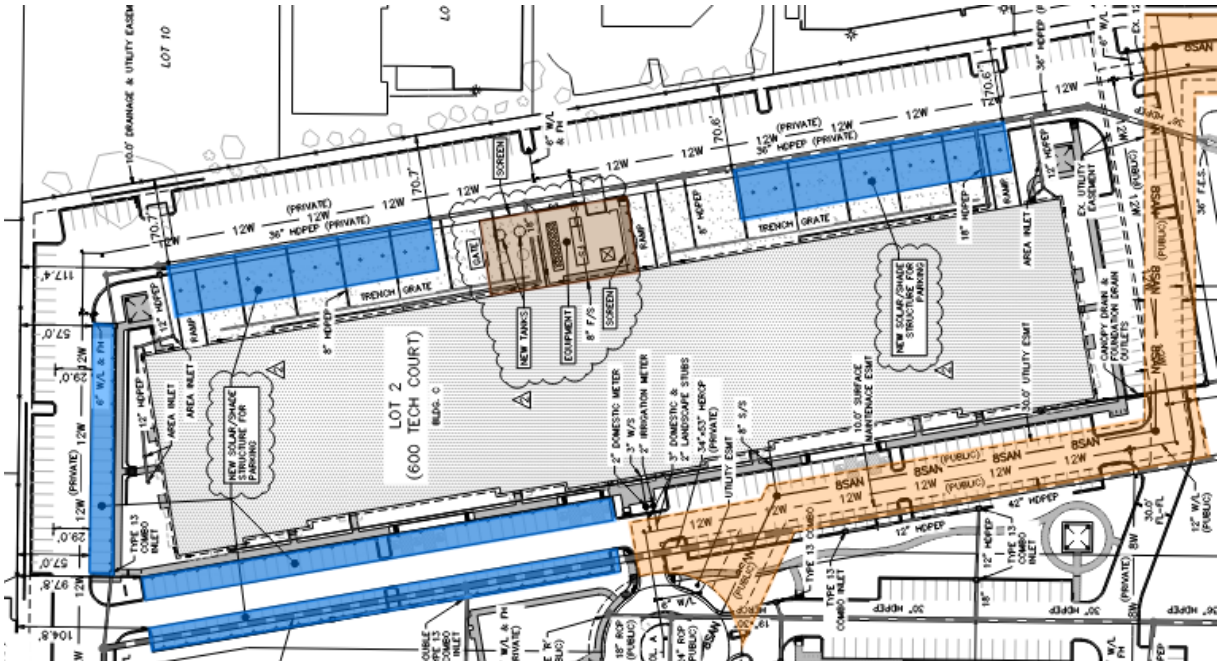
BACKGROUND / PRIOR DISCUSSIONS:

The property is zoned Industrial (I) and consists of Lot 2 in the Louisville Corporate Campus at CTC Planned Unit Development (PUD), which establishes development patterns for Lots 1-3 of the Louisville Corporate Campus at CTC subdivision. All other site design elements are subject to the Industrial Development Design Standards and Guidelines (IDDSG). The following bullet points summarize previous action on the property:

- The Louisville Corporate Campus at CTC Final Subdivision Plat was approved by City Council in 2015.
- The Louisville Corporate Campus at CTC PUD was approved by City Council in 2017.
- An amendment to the Louisville Corporate Campus at CTC PUD was administratively approved in 2019 and included several changes to Lot 1 and one minor adjustment to the dock door and ramp location on the subject Lot 2.

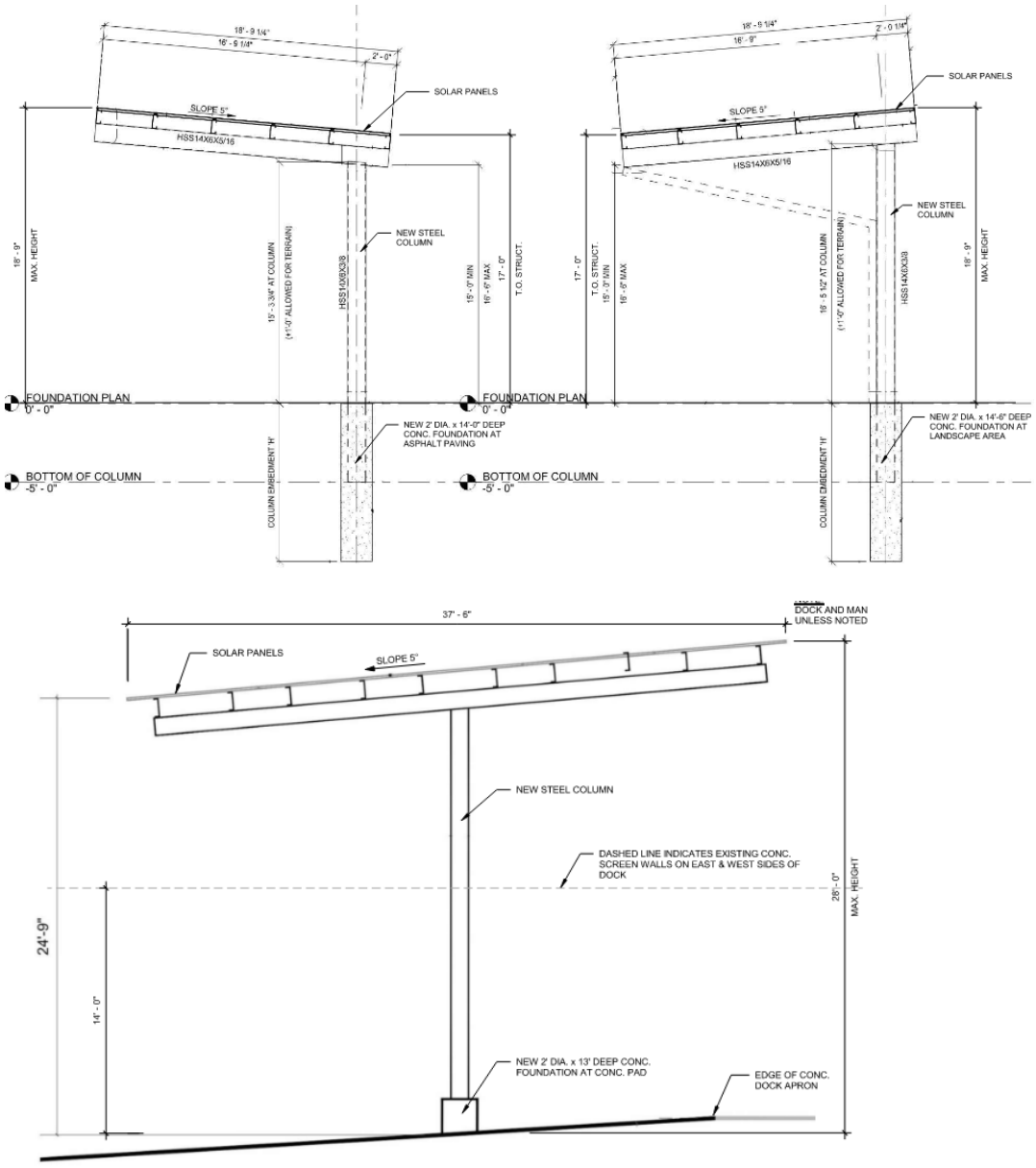
DEVELOPMENT PROPOSAL:

The applicant is proposing to install approximately 33,500 square feet of solar canopy structures on the subject property. Approximately half of the canopy structures will be in the western front and side parking areas, and the remaining solar canopy structures will be located along the rear truck court. The solar structures proposed along the front and side parking areas will be approximately 18.75 feet tall with a vehicle clearance height of 15.3 feet. The solar cover is approximately 18.75 feet wide. The solar canopies will cover 99 of the 327 existing parking spaces and will not take away any existing parking spaces.



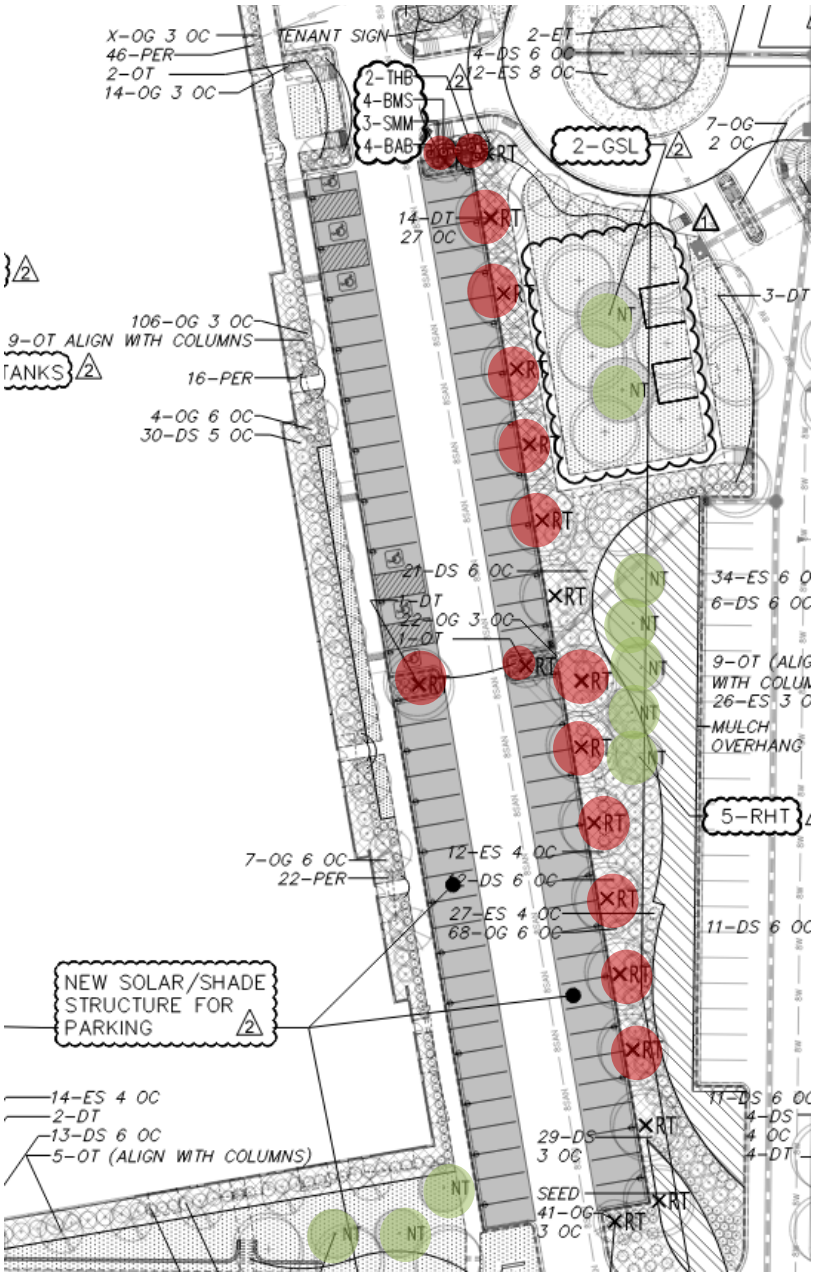
Site plan. Orange represents an existing utility easement, blue represents the proposed solar canopies, and brown represents the mechanical yard screening area.

The solar canopies in the rear truck court will be 28 feet tall and 37.6 feet wide. The canopy columns will be spaced approximately 18 feet apart. All canopy posts will be set in concrete at a diameter of 2 feet and a depth of 13-14.5 feet.



Proposed soar canopies over parking lot (above) and rear loading dock (left).

Additionally, the rear mechanical yard screening area is proposed to be expanded to allow for the placement of two storage tanks. The proposed screening will be expanded by 30.8 x 37.8 feet and will align with the depth of the existing screen area. Two 45-foot-tall metal storage tanks are proposed to be placed in the expanded equipment yard. The proposed screen wall will match the height and style of the existing screening, which consists of aluminum panels mounted to steel posts.



Landscape plan showing tree removal (red) and some new tree placement (green).

Twenty trees will be removed with this proposal. Nineteen trees will be removed from the southwestern parking area and one tree will be removed from the mechanical yard. Twenty new trees will be planted on the property in existing landscaped areas. The 19 proposed tree removals are to provide clear access for the solar canopy structures and the tree removal from the mechanical yard will provide additional space for the proposed tanks.

One wall sign will be installed on the southern building façade and will be four feet tall and approximately 38 square feet in size. The area of the wall sign meets Louisville Sign Code standards, but a waiver is requested to allow for the maximum height to exceed the permitted three feet.

Proposed wall sign.

ANALYSIS:
Staff analysis includes a review of applicable IDDSG policies followed by waiver criteria. The PUD review criteria are included as an appendix. The following applicable policies from the IDDSG are highlighted in italics below, followed by staff analysis.

IDDSG Analysis:
IDDSG: 1. Site Planning
The proposal does not include new building additions or changes to the existing site layout. Aside from the requested waivers, the solar canopies meet yard and bulk standards for accessory structures. Total site coverage of the subject property will be 39% and overall coverage of Lots 1-3 will be 65%, both of which are below the maximum 75% site coverage allowed for the Louisville Corporate Campus at CTC PUD. Adequate landscape coverage and utility screening are provided, as further described in IDDSG 5 and 6 of the analysis.

IDDSG: 2. Vehicular Circulation & Parking
The proposed solar canopies will not obstruct existing drive aisles, parking spaces, or vehicle circulation. The canopies located in the front parking area provide a minimum of 15.3 feet in clearance height. The average height of a vehicle ranges from 4.5-6.5 feet, providing adequate clearance from the canopy structures.

The solar structures located along the rear loading dock reach a maximum clearance height of 24.5 feet. The average maximum height of a tractor trailer is 13.5-14.5 feet, providing adequate clearance. The 18-foot post spacing will not interfere with the circulation of tractor trailers around the truck court.

IDDSG: 3. Pedestrian & Bicycle Circulation
The proposed solar canopies will not interfere with existing pedestrian and bicycle circulation. The canopy posts will not be installed on sidewalks and the posts are not proposed to cause any unwarranted circulation issues.

IDDSG: 5. Landscape Design
The minimum amount of landscape coverage required within an overall development is 25%. The Louisville Corporate Campus at CTC PUD provided 37% overall landscape coverage upon its original approval, and the proposed PUD Amendment will maintain the same coverage. Twenty deciduous and ornamental trees are proposed to be removed from the site. Twenty new trees of similar size and species are proposed to be planted in existing planting areas. While one of the purposes of the IDDSG tree requirement is to provide shade and address heat island effects from the parking lot, the removed trees will provide an unobstructed area for the solar canopies, avoiding concerns of potential fire hazards and future tree overgrowth and providing shade in the parking area.

Two of the 20 trees are proposed to be removed from the front entrance area. New shrubs and ornamental grasses will be planted in the front entrance bed to maintain diversity in height and size of entry landscaping.

IDDSG: 6. Fences & Walls
Proposed screening in the rear truck bay will match existing screening in the screened area, which consists of 10-foot-tall aluminum panels mounted to steel galvanized posts. These materials are consistent with the guidelines in the IDDSG that request screening material be made of durable materials, like metal.

Waiver Compliance with LMC Section 17.28.110:
Section 17.28.110 of the Louisville Municipal Code (LMC) sets the standards for all PUDs to comply with the underlying zoning standards and adopted design guidelines. The section also states that *any such requirements may be waived or modified through the approval process of the planned unit development if the spirit and intent of the development plan criteria contained in LMC Section 17.28.120 are met*. Section 17.28.120 of the LMC lists 28 criteria for PUDs that must be satisfied or found not applicable in order to approve a PUD. Analysis and staff's recommended finding of each criterion is provided in the attached appendix.

Waiver from Yard and Bulk Standards in LMC Section 17.12.040:
Section 17.12.040 of the LMC outlines yard and bulk requirements for all zones, including maximum height for building and accessory uses, setbacks, and lot sizes. Bulk standards set in the IDDSG override those found in the LMC for industrial zones, but for standards not outlined in the IDDSG, such as accessory use regulations, the underlying zoning regulations apply. The following bulk standard waivers are requested:

- Front yard setbacks for accessory uses must be a minimum of 30 feet in the Industrial zone. The applicant is requesting a minimum 10-foot front setback for the solar canopies. Accessory uses typically require setbacks in the front yard at a farther distance than the principal structure, encouraging accessory structures to only be placed behind the principal structure. Conversely, the IDDSG allows for front yard parking setbacks to be less than principal structure setbacks, encouraging parking areas to be in front of the principal structure. The requested waiver would allow for the canopies to function as both a solar energy collector and shaded parking for the building tenants.

- A maximum of 25 feet in height is allowed for accessory structures in the industrial zone. The proposed maximum height of the solar canopies located in the rear truck yard is 28 feet. The rear canopies exceed the maximum height to allow for additional clearance for semi-trailers that use the loading area.

- The rear storage tanks are proposed to be 45 feet tall. The proposed tanks would be in addition to existing tanks on site which also exceed the 25-foot maximum height. The proposed tanks will be used for storage of nitrogen and argon and will be in the rear of the 38-foot-tall building.

Waiver from the Sign Code:
The applicant is requesting a waiver from the maximum allowed height of wall signs in industrial zones, which is 3 feet. The proposed sign is 4 feet tall. The sign area, placement, and all other site elements comply with the Sign Code. Sign waiver requests shall be reviewed against the criteria provided in Section 2.3 of the Sign Code, which is outlined below followed by staff analysis:

A. *The proposed sign(s) shall encourage excellence in design, exhibit improved creativity, promote community aesthetics, and be appropriate with the character of the area.*

   The proposed wall sign is compatible with the design of the Lilly brand, who are the building tenants. The proposed sign provides building identification from Tech Court and blends with the community aesthetic within the Colorado Technological Cener.

B. *The proposed sign(s) shall be compatible with the color, materials, and design of the on-site building(s).*

   The colors, material, and design of the proposed sign are compatible with the materials and color of the existing building. The proposed sign will have red lettering and will be installed against the gray building façade. No architectural features or windows will be obstructed with the installation of the proposed sign.

C. The proposed signs(s) shall be scaled and located in a manner that is compatible with the scale of the lot and the massing of the building(s), with consideration of legibility of copy area.

The scale of the proposed sign is aligned with the scale of the building on the subject property. The increase in sign square footage is primarily to accommodate the large "L" in the Lilly logo, while the other letters remain under 4 feet tall.

D. The proposed sign(s) are otherwise in conformance with the regulations of this chapter and applicable design guidelines respecting the size, height, location, design, and appearance of the sign(s) involved.

The proposed sign aligns with all other design standards and regulations for size, location, and appearance.

2025 COUNCIL WORK PLAN:
This item supports the City Council's priority of Economic Vitality.

FISCAL IMPACT:
Budgeted?: **Not Applicable**

ALTERNATIVE(S):
The City Council may approve, approve with conditions, or deny the application based on compliance with the relevant review criteria and waiver criteria.

PLANNING COMMISSION RECOMMENDATION:
On June 12, 2025, the Planning Commission approved Resolution 9, Series 2025, recommending approval of a Planned Unit Development (PUD) Amendment to install solar canopies and perform other exterior alterations to the property at 600 Tech Court with waivers to yard and bulk and sign standards summarized in this staff report. Planning Commission meeting minutes are attached.

RECOMMENDATION:
Staff recommends approval of Resolution No. 47, Series 2025, approving a request for a PUD Amendment to install solar canopies and perform other exterior alterations to the property at 600 Tech Court with waivers to yard and bulk and sign standards.

ATTACHMENT(S):
1. Resolution No. 47, Series 2025
2. Application materials
3. Draft minutes of June 12, 2025 Planning Commission meeting
4. Presentation

APPENDIX: PUD Criteria Analysis

Criteria 17.28.120 (A)	Finding	Narrative
1. An appropriate relationship to the surrounding area;	Compliant	The proposal is aligned in scale and design to the surrounding area.
2. Circulation in terms of the internal street circulation system, designed for the type of traffic generated, safety, separation from living areas, convenience, access, and noise and exhaust control. Proper circulation in parking areas in terms of safety, convenience, separation and screening;	Compliant	The proposed solar canopies will not interfere with existing circulation. The canopy posts will not be in drive aisles or interfere with existing parking and loading.
3. Consideration and provision for low and moderate-income housing;	Not Applicable	The proposal does not include housing.
4. Functional open space in terms of optimum preservation of natural features, including trees and drainage areas, recreation, views, density relief and convenience of function;	Not Applicable	The proposal does not include building development or other elements that will impact the existing dedicated open space.
5. Variety in terms of housing types, densities, facilities and open space;	Not Applicable	The proposal does not include housing.
6. Privacy in terms of the needs of individuals, families and neighbors;	Not Applicable	The proposal does not include housing.
7. Pedestrian and bicycle traffic in terms of safety, separation, convenience, access points of destination and attractiveness;	Compliant	The proposal does not interfere with the existing pedestrian and bicycle circulation. The canopy posts will not obstruct existing sidewalks.
8. Building types in terms of appropriateness to density, site relationship and bulk;	Compliant	The proposed solar canopies are appropriate in scale to the existing site buildings.

9. Building design in terms of orientation, spacing, materials, color, texture, storage, signs and lighting;	Not Applicable	The proposal does not include new buildings.
10. Landscaping of total site in terms of purpose, such as screening, ornamental types used, and materials used, if any; and maintenance, suitability and effect on the neighborhood;	Compliant	The landscape plan proposes planting new trees of similar size and type as the ones being removed, maintaining uniformity in the overall site landscaping.
11. Compliance with all applicable development design standards and guidelines and all applicable regulations pertaining to matters of state interest, as specified in chapter 17.32;	Compliant	Aside from the requested waivers, the proposed PUD Amendment complies with all applicable design standards and guidelines.
12. None of the standards for annexation specified in chapter 16.32 have been violated;	Not Applicable	No annexation is proposed.
13. Services including utilities, fire and police protection, and other such services are available or can be made available to adequately serve the development specified in the final development plan.	Compliant	The Police, Fire Marshal, and Public Works departments were referred the proposal and did not voice concern over access to services with the proposal.

Criteria 17.28.120 (B)	Finding	Narrative
1. Development shall be in accordance with the adopted elements of the comprehensive development plan of the city, and in accordance with any adopted development design standards and guidelines.	Compliant	Aside from the requested waivers, the proposed PUD Amendment complies with all applicable design standards and guidelines.
2. No structures in a planned unit development shall encroach upon the floodplain. Existing bodies of water and existing stream courses shall not be channelized or altered in a planned unit development plan.	Compliant	The subject property is not located in a floodplain, nor are there existing bodies of water in the area.

3. No occupied structure shall be located on ground showing severe subsidence potential without adequate design and study approved specifically by the city.	Compliant	There is no signs of subsidence on the subject property.
4. The proposal should utilize and preserve existing vegetation, land forms, waterways, and historical or archeological sites in the best manner possible. Steep slopes and important natural drainage systems shall not be disrupted. How the proposal meets this provision, including an inventory of how existing vegetation is included in the proposal, shall be set forth on the landscape plan submitted to the city.	Compliant	Much of the existing vegetation and landscaping is proposed to remain, aside from the 20 trees proposed for removal. The landscape plan includes planting 20 new trees to offset the removed trees.
5. Visual relief and variety of visual sitings shall be located within a development in the overall site plan. Such relief shall be accomplished by building placements, shortened or interrupted street vistas, visual access to open space and other methods of design.	Compliant	The proposed structures provide a visual relief from the building façade, and the absence of shade structures on the eastern side of the property provide additional visual relief.
6. Open space within the project shall be located in such a manner as to facilitate pedestrian use and to create an area that is usable and accessible to residents of surrounding developments.	Not applicable	No changes to existing open space dedications are proposed with the PUD Amendment.
7. Street design should minimize through traffic passing residential units. Suggested standards with respect to paving widths, housing setbacks and landscaping are set forth in public works standards of the city and applicable development design standards and guidelines. The system of streets, including parking lots, shall aid the order and aesthetic quality of the development.	Compliant	No changes to the existing street design is proposed with the PUD Amendment.
8. There shall exist an internal pedestrian circulation system separate from the vehicular system such that allows access	Compliant	No changes to the existing pedestrian circulation are proposed. All solar canopies will be located off

to adjacent parcels as well as to parks, open space or recreation facilities within the development. Pedestrian links to trail systems of the city shall be provided.		of sidewalks to maintain existing pedestrian patterns.
9. The project and development should attempt to incorporate features which reduce the demand for water usage.	Compliant	The proposed canopies will have minimal water usage. The landscaping is proposed to use no more water than existing landscaping once the trees mature.
10. Landscape plans shall attempt to reduce heating and cooling demands of buildings through the selection and placement of landscape materials, paving, vegetation, earth forms, walls, fences, or other materials.	Compliant	The landscape plan does not propose removing many trees located closest to the building. Most trees to be removed are along the site perimeter. Additionally, the proposed solar canopies will provide shade to the parking area.
11. Proposed developments shall be buffered from collector and arterial streets. Such buffering may be accomplished by earthen berms, landscaping, leafing patterns, and other materials. Entrance islands defining traffic patterns along with landscaping shall be incorporated into entrances to developments.	Compliant	The proposal is located at the end of a privately-owned cul-de-sac and has minimal property line exposure to streets. A landscaped entry are is provided at the entrance of the subject lot.
12. There shall be encouraged the siting of lot arrangement, building orientation and roof orientation in developments so as to obtain the maximum use of solar energy for heating.	Not applicable	The proposal does not include housing.
13. The overall PUD shall provide a variety of housing types.	Not applicable	The proposal does not include housing.
14. Neighborhoods within a PUD shall provide a range of housing size.	Not applicable	The proposal does not include housing.
15. Architectural design of buildings shall be compatible in design with the contours of the site, compatible with surrounding designs and neighborhoods, shall promote	Not applicable	The proposal does not include new buildings.

harmonious transitions and scale in character in areas of different planned uses, and shall contribute to a mix of styles within the city.		

RESOLUTION NO. 47
SERIES 2025

A RESOLUTION APPROVING THE LOUISVILLE CORPORATE CAMPUS AT CTC PLANNED UNIT DEVELOPMENT AMENDMENT #2

WHEREAS, there has been submitted to the Louisville Planning Commission an application for approval of the proposed Louisville Corporate Campus at CTC Planned Unit Development Amendment #2, to allow the installation of solar canopies, the expansion of a mechanical yard, the installation of two storage tanks, and the installation of a wall sign located at 600 Tech Court; and

WHEREAS, City staff have reviewed the application materials and found that, with the four requested waivers, the application complies with the Louisville zoning regulations and other applicable sections of the Louisville Municipal Code; and

WHEREAS, the Planning Commission considered the application at a duly noticed public hearing on June 12, 2025, where evidence and testimony were entered into the record, and the Planning Commission voted unanimously in favor of recommending approval; and

WHEREAS, the City Council considered the application at a duly noticed public hearing on July 8, 2025, where evidence and testimony were entered into the record, including the findings in the Louisville City Council staff report dated July 8, 2025; and

WHEREAS, the City Council finds the application should be approved, as set forth herein.

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO:

Section 1. The City Council hereby approves the proposed Louisville Corporate Campus at CTC Planned Unit Development Amendment #2.

PASSED AND ADOPTED this 8th day of July, 2025.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Genny Kline, Interim City Clerk

City of Louisville
COLORADO • SINCE 1878

Community Development Department

749 Main Street • Louisville CO 80027 • 303.335.4592 • www.louisvilleco.gov

Development Review Application Form

Please complete this form and include it with the submittal documents for your development review application. Applications will not be processed until all required information is provided to the satisfaction of the City of Louisville Planning Department.

Property Information

Common Address(es): 600 Tech Court, Louisville, CO

Legal Description:

Lot 2 Block _____ Subdivision Louisville Corporate Campus at CTC

Lot Area: 373618 Sq. Ft. or 8.58 Acres

LAND USE PROCESS (check all that apply)

- ☐ Annexation
- ☐ Concept Plan
- ☐ Easement Vacation
- ☐ Oil and Gas
- ☐ General Development Plan (GDP)
  - ☐ Amendment
  - ☐ New GDP
- ■ Planned Unit Development (PUD)
  - ■ Amendment
  - ☐ Preliminary
  - ☐ New PUD
- ☐ Rezoning
- ☐ Special Review Use (SRU)
  - ☐ Amendment
  - ☐ New SRU
- ☐ Subdivision
  - ☐ Final or Replat
  - ☐ Preliminary Plat
- ☐ Temporary Use Permit
- ☐ Variance
- ☐ Vested Property Right
- ☐ Wireless Facility
- ☐ Other: _____

PROJECT DESCRIPTION:

New full building tenant would like to install new solar panel vehicle parking shade structures over existing parking spaces and expand an existing equipment yard along the northern dock side of building.

Property Owner Information

Name: _____ Entity (if applicable) _____

Address: _____

Phone: _____ Email: _____

Application Representative Information

Name: Bill Smith Entity (if applicable) Intergroup Architects

Address: 2000 W. Littleton Blvd., Littleton, CO

Phone: 3037388877 Email: bsmith@igarch.com

Certification/Signature

I certify that the information I have submitted is true and correct to the best of my knowledge and in filing the application and submittal documents, I am acting as and/or with the knowledge and consent of those persons who are owners of the subject property or are parties to this application.

Signature*	Bill Smith	12/18/2024
	Print Name	Date

***If acting as a representative/agent of the owner, include written authorization from the owner that certifies the agent's right to submit this application**

INTERGROUP
ARCHITECTS
Designing Success

Wednesday, December 18, 2024

City of Louisville
Planning Department
749 Main St.
Louisville, CO 80027

Re: **Louisville Corporate Campus PUD Alternative #1, Amendement #2**
Land Use Application
Project Intent Narrative

Dear City of Louisville,

This letter is intended to outline the proposed narrative for the modifications requested in this PUD amendment. It is the owner's intention to construct new shade and solar panel shelters above existing parking spaces in lot 2 at the request of the existing tenant at building C on the campus. In addition to the parking shade/solar structures they would like to expand the existing equipment screening at the truck court of the building. Currently there is exterior installed equipment that is screened and approved by the City of Louisville and the owner would like to expand this existing screening to allow for additional equipment to be installed in this area. Some of the equipment proposed for this screened area is the installation of a new 45-foot-tall storage tank. Lastly, the tenant and owner would like to update existing building monument signs and install new signage on the southern elevation of the existing building to accommodate the tenant. All new signage will be submitted directly to the building department as part of a separate sign permit for review and approval.

Cordially,

, AIA
Architect

PHONE
303.738.8877

FAX
303.738.2294

WEB
www.igarch.com

ADDRESS
2000 W. Littleton Blvd
Littleton, CO 80120

INTERGROUP
ARCHITECTS
Designing Success

June 2nd, 2025

William Smith
Intergroup Architects
2000 W. Littleton Blvd.
Littleton, CO 80120
(303) 738-8877
bsmith@igarch.com

Re: Louisville Corporate Campus at CTC
Planned Unit Development Amendment #2
Waiver Request for Wall Sign Height

Dear Planning Department,

I am writing on behalf of Eli Lilly and Company to formally request a waiver from the City's signage code maximum height restrictions as outlined in Development Code Appendix B Section 4.11, to allow for the installation of a tenant wall sign exceeding the allowable height limit at 600 Tech Court, Louisville, CO.

To better serve our community and visitors, we are requesting approval to increase the maximum height of our wall sign from 3 feet to 4 feet. Due to the LCC business park site layout 600 Tech Ct. is at the far end of the access road, approximately 1,100 feet from the public right of way along Dillon Road. The additional height will significantly improve visibility and readability from a greater distance, enhancing safety and wayfinding for both pedestrians and drivers. This modest increase is designed to maintain aesthetic harmony with the surrounding environment while ensuring our business remains accessible and easy to locate.

We respectfully request that the Planning Department consider this waiver at its earliest convenience. We are available to attend a hearing or provide additional information as needed.

Thank you for your attention to this matter.
Sincerely,

William Smith, AIA
Architect

PHONE
303.738.8877

FAX
303.738.2294

WEB
www.igarch.com

ADDRESS
2000 W. Littleton Blvd
Littleton, CO 80120

LOUISVILLE CORPORATE CAMPUS AT CTC
PLANNED UNIT DEVELOPMENT AMENDMENT #2

LOCATED IN THE SOUTHEAST QUARTER OF SECTION 16, TOWNSHIP 1 SOUTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN, CITY OF LOUISVILLE, COUNTY OF BOULDER, STATE OF COLORADO

INTERGROUP ARCHITECTS
2000 West Littleton Blvd. Littleton, CO 80120
P. 303.738.8877 F. 303.738.2294 igarch.com

PROJECT SUMMARY

TOTAL LAND AREA:	NO CHANGES PROPOSED
BUILDING AREA:	NO CHANGES PROPOSED
TOTAL LOT 2 AREA COVERAGE OF PROPOSED CARPORTS:	33,489 SF CARPORT COVERAGE (APPOX. 197 SPACES COVERED)
STORAGE TANK HEIGHT:	45.00 FEET
CARPORT CANOPY HEIGHT:	28.00 FEET
LOT 2, BUILDING C SETBACKS AFFECTED BY AMENDMENT:	REAR YARD ABUTTING A SIMILAR ZONE DISTRICT ALLOWABLE: 15 FEET PROPOSED: 70 FEET

LOT 2, BUILDING C PARKING:

EXISTING TO REMAIN:

STANDARD:	318 SPACES
HANDICAP:	9 SPACES
TOTAL	327 SPACES

EXISTING PARKING TO BE COVERED BY SOLAR CARPORTS:

STANDARD:	93 SPACES
HANDICAP:	6 SPACES
TOTAL	99 SPACES

SHEET INDEX

1 OF 9	COVER SHEET
2 OF 9	UTILITY PLAN
3 OF 9	GRADING PLAN
4 OF 9	BUILDING "C" FLOOR PLAN
5 OF 9	BUILDING "C" SOUTH ELEVATION
6 OF 9	BUILDING "C" WEST & EAST ELEVATIONS
7 OF 9	BUILDING "C" NORTH ELEVATION
8 OF 9	LANDSCAPE PLAN
9 OF 9	LANDSCAPE PLAN

OWNERSHIP SIGNATURE BLOCK:

BY SIGNING THIS FINAL PUD, THE OWNER ACKNOWLEDGES AND ACCEPTS ALL THE REQUIREMENTS AND INTENT SET FORTH IN THIS FINAL PUD. WITNESS MY HAND AND SEAL THIS _____ DAY OF _____, 20__.

OWNER:

LOUISVILLE CORPORATE CAMPUS AT CTC, LLC

BY: _____

BRUCE H. ETKIN, MANAGER — DATE

_____

NOTARY NAME (PRINT)

_____

NOTARY SIGNATURE — DATE

WITNESS MY HAND AND OFFICIAL SEAL

MY COMMISSION EXPIRES_____.

LEGAL DESCRIPTION:

LOT 1, 2 & 3 OF THE LOUISVILLE CORPORATE CAMPUS AT CTC, REPLAT A.

AMENDMENT PROJECT DESCRIPTION:

THIS AMENDMENT INCLUDES THE FOLLOWING CHANGES FROM THE APPROVED PUD:

1. LOT 2 - CONSTRUCT PARKING SPACE SHADE/SOLAR SHELTERS.
2. LOT 2 - EXPANDING EXISTING SCREENED EQUIPMENT YARDS.
3. LOT 2 - INSTALLATION OF EXTERIOR 45 FOOT HEIGHT WHITE CYLINDRICAL STORAGE TANKS IN SCREENED EQUIPMENT YARDS.
4. LOT 2 - UPDATE AND INSTALL NEW SIGNAGE FOR FULL BUILDING TENANT.

WAIVER REQUESTS:

1. REQUEST FOR THE HEIGHT OF TWO STORAGE TANKS TO BE 45 FEET TALL.
2. REQUEST FOR WALL SIGN TO BE 4 FEET TALL, EXCEEDING THE MAXIMUM HEIGHT OF 3 FEET IN THE SIGN CODE.
3. REQUEST TO EXCEED ACCESSORY STRUCTURE HEIGHT OF 25 FEET FOR REAR SOLAR CANOPIES.
4. REQUEST TO ALLOW ACCESSORY STRUCTURE FRONT SETBACK TO 10 FEET INSTEAD OF 30 FEET.

PLANNING COMMISION CERTIFICATE:

RECOMMENDED APPROVAL THIS _____ DAY OF _____, 20__ BY THE PLANNING COMMISSION OF THE CITY OF LOUISVILLE, COLORADO.

RESOLUTION NO. _____ SERIES _____

CITY COUNCIL CERTIFICATE:

APPROVED THIS _____ DAY OF _____, 20__ BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO.

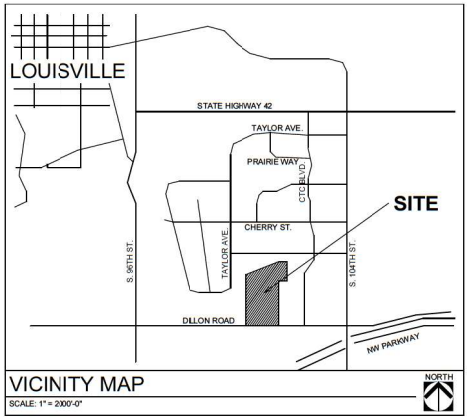
RESOLUTION NO. _____ SERIES _____

_____ _____ _____

MAYOR — CITY CLERK — SEAL

GENERAL NOTES

1. THE PROPERTY IS ZONED I-INDUSTRIAL.
2. ALL SETBACKS AND LAND USE REQUIREMENTS SHALL CONFORM TO THE CITY OF LOUISVILLE, COLORADO ZONING AND LAND USE REGULATIONS IN EFFECT AS OF THE DATE OF APPROVAL OF THIS PLANNED UNIT DEVELOPMENT BY THE CITY OF LOUISVILLE, COLORADO.
3. THE CITY OF LOUISVILLE IS NOT RESPONSIBLE FOR DAMAGE TO OR REPAIR OF MONUMENT SIGNS DUE TO UTILITY MAINTENANCE.
4. THE CITY OF LOUISVILLE IS NOT RESPONSIBLE FOR DAMAGE TO PAVEMENT SURFACES OR LANDSCAPING CAUSED DURING REPAIR OR MAINTENANCE ACTIVITIES OF UTILITIES LOCATED WITHIN PUBLIC UTILITY EASEMENTS.
5. SIGNS FOR THIS LOT HAVE BEEN APPROVED BY ALL OWNERS TO FOLLOW SIGN CODE.



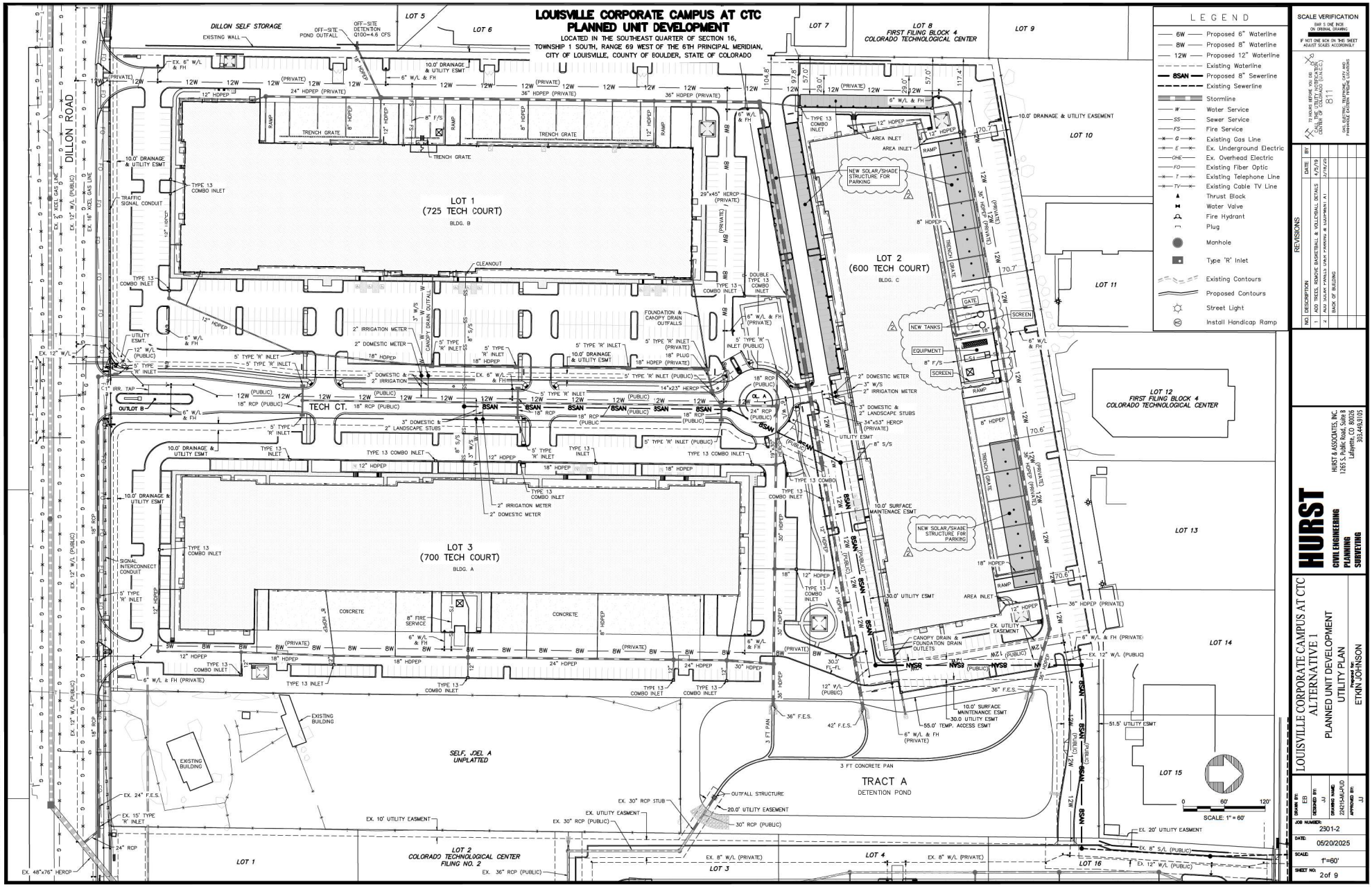
VICINITY MAP

SCALE: 1" = 2000'-0"

BUILDING C

PUD	DATE APPROVED	NOTE
LOUISVILLE CORPORATE CAMPUS PUD ALTERNATIVE #1	NOV. 17, 2015	THIE SITE BEING DEVELOPED UNDER THIS PUD
LOUISVILLE CORPORATE CAMPUS PUD ALTERNATIVE #2	NOV. 17, 2015	THE SITE IS NOT DEVELOPED UNDER THIS PUD
LOUISVILLE CORPORATE CAMPUS PUD ALTERNATIVE #1, AMENDMENT #1	FEB. 18, 2019	MINOR CHANGES TO ARCHITECTURE, PARKING, LANDSCAPING AND SITE DESIGN
LOUISVILLE CORPORATE CAMPUS PUD ALTERNATIVE #1, AMENDMENT #2	———	BLDG C - PARKING SHADE/SOLAR STRUCT., EXPANSION OF EQUIP. YARD

DATE:	ALTERNATIVE #1
11.12.2024 P.U.D. AMEND.	COVER SHEET
	SHEET 1 OF 9



SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

REVISIONS

NO.	DESCRIPTION	DATE	BY
1	ADD TREES, REMOVE BASKETBALL & VOLLEYBALL DETAILS	4/25/25	
2	ADD SOLAR PANELS OVER PARKING & EQUIPMENT A1	5/16/25	
	BACK OF BUILDING		

HURST & ASSOCIATES, INC.
1265 S. Public Road, Suite B
Lafayette, CO 80026
303.449.9105

HURST
CIVIL ENGINEERING
PLANNING
SURVEYING

LOUISVILLE CORPORATE CAMPUS AT CTC
ALTERNATIVE 1
PLANNED UNIT DEVELOPMENT
UTILITY PLAN

Prepared for:
ETKIN JOHNSON

DRAWN BY:	EB
DESIGNED BY:	JJ
DRAWING NAME:	224215-MU-PUD
APPROVED BY:	JJ
JOB NUMBER:	2501-2
DATE:	05/20/2025
SCALE:	1"=60'
SHEET NO:	2 of 9

LAST SAVED: 3/18/2025 12:08 PM
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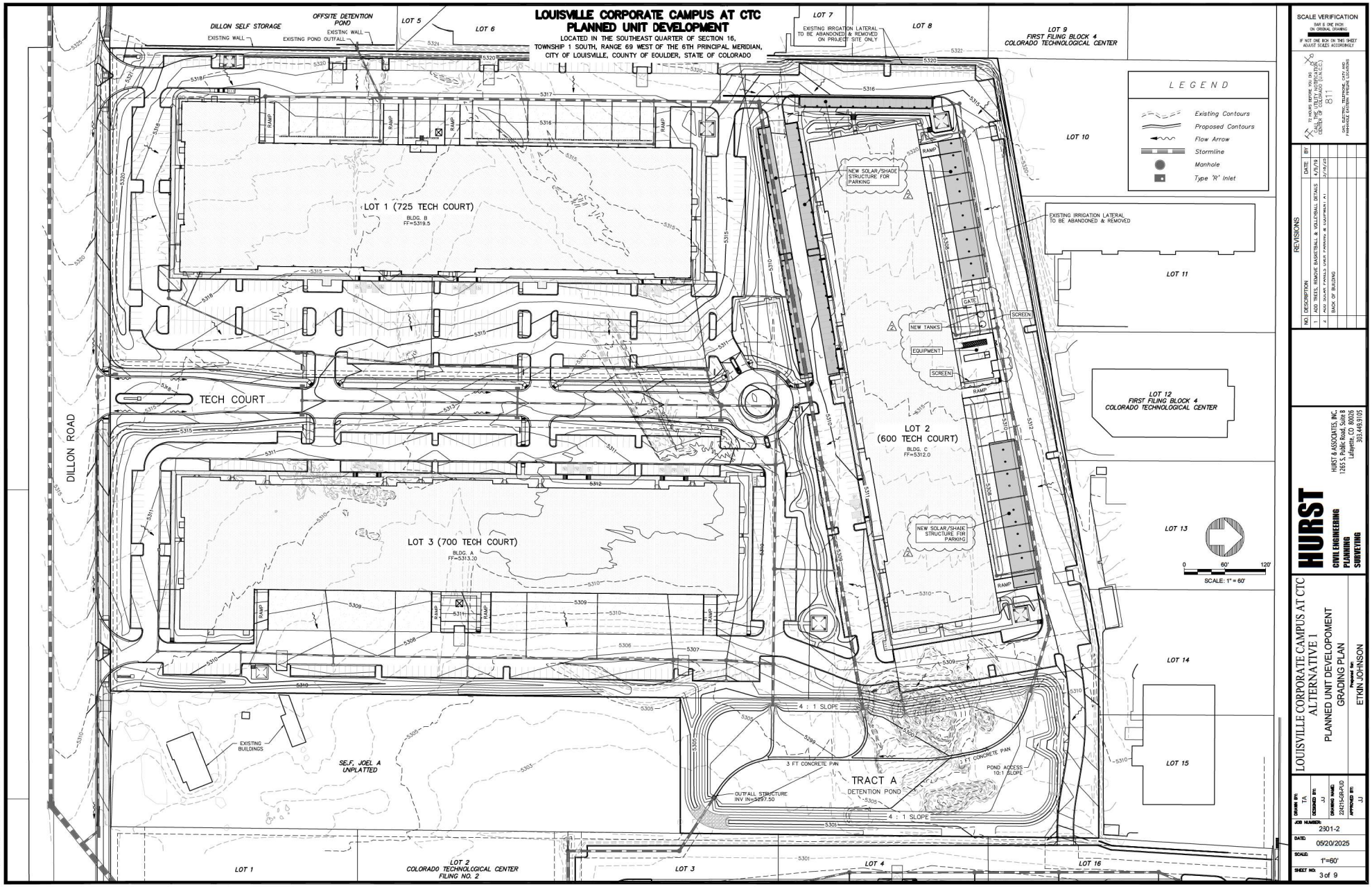

SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

811
CALL TWO BUSINESS DAYS BEFORE YOU DIG, GRADE OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER FACILITIES
UTILITY NOTIFICATION CENTER OF COLORADO (UNCC)
GAS, ELECTRIC, TELEPHONE, CATV AND PARKWAY CENTERS IMPROVE LOCATIONS

REVISIONS

NO.	DESCRIPTION	DATE	BY
1	ADD TREES, REMOVE BASKETBALL & VOLLEYBALL DETAILS	4/5/25	
2	ADD SOLAR PANELS OVER PARKING & EQUIPMENT #1	5/19/25	
	BACK OF BUILDING		

HURST
CIVIL ENGINEERING
PLANNING
SURVEYING
HURST & ASSOCIATES, INC.
1265 S. Public Road, Suite B
Lafayette, CO 80026
303.449.9105

LOUISVILLE CORPORATE CAMPUS AT CTC
ALTERNATIVE 1
PLANNED UNIT DEVELOPMENT
GRADING PLAN
Prepared for:
ETKIN JOHNSON

DRAWN BY:	TA
DESIGNED BY:	JJ
DRAWING NAME:	224215-GR-PUD
APPROVED BY:	JJ
JOB NUMBER:	2301-2
DATE:	05/20/2025
SCALE:	1"=60'
SHEET NO.	3 of 9

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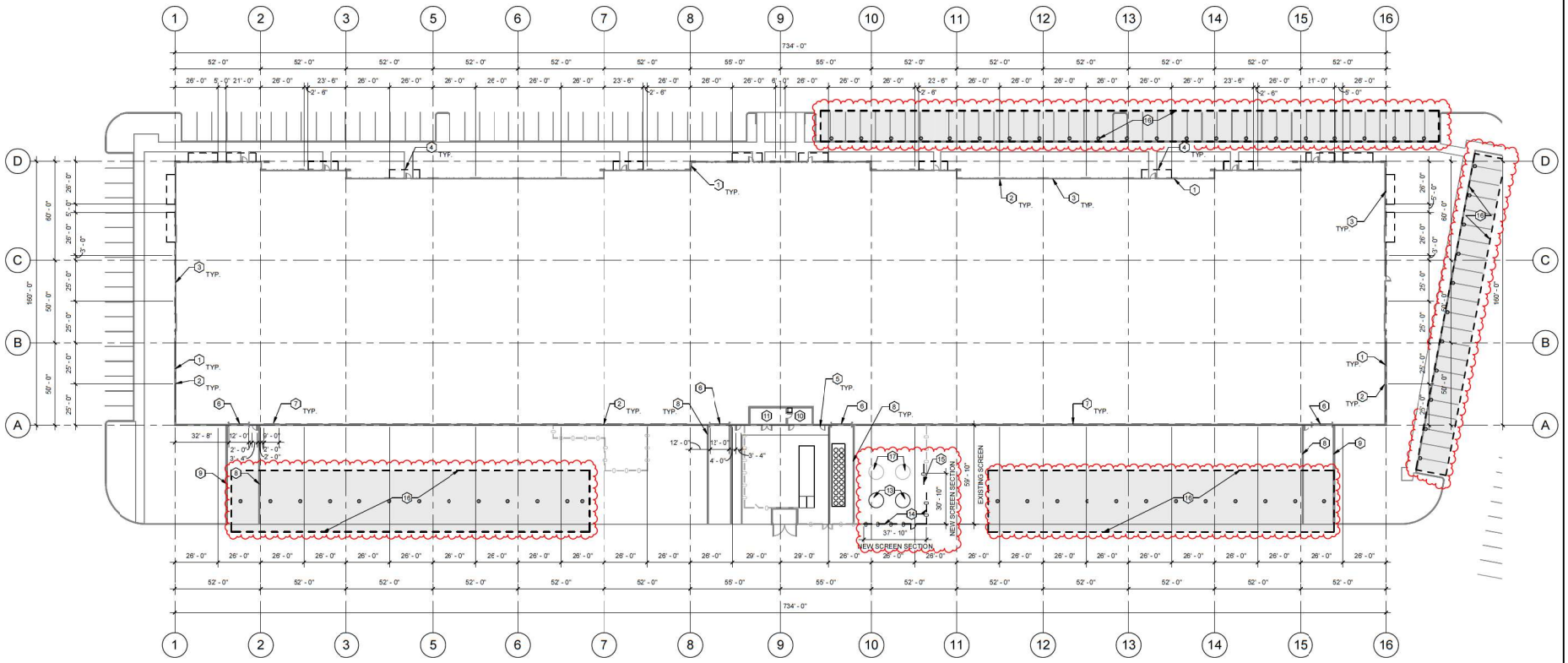
LOUISVILLE CORPORATE CAMPUS AT CTC
PLANNED UNIT DEVELOPMENT AMENDMENT #2

**LOCATED IN THE SOUTHWEST QUARTER OF SECTION 16,
TOWNSHIP 1 SOUTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN,
CITY OF LOUISVILLE, COUNTY OF BOULDER, STATE OF COLORADO**

INTERGROUP ARCHITECTS
2000 West Littleton Blvd. Littleton, CO 80120
P. 303.738.8877 F. 303.738.2294 igarch.com



1 BUILDING "C" FLOOR PLAN
SCALE: 1" = 30'-0"

NORTH

PLAN KEY NOTES:

1. CONCRETE TLT-UP PANEL, PAINTED.
2. CONCRETE TLT-UP PANEL JOINT.
3. ALUMINUM STOREFRONT SYSTEM WITH 1" INSULATED GLAZING.
4. STEEL CANOPY ABOVE.
5. 3' WIDE x 7' HIGH MAN DOOR.
6. 12' WIDE x 14' HIGH DRIVE UP DOOR.
7. 9' WIDE x 10' HIGH DOCK DOOR.
8. RETAINING WALL, 42" HIGH ABOVE GRADE.
9. SCREEN WAL,, MAXIMUM 14' HIGH ABOVE ADJACENT GRADE
10. FIRE RISER ROOM.
11. ELECTRICAL ROOM.
12. STAIR CASE WITH GUARDRAIL AND HANDRAIL.
13. NEW 45'H. CYLINDRICAL WHITE STORAGE TANKS.
14. EXPANDED EXISTING EQUIPMENT SCREEN WALLS.
15. NEW 12'W SLIDING GATE.
16. NEW SOLAR/SHADE STRUCT. FOR EXISTING PARKING SPACES. SEE SHADE SECTIONS ON SHEET 6 OF 9.
17. EXISTING WHITE CYLINDRICAL TANKS TO REMAIN.

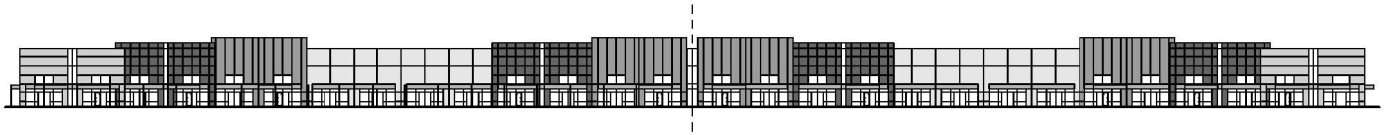
DATE:
05.23.2025 P.U.D. AMEND.

ALTERNA"IVE #1
BUILDING "C" FLOOR PLAN
SHEET 4 OF 9

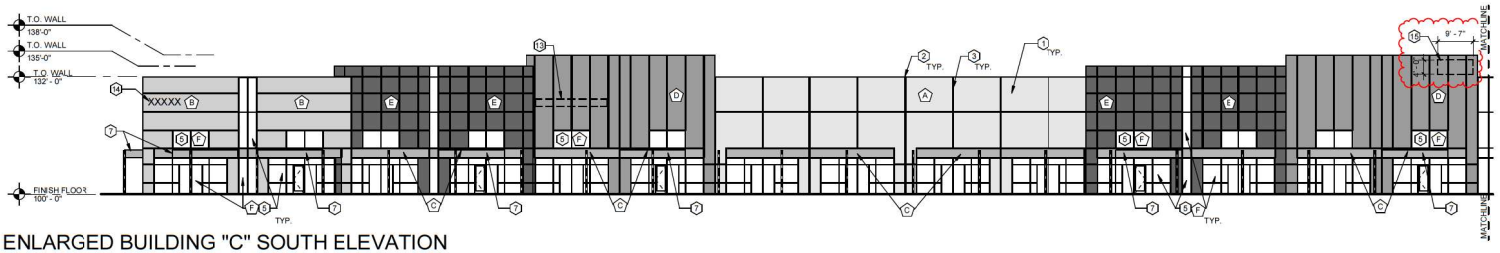
LOUISVILLE CORPORATE CAMPUS AT CTC
PLANNED UNIT DEVELOPMENT AMENDMENT #2

**LOCATED IN THE SOUTHWEST QUARTER OF SECTION 16,
TOWNSHIP 1 SOUTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN,
CITY OF LOUISVILLE, COUNTY OF BOULDER, STATE OF COLORADO**

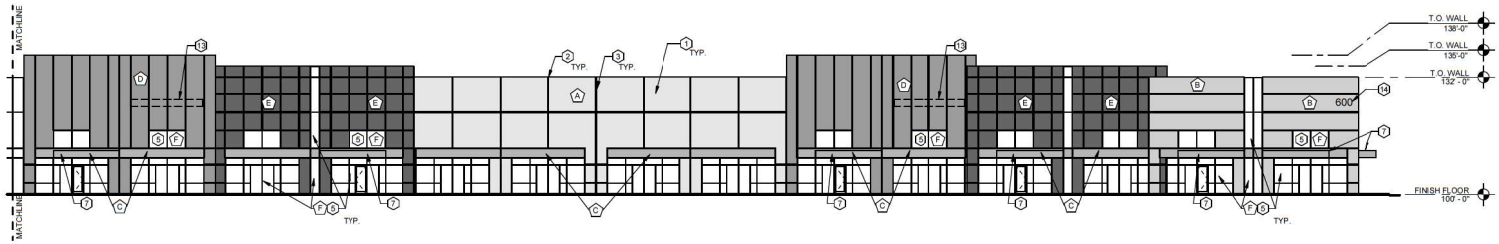
INTERGROUP ARCHITECTS
2000 West Littleton Blvd. Littleton, CO 80120
P. 303.738.8877 F. 303.738.2294 igarch.com



1 OVERALL BUILDING "C" SOUTH ELEVATION
SCALE: 1/32" = 1'-0"



2 PARTIAL ENLARGED BUILDING "C" SOUTH ELEVATION
SCALE: 1/16" = 1'-0"



3 PARTIAL ENLARGED BUILDING "C" SOUTH ELEVATION
SCALE: 1/16" = 1'-0"

ELEVATION KEY NOTES:

1. CONCRETE TILT-UP PANEL WITH TEXTURED FAINT.
2. CONCRETE TILT-UP PANEL JOINT.
3. 3/4" V-REVEAL.
4. STAIR CASE WITH GUARDRAIL AND HANDRAIL
5. ALUMINUM STOREFRONT SYSTEM WITH 1" INSULATED LOW E GLAZING
6. FINISH GRADE, SEE CIVIL DRAWINGS.
7. STEEL CANOPY, PAINTED.
8. 12' WIDE x 14' HIGH DRIVE UP DOOR.
9. 9' WIDE x 10' HIGH DOCK DOOR.
10. 3' WIDE x 7' HIGH MAN DOOR.
11. STEPPED RETAINING WALL, MAX. 3'-6" HIGH ABOVE ADJACENT GRADE.
12. STEPPED SCREEN WALL, MAX 10' HIGH ABOVE ADJACENT GRADE.
13. TENANT SIGNAGE, 2' W x 20' LONG (TOTAL OF FOUR LOCATIONS).
14. BUILDING ADDRESS SIGNAGE.
15. PROPOSED TENANT SIGNAGE, 9'-7"W x 4'-0"H., SIGN PERMIT WILL BE SEPARATE PERMIT SUBMITTAL.
16. NEW 45'H, WHITE CYLINDRICAL STORAGE TANKS (NITROGEN & ARGON), INSTALLED NEXT TO EXISTING TANKS TO REMAIN.
17. ENLARGE EXISTING EQUIPMENT SCREEN, MATCH EXISTING ALUMIN. PANELS MOUNTED TO GALV. STEEL POSTS.
18. EXISTING WHITE STORAGE TANKS TO REMAIN.

EXTERIOR FINISH LEGEND

SYM.	PATTERN	DESCRIPTION	MANUFACTURER / CO.OR
A		PAINT - FIELD	SHERWIN WILLIAMS SW6182/212-C1 "ANCIENT MARBLE"
B		PAINT - FIELD	SHERWIN WILLIAMS SW9154/237-C4 "ILLUSIVE GREEN"
C		PAINT - FIELD	SHERWIN WILLIAMS SW6239/222-C6 "GRAY HARBOR"
D		PAINT - FIELD	SHERWIN WILLIAMS SW6235/222-C5 "FOGGY DAY"
E		PAINT - FIELD	SHERWIN WILLIAMS SW6164/212-C3 "SVELT SAGE"
F		STOREFRONT WINDOWS	CLEAR ANODIZED ALUM. FRAMES PPG SOLARGRAY GLAZING

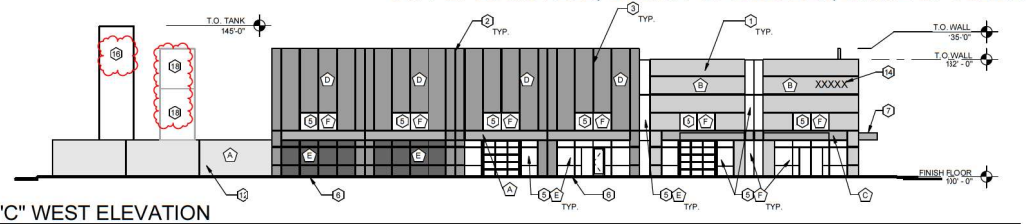
NOTE:
DOOR AND MAN DOOR COLORS TO MATCH ADJACENT WALL COLOR, UNLESS NOTED OTHERWISE.

DATE:	ALTERNATIVE #1
05.23.2025 P.U.D. AMEND.	BUILDING "C" SOUTH ELEVATION
	SHEET 5 OF 9

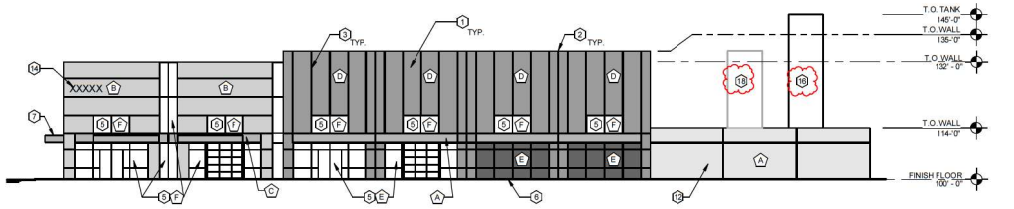
LOUISVILLE CORPORATE CAMPUS AT CTC
PLANNED UNIT DEVELOPMENT AMENDMENT #2

**LOCATED IN THE SOUTHWEST QUARTER OF SECTION 16,
TOWNSHIP 1 SOUTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN,
CITY OF LOUISVILLE, COUNTY OF BOULDER, STATE OF COLORADO**

INTERGROUP ARCHITECTS
2000 West Littleton Blvd. Littleton, CO 80120
P. 303.738.8877 F. 303.738.2294 igarch.com



1 BUILDING "C" WEST ELEVATION
SCALE: 1/16" = 1'-0"



2 BUILDING "C" EAST ELEVATION
SCALE: 1/16" = 1'-0"

ELEVATION KEY NOTES:

1. CONCRETE TILT-UP PANEL WITH TEXTURED PAINT.
2. CONCRETE TILT-UP PANEL JOINT.
3. 3/4" V-REVEAL.
4. STAIR CASE WITH GUARDRAIL AND HANDRAIL.
5. ALUMINUM STOREFRONT SYSTEM WITH 1" INSULATED LOW E GLAZING.
6. FINISH GRADE, SEE CIVIL DRAWINGS.
7. STEEL CANOPY, PAINTED.
8. 12' WIDE x 14' HIGH DRIVE UP DOOR.
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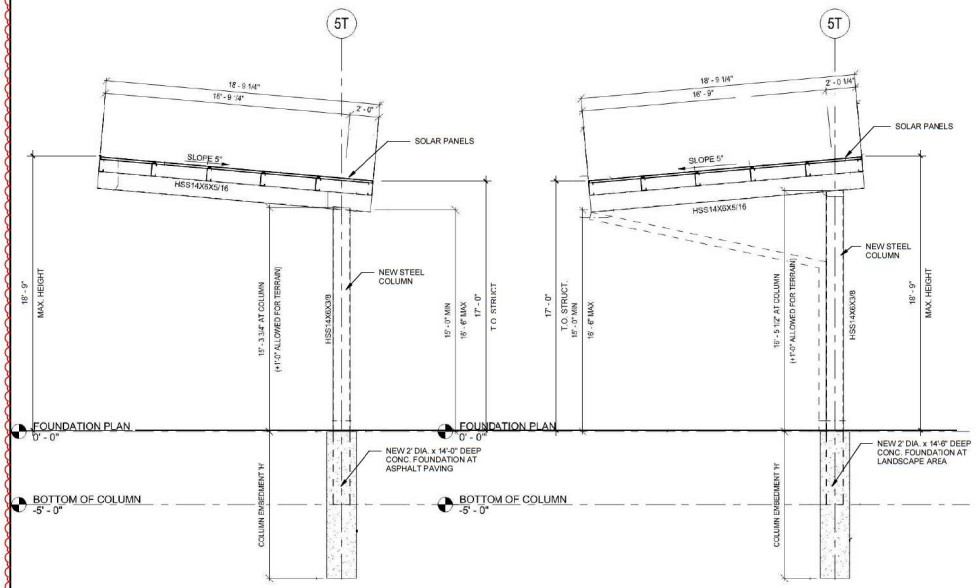
10. 3' WIDE x 7' HIGH MAN DOOR.
11. STEPPED RETAINING WALL, MAX. 3'-6" HIGH ABOVE ADJACENT GRADE.
12. STEPPED SCREEN WALL, MAX 10' HIGH ABOVE ADJACENT GRADE.
13. TENANT SIGNAGE, 2' W x 20' LONG (TOTAL OF FOUR LOCATIONS).
14. BUILDING ADDRESS SIGNAGE.
15. PROPOSED TENANT SIGNAGE, 9'-7"W x 4'-0"H., SIGN PERMIT WILL BE SEPARATE PERMIT SUBMITTAL.
16. NEW 46'H. WHITE CYLINDRICAL STORAGE TANKS (NITROGEN & ARGON), INSTALLED NEXT TO EXISTING TANKS TO REMAIN.
17. ENLARGE EXISTING EQUIPMENT SCREEN, MATCH EXISTING ALUMIN. PANELS MOUNTED TO GALV. STEEL POSTS.
18. EXISTING WHITE STORAGE TANKS TO REMAIN.

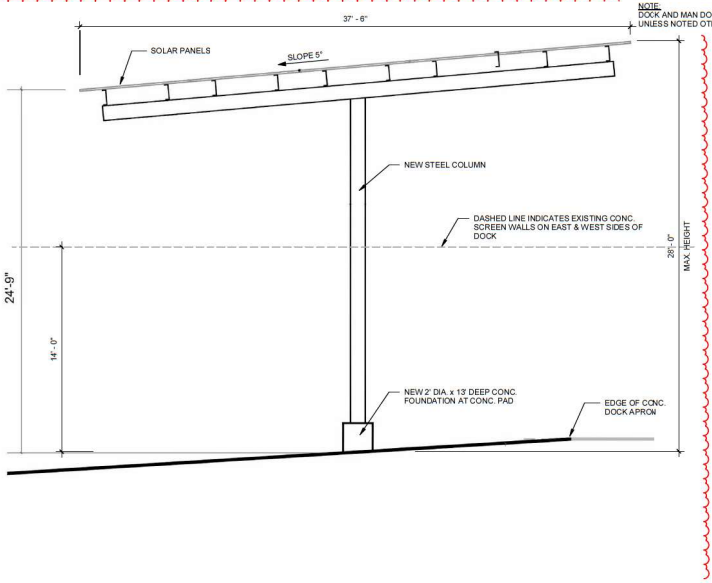
EXTERIOR FINISH LEGEND

SYM.	PATTERN	DESCRIPTION	MANUFACTURER / COLOR
A		PAINT - FIELD	SHERWIN WILLIAMS SW6162/212-C1 "ANCIENT MARBLE"
B		PAINT - FIELD	SHERWIN WILLIAMS SW6164/237-C4 "ILLUSIVE GREEN"
C		PAINT - FIELD	SHERWIN WILLIAMS SW6236/222-C6 "GRAY HARBOR"
D		PAINT - FIELD	SHERWIN WILLIAMS SW6235/222-C5 "FOGGY DAY"
E		PAINT - FIELD	SHERWIN WILLIAMS SW6164/212-C3 "SVELT SAGE"
F		STOREFRONT WINDOWS	CLEAR ANODIZED ALUM. FRAMES PPG SOLARGRAY GLAZING

NOTE:
DOCK AND MAN DOOR COLORS TO MATCH ADJACENT WALL COLOR, UNLESS NOTED OTHERWISE.



3 SOLAR/SHADE CARPORT @ PARKING LOT
SCALE: 1/4" = 1'-0"



4 SOLAR/SHADE CARPORT @ DOCK
SCALE: 1/4" = 1'-0"

DATE:
05.23.2025 P.U.D. AMEND.

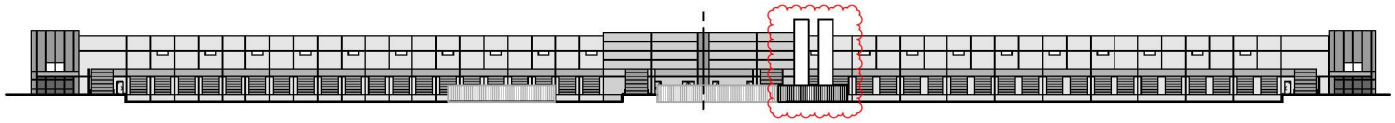
ALTERNATIVE #1

BUILDING "C" WEST AND EAST ELEVATIONS
SHEET 6 OF 9

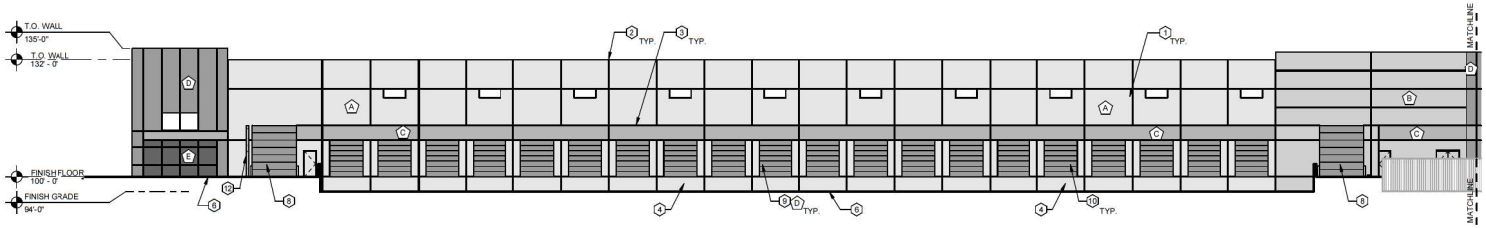
INTERGROUP ARCHITECTS
2000 West Littleton Blvd. Littleton, CO 80120
P. 303.738.8877 F. 303.738.2294 igarch.com

LOUISVILLE CORPORATE CAMPUS AT CTC
PLANNED UNIT DEVELOPMENT AMENDMENT #2

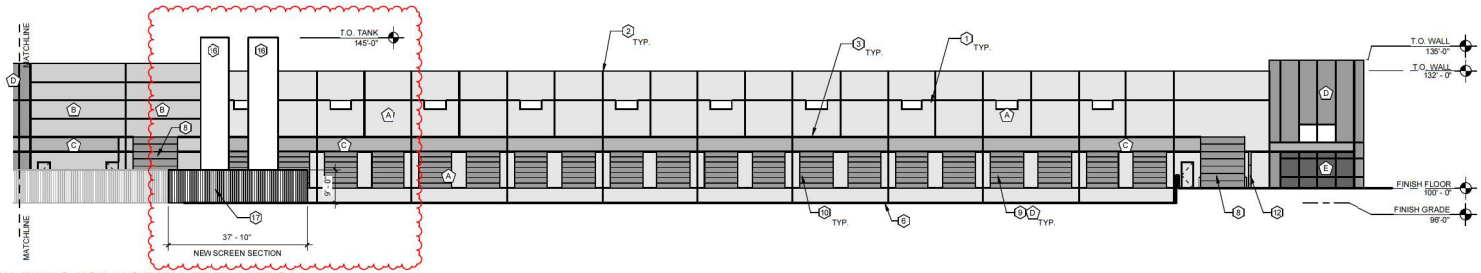
**LOCATED IN THE SOUTHWEST QUARTER OF SECTION 16,
TOWNSHIP 1 SOUTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN,
CITY OF LOUISVILLE, COUNTY OF BOULDER, STATE OF COLORADO**



1 OVERALL BUILDING "C" NORTH ELEVATION
SCALE: 1/32" = 1'-0"



2 PARTIAL ENLARGED BUILDING "C" NORTH ELEVATION
SCALE: 1/16" = 1'-0"



3 PARTIAL ENLARGED BUILDING "C" NORTH ELEVATION
SCALE: 1/16" = 1'-0"

ELEVATION KEY NOTES:

1. CONCRETE TILT-UP PANEL WITH TEXTUREC PAINT.
2. CONCRETE TILT-UP PANEL JOINT.
3. 3/4" V-REVEAL.
4. STAIR CASE WITH GUARDRAIL AND HANDRAIL.
5. ALUMINUM STOREFRONT SYSTEM WITH 1" INSULATED LOW E GLAZING.
6. FINISH GRADE, SEE CIVIL DRAWINGS.
7. STEEL CANOPY, PAINTED.
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17. ENLARGE EXISTING EQUIPMENT SCREEN, MATCH EXISTING ALUMIN. PANELS MOUNTED TO GALV. STEEL POSTS.
18. EXISTING WHITE STORAGE TANKS TO REMAIN.

EXTERIOR FINISH LEGEND

SYM.	PATTERN	DESCRIPTION	MANUFACTURER / COLOR
A		PAINT - FIELD	SHERWIN WILLIAMS SW6162/212-C1 "ANCIENT MARBLE"
B		PAINT - FIELD	SHERWIN WILLIAMS SW9164/237-C4 "ILLUSIVE GREEN"
C		PAINT - FIELD	SHERWIN WILLIAMS SW6236/222-C6 "GRAY HARBOR"
D		PAINT - FIELD	SHERWIN WILLIAMS SW6235/222-C5 "FOGGY DAY"
E		PAINT - FIELD	SHERWIN WILLIAMS SW6164/212-C3 "SVELT SAGE"
F		STOREFRONT WINDOWS	CLEAR ANODIZED ALUM. FRAMES PPG SOLARGRAY GLAZING

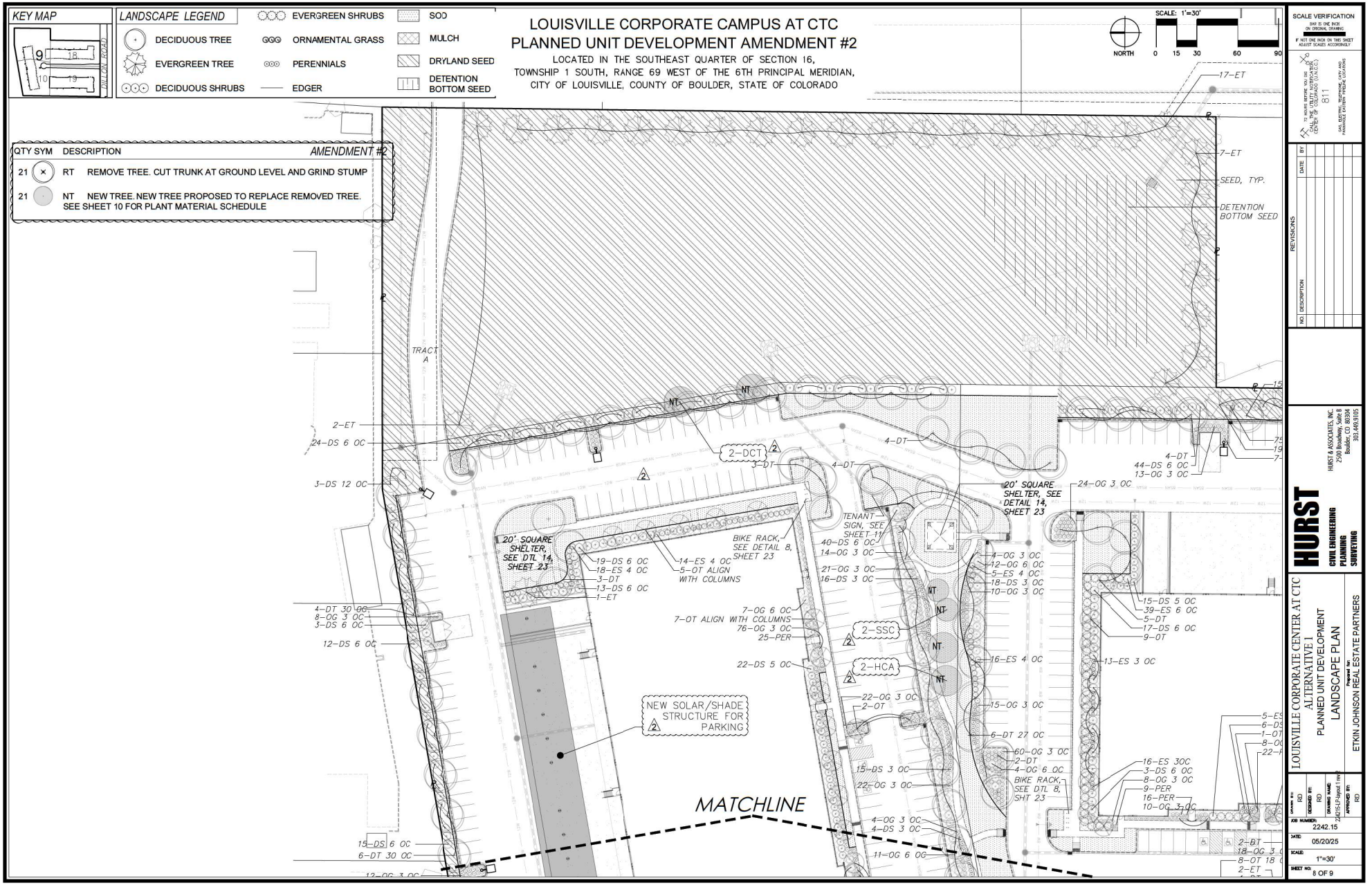
NOTE:
DOCK AND MAN DOOR COLORS TO MATCH ADJACENT WALL COLOR, UNLESS NOTED OTHERWISE.

DATE:	
05.23.2025	P.U.D. AMEND.

ALTERNATIVE #1

BUILDING "C" NORTH ELEVATION

SHEET 7 OF 9


KEY MAP
LANDSCAPE LEGEND
DECIDUOUS TREE
EVERGREEN TREE
DECIDUOUS SHRUBS
EVERGREEN SHRUBS
ORNAMENTAL GRASS
PERENNIALS
EDGER
SOD
MULCH
DRYLAND SEED
DETENTION BOTTOM SEED
LOUISVILLE CORPORATE CAMPUS AT CTC
PLANNED UNIT DEVELOPMENT AMENDMENT #2
LOCATED IN THE SOUTHEAST QUARTER OF SECTION 16,
TOWNSHIP 1 SOUTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN,
CITY OF LOUISVILLE, COUNTY OF BOULDER, STATE OF COLORADO
SCALE: 1"=30'
NORTH
0 15 30 60 90
QTY SYM DESCRIPTION AMENDMENT #2
21 RT REMOVE TREE. CUT TRUNK AT GROUND LEVEL AND GRIND STUMP
21 NT NEW TREE. NEW TREE PROPOSED TO REPLACE REMOVED TREE.
SEE SHEET 10 FOR PLANT MATERIAL SCHEDULE
TRACT A
2-ET
24-DS 6 OC
3-DS 12 OC
4-DT 30 OC
8-OG 3 OC
3-DS 6 OC
12-DS 6 OC
15-DS 6 OC
6-DT 30 OC
12-OG 3 OC
2-DCT
3-DT
4-DT
20' SQUARE SHELTER, SEE DTL 14, SHEET 23
19-DS 6 OC
18-ES 4 OC
3-DT
13-DS 6 OC
1-ET
14-ES 4 OC
5-OT ALIGN WITH COLUMNS
BIKE RACK, SEE DETAIL 8, SHEET 23
7-OG 6 OC
7-OT ALIGN WITH COLUMNS
76-OG 3 OC
25-PER
22-DS 5 OC
NEW SOLAR/SHADE STRUCTURE FOR PARKING
TENANT SIGN, SEE SHEET 11
40-DS 6 OC
14-OG 3 OC
21-OG 3 OC
16-DS 3 OC
2-SSC
2-HCA
22-OG 3 OC
2-OT
15-OG 3 OC
6-DT 27 OC
60-OG 3 OC
2-DT
4-OG 6 OC
BIKE RACK, SEE DTL 8, SHT 23
15-DS 3 OC
22-OG 3 OC
4-OG 3 OC
4-DS 3 OC
11-OG 6 OC
MATCHLINE
20' SQUARE SHELTER, SEE DETAIL 14, SHEET 23
24-OG 3 OC
4-DT
44-DS 6 OC
13-OG 3 OC
4-OG 3 OC
12-OG 6 OC
5-ES 4 OC
18-DS 3 OC
10-OG 3 OC
15-DS 5 OC
39-ES 6 OC
5-DT
17-DS 6 OC
9-OT
16-ES 4 OC
13-ES 3 OC
16-ES 30C
3-DS 6 OC
8-OG 3 OC
9-PER
16-PER
10-OG 3 OC
17-ET
7-ET
SEED, TYP.
DETENTION BOTTOM SEED
NT
P
SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY
CALL THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC)
811
REVISIONS
NO. DESCRIPTION DATE BY
HURST & ASSOCIATES, INC.
2500 Broadway, Suite B
Boulder, CO 80304
303.449.9105
HURST
CIVIL ENGINEERING
PLANNING
SURVEYING
LOUISVILLE CORPORATE CENTER AT CTC
ALTERNATIVE 1
PLANNED UNIT DEVELOPMENT
LANDSCAPE PLAN
Prepared for:
ETKIN JOHNSON REAL ESTATE PARTNERS
DRAWN BY: RD
DESIGNED BY: RD
DRAWING NAME: 2242I5-LP-layout 1 rev2
APPROVED BY: RD
JOB NUMBER: 2242.15
DATE: 05/20/25
SCALE: 1"=30'
SHEET NO: 8 OF 9
LAST SAVED: 5/20/2025 5:33 PM
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LOUISVILLE CORPORATE CAMPUS AT CTC
PLANNED UNIT DEVELOPMENT AMENDMENT #2

LOCATED IN THE SOUTHEAST QUARTER OF SECTION 16,
TOWNSHIP 1 SOUTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN,
CITY OF LOUISVILLE, COUNTY OF BOULDER, STATE OF COLORADO
ALTERNATIVE #1

QTY	SYM	DESCRIPTION	AMENDMENT #2
20	RT	REMOVE TREE. CUT TRUNK AT GROUND LEVEL AND GRIND STUMP	
20	NT	NEW TREE. NEW TREE PROPOSED TO REPLACE REMOVED TREE	
13		NEW SHRUBS AND GRASSES AT ENTRANCE	2

DECIDUOUS TREES

SYM	QTY	COMMON NAME	BOTANICAL NAME	SIZE	MATURE HEIGHT x WIDTH
DCT	2	COFFEE TREE, KENTUCKY DECAF	*Gymnocladus dioica 'McKBranched'*	2" cal. B&B	45' x 35'
GSL	2	LINDEN, GREENSPIRE	*Tilia cordata 'Greenspire'*	2" cal. B&B	35' x 30'
HCA	2	CATALPA, HEARTLAND	*Catalpa speciosa 'Hiawatha 2'*	2" cal. B&B	45' x 20'
UPO	4	OAK, BUR URBAN PINNACLE	*Quercus macrocarpa 'JFS-KW3'*	2" cal. B&B	45' x 20'
	10				

ORNAMENTAL TREES

SYM	QTY	COMMON NAME	BOTANICAL NAME	SIZE	SIZE
GRT	3	RAINTREE, GOLDEN	*Koelreuteria paniculata*	1-1/2" cal. B&B	25 x 30'
RHT	5	HAWTHORN, RUSSIAN	*Crataegus ambigua*	1-1/2" cal. B&B	20' x 15'
SSC	2	CRABAPPLE, SPRING SNOW	*Malus 'Spring Snow'*	1-1/2" cal. B&B	20' x 20'
	10				

EVERGREEN SHRUBS

SYM	QTY	COMMON NAME	BOTANICAL NAME	SIZE	SIZE
SMM	3	MUGO, SLOWMOUND	*Pinus mugo 'Slowmound'*	5 gallon	5' x 7'

DECIDUOUS SHRUBS

SYM	QTY	COMMON NAME	BOTANICAL NAME	SIZE	SIZE
BMS	4	SPIREA, BLUE MIST	*Caryopteris x cladonensis 'Blue Mist'*	5 gallon	4' x 3'
THB	2	BUCKTHORN, TALL HEDGE	*Frangula alnus 'Columnaris'*	5 gallon	8' x 3'

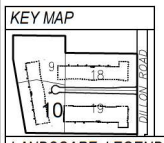
ORNAMENTAL GRASSES

SYM	QTY	COMMON NAME	BOTANICAL NAME	SIZE	SIZE
BAB	4	BLUE GRAMA GRASS, BLONDE AMBITION	*Bouteloua gracilis 'Blonde Ambition'*	1 gallon	2.5' x 2.5'

MATCHLINE

SCREEN 2
EQUIPMENT 2
NEW TANKS 2
SCREEN
GATE 2
NEW SOLAR/SHADE STRUCTURE FOR PARKING 2
TENANT SIGN
TENANT SIGN, SEE SHEET 11
2-GSL 2
5-RHT 2
3-GRT 2
4-UPO 2
20' SQUARE SHELTER, SEE DTL 14, SHEET 23
20' SQUARE SHELTER, SEE DETAIL 14, SHEET 23
EXISTING RUSSIAN OLIVE TO REMAIN

KEY MAP



LANDSCAPE LEGEND

- DECIDUOUS TREE
- EVERGREEN TREE
- DECIDUOUS SHRUBS
- EVERGREEN SHRUBS
- ORNAMENTAL GRASS
- PERENNIALS
- EDGER
- SOD
- MULCH
- DRYLAND SEED
- DETENTION BOTTOM SEED

SCALE: 1"=30'
NORTH
0 15 30 60 90

SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

811 CALL TWO BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES, CALL THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC)

GAS, ELECTRIC, TELEPHONE, CATV AND PARKWAYS EASTERN PRIVATE LOCATIONS

REVISIONS

NO	DESCRIPTION	DATE	BY
1	ADD TREES, REMOVE BASKETBALL AND VOLLEYBALL DETAILS	04/30/25	RD
2	ADD SOLAR PANELS TO PARKING LOT, REMOVE TREES, ADD NEW TREES	11/15/24	RD
###	###	###	###
###	###	###	###
###	###	###	###

HURST
CIVIL ENGINEERING
PLANNING
SURVEYING

HURST & ASSOCIATES, INC.
2500 Broadway, Suite B
Boulder, CO 80304
303.449.9105

LOUISVILLE CORPORATE CENTER AT CTC
ALTERNATIVE 1

LANDSCAPE PLAN

Prepared for:
ETKIN JOHNSON REAL ESTATE PARTNERS

DRAWN BY: RD
DESIGNED BY: RD
DRAWING NAME: 2242\15-P-layout 1 rev2
APPROVED BY: RD
JOB NUMBER: 2242.15
DATE: 05/20/25
SCALE: 1"=30'
SHEET NO: 9 OF 9

LAST SAVED: 5/20/2025 5:03 PM

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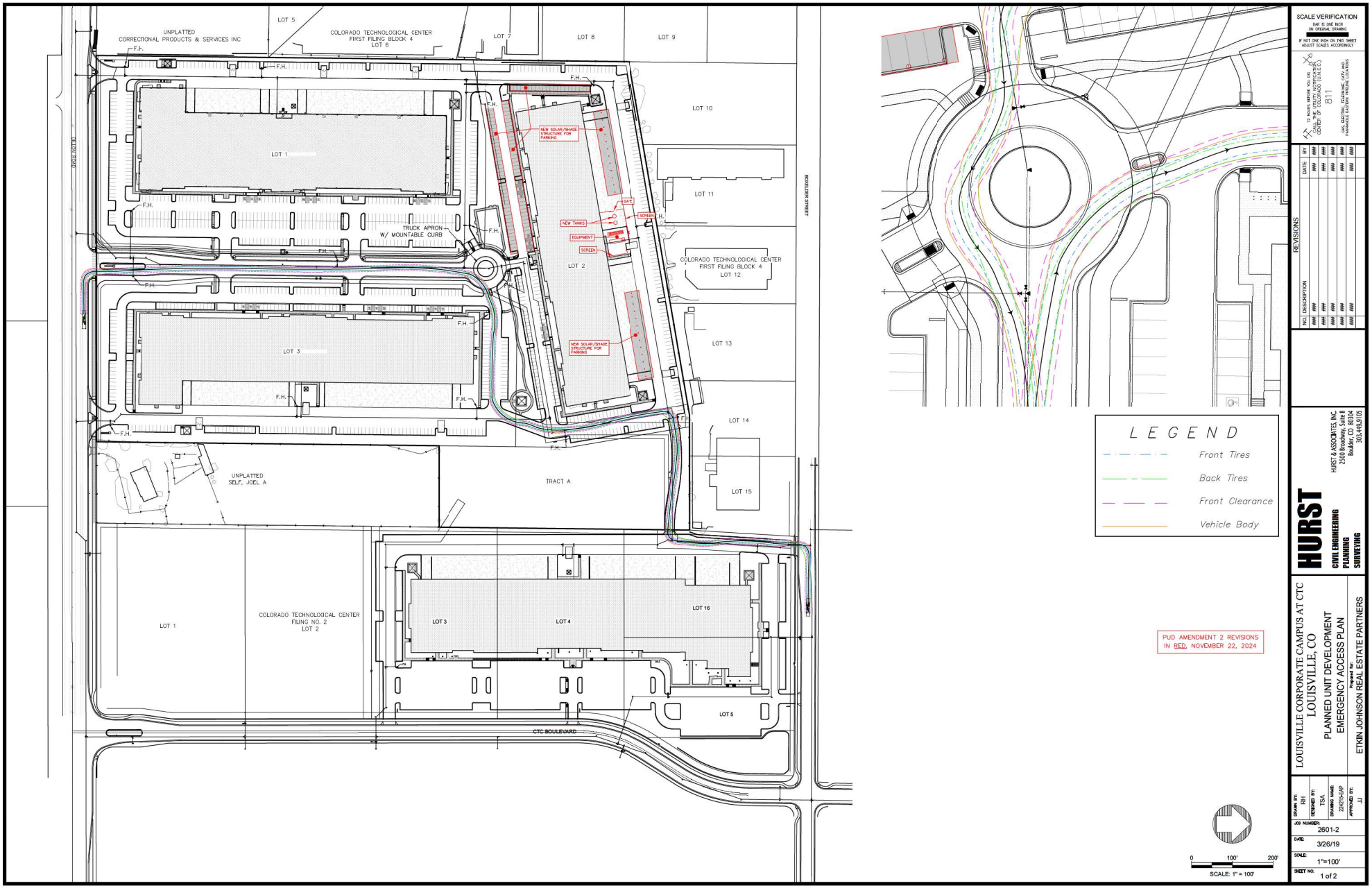
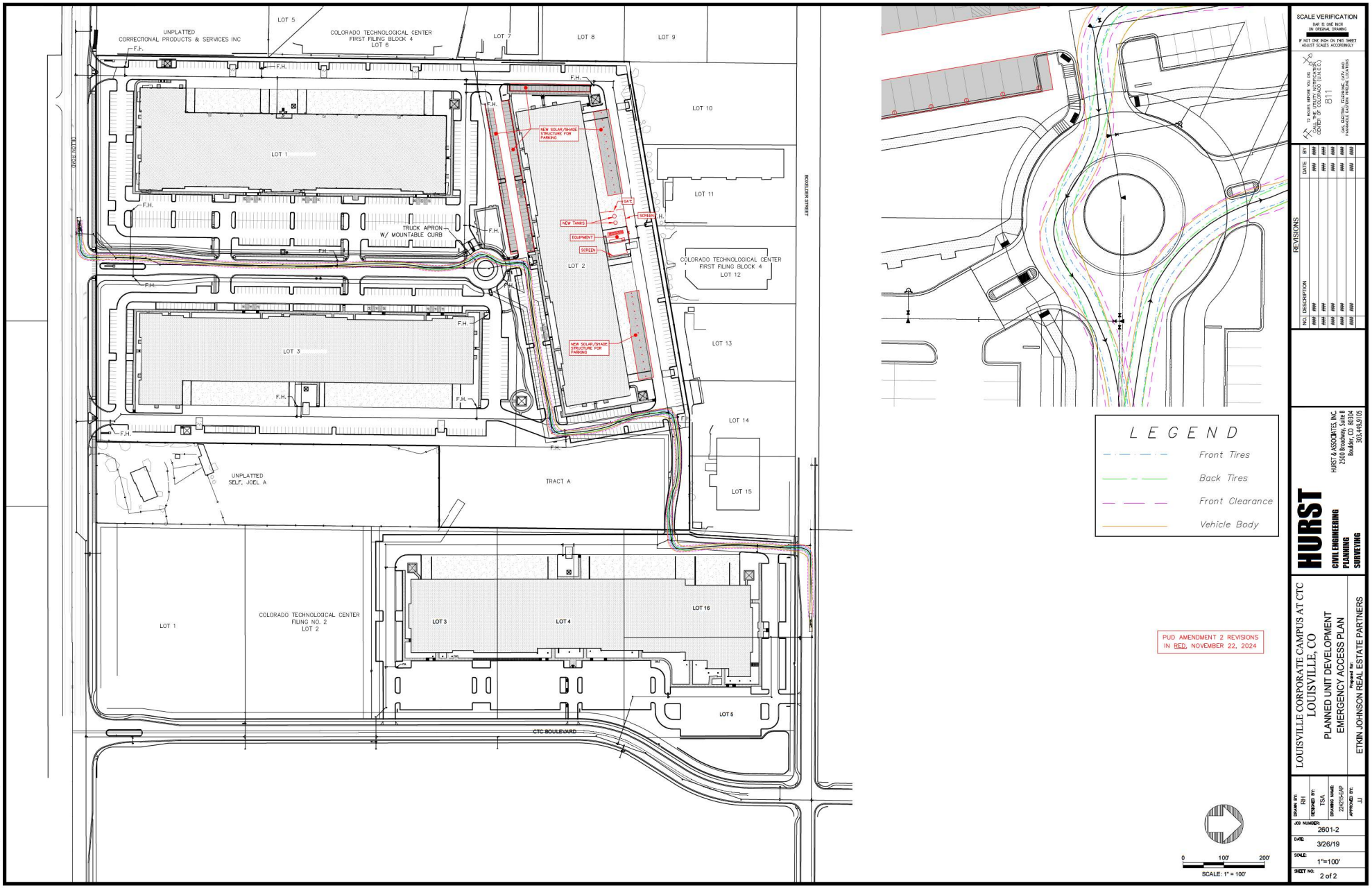

UNPLATTED
CORRECTIONAL PRODUCTS & SERVICES INC
COLORADO TECHNOLOGICAL CENTER
FIRST FILING BLOCK 4
LOT 6
LOT 5
LOT 7
LOT 8
LOT 9
LOT 10
LOT 11
LOT 12
LOT 13
LOT 14
LOT 15
LOT 16
LOT 1
LOT 2
LOT 3
LOT 4
LOT 5
TRUCK APRON
W/ MOUNTABLE CURB
NEW SOLAR/SHADE STRUCTURE FOR PARKING
NEW TANKS
EQUIPMENT
SCREEN
GATE
F.H.
UNPLATTED
SELF, JOEL A
TRACT A
COLORADO TECHNOLOGICAL CENTER
FILING NO. 2
LOT 2
CTC BOULEVARD
BOULDER STREET
DOGE TROTTIC
LEGEND
Front Tires
Back Tires
Front Clearance
Vehicle Body
PUD AMENDMENT 2 REVISIONS
IN RED, NOVEMBER 22, 2024
0
100'
200'
SCALE: 1" = 100'
SCALE VERIFICATION
BAR IS ONE INCH
ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET
ADJUST SCALES ACCORDINGLY
72 HOURS BEFORE YOU DIG
CONTACT THE COLORADO 811 CENTER
811
REVISIONS
NO.
DESCRIPTION
DATE
BY
HURST
CIVIL ENGINEERING
PLANNING
SURVEYING
HURST & ASSOCIATES, INC.
2300 Broadway, Suite B
Boulder, CO 80304
303.449.9105
LOUISVILLE CORPORATE CAMPUS AT CTC
LOUISVILLE, CO
PLANNED UNIT DEVELOPMENT
EMERGENCY ACCESS PLAN
Prepared for:
ETKIN JOHNSON REAL ESTATE PARTNERS
DRAWN BY:
CHECKED BY:
TSA
DRAWING NAME:
224215-EAP
APPROVED BY:
JJ
JOB NUMBER:
2601-2
DATE:
3/26/19
SCALE:
1"=100'
SHEET NO:
1 of 2
LAST SAVED: 11/14/2024 3:10 PM
G:\224215\UPDATED PUD 2024\224215-EAP.dwg


UNPLATTED
CORRECTIONAL PRODUCTS & SERVICES INC
COLORADO TECHNOLOGICAL CENTER
FIRST FILING BLOCK 4
LOT 6
LOT 5
LOT 7
LOT 8
LOT 9
LOT 10
LOT 11
LOT 12
LOT 13
LOT 14
LOT 15
LOT 16
LOT 1
LOT 2
LOT 3
LOT 4
LOT 5
TRUCK APRON
W/ MOUNTABLE CURB
NEW SOLAR/SHADE STRUCTURE FOR PARKING
NEW TANKS
EQUIPMENT
SCREEN
GATE
F.H.
UNPLATTED
SELF, JOEL A
TRACT A
COLORADO TECHNOLOGICAL CENTER
FILING NO. 2
LOT 2
CTC BOULEVARD
BOULDER STREET
DOGE ROUTE
LEGEND
Front Tires
Back Tires
Front Clearance
Vehicle Body
PUD AMENDMENT 2 REVISIONS
IN RED, NOVEMBER 22, 2024
0
100'
200'
SCALE: 1" = 100'
SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET
ADJUST SCALES ACCORDINGLY
72 HOURS BEFORE YOU DIG
CONTACT THE COLORADO 811 CENTER
811
GAS, ELECTRIC, TELEPHONE, CATV AND
PIPELINES, SYSTEMS, PHYSICAL LOCATIONS
REVISIONS
NO. DESCRIPTION DATE BY
HURST
CIVIL ENGINEERING
PLANNING
SURVEYING
HURST & ASSOCIATES, INC.
2300 Arapahoe, Suite B
Boulder, CO 80304
303.449.9105
LOUISVILLE CORPORATE CAMPUS AT CTC
LOUISVILLE, CO
PLANNED UNIT DEVELOPMENT
EMERGENCY ACCESS PLAN
Prepared for:
ETKIN JOHNSON REAL ESTATE PARTNERS
DRAWN BY: JDH
CHECKED BY: TSA
DRAWING NAME: 2247X-EAP
APPROVED BY: JJ
JOB NUMBER: 2601-2
DATE: 3/26/19
SCALE: 1"=100'
SHEET NO: 2 of 2
LAST SAVED: 11/14/2024 3:10 PM
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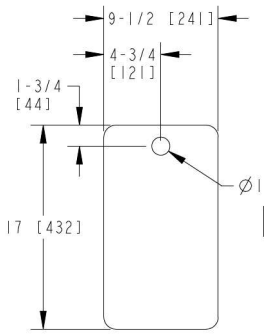
DRAWING NUMBER **C-14190861**

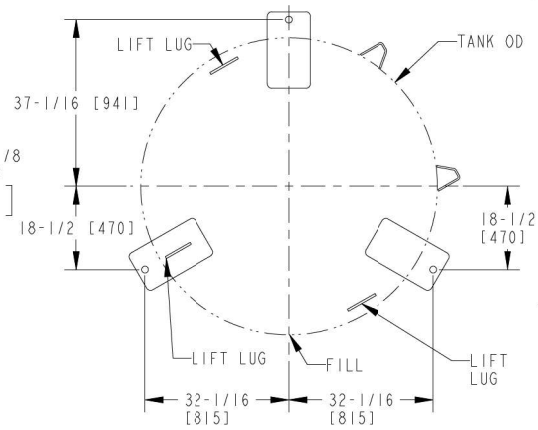
INNER VESSEL DESIGN DATA				
Model:		VS-525 / 900 / 1500		
MAWP:	PSIG	250	400	500
	barg	17.24	27.58	34.47
DESIGN PRESSURE	PSIG	272.4	422.4	522.4
	barg	18.78	29.12	36.02
CODE COMPLIANCE:	ASME CODE CASE 2596			
DESIGN TEMPERATURE	°F	-320° TO 120°		
	°C	-196° TO 49°		
MATERIAL OF CONSTRUCTION:	SA240 304 STAINLESS STEEL			

OUTER VESSEL DATA		
CODE COMPLIANCE:	FULL VACUUM PER CGA-341	
DESIGN TEMPERATURE	°F	-20° TO 300°
	°C	-29° TO 149°
MATERIAL OF CONSTRUCTION:	A36 CARBON STEEL	
INSULATION TYPE:	VACUUM AND MULTILAYER INSULATION	
EVACUATION CONNECTION:	3-1/2" PUMPOUT PORT	
VACUUM GAUGE CONNECTION:	HASTINGS DV6R	

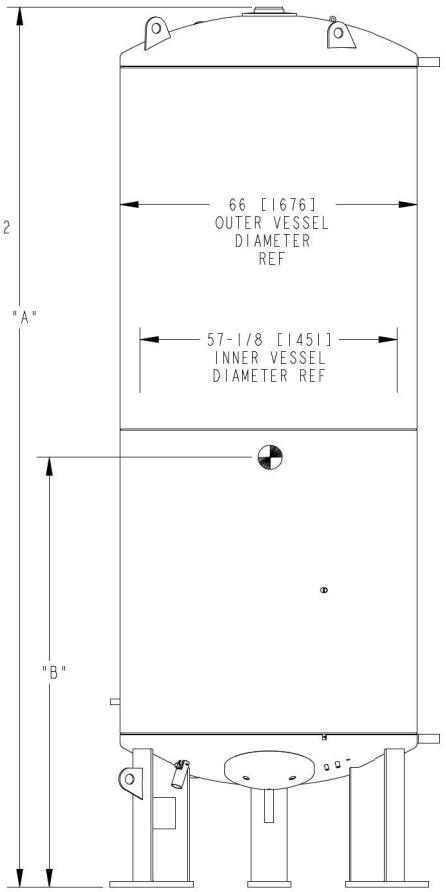
BUILDING CODE:
DESIGNED FOR CURRENT BUILDING CODE
SEE CHART POLICY #NP-180



FOOT PAD
1-1/4 [32] THK
TYP 3 PLCS



BOLT HOLE LAYOUT
TOP VIEW
SCALE: N/A



WEIGHTS AND SHIPPING DATA											
MODEL:			VS-525			VS-900			VS-1500		
MAWP	PSIG		250	400	500	250	400	500	250	400	500
	barg		17.24	27.58	34.47	17.24	27.58	34.47	17.24	27.58	34.47
WEIGHT EMPTY	POUNDS		3,300	4,000	4,500	4,400	5,100	5,800	6,200	7,600	8,700
	KILOGRAMS		1,500	1,814	2,041	2,000	2,313	2,631	2,818	3,447	3,946
WEIGHT FULL	OXYGEN	POUNDS	8,300	9,000	9,500	12,700	13,400	14,100	21,600	23,000	24,100
		KILOGRAMS	3,773	4,082	4,309	5,773	6,078	6,396	9,818	10,433	10,932
	NITROGEN	POUNDS	6,800	7,500	8,000	10,200	11,000	11,700	17,100	18,500	19,600
		KILOGRAMS	3,091	3,402	3,629	4,636	4,990	5,307	7,773	8,391	8,890
	ARGON	POUNDS	9,400	10,100	10,600	14,500	15,200	15,900	25,000	26,400	27,500
		KILOGRAMS	4,273	4,581	4,808	6,591	6,895	7,212	11,364	11,975	12,474
SHIPPING DIMENSIONS	INCHES		105 X 85 X 75			136 X 85 X 75			196 X 85 X 75		
	MM'S		2,667 X 2,159 X 1,905			3,454 X 2,159 X 1,905			4,978 X 2,159 X 1,905		

TANK HEIGHT		
MODEL	DIM "A" REF	DIM "B" REF
VS-525	105 [2667]	66 [1682]
VS-900	136 [3454]	82 [2085]
VS-1500	196 [4978]	112 [2838]

CAPACITIES					
MODEL:			VS-525	VS-900	VS-1500
CAPACITY	GROSS (COLD)	GALLONS	570	940	1,640
		LITERS	2,158	3,558	6,208
	NET (COLD)	GALLONS	510	850	1,580
		LITERS	1,931	3,218	5,981
GASES EQUIVALENT AT 1 ATM AND 70°F/ 1 ATM AND 21°C	OXYGEN	SCF	58,800	97,900	181,900
		NM3	1,665	2,772	5,151
	NITROGEN	SCF	47,500	79,200	147,200
		NM3	1,345	2,243	4,168
	ARGON	SCF	57,400	95,700	177,800
		NM3	1,625	2,710	5,035

IN[mm]

THIRD ANGLE PROJECTION

Material Required
SEE B.O.M. UNLESS OTHERWISE STATED

VISIT US AT CHARTINDUSTRIES.COM
OEM PARTS AT CHARTPARTS.COM

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	APPROVED	DATE
DRAWN BY	JJC	10-7-08
CHK'D BY	MMK	10-8-08
PROJ. ENGR.	DML	0-22-08
QUAL. CONT.	JK	0-13-08
MFG. ENGR.	RC	10-8-08
MFG. SERV.	KJR	0-15-08

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.
TOLERANCES:
FRACTIONS ± 1/8
ANGLES ± 1°
2 PLACE DECIMALS ± N/A
3 PLACE DECIMALS ± N/A

REV	ECR NO	DESCRIPTION	BY	DATE
B	15874	ADD DIM B	SY	6-25-14
A	14219	UPDATE WEIGHTS	JJC	10-20-09

CHART® Distribution & Storage, New Prague Operations
Innovation. Experience. Performance.®

TITLE: O&D VS-525/900/1500 SS COLD STRETCH 250/400/500PSI

DRAWING NUMBER: C-14190861 Rev B

SCALE: 1/32"=1" PART NUMBER: 14190861 SHEET: 1 OF 1

FACADE SIGN & ENTRANCE SIGN

REVISED OPTION

Capital L to be **48”H** to avoid applying to PUD (Planning Urban Development)

Sign to be 115”W x 48”H x 5”D hollow letters lacquer painted and pin mounted flush to the wall. Total SF: 38.33

Logo in die cut vinyl weather resistant applied to the glass (first surface) on the exterior side of the building due the glass is tinted.

Entrance canopy to be painted in white

City of Louisville
COLORADO • SINCE 1878

Planning Commission
Meeting Minutes
June 12, 2025
City Hall, Council Chambers
749 Main Street
6:30 PM

Call to Order – Vice Chair **Baskett** called the meeting to order at 6:30 PM.

Roll Call was taken, and the following members were present:

Commission Members Present:	Debra Baskett, Vice Chair David Bangs Jennifer Hunt Jonathan Mihaly
Commission Members Absent:	Steve Brauneis, Chair Cullen Choi, Secretary Jeff Moline
Staff Members Present:	Jeff Hirt, Planning Manager Emily Cline-Gibson, Planner II Ben Jackson, Planning Clerk

APPROVAL OF AGENDA

Motion to approve the agenda was moved by **Hunt**, seconded by **Mihaly**, and adopted by voice vote.

PUBLIC COMMENTS ON ITEMS NOT ON THE AGENDA

Michael Reis, resident, wanted to encourage extra meetings for the Commission to accommodate an expedited process for some affordable housing projects, gave reasons for this, including as this would enable them to apply for state grant funding.

PUBLIC HEARING ITEMS – NEW BUSINESS

a. **Planned Unit Development (PUD) Amendment** – Resolution 9, Series 2025 recommending to the City Council approval of a PUD amendment for solar canopies and other exterior building changes on a commercial building in the Colorado Tech Center (CTC) at 600 Tech Court.

Staff Presentation:
ECG introduced presentation for PUD amendment. Noted that proposal was for solar canopy and signage changes. Covered background of the site, and current use. Noted proposed waivers for yard and bulk standards and for the sign code, and that these were reasonable.

Staff Recommendation:
Staff recommended approval of Resolution 9, Series 2025.

Commissioner Questions of Staff:
Bangs asked about height of existing storage tanks.
ECG said approx. 35ft.
Bangs on waivers.
ECG confirmed.

Commissioner Questions of Applicant:
None was heard.

Public Comment:
None were heard.

Commissioner Discussion:
Hunt said she had no issues, was in support.
Mihaly said in support of both shade and added solar. Concerns about tanks were resolved, so in support.
Bangs in support.
Baskett said well-informed from packet, in support. Noted importance of landscaping in the CTC.

Motion to approve Resolution 9, Series 2025 was moved by Mihaly and seconded by Bangs. The motion was adopted by a vote of 4 to 0.

PLANNING COMMISSION COMMENTS

None were heard.

STAFF COMMENTS

Comprehensive Plan Update from Hirt. Noted that draft was expected for Planning Commission in about a month. Floated a second July meeting.

Discussion on public comment provided by Tamar Krantz and potential for second July meeting.

ADJOURNMENT

Motion to adjourn was moved by **Hunt**, seconded by **Bangs**, and adopted by voice vote. The Commission adjourned at 6:54 pm.

City Council

July 8, 2025

600 Tech Court

Resolution No. 47, Series 2025 – A Resolution Approving the Louisville Corporate Campus at CTC Planned Unit Development #2.

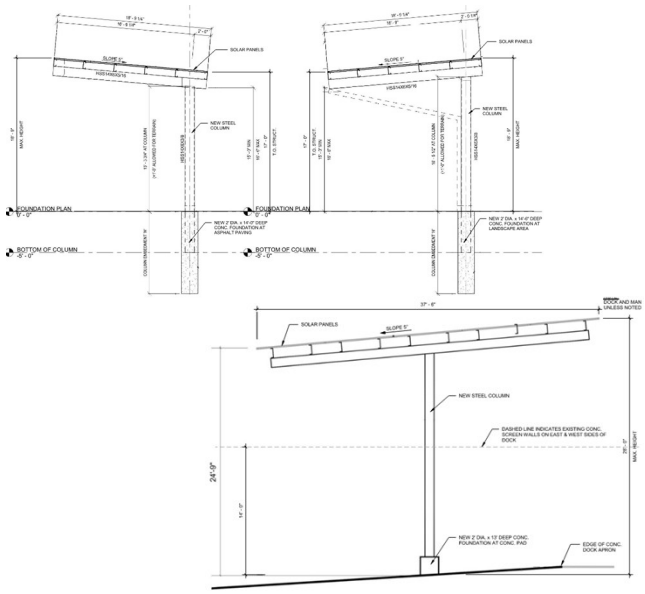
Presented by: Emily Cline-Gibson, Planner II

Background

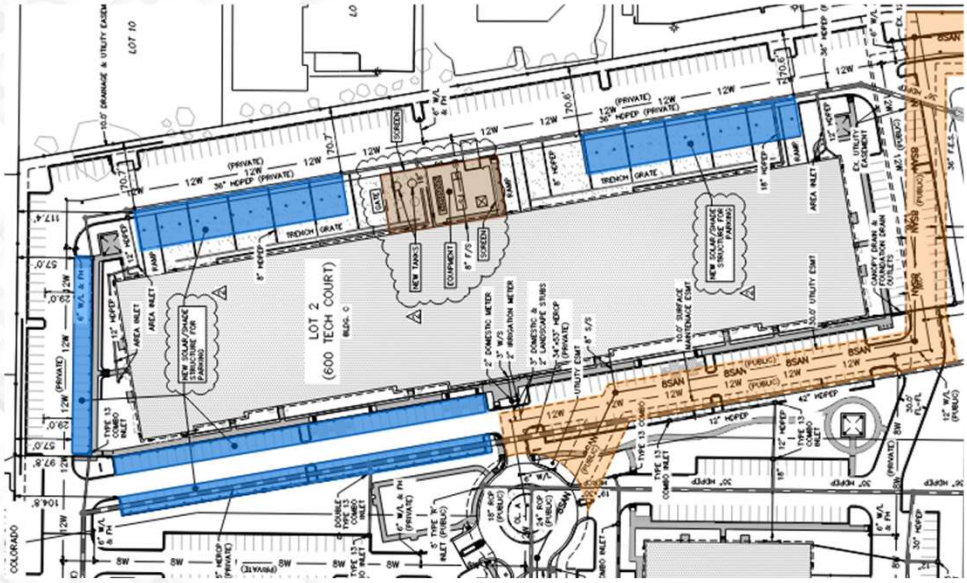
- Industrial zoned.
- Louisville Corporate Campus at CTC Planned Unit Development (PUD).
  - Approved in 2017
- Amendment #1 approved in 2019 for changes to Lot 1.
- Proposed Amendment #2 is for Lot 2 only.

Proposal

- Install solar canopies
- Install a wall sign
- Expand equipment yard
- Install 2 storage tanks
- 4 waiver requests
  - 3 waivers to Yard & Bulk Standards
  - 1 waiver to the Sign Code



City of Louisville

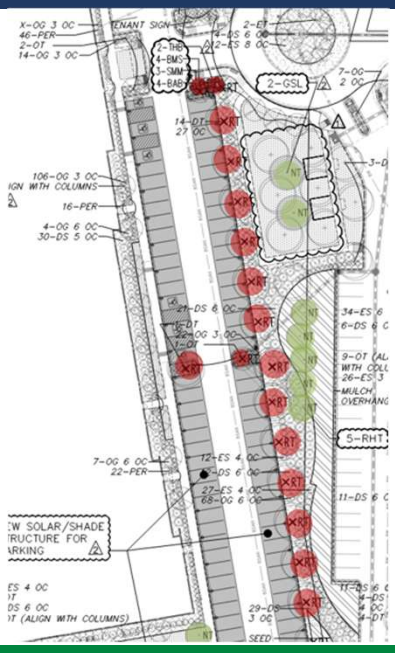


City of Louisville

Proposal

Solar Canopy Installation

- 33,500 square feet of canopy structures.
- Western front and side parking, plus rear truck court.
- Maximum heights 18.75-28 feet.
- 20 trees to be removed, 20 new trees to be planted.

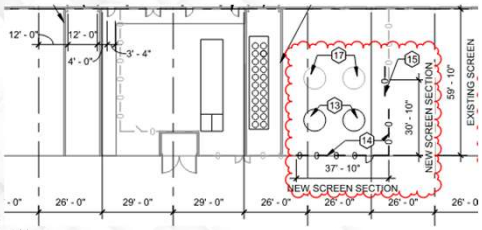


City of Louisville

Proposal

Mechanical Yard Expansion

- 30.8 x 37.8 expansion
- New size and screening materials will match existing yard.
- Expansion allows for the installation of 2 new 45-foot-tall storage tanks.



Wall Sign Installation

- Sign to be located along front façade.
- Maximum height of 4 feet.
- Waiver required for height.

City of Louisville

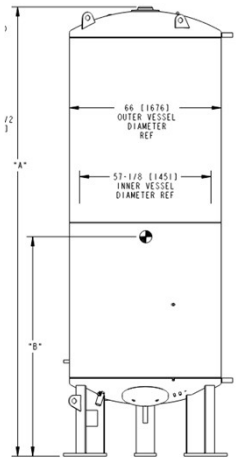
Waivers

Waivers from Yard and Bulk Standards

1. Allow a front yard setback of 10 feet for accessory structures.
2. Allow a maximum height of 45 feet for the storage tanks.
3. Allow a maximum height of 28 feet for the solar canopies.

Waiver from the Sign Code

1. Allow a maximum wall sign height of 4 feet.



City of Louisville

Analysis

- Four waivers requested, otherwise meets applicable criteria of IDDSG and LMC.
- No changes proposed to building and site layout.
- Minimal impacts to existing circulation patterns.
- Replacement trees are of similar species as existing and same amount to be replanted.

City of Louisville

Analysis: Waivers

Waivers from Yard and Bulk Standards

- Reduced front yard setback allows for solar canopy structures to provide cover for parking spaces.
- Increased canopy height allows for truck clearance.
- Increased storage tank height allows for proper equipment to be used.

Waiver from Sign Code

- Increased sign height allows for visibility from Dillon Road.

Recommendation

Planning Commission

Planning Commission unanimously recommended approval as presented at a public hearing on June 12th, 2025.

Staff

Staff recommends approval of Resolution No. 47, Series 2025 – A Resolution Approving the Louisville Corporate Campus at CTC Planned Unit Development Amendment #2

City of Louisville

City of Louisville
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CITY COUNCIL COMMUNICATION
AGENDA ITEM 10E

SUBJECT: **ORDINANCE NO. 1896, SERIES 2025 – AN ORDINANCE AMENDING LOUISVILLE MUNICIPAL CODE SECTION 17.72.190 REGARDING YARD AND BULK REQUIREMENTS FOR GENERAL DEVELOPMENT PLANS – 2nd READING PUBLIC HEARING (advertised City of Louisville Website 06/16/2025)**

DATE: **JULY 8, 2025**

PREPARED BY: **ROB ZUCCARO, AICP, COMMUNITY DEVELOPMENT DIRECTOR**

PRESENTED BY: **ROB ZUCCARO, AICP, COMMUNITY DEVELOPMENT DIRECTOR**

SUMMARY:
The applicant, Portercare Adventist Health Systems, has submitted a proposed amendment to Louisville Municipal Code (LMC) Sec. 17.72.190 - Yard and Bulk Requirements (see Attachment Nos. 1 and 2 for draft ordinance and application respectively). The proposed amendment would allow General Development Plans (GDPs) for properties zoned Planned Community Zone District (PCZD) to specify the desired yard and bulk standards, including building setbacks, building height, and lot coverage. The current ordinance limits yard and bulk standards to be in "general conformance" with certain existing zoning districts. The following reflects the proposed amendments:

> ***Sec. 17.72.190. Yard and bulk requirements.***
>
> *Yard and bulk requirements under a planned community zone district shall be specified on the general development plan filed for the different areas of the district. Such yard and bulk requirements shall be consistent with the comprehensive development plan or other adopted plan of the city and the desired character of the district. ~~Such~~ If not specified in the general development plan for an area of the district, the yard and bulk requirements shall be in general conformance with the yard and bulk requirements set forth in chapter 17.12 of this Code. based on the most similar zoning district ~~Yard and bulk requirements set forth in the general development plan shall be in general conformance with the zones~~ as set forth below:*
>
> *Agricultural use—A Zone.*
> *Industrial use — I Zone.*
> *Commercial and office use — C-N, C-B, C-C, O Zones.*
> *Residential use — R-E, R-L, R-M, R-H, SF Zones.*

The proposed ordinance amendment would be broadly applicable to all property in the City zoned PCZD. The applicant owns several properties within the City, including all properties located within the Avista Adventist Hospital GDP and Lot 1, Block 2 Redtail Ridge Filing No. 1 located within the ConocoPhillips Campus GDP.

BACKGROUND / PRIOR DISCUSSIONS:
The City established the PCZD and standards for GDPs by Ordinance No. 806, Series 1983. This ordinance limited yard and bulk standards for GDPs to be in "general conformance" with existing comparable yard and bulk standards in the zoning code (see Attachment Nos. 3 and 4 for ordinance and City Council public hearing minutes respectively). While the ability to alter yard and bulk standards with a GDP is limited, most property within a GDP district is also subject to a future Planned Unit Development (PUD) approval and yard and bulk standards could be waived with the PUD process after the City approves a GDP. LMC Sec. 17.28.110 provides the waiver standards for PUDs:

> *…any such requirements may be waived or modified through the approval process of the planned unit development if the spirit and intent of the development plan criteria contained in section 17.28.120 are met and the city council finds that the development plan contains areas allocated for usable open space in common park area in excess of public use dedication requirements or that the modification or waiver is warranted by the design and amenities incorporated in the development plan, and the needs of residents for usable or functional open space and buffer areas can be met.*

Some previously approved GDPs include yard and bulk standards that differ significantly from the comparable zoning despite the restrictions in Sec. 17.72.190. For example, the Avista Adventist Hospital GDP, approved in 2002, allows building heights up to four stories and 63' to the roof and 77' to the mechanical screen. The adopted comparable zoning standards limits height to 35' to the roof and 42' to the mechanical screen. In 2010, with the approval of the ConocoPhillips Campus GDP, the City recognized that Section 17.72.190 did not allow significant deviations from the adopted comparable zoning standards and that any differences between the GDP and the comparable zoning could be subject to legal challenge.

ANALYSIS:
LMC Sec. 17.72.010 states the purpose of the PCZD, including that the district is to encourage "the use of contemporary land planning principles and coordinated community design…." Any property that is zoned PCZD must be at least 30 acres in size and under single ownership at the time the City designates the property as PCZD and approves the GDP. Effectively, the GDP establishes a master-planned custom zoning for larger parcels that reflect the intended character of the district outside of what the City's standard districts provide.

LMC Sec. 17.72.030 lists the minimum content of a GDP:

> *A. The proposed use of all lands within the subject property;*
>
> ***B. The type or character of development and the number of dwelling units per gross acre proposed;*** *[emphasis added]*

C. The proposed location of school sites, parks, open spaces, recreation facilities and other public and quasi-public facilities;

D. The proposed location of all streets shall be coordinated with the adopted general street plan for the city.

Subsection B typically results in the GDP establishing design standards custom to the planned community zone district, including yard and bulk standards, which are also explicitly required under Sec. 17.72.190. However, the adopted standards may not reflect the actual intended character of the development due to the restrictions in the current code language. Consequently, the intent and purpose of the PCZD GDP to establish "contemporary land planning principles and coordinated community design" and to outline the "type and character of development" could be seen in conflict with Sec. 17.72.190.

Removing the restrictive language in Sec. 17.72.190 that requires "general conformance" of yard and bulk standards with baseline zoning standards would allow the City to adopt GDP standards that more comprehensively set the intended character of the district. The primary argument to defer to the future PUD process is that the PUD will provide complete architectural and site plans for the proposed development and any yard and bulk waivers can be considered in the context of the full set of plans. However, design standards and other restrictions can be established as part of a GDP to address site design. For example, a GDP that allows buildings taller than three stories could establish standards for building materials, building step backs and articulations, and define zones or critical view corridors within the GDP area where building height should be treated differently. The subsequent PUD then must demonstrate compliance with the design standards.

2025 COUNCIL WORK PLAN:

The 2025 City Council Work Plan establishes four priorities, and initiatives within each of the four priorities. Under the Economic Vitality priority, City Council has set a goal to initiate targeted code amendments ahead of the Comprehensive Plan adoption and land development code rewrite that will follow (see Figure 1 below). Even though this code amendment is not being initiated by the City, it could be considered to fall under this section of the 2025 City Council Work Plan.

Figure 1: City Council 2025 Work Plan Excerpt

2025 Comprehensive Plan Implementation - **Targeted Development Code Amendments**	Identify near term, targeted, priority development code updates to implement the 2025 Comprehensive Plan that should occur prior to the development code rewrite project that is planned to begin in early 2026. Such code changes include but are not limited to parts of Title 16 (Subdivisions) and Title 17 (Zoning).	Potential council actions include discussion and direction, if needed, as well as adoption of targeted code amendments.

One of the primary purposes of the anticipated land development code rewrite is to provide more predicable codes and procedures. Current codes and procedures are generally considered to be outdated and in need of modernization. The subject ordinance, for example, originated in 1983. Another purpose of the land development code rewrite is to create a more business-friendly approach to land development review processes in the City. This targeted amendment to Sec. 17.72.190 eliminates a vague and contradictory section of the current land development code and will allow more predictable processes for PCZD zoned properties and for the implementation of GDPs.

FISCAL IMPACT:
Budgeted?: **Not Applicable**
Approval of the ordinance could lead to reduced demand on staff time for development review by providing more clarity to applicants and staff on the desired character of development in PCZD zoned districts.

ALTERNATIVE(S):
Alternatives Include:

- Adopt the amended code language as drafted. This will update the standards for GDPs to allow establishment of yard and bulk standards that reflect the final desired condition within the district.
- Decline to adopt the amended code language. This will maintain the current process of requiring yard and bulk standards to be listed on GDPs but require that they be in "general conformance" with certain zoning districts, and thus, require PUD waivers if there is going to be any deviation from the referenced zoning districts.

PLANNING COMMISSION RECOMMENDATION:
At their May 8, 2025 meeting, the Planning Commission passed Resolution 6, Series 2025 recommending approval of the draft ordinance concerning yard and bulk standards for GDPs as drafted (see Attachment No. 6 for resolution and Attachment No. 7 for draft minutes). The meeting video is at the following link (minutes 0:6:45 - 1:02:45)

Link: www.youtube.com/watch?v=KLxYJfEzTOY

STAFF RECOMMENDATION:
Staff recommends approval of Ordinance No. 1896, Series 2025 as drafted.

ATTACHMENT(S):

1. Ordinance No. 1896, Series 2025
2. Application
3. Ordinance No. 806, Series 1983
4. August 16, 1983 City Council Minutes
5. Public Comment

6. Planning Commission Resolution No. 06, Series 2025
7. Draft May 8, 2025 Planning Commission Minutes
8. Presentation

ORDINANCE NO. 1896
SERIES 2025

AN ORDINANCE AMENDING LOUISVILLE MUNICIPAL CODE SECTION 17.72.190 REGARDING YARD AND BULK REQUIREMENTS FOR GENERAL DEVELOPMENT PLANS

WHEREAS, the City of Louisville (the "City"), is a Colorado home rule municipal corporation duly organized and existing under laws of the State of Colorado and the City of Louisville Home Rule Charter (the "City Charter");

WHEREAS, Chapter 17.72 of the Louisville Municipal Code ("LMC") sets forth standards for the Planned Community Zone District, which include approval of general development plans with supplemental development standards for property within the boundaries of the plans; and

WHEREAS, the City desires to amend the standards for the Planning Community Zone District so that yard and bulk requirements may be established through a general development plan that are different from those of the corresponding zone districts, so long as such yard and bulk requirements are consistent with the City's comprehensive development plan or other adopted plan of the City and they further the desired character of the district; and

WHEREAS, after a duly noticed public hearing held May 8, 2025, where evidence and testimony were entered into the record, including the Louisville Planning Commission Staff Report dated May 8, 2025, the Louisville Planning Commission has recommended the City Council adopt the amendments to the LMC set forth in this ordinance;

WHEREAS, City Council has provided notice of a public hearing on said ordinance by publication as provided by law and held such public hearing.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO:

Section 1. Section 17.72.190 of the Louisville Municipal Code is hereby amended to read as follows (words to be added underlined; words to be deleted ~~stricken~~):

Sec. 17.72.190. Yard and bulk requirements.

Yard and bulk requirements under a planned community zone district shall be specified on the general development plan filed for the different areas of the district. Such yard and bulk requirements shall be consistent with the comprehensive development plan or other adopted plan of the city and the desired character of the district. ~~Such~~ If not specified in the general

development plan for an area of the district, the yard and bulk requirements shall be in general conformance with the yard and bulk requirements set forth in chapter 17.12 of this Code~~.~~ based on the most similar zoning district ~~Yard and bulk requirements set forth in the general development plan shall be in general conformance with the zones~~ as set forth below:

Agricultural use—A Zone.
Industrial use — I Zone.
Commercial and office use — C-N, C-B, C-C, O Zones.
Residential use — R-E, R-L, R-M, R-H, SF Zones.

Section 2. If any portion of this ordinance is held to be invalid for any reason, such decision shall not affect the validity of the remaining portions of this ordinance. The City Council hereby declares that it would have passed this ordinance and each part hereof irrespective of the fact that any one part be declared invalid.

Section 3. The repeal or modification of any provision of the Municipal Code of the City of Louisville by this ordinance shall not release, extinguish, alter, modify, or change in whole or in part any penalty, forfeiture, or liability, either civil or criminal, which shall have been incurred under such provision, and each provision shall be treated and held as still remaining in force for the purpose of sustaining any and all proper actions, suits, proceedings, and prosecutions for the enforcement of the penalty, forfeiture, or liability, as well as for the purpose of sustaining any judgment, decree, or order which can or may be rendered, entered, or made in such actions, suits, proceedings, or prosecutions.

Section 4. All other ordinances or portions thereof inconsistent or conflicting with this ordinance or any portion hereof are hereby repealed to the extent of such inconsistency or conflict.

INTRODUCED, READ, PASSED ON FIRST READING AND ORDERED PUBLISHED this 3rd day of June, 2025.

Christopher M. Leh, Mayor

ATTEST:

Genny Kline, Interim City Clerk

CITY OF LOUISVILLE SEAL COLORADO

APPROVED AS TO FORM:

_____
Kelly PC, City Attorney

PUBLIC HEARING AND SECOND READING WILL BE THE 8th **DAY OF** July **, 2025, AT 6:00 P.M. AT LOUISVILLE CITY HALL, 749 MAIN STREET, LOUISVILLE, CO 80027.**

PASSED AND ADOPTED ON SECOND AND FINAL READING, this __ day of _____, 2025.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Genny Kline, Interim City Clerk

Development Review Application Form

Please complete this form and include it with the submittal documents for your development review application. Applications will not be processed until all required information is provided to the satisfaction of the City of Louisville Planning Department.

Property Information

Common Address(es): _____

Legal Description:

Lot 1 Block 2 Subdivision Redtail Ridge Filing No. 1

Lot Area: _____ Sq. Ft. or 40 Acres

LAND USE PROCESS (check all that apply)

- ☐ Annexation
- ☐ Concept Plan
- ☐ Easement Vacation
- ☐ Oil and Gas
- ☐ General Development Plan (GDP)
  - ☐ Amendment
  - ☐ New GDP
- ☐ Planned Unit Development (PUD)
  - ☐ Amendment
  - ☐ Preliminary
  - ☐ New PUD
- ☐ Rezoning
- ☐ Special Review Use (SRU)
  - ☐ Amendment
  - ☐ New SRU
- ☐ Subdivision
  - ☐ Final or Replat
  - ☐ Preliminary Plat
- ☐ Temporary Use Permit
- ☐ Variance
- ☐ Vested Property Right
- ☐ Wireless Facility
- ☒ Other: Zoning Text Amendment

PROJECT DESCRIPTION:

Development of AdventHealth Louisville
Zoning Text Amendment to Sec. 17.72.190
Regarding GDP Yard and Bulk Standards

Property Owner Information

Name: BRETT SPENST Entity (if applicable) PORTERCARE ADVENTIST HEALTH SYSTEM

Address: 6061 S. WILLOW DRIVE, SUITE 210, GREENWOOD VILLAGE, CO 80112

Phone: _____ Email: BRETT.SPENST@ADVENTHEALTH.COM

Application Representative Information

Name: VALERIE WILKINS Entity (if applicable) ADAMS MANAGEMENT SERVICES

Address: 336 BROAD STREET, SUITE 300, ROMA, GA 30161

Phone: 720-799-3041 Email: VWILKINS@ADAMSPMC.COM

Certification/Signature

I certify that the information I have submitted is true and correct to the best of my knowledge and in filing the application and submittal documents, I am acting as and/or with the knowledge and consent of those persons who are owners of the subject property or are parties to this application.

Signature*	BRETT SPENST	04/10/2025
	Print Name	Date

***If acting as a representative/agent of the owner, include written authorization from the owner that certifies the agent's right to submit this application**

April 7, 2025

VIA EMAIL

Rob Zuccaro, Community Development Director
City of Louisville
749 Main Street
Louisville, CO 80027

Re: Code of Ordinance Amendment Request
Redtail Development – AdventHealth Louisville

Dear Rob:

Below please find the request to amend Code of Ordinance Title 17 - Zoning, Chapter 17.72 Planned Community Zone District, Section 17.72.190 Yard and Bulk Requirements.

Sec. 17.72.190. Yard and bulk requirements.
Yard and bulk requirements under a planned community zone district shall be specified on the general development plan filed for the different areas of the district. Such yard and bulk requirements shall be consistent with the comprehensive development plan or other adopted plan of the city and the desired character of the district. If not specified in the general development plan for an area of the district, the yard and bulk requirements shall be in general conformance with the yard and bulk requirements set forth in chapter 17.12 of this Code based on the most similar district as set forth below:

Agricultural use—A Zone.
Industrial use — I Zone.
Commercial and office use — C-N, C-B, C-C, O Zones.
Residential use — R-E, R-L, R-M, R-H, SF Zones.

Please advise any additional information is needed. Thank you for your assistance with this matter.

Sincerely,

Brett Spenst
AdventHealth Rocky Mountain Region
President and CEO

ORDINANCE 806

AN ORDINANCE AMENDING TITLE 17 OF THE LOUISVILLE MUNICIPAL CODE BY PROVIDING FOR A NEW ZONING DISTRICT WITHIN THE CITY OF LOUISVILLE CALLED THE PLANNED COMMUNITY ZONE DISTRICT.

WHEREAS, the City Council of the City of Louisville believes that a new zoning district would serve the purposes of the City; and

WHEREAS, the City Council believes that the establishment of a planned community zone district within the City would aid in the orderly planning and growth of the City.

NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO:

Section 1. The following Chapter 17.72 is hereby added to Title 17 of the Louisville Municipal Code:

17.72 Planned Community Zone District

17.72.010 Purpose

The purpose of the planned community zone district is to encourage, preserve and improve the health, safety and general welfare of the people of the City by encouraging the use of contemporary land planning principles and coordinated community design. The planned community zone district is created in recognition of the economic and cultural advantages that will accrue to the residents of an integrated, planned community development of sufficient size to provide related areas for various housing types; retail and service activities; recreation, schools, public facilities; and other uses of land. This district is designed for use where the area comprising such development project is under single ownership or control at the time of its classification of this district.

17.72.020 Minimum Planned Community Area

(a) The minimum area required for a planned community zone district is one hundred sixty (160) contiguous acres and must be held under single ownership at the time of the application for such zone.

(b) An area of less than one hundred sixty (160) contiguous acres may be added to an existing planned community zone district, provided such land is made a part of the original or existing planned community general development plan prior to its incorporation into such district by way of amendment of the planned community general development plan.

(c) In the computation of the minimum one hundred sixty (160) acres, those areas included in any public right-of-way may be included in such computation to the section line.

17.72.030 Procedure and Applicability

The planned community zone district may be applied only to such land as the city shall determine to be suitable for such a development. Any request to place property in a planned community zone district shall be accompanied by a general development plan for the entire property to be zoned as a planned community district. The form of the which general development plan must be first approved by the director of community development prior to its submission to the planning commission for review and prior to adoption by City Council. Such development plan shall consist of a map or maps, together with supplementary text materials, and an agreement between Developer and City which includes a phasing plan, shall set forth the following:

(1) The proposed use of all lands within the subject property;

(2) The type of character of development and the number of dwelling units per gross acre proposed;

(3) The proposed location of school sites, parks, open spaces, recreation facilities and other public and quasi-public facilities;

(4) The proposed location of all streets shall be coordinated with the adopted general street plan for the City.

17.72.040 Action Before the Planning Commission and City Council

(a) The planning commission shall conduct a public hearing on the proposed zoning request and general development plan under this article, and make recommendation to City Council with respect to the request and plan.

(b) The City Council shall establish a date for a public hearing to consider the zoning application and general development plan which shall take place within sixty (60) days of the planning commission's recommendation. The City Council shall then approve such zoning by ordinance and the general development plan, not grant such zoning or approval of the plan or refer the question back to the planning commission for additional consideration by the Planning Commission.

17.72.050 General Plan and Standards of Development

The planned community general development plan and supplementary development standards, after approval and adoption as provided herein, shall be recorded in the office of the county clerk and recorder of the proper county, and all development within the district shall substantially comply therewith, unless the development plan is amended. The standards and regulation contained in this article, together with any amendments thereto as may be adopted, shall limit and control the issuance and validity of all building and occupancy permits within the planned community zone district.

17.72.060 Amendment

(a) Any adopted planned community general development plan and supplementary development standards may be amended, revised or territory added thereto, pursuant to the same procedure and subject to the same limitations and requirements by which such plan was originally approved.

(b) The director of community development may permit amendments to the planned development community general plan, when such amendments will not effect an increase in the permitted gross density of dwelling units or result in a change in character of the overall development plan. Any such amendment by the director of community development shall have approval by City Council prior to the amendment becoming effective or City Council may direct that such change be made as through (a) of this section.

17.72.070 Planning Area

The terms "planning area", as used herein, shall be defined as an area within the planned community zone district, as

shown on the adopted planned community general development plan. The planning areas are designated as to general land use categories, such as residential, commercial, industrial, agricultural, office, and public uses. Unless otherwise specified by the adopted planned community general development plan, the uses permitted within each planning area and the corresponding development standards shall be as set forth herein.

17.72.080 Residential

(a) Generally. It is the intention of this section to promote the development of balanced residential neighborhoods containing a variety of housing types and related recreational and community facilities.

(b) Uses permitted. The following uses may be permitted within any planning area designated for residential use by the adopted planned community general development plan:

(1) Single-family detached dwellings;

(2) Single-family attached dwellings;

(3) Multiple-family dwellings;

(4) Churches and synagogues;

(5) Public and private schools;

(6) Municipal recreational areas;

(7) Public libraries;

(8) Golf courses and country clubs;

(9) Institutions for higher education;

(10) Clubs and lodges;

(11) Private, noncommercial recreational facilities;

(12) Accessory structures and uses necessary and customarily incidental to the above uses;

(13) Governmental and public facilities;

(14) Family care home.

17.72.090 Commercial and Office

(a) Generally. This section is intended to promote the development and well-planned shopping centers and facilities that provide a variety of shopping, professional, business, cultural and entertainment facilities designed to create an attractive and pleasant shopping atmosphere.

(b) Uses permitted. The following commercial and noncommercial uses may be permitted within any planning area designed "commercial" on the adopted planned community development general plan:

(1) Any retail trade or service business;

(2) Professional, business and administrative offices;

(3) Motels and hotels;

(4) Cultural facilities, such as museums, theaters, art galleries and churches;

(5) Pedestrian plazas and pedestrian ways, including such amenities as outdoor art exhibit facilities, statuary, fountains and landscaping features;

(6) Outdoor specialty uses, including sidewalk cafes and outdoor market places to provide unique congregating places for sales and shopper interes;

(7) Recreational facilities, both indoors and outdoors, such as ice skating and roller skating rinks which may be designed as intergral parts of a center;

(8) Restaurants, both indoor and drive-in types, food-to-go facilities, sidewalk cafes;

(9) Hospitals and medical clinics;

(10) Transportation terminals, parking lots and parking buildings;

(11) Animal hospitals and clinics;

(12) Automobile service stations, subject to prescribed performance and development standards;

(13) Nursing and rest homes;

(14) Small and large child care centers;

(15) Financial offices, including banks and savings and loans;

(16) Accessory structures and uses necessary and customarily incidental to the above uses;

(17) Governmental and public facilites.

17.72.100 Industrial

(a) Uses permitted. The following industrial and nonindustrial uses may be permitted within any planning area designated "industrial" on the adopted planned community development general plan:

(1) All those uses permitted in the I - industrial zone of the City;

(2) Automobile service stations, subject to prescribed performance and development standards;

(3) Other uses as established by City Council for industrial planning areas;

(4) Governmental and public facilities.

17.72.110 Agriculture Areas

Within the planned community zone district, the continued use of the land for agricultural purposes and other uses similar in character and all necessary structures and appurtenances shall be permitted. These areas are subject to further planning consideration as development progresses. Until such time, these planning areas shall be reserved primarily for agricultural pursuits, particularly for crops and cattle raising.

17.72.120 Open Area

Open space areas are intended to be preserved in a non-developed manner. Permitted uses shall include agricultural and open areas with no structures being allowed to be constructed except those which are necessary for the agriculture uses. No commercial activity shall be allowed in the area.

17.72.130 Automobile Service Station Standards

The following performance and development standards shall apply to all permitted automobile service station uses within a planned community zone district.

(1) Uses permitted: An automobile service station shall be a retail place of business engaged in the sale of motor fuels and in supplying goods and services generally required in the operation and maintenance of automotive vehicles and the fulfilling of motorists' needs. Major automotive repairs, painting, body and fender work are prohibited.

(2) Building line regulations: Building setback line for all structures shall be twenty (20) feet from the ultimate street right-of-way line, except canopy roofs over pump islands and lighting fixtures may be cantilevered to within five (5) feet of the ultimate street right-of-way line.

(3) Exterior displays and trash and storage: No displays or storage of merchandise, automobiles, parts or refuse shall be located closer than twenty (20) feet from the ultimate street right-of-way line, and all trash and refuse shall be stored in a building or within an area enclosed by a wall at least six (6) feet high.

(4) Lighting: All lighting shall be designed and located so as to confine direct rays to the premises.

(5) Outside activity: All activities, other than the sale of motor fuels and the normal services incidental thereto, are prohibited outside of the main building.

(6) Screening: A masonry wall shall be installed and maintained along property lines where the premises abut a residential area. Such wall shall have a total height of not less than six (6) feet, except within twenty (20) feet of any ultimate street right-of-way line, where the height shall be not less than three (3) feet nor more than three and one-half (3 1/2) feet.

(7) Landscaping:

(a) Boundary landscaping is required for a minimum depth of five (5) feet along all property lines abutting streets, except for the area required for street openings.

(b) Any landscaped area shall be separated from an adjacent vehicular area by a wall or curb at least six (6) inches higher than the adjacent vehicular area.

(c) Permanent watering facilities shall be provided for all landscaped areas.

(d) Required landscaping shall be maintained in a neat, clean and healthy condition. This shall include proper pruning, mowing of lawns, weeding, removal of litter, fertilizing, replacement of plants, when necessary, and the regular watering of all plantings.

17.72.140 Boundaries and Dimensions

Planning area boundaries shall not be construed as precise boundaries; provided, that all development subject to a particular planning area substantially conforms to such planning area boundaries, as shown on the planned community development general plan. Unless otherwise indicated on the planned community development general plan, planning area dimensions shall be determined by scale, measured from centerlines of street.

17.72.150 Development of Plan

The construction and development of every planned community general plan shall be commenced within a time mutually agreed upon. All development within the district shall occur in accordance with the provision of Title 16 and Title 17 of the Louisville Municipal Code.

17.72.160 Effect of Registered and Recorded Plans

All final plans registered and recorded or filed hereinder shall be binding upon the applicants therefor, their

successors and assigns, shall limit and control the issuance and validity of all building permits and shall restrict and limit the construction, location, use and operation of all land and structures included within such plans to all conditions, and limitations set forth in such plans.

17.72.170 Amendment of Approved Plans

Amendment of plans previously approved shall be pursuant to the same procedure and subject to the same limitations and requirements by which such plans were originally approved.

17.72.180 Filing Fees

(1) Application for planned community zoned district is $10.00 per acre.

(2) Application for amendment to development plan is $500.00.

17.72.190 Yard and Bulk Requirements

Yard and bulk requirements under a planned community zoned district shall be specified on the general development plan filed for different areas of the district. Said yard and bulk requirements shall be in general conformance with the yard and bulk requirements set forth in Section 17.12.040 of the Louisville Municipal Code. Yard and bulk requirements set forth in the general development plan shall be in general conformance with the zones as set forth below:

Agricultural use - A zone

Industrial use - I zone

Commercial and Office use - C-N, C-B, C-C, O zones

Residential use - R-E, R-L, R-M, R-H zones

INTRODUCED, READ AND ORDERED PUBLISHED this 19th day of July, 1983.

Norbert A. Mevis
Mayor

ATTEST:

Cleo M. Murdock
City Clerk

ADOPTED AND APPROVED on second and final reading this 16th day of August, 1983.

Mayor

ATTEST:

City Clerk

ORDINANCE NO. 806

AN ORDINANCE AMENDING TITLE 17
OF THE LOUISVILLE MUNICIPAL CODE
BY PROVIDING FOR A NEW ZONING
DISTRICT WITHIN THE CITY OF
LOUISVILLE CALLED THE PLANNED
COMMUNITY ZONE DISTRICT.

The following amendments were passed and adopted with respect to Ordinance No. 806 on second and final reading:

17.72.030 Procedure and Applicability

Such development plans shall consist of a map or maps, together with supplementary text materials, and an agreement between developer and City which includes a phasing plan, and such development plan shall set forth the following:

17.72.060 Amendment

(b) Any such amendment by the director of community development shall have approval by City Council prior to the amendment becoming effective or City Council may direct such change be made through paragraph (a) of this section.

17.72.080 Residential

(b) 5. Public and Private Schools

17.72.120 Open Area

Open areas are intended to be preserved in a non developed manner. Permitted uses may include crop raising and animal husbandry and open areas with no structures being allowed to be constructed except those which are necessary for the crop raising and animal husbandry uses. No other commercial activities shall be allowed in the area.

ADOPTED AND APPROVED on second and final reading this 16th day of August, 1983.

Norbert A. Meier
Mayor

ATTEST:

Cleo M. Mudrock
City Clerk

The determination of the accessory use for STC would be given by the Variance Board should this situation arise; but solely as an added benefit for its employees.

Chief Building Inspector Steve Ferris - Licensing

Advised a use for a Day Care Center or any of the child care operations must have the approval of the State, then it is the City's responsibility to see that all the Codes are met, i.e. proper exits, etc.

Beth Avore, Fantasyland

Stated everyone having a child care center including STC would have to obtain a license from the State Department of Social Services.

Vote on Motion

Question called for on the amendment to Ordinance #804 to allow a Special Review Use in the Office Zone. All in favor. Motion carried unanimously.

Councilman Leary

Commented that a Neighborhood Child Care Center was for 1-12 children, anything over 12 would be considered a full Day Care Center i.e. LaPetite - wished to verify this. Attorney Rautenstraus advised this was so.

Mayor Meier closed the public hearing.

ADOPTION OF ORDINANCE #804 AS AMENDED

Councilman Fauson moved, Councilman Leary seconded that Ordinance #804 - Child Care Zoning be adopted as amended. Roll call vote:

Leary	Yes
Morris	Yes
Fauson	Yes
Cummings	Yes
Ferrera	Yes
Meier	Yes

Motion carried unanimously.

ORDINANCE #806 - PLANNED COMMUNITY ZONE DISTRICT PUBLIC HEARING

Councilmembers had a copy of the ordinance; Attorney Rautenstraus read it by title only and certified proper publication.

Mayor Meier opened the public hearing. Attorney Rautenstraus certified proper publication of the public hearing notices. He also advised that after the study session held by council the following changes were made to the ordinance - adding a section which required an agreement between the developer and the City, which included a phasing plan.

Amendments to the development plan which did not effect an increase in the density or would result in a character change of the development - would be reveiwed by the Director of Community Development but would not become effective until City Council had reviewed the plan and determined if they wished to make a change through a total zoning change as required through the original adoption of the zoning plan. Was also amended to allow for private schools when the use is permitted in residential areas. Also, a new type of use was added known as a lease - open space use. Generally would allow agricultural use but not structures.

Mayor Meier continued the public hearing and asked if there was anyone in favor of the ordinance - none. Anyone in opposition of the ordinance - none. Any public questions - none. Staff comments - Director Rupp stated they would recommend Council adopt the ordinance. Council comments or questions.

Councilman Leary

Wished clarification of the agricultural - open space use. Rautenstraus advised this would be that no commercial activity would be allowed. Suggested perhaps agricultural be changed to crop farming and animal husbandry pursuits.

Amendment to Ordinance #806

Councilman Leary moved, Councilwoman Morris seconded that an amendment be added to Ordinance #806 to change agricultural or open space to crop farming and animal husbandry use.

Councilman Ferrera

Wished to verify that this was not being designated - Open Space Zone. Rautenstraus advised that it was not, but rather that it was naming uses permitted in open space.

Mayor Meier

Remarked would then a golf course be considered and open space use, or would this ordinance preclude that use? Rautenstraus did not feel this use would be precluded, rather referred to drainage swales, or areas within a general development plan that were always going to be farms. Meier suggested that these be clearly defined in the ordinance, i.e. drainage swales, 100 year flood plain, 1500' buffer along Highway 36, etc. since it applies primarily to the Homart development.

Councilman Ferrera

Wished to verify - when a developer dedicates 12% of the property to the City as open space, does this mean that a park could not be built on the open space land, or perhaps construct a swimming pool. Rautenstraus advised that it did not, the open space term did not apply to property dedicated to the City or recreation uses, but would simply be an area that would always be set up for no development. Ferrera suggested the wording be changed to state undeveloped areas rather than open space.

Director Rupp

Stated he had a problem with this as he felt the intent of the zone is try to forecast what those uses are going to be in the future. Because their plans may be 5,10,15, or 20 years in the future. When the City is attempting to develop plans from the standpoint of open space, arterials, utitilies, etc. if there is a large area of 160 acres just as undeveloped, it is going to be very difficult to rationalize that in the future whether it is an acceptable use or not. He felt that in the general development plan there may be planning areas within that plan that would be just left for open areas; not to be developed at all and they should be so stated.

Councilman Leary

Asked how parks and golf courses are presented on the development plan? Rupp stated they would be within a planning area that might identify residential as the principle use or they may show 20 acres of public land dedication for public park, public school, fire station, etc. It could come in with residential, commercial or industrial zoning.

Addition to the Amendment of Ordinance #806

Councilman Leary moved, Councilwoman Morris seconded that the following be added to his original motion the wording "Open Space" under section 17.72.120 be changed to read "Open Areas"; also the word shall be changed to may include agricultural, etc. Discussion by council relative to number of acres for animal husbandry in respect to adjoining residential zones-to be dealt with in the agreement.

Vote on the Amendment

Question called for. All in favor. Motion carried unanimously.

Mayor Meier closed the public hearing on Ordinance #806.

ADOPTION

Councilman Cummings moved, Councilman Ferrera seconded that Ordinance #806 - Planned Community Zone District be adopted as amended. Roll call vote:

Morris	Yes
Cummings	Yes
Fauson	Yes
Meier	Yes
Leary	Yes
Ferrera	Yes

Motion carried unanimously.

RESOLUTION #27 - LA PETITE FINAL PLAT & P.U.D. & SPECIAL REVIEW USE

Councilmembers had a copy of the resolution; Attorney Rautenstraus read it in its entirety. Councilmembers were also provided with information from Director Rupp and recommendation of Planning Commission for approval. La Petite provided Council with copies of their Child Care Survey in Boulder County.

ADOPTION

Councilman Leary moved, Mayor Meier seconded that Resolution #27 - La Petite Final Plat and P.U.D. and Special Review Use be adopted.

Director Rupp

Advised he had added to the report those items that dealt with the Special Review Use, taken from the Code, i.e. location of the site, access, the intensity of use, environmental qualities and the department had no particular objection to the proposal.

Dennis Rosengarten, Applicant

Mr. Rosengarten stated that if Council had any questions he invited to the meeting, Ray Shelton one of the owners of the property, Frances Rock, the Colorado Director, and Ben LaFrance, National Director of Operations. He stated at the last Council meeting he attended several questions were brought up regarding traffic, safety, and the aspect of need as stated.

Councilwoman Morris

Commented that she felt the information provided did cover the questions of traffic impact and safety; however wished to know how the need was determined, i.e. 50, 100, or 200 children.

Frances Rock

Stated she was pleased with Council's concerns relative to the quality of the City. La Petite shared the concern of quality for their center. In regard to need, felt that choice was very important also. Since both parents work now

Rob Zuccaro

Subject: FW: Please reject Portercare Adventist Health Systems's application to amend Louisville Municipal Code Section 17.72.190

From: tamar krantz <tamarkrantz@gmail.com>
Sent: Saturday, May 3, 2025 1:23 PM
To: Planning <planning@Louisvilleco.gov>
Cc: Steve Brauneis <stevebrauneis@hotmail.com>
Subject: Please reject Portercare Adventist Health Systems's application to amend Louisville Municipal Code Section 17.72.190

Dear Planning Commissioners,

Please reject Portercare Adventist Health Systems's application to amend Louisville Municipal Code Section 17.72.190. If the applicant is seeking lot coverage and setbacks for their properties within the Avista GDP and the RTR (conocophillips) GDP, they should submit a PUD with their desired changes. Since this change is not associated with a PUD, it is not clear what their intentions are.

In your meeting packet, staff present this code change as a part of the anticipated development code rewrite that will come after the comprehensive plan. This should not be initiated with a quasi-judicial application. The packet includes the work plan item that allows for city council discussion and direction on targeted code amendments. Has there been any discussion and direction regarding yard and bulk requirements for GDPs? Residents should have the opportunity to discuss this with commissioners and their city council representatives.

If the applicant's intention is indeed to change the lot coverage and setback requirements for their properties, this packet doesn't include enough particulars. For example, Table 1, GDP Yard and Bulk Comparison gives a general indication of how this may affect the Conocophillips GDP. The GDP requires a 50 foot setback for buildings over 30,000 square feet. It seems to me that this code change would reduce that to 20 to 25. It would be useful to understand how this compares to existing setbacks for large commercial buildings so that commissioners can visualize this change.

Please address these code changes outside of the context of Avista's application. You should have the opportunity to analyze the impact of this change to all GDPs, not just a sampling. You should also have a complete analysis of the changes and impacts for all existing GDPs. Finally, I believe that there could be a more straightforward way to re-write this code for future GDPs– if any are anticipated.

Thanks for considering this.

Tamar Krantz
Louisville

==CAUTION: EXTERNAL EMAIL==

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RESOLUTION NO. 7
SERIES 2025

A RESOLUTION RECOMMENDING APPROVAL OF AN ORDINANCE AMENDING LOUISVILLE MUNICIPAL CODE SECTION 17.72.190 REGARDING YARD AND BULK REQUIREMENTS FOR GENERAL DEVELOPMENT PLANS

WHEREAS, the City of Louisville (the "City"), is a Colorado home rule municipal corporation duly organized and existing under laws of the State of Colorado and the City of Louisville Home Rule Charter (the "City Charter");

WHEREAS, the Planning Commission finds that the current standards in Louisville Municipal Code Sec. 17.72.190 are not consistent with the purpose of the Planned Community Zone District (PCZD) and associated General Development Plans (GDPs) to promote contemporary land planning principles and coordinated community design; and

WHEREAS, the Planning Commission desires to provide more flexibility as part of the GDP approval process to establish yard and bulk standards that are consistent with the City's Comprehensive Plan and the City's desired character for PCZD districts; and

WHEREAS, the Planning Commission has considered the proposal at a duly noticed public hearing on May 8, 2025, where evidence and testimony were entered into the record.

NOW THEREFORE, BE IT RESOLVED that the Planning Commission of the City of Louisville, Colorado does hereby recommend approval of an ordinance amending Title 17 of the Louisville Municipal Code to regarding yard and bulk requirements for GDPs.

PASSED AND ADOPTED this 8th day of May, 2025.

By: _____
Steve Brauneis, Chair
Planning Commission

Attest: _____
Cullen Choi, Secretary
Planning Commission

City of Louisville
COLORADO • SINCE 1878

MayPlanning Commission
Meeting Minutes
May 8, 2025
City Hall, Council Chambers
749 Main Street
6:30 PM

Call to Order – Chair **Brauneis** called the meeting to order at 6:30 PM.

Roll Call was taken, and the following members were present:

Commission Members Present:	Steve Brauneis, Chair Cullen Choi, Secretary David Bangs Jennifer Hunt Jonathan Mihaly Jeff Moline
Commission Members Absent:	Debra Baskett, Vice Chair
Staff Members Present:	Rob Zuccaro, Director of Community Development Jeff Hirt, Planning Manager Matt Post, Senior Planner Emily Cline-Gibson, Planner II Ben Jackson, Planning Clerk

APPROVAL OF AGENDA
Motion to approve the agenda was moved by **Moline**, seconded by **Hunt**, and adopted by voice vote.

PUBLIC COMMENTS ON ITEMS NOT ON THE AGENDA
None were heard.

PUBLIC HEARING ITEMS – NEW BUSINESS
a. **General Development Plan (GDP) Yard and Bulk Requirements Code Amendment** – Resolution 6, Series 2025 recommending to the City Council approval

of an ordinance amending Louisville Municipal Code Section 17.72.190 regarding Yard and Bulk Requirements for General Development Plans.

Staff Presentation:
Zuccaro introduced the presentation on proposed changes to the yard and bulk requirements. He noted that it was proposed by a property owner, but that it would still apply to the whole city. He explained that the change was intended to provide clarity when amending or approving a general development plan.

Staff Recommendation:
Staff recommended approval of Resolution 6, Series 2025.

Commissioner Questions of Staff:
Hunt asked to clarify the implications of the change. She asked whether this simply allowed applicants to define changes to the standards at the GDP stage rather than requiring waivers at the PUD stage.
Zuccaro said that the change provided additional flexibility, and would make it so that changes to the standards could be made at either the GDP stage or as waivers to the PUD stage as was currently the case.
Hunt asked whether staff would still work with applicants to determine appropriate zoning for the development.
Zuccaro said yes, applicants would still be required to work with staff if the proposed yard and bulk standards were significantly different from the normal standards, and to explain why this would be necessary.
Hunt asked whether the changes would give developers more certainty over their final designs.
Zuccaro said that this change would give developers more assurance that they would be able to proceed with their desired designs.
Hunt asked whether staff would still look at the other uses to set the yard and bulk requirements if the applicant opted not to do it during the GDP process.
Zuccaro said yes, and that they left this language in the ordinance as there were some GDPs that did not have yard and bulk standards.
Bangs asked whether developers would need to seek waivers from the yard and bulk requirements if the Commission did not approve the proposed code amendment.
Zuccaro said yes.
Bangs asked to clarify what comparable zone districts meant.
Zuccaro said that it was generally up to staff to determine which zoning type the proposed development would be most comparable to, though there was a general lack of clarity around this.

Zuccaro added that the proposals from applicants also had to be consistent with the Comprehensive Plan or another adopted policy of the City, and consistent with the desired character of the district.
Bangs asked why the change was necessary given the current waiver process seemed to work.
Zuccaro said that it was not always possible to guide applicants on what would be appropriate and passable waivers, making the process more complicated than it needed to be.
Bangs asked whether the code amendment would make it harder for the Commission to object to changes to the yard and bulk standards.
Zuccaro said that it would provide more predictability for the Commission and City Council.
Hunt asked whether the Planning Commission would still get a say on changes to the yard and bulk standards in the GDP process.
Zuccaro said that the Commission would still get a say on this when they consider a GDP or GDP amendment. He added that staff would analyze all proposals and provide recommendations to Commissioners.
Bangs asked how much definition of the standards would be in the Comprehensive Plan.
Zuccaro said that the Plan would not include any specific details.
Bangs asked about the downsides and risks of the proposal.
Zuccaro said that the main downside would be making a decision on the yard and bulk standards without seeing the final design, and that Commissioners would not have as specific information.
Brauneis noted that applicants could still apply for waivers beyond what would be approved in the GDP.
Choi asked to clarify whether the amendment would only apply to areas of 30 acres or larger that had a single owner.
Zuccaro said yes, and noted that it would only apply to properties zoned PCZD.
Choi asked how many of these properties existed in the city.
Zuccaro said he believed there were no more than 6.
Choi asked whether the property could then be sub-divided and sold off.
Zuccaro said that the 30 acre requirement only applied at the time of the establishment of the original GDP, and that future property owners could amend the GDP for their individual parcels.
Choi asked about the language regarding potential legal challenges in the amendment.
Zuccaro said that changes to the yard and bulk standards during the GDP process could be subject to legal action relating to their general conformance with the code.
Moline asked when a GDP was required.
Zuccaro said that a GDP was required when an applicant requested the PCZD zone district. He added that this was likely to mainly apply to GDP amendments given the limited scope for the creation of new PCZD zoned areas.

Brauneis asked when the last time an outside party requested a code amendment was.
Zuccaro said that it was pretty rare, and that he did not recall any in the last decade.

Applicant Presentation:
Mark Smith, resident, representing Advent Health Avista, He noted that Advent Health had purchased a 40 acre site in the Red Tail Ridge development, and were planning its future development. He said that they were in favor of the change as it would provide greater predictability and certainty in their planning and design process.

Commissioner Questions of Applicant:
Brauneis asked about the applicant's reasoning for their proposed major code change.
Smith said that they felt that the change would give them the clarity needed to make the project viable.
Bangs asked about how this would improve their design process over the existing PUD waiver process.
Valerie Wilkins, non-resident, of the development team, said that they can get through more comprehensive design planning earlier, and that they hope to simplify and speed up this process.
Bangs asked whether the yard and bulk requirements were clear for this development.
Zuccaro said that they were not clear on the GDP, particularly with regards to desired heights.
Bangs asked how long it would be before the applicant came before the Commission with their proposed designs.
Zuccaro said that they were currently discussing this with the applicant.
Wilkins said that they were going through the concept design, and intended to have a PUD ready by the end of the year.

Public Comment:
Tamar Krantz, resident, pooled with **Cindy Bodell**, resident, asked what changes Advent Health from the existing yard and bulk standards. She was concerned that it would just be a means to alter the existing GDP. She also objected to the unusual manner in which this proposal was brought before the Planning Commission.

Applicant Closing Statement:
Wilkins said that they were not planning any changes to setbacks for their future GDP amendment, and that this was just an example brought up in conversation.

Additional Commissioner Questions of Staff:
Mihaly asked how this would affect the GDP amendment process.
Zuccaro said that it would not affect existing GDPs or the GDP amendment process.

Hunt asked to clarify that the references to general conformance would only apply to GDPs that did not specify yard and bulk requirements.
Zuccaro confirmed this.

Commissioner Discussion:
Hunt said that she was in support, and that she liked the idea of providing more certainty to developers.
Moline said that he in support, and that the added clarity would be a benefit to the code and a benefit to the community.
Choi said that he was in support, and thought it would help ease the development process.
Mihaly said that his initial concerns were allayed by the presentations, and that he thought it would help make the city more business friendly. He was in support.
Bangs said that while he did not feel the existing PUD waiver process was broken such that it warranted major changes, he was supportive of the amendment as it would help improve the efficiency of the development process. He was in support.
Brauneis said that he was in support, and said that this would be beneficial for both developers and the city.

Motion to approve Resolution 6, Series 2025, was moved by **Hunt** and seconded by **Moline**. The motion was adopted by a vote of 6 to 0.

b. Advent Health PUD Amendment (Signage) - Resolution 7, Series 2025, recommending approval of a request for a Planned Unit Development (PUD) Amendment to replace existing freestanding signs and add a new wall sign on the hospital campus.

Staff Presentation:
Cline-Gibson introduced the presentation for the PUD amendment. She noted the location of the property, and where the changes to the existing signage were proposed. There had been previous changes to signage in 1997 and 2002 in accordance with periodic hospital rebranding. She also covered proposed waivers for the freestanding and wall signs. Staff found that the application met all of the criteria in the sign code. Staff also found that the requested waivers were appropriate.

Staff Recommendation:
Staff recommended approval of Resolution 7, Series 2025.

Commissioner Questions of Staff:
Choi asked whether all of the signs were proposed to be internally illuminated.
Cline-Gibson said yes.

Choi asked whether there would be a change in lumen output from the new signs.
Cline-Gibson said that there would not be any change.
Moline asked about the requirement for architectural base and border in the new code.
Cline-Gibson said that this was a requirement for freestanding signs, but was largely targeted at entrance signs rather than the wayfinding signs proposed here, hence the waiver.
Bangs asked about the current height of the sign facing US-36.
Cline-Gibson said she was not sure, but would check.
Brauneis wondered about the need and value of the sign facing the golf course and open space.
Cline-Gibson deferred to the applicant, but suggested that it was meant to be viewed from US-36.

Applicant Presentation:
Mark Smith, resident, CEO of Advent Health Avista, spoke to the importance of clear and visible signage for the hospital campus.

Commissioner Questions of Applicant:
Brauneis asked about the need for the sign facing the golf course.
Smith said that their desire was for the sign to be visible from US-36, as it is otherwise difficult to see the building from the freeway.
Brauneis asked whether the sign adjacent to US-36 would accomplish this.
Smith said that they would prefer to have both.
Hunt asked to confirm that the wall sign would directed towards eastbound US-36 traffic.
Smith said yes.
Moline asked whether there was an existing wall sign.
Brauneis said no.

Public Comment:
None were heard.

Applicant Closing Statement:
Smith thanked the Commission for their time.

Staff Closing Statement:
None was heard.

Additional Commissioner Questions of Staff:
Bangs asked whether there was any other illuminate signage in Louisville that faced US-36.
Cline-Gibson said not as far as she could recall.

Mihaly asked how the wall sign would look if it conformed to the sign code.
Cline-Gibson said that it would be somewhat smaller.

Commissioner Discussion:
Hunt said she thought the requests were reasonable, and was in support.
Bangs agreed.
Moline said he was in support.
Mihaly said that he was supportive, and thought that the waivers were minor enough to be reasonable.
Choi said that he was in support.
Brauneis said that he still had some concerns about the wall sign, but was ultimately in support.

Motion to approve Resolution 7, Series 2025, was moved by **Mihaly** and seconded by **Bangs**. The motion was adopted by a vote of 6 to 0.

c. **Parking Minimums Code Amendment** - Resolution 8, Series 2025 recommending to the City Council approval of an ordinance amending Title 17 of the Louisville Municipal Code (LMC) concerning parking minimums for multifamily and adaptive reuse development to comply with HB24-1304.

Staff Presentation:
Post introduced the presentation for the ordinance. He said that the change was required to bring the City into compliance with a new state law that prohibited minimum parking requirements in some circumstances. He outlined the parts of the city were parking minimums would no longer be permitted, and how the new policy would be implemented.

Staff Recommendation:
Staff recommended approval of Resolution 8, Series 2025.

Commissioner Questions of Staff:
Hunt asked whether the City can still apply its EV charging and accessibility requirements if developers choose to provide parking spaces.
Post said yes.
Brauneis asked whether the 228 bus met the definition of frequent transit.
Post said no because it only ran every 60 minutes instead of the 30 minute standard set by the legislation.
Brauneis asked whether a private shuttle that met the requirements could be considered a transit service.
Post said that this was considered by DOLA and could factor into the transit service area.

Bangs asked about the number of units that could be added with a reduced number of parking spaces.
Post said that he would expect the bill to produce greater density, though he noted that the City's density limits still applied.

Public Comment:
None were heard.

Staff Closing Statement:
None was heard.

Commissioner Discussion:
Hunt said that she was in favor.
Bangs said that he was in favor.
Moline said that he was in support.
Mihaly said that he was in support.
Choi said that he was in support.
Brauneis said that he was in support, and said that he would encourage staff and City Council to consider abolishing parking minimums in other areas of the city.

Motion to approve Resolution 8, Series 2025, was moved by **Moline** and seconded by **Bangs**. The motion was adopted by a vote of 6 to 0.

PLANNING COMMISSION COMMENTS

None were heard.

STAFF COMMENTS

None were heard.

ADJOURNMENT

Motion to adjourn was moved by **Mihaly**, and adopted by voice vote.
The Commission adjourned at 8:35pm.

City Council Review

July 8, 2025

2nd Reading and Public Hearing

ORDINANCE 1896, SERIES 2025
AN ORDINANCE AMENDING LOUISVILLE MUNICIPAL CODE SECTION 17.72.190 REGARDING YARD AND BULK REQUIREMENTS FOR GENERAL DEVELOPMENT PLANS

Presented by: Rob Zuccaro, Community Development Director

City of Louisville

Proposal

- Request by Portercare Adventist Health Systems (owner of two properties zoned PCZD)
- Allow Planned Community Zoned District (PCZD) properties to establish custom yard and bulk standards (height, setbacks, lot coverage) standards on General Development Plans
- Current regulations restrict GDP yard and bulk standards to be in "general conformance" with comparable zone districts

City of Louisville

Proposal

Sec. 17.72.190. Yard and bulk requirements.

Yard and bulk requirements under a planned community zone district shall be specified on the general development plan filed for the different areas of the district. Such yard and bulk requirements shall be consistent with the comprehensive development plan or other adopted plan of the city and the desired character of the district. ~~Such~~ If not specified in the general development plan for an area of the district, the yard and bulk requirements shall be in general conformance with the yard and bulk requirements set forth in chapter 17.12 of this Code. based on the most similar zoning district ~~Yard and bulk requirements set forth in the general development plan shall be in general conformance with the zones~~ as set forth below:

Agricultural use—A Zone.
Industrial use — I Zone.
Commercial and office use — C-N, C-B, C-C, O Zones.
Residential use — R-E, R-L, R-M, R-H, SF Zones.

City of Louisville

PCZD Zoning Background

- Code adopted in 1983
- Set standards for PCZD and GDPs
- Yard and bulk "General Conformance" standard not defined and inconsistently applied
- Relies on Planned Unit Development (PUD) waiver process to vary yard and bulk

City of Louisville

Analysis

- Purpose of PCZD is to encourage "the use of contemporary land planning principles and coordinated community design."
- GDPs are to establish: "*The type or character of development…*"
- Yard and bulk standards required to be provided on GDPs as part of defining type and character of development
- "General conformance" standard could be seen as in conflict with purpose of PCZD and GDPs

City of Louisville

Analysis

- Code amendment allows the City to adopt more comprehensive development standards on a GDP to establish the intended character of the district.
  - ✓ Planning Commission and Council do not need to adopt yard and bulk standards inconsistent with the comparable zoning unless applicant provides adequate design standards on the GDP
  - ✓ Planning Commission and Council will also have design review at the PUD stage of the process
- Provides a more predictable process for property owners to plan developments

City of Louisville

City Council Work Plan

- Near-term, targeted, priority development code updates to improve the City's development review process and create a more business friendly approach to development review.

2025 Comprehensive Plan Implementation - **Targeted Development Code Amendments**	Identify near term, targeted, priority development code updates to implement the 2025 Comprehensive Plan that should occur prior to the development code rewrite project that is planned to begin in early 2026. Such code changes include but are not limited to parts of Title 16 (Subdivisions) and Title 17 (Zoning).	Potential council actions include discussion and direction, if needed, as well as adoption of targeted code amendments.

City of Louisville

RECOMMENDATIONS

Planning Commission

Held public hearing on May 8, 2025 and voted unanimously to recommend approval as drafted.

Staff

Staff recommends approval as drafted.

City of Louisville

SUBJECT: **ORDINANCE NO. 1897, SERIES 2025 – AN ORDINANCE AMENDING TITLE 17 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING PARKING MINIMUMS FOR MULTIFAMILY AND ADAPTIVE REUSE DEVELOPMENT – 2ND READING PUBLIC HEARING (advertised City of Louisville Website 06/16/2025)**

DATE: **JULY 8, 2025**

PREPARED BY: **MATT POST, SENIOR PLANNER**

PRESENTED BY: **MATT POST, SENIOR PLANNER**

SUMMARY:
In 2024, the Colorado General Assembly adopted House Bill 24-1304 requiring local governments within Metropolitan Planning Organizations (MPOs) to eliminate minimum parking requirements for new multifamily and residential adaptive reuse developments within designated Applicable Transit Service Areas (ATSAs).

The City of Louisville is located within a Denver Regional Council of Governments MPO, and a total of 44 transit stops that qualify as ATSAs have been identified within the City's jurisdiction.

HB24-1304 prohibits local governments within MPOs from enacting or enforcing these minimum parking requirements on or after June 30, 2025. The law was adopted with the intent of reducing the overall cost of housing, increasing development feasibility, and promoting a shift toward multi-modal transportation options. To comply with the law, staff are proposing amendments to Title 17 of the Louisville Municipal Code (LMC), which will remove minimum parking requirements for the specified land uses located within identified ATSAs.

BACKGROUD / PRIOR DISCUSSIONS:
HB24-1304 applies to properties within the city that at least partially intersect with areas identified as having Applicable Transit Service, which are defined as areas that are within one-quarter mile of a transit stop that provides service at intervals of 30 minutes or less during peak hours. In Louisville, this includes areas within one-quarter mile of Regional Transportation District (RTD) transit stops, including the DASH route, Route 228 (Lafayette/Louisville/Broomfield), and the Flatiron Flyer stop at US 36 and McCaslin Blvd.

For properties within these ATSAs, the bill **prohibits** local governments from enforcing or requiring minimum off-street parking for:

- New multifamily residential and the residential portion of new mixed-use residential developments; and
- Adaptive reuse projects converting buildings for residential use; and

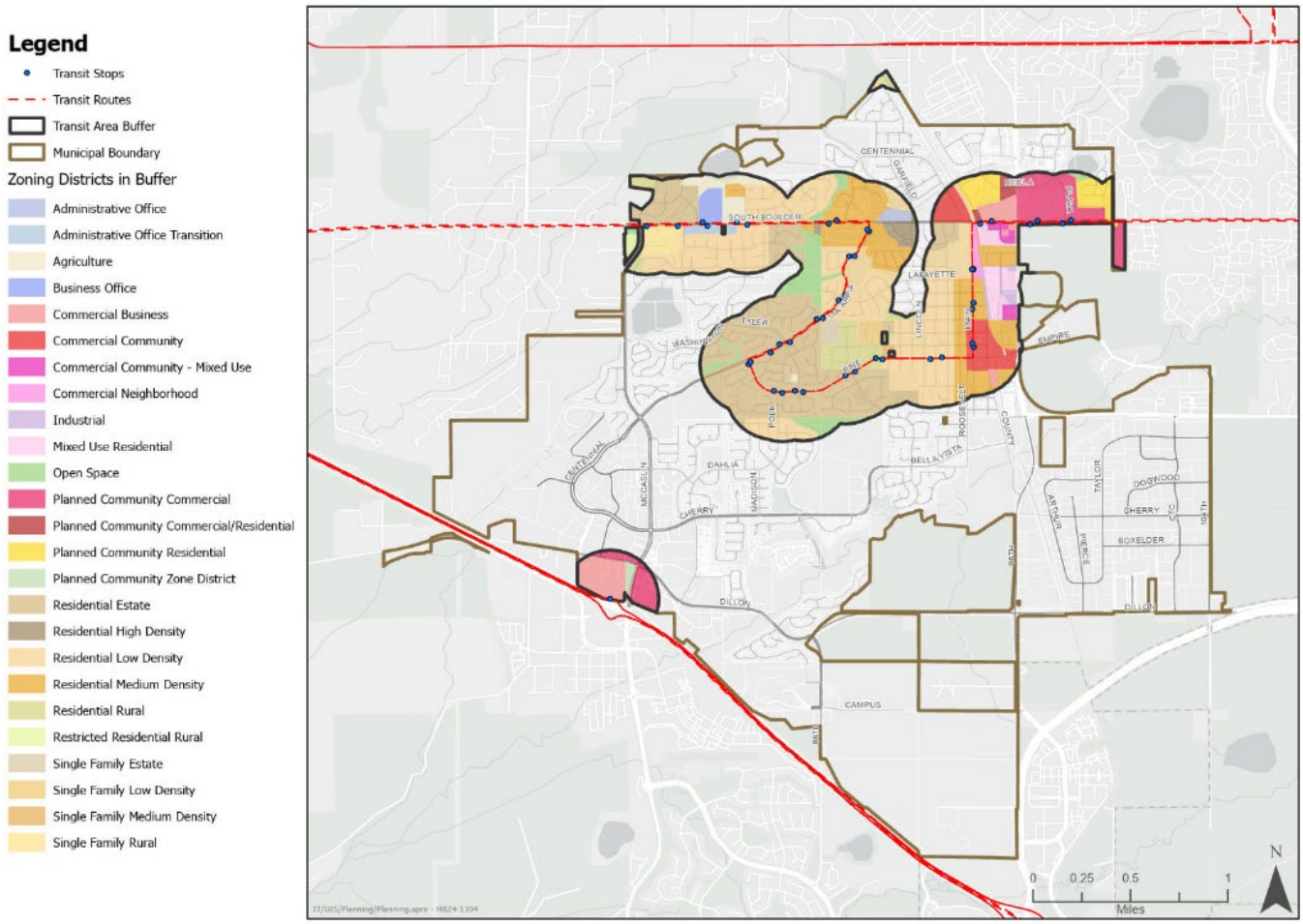
- Adaptive reuse projects that are at least 50% residential in use, including all uses in such buildings.

Applicable Transit Service Areas were developed and determined by the Colorado Department of Local Affairs, in collaboration with CDOT, the Colorado Energy Office, and RTD. Applicable Transit Service Areas include locations within one-quarter mile of:

- Existing commuter bus rapid transit stations, such as those served by RTD's Flatiron Flyer routes; and
- Bus stops on routes with weekday service every 30 minutes or more for at least four hours, either already operating or planned for implementation by 2030, such as those served RTD's Dash route.

FIRST READING

At the June 3, 2025, City Council meeting, staff presented the ordinance for first reading. During discussion, City Council expressed interest in exploring the possibility of eliminating parking minimums city-wide. Staff is actively researching this topic and anticipates bringing a detailed analysis back to City Council for consideration at a future date.



Applicable Transit Service Areas in Louisville

Although the law prohibits a local jurisdiction from enforcing minimum parking requirements on multifamily and adaptive reuse development projects within an ATSA, a **developer may voluntarily provide off-street parking for such developments.** The law further clarifies that nothing prevents a local jurisdiction from:

- Parking compliance with affordable housing funding conditions. If the City or a developer has obtained funding for affordable housing development which requires a minimum number of parking spaces, the City may enforce parking requirements necessary to comply with funding conditions.
- Requiring bicycle parking.

- Requiring accessible (ADA) parking spaces and electric vehicle charging stations when a developer voluntarily provides on-site parking.

Definition of Multifamily and Alignment with HB24-1304

HB24-1304 does not include a specific definition of multifamily housing. However, guidance from the Colorado Department of Local Affairs (DOLA) indicates that local jurisdictions may apply their own definition of multifamily (or similar) provided that the definition does not differ substantially from the State's definition. Under C.R.S. § 38-45-101, the State of Colorado defines multifamily as "*any improved real property used or intended to be used as a residence and that contains more than one dwelling unit. Multi-family dwelling includes a condominium or cooperative".*

The Louisville Municipal Code currently defines a "multi-unit or multifamily dwelling" as a *"building used by two or more families living independently of each other in separate dwelling units, but does not include hotels, motels or resorts"*. This definition closely aligns with the State's definition of multifamily housing under C.R.S. § 38-45-101. As such, staff do not recommend any changes to the City's existing definition for the purposes of complying with HB24-1304. The term "multi-unit" will be used throughout this report, and for review and use determination purposes, as it is the general use term that aligns with the definition referenced throughout multiple sections of the LMC.

For new mixed-use buildings, HB24-1304 applies only to the multi-unit residential portion, allowing the City to continue enforcing minimum parking requirements for the nonresidential components of such developments. However, in the case of adaptive reuse projects, where at least 50% of the existing building is converted to residential use, the law prohibits the City from imposing minimum parking requirements for any portion of the building, including the nonresidential uses.

The law defines "adaptive reuse" as the "*conversion of an existing structure from the use for which it was constructed to a new use by maintaining elements of the structure and adapting such elements to a new use".* Staff do not recommend adopting a separate definition at this time, as the term is generally self-explanatory and clearly implies the repurposing of an existing building for a different land use

Zoning and Case Review

Depending on the zoning district, multi-unit or mixed-use buildings that include residential uses may be permitted either by-right or through a Special Review Use (SRU) process.

In districts where SRU approval is required, proposals are subject to the review criteria set forth in LMC Sec. 17.40. These criteria are designed to ensure compatibility with the surrounding development context by considering the location and nature of the proposed

use, the character of adjacent development, and any potential adverse impacts. The SRU process allows for additional review and consideration in established or transitional neighborhoods, helping to ensure that new development aligns with the intent and character of each zoning district. While staff will continue to apply these criteria as part of the SRU review, it is important to note that, in accordance with HB24-1304, parking may not be imposed as a condition of approval for any multi-unit or mixed-use residential development located within an ATSA.

In addition to SRU review, applicable zoning districts include density limitations aligned with the intent of each district, as outlined in LMC Sec. 17.12.010 – District Categories. Zoning districts where multi-unit dwellings are permitted as a Special Review Use include:

- Residential Estate (R-E)
- Residential Low Density (R-L)
- Residential Rural (R-R)
- Business Office (B-O)
- Commercial Business (C-B)
- Commercial Community (C-C)
- Commercial Neighborhood (C-N)

The following zoning districts permit multifamily dwellings as a by-right use. While these districts also include density limitations consistent with the intent of each district, they are generally considered appropriate for higher-density residential development.

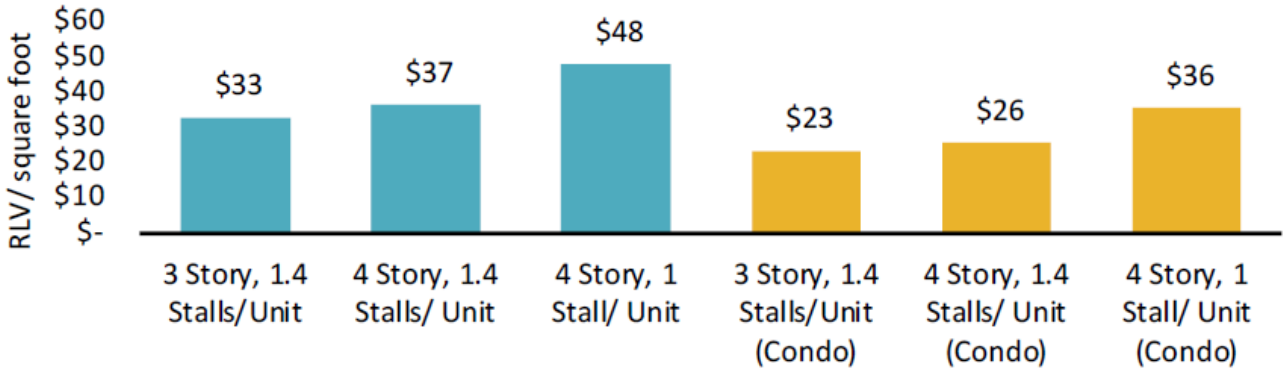
- Residential Medium Density (R-M)
- Residential High Density (R-H)
- Mixed Use Residential (MU-R)
- Planned Community Commercial/Residential (PCZD)

While the City will continue to apply established zoning and SRU criteria to ensure context-sensitive development, HB24-1304 limits our ability to require off-street parking for qualifying projects within ATSAs.

ANALYSIS

The City of Louisville Housing Plan identifies several regulatory and economic barriers that limit the City's ability to meet current and future housing needs. Among these, minimum parking requirements are recognized as a constraint to residential development, particularly for higher-density and income-restricted housing. The Housing Plan notes that existing minimum parking standards increase development costs, reduce buildable area on constrained sites, and negatively impact the financial feasibility of projects, especially in areas near transit where parking demand may be lower.

Modeling conducted as part of the Housing Plan's feasibility analysis demonstrated that reducing parking requirements had a greater positive impact on project viability than increasing building height. Specifically, scenarios that reduced parking from 1.4 to 1 space per unit yielded higher residual land values for both rental and for-sale multifamily projects, thereby improving the financial feasibility of development and increasing the likelihood that such projects will move forward. The Plan further recommends reduced parking ratios and parking-related incentives in targeted areas such as transit corridors and Downtown Louisville, where walkability and access to multimodal transportation options can support lower vehicle dependence. These areas directly coincide with the ATSAs identified in HB24-1304 where enforcement of parking minimums is not prohibited.



Feasibility Results for Three- and Four-Story Multifamily Prototypes with Parking Reduction

The Housing Plan emphasizes the importance of revisiting parking requirements as part of a broader strategy to modernize the City's zoning and land use regulations, and community engagement responses highlighted a desire for more flexible parking standards, especially near transit, as a way to support more affordable and diverse housing types.

While HB24-1304 prohibits the City from enforcing minimum off-street parking requirements for multi-unit developments within ATSAs, staff anticipate that most eligible projects will continue to include off-street parking on a voluntary basis. This expectation is supported by several industry-standard development considerations. First, market feasibility analyses routinely identify parking availability as a critical factor in project leasing and long-term occupancy, particularly in suburban communities such as the City of Louisville. Second, private financing entities, including construction lenders and long-term investors, often require some level of on-site parking as a condition of funding. These parties typically view the inclusion of parking as essential to maintaining the competitiveness and financial viability of a development. As such, while the City must comply with the prohibition on mandatory parking minimums, the practical realities of the development process are likely to result in the inclusion of off-street parking in most future development projects.

Staff recognize that the elimination of parking minimums may result in unintended consequences, including the potential for spillover parking in adjacent neighborhoods or commercial areas. However, the extent of any such impacts remains unknown at this time and will likely depend on the location, scale, and design of future development proposals as well as ongoing market behavior. Staff will continue to monitor conditions to consider policy responses.

2025 COUNCIL WORK PLAN:
This code amendment supports the 2025 City Council Work Plan by addressing two Council Priorities:

- Economic Vitality - this item is a targeted development code amendment to maintain a business-friendly approach by providing more flexibility for site planning with residential and mixed use buildings near transit.

- Housing – this item implements the Housing Plan through a development code amendment that supports more flexibility for off street parking, which can be one of the most significant barriers to building new, more affordable housing.

FISCAL IMPACT:
Budgeted?: **Not Applicable**

ALTERNATIVES:
The City Council may approve, approve with amendments, or deny the ordinance amendment.

Denial of the ordinance will leave the City in violation of HB24-1304. This may result in loss of eligibility for state funding and create legal challenges for the City.

PUBLIC COMMENTS:
No public comments have been received as of the date of this report.

PLANNING COMMISSION RECOMMENDATION:
On May 8, 2025, The Planning Commission recommended approval of Resolution 8, Series 2025, approval of an ordinance amending Title 17 of the Louisville Municipal Code (LMC) concerning parking minimums for multifamily and adaptive reuse development to comply with HB24-1304.

STAFF RECOMMENDATION:
Staff recommend approval of Ordinance 1897, Series 2025, amending Title 17 of the Louisville Municipal Code (LMC) concerning parking minimums for multifamily and adaptive reuse development to comply with HB24-1304.

ATTACHMENTS:

1. Ordinance No. 1897, Series 2025
2. Resolution 8, Series 2025
3. Planning Commission Minutes
4. DOLA HB24-1304 Guide
5. HB24-1304
6. ATSA Map

ORDINANCE NO. 1897
SERIES 2025

AN ORDINANCE AMENDING TITLE 17 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING PARKING MINIMUMS FOR MULTIFAMILY AND ADAPTIVE REUSE DEVELOPMENT

WHEREAS, the City of Louisville (the "City"), is a Colorado home rule municipal corporation duly organized and existing under laws of the State of Colorado and the City of Louisville Home Rule Charter (the "City Charter"); and

WHEREAS, the Colorado General Assembly enacted House Bill 24-1304, codified in Section 29-20-115, Colorado Revised Statutes, concerning parking requirements within Metropolitan Planning Organizations; and

WHEREAS, House Bill 24-1304 requires local governments within Metropolitan Planning Organization areas, including the City, to eliminate minimum parking requirements for certain new multifamily residential developments and adaptive reuse projects within designated transit areas; and

WHEREAS, the City recognizes that reducing or eliminating parking minimums in strategic locations supports goals of increasing housing affordability, encouraging transit-oriented development, promoting environmental sustainability, and complying with state law; and

WHEREAS, after a duly noticed public hearing held May 8, 2025, where evidence and testimony were entered into the record, including the Louisville Planning Commission Staff Report dated May 8, 2025, the Louisville Planning Commission has recommended the City Council adopt the amendments to the Louisville Municipal Code set forth in this ordinance; and

WHEREAS, City Council has provided notice of a public hearing on said ordinance by publication as provided by law and held a public hearing as provided in said notice; and

WHEREAS, the City Council finds it necessary and appropriate to amend Title 17 of the Louisville Municipal Code to conform with the requirements of House Bill 24-1304 and to support broader community goals for mobility, housing, and sustainability.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO:

Section 1. Section 17.20.010 of the Louisville Municipal Code is hereby amended to read as follows (words to be deleted ~~stricken~~; words to be added underlined):

Sec. 17.20.010 Parking requirements

A. At the time of the erection of a new structure or at the time of enlargement or change in use of an existing structure within any district in the city, off-street parking spaces shall be as provided in this section and in section 17.20.020.

B. If parking space has been provided in connection with an existing use or is added to an existing use, the parking space shall not be eliminated if elimination would result in less space than is required by section 17.20.020.

C. Where square feet are specified, the area measured shall be the floor area primary to the functioning of the particular use of property and shall exclude stairwells; elevator shafts; hallways; ornamental balconies; space occupied by heating, air conditioning or other utility equipment; space devoted exclusively to storage; and space devoted to off-street parking or loading. This subsection C shall not apply to development subject to the City of Louisville Commercial Development Design Standards and Guidelines.

D. The number of employees of a new or expanding business shall be estimated in a manner approved by the planning commission, and the number of employees of an established business shall be determined from an examination of employment information presented by applicants.

E. Uses in the area designated as Downtown Louisville shall be exempt from the requirements of this Section and Section 17.20.020.

F. Notwithstanding any parking requirements contained in the City's adopted design standards and guidelines or previously approved development plans, including Planned Unit Developments ("PUDs") and General Development Plans ("GDPs"), off-street parking shall not be required for new multi-unit or multifamily residential developments or for adaptive reuse developments in which residential dwelling units occupy fifty percent (50%) or more of the total floor area, provided such developments are located within an Applicable Transit Service Area, as defined in Section 29-36-102(3) of the Colorado Revised Statutes and identified on the official map maintained by the Colorado Department of Local Affairs.

Section 2. Section 17.20.020 of the Louisville Municipal Code is hereby amended to read as follows (words to be deleted ~~stricken~~; words to be added underlined):

Sec. 17.20.020. Parking standards designated for each use

The parking requirements for each use shall be as follows:

A. Residential uses:

1. ~~For~~ Except as set forth in Section 17.20.010.F of this Code, one-family dwellings and two-family dwellings with separate driveways, two spaces per dwelling unit (driveway and garage or carport areas defined as off-street parking space);

2. ~~For~~ Except as set forth in Section 17.20.010.F of this Code, multifamily dwellings containing three or more dwelling units, two spaces per dwelling unit;

3. For a residential hotel, roominghouse or boardinghouse, one space per guest accommodation;

4. For housing restricted to the aged, disabled, etc., one-half space per unit;

5. For dormitories and other lodging facilities and rooms for unmarried students, three spaces per four occupants;

B. Commercial residential uses:

1. For hotels and motels, one space per guest room plus one space per two employees;

2. For a club or lodge, spaces to meet the combined requirements of the uses being conducted, such as hotel, restaurant, auditorium, etc.;

C. Institutions:

1. For a nursing home, rest home or home for the aged, one space per three beds;

2. For a hospital, three spaces per two beds;

D. Places of public assembly:

1. For a church, one space per three seats;

2. For a library or reading room, one space per 400 feet of floor area plus one space per two employees;

3. For a preschool nursery, day care school, kindergarten, elementary school or intermediate school, 1½ spaces per teacher plus one space per administrative employee, in addition to any areas for loading and unloading of pupils;

4. For a high school, one space per teacher, plus one space per administrative employee, plus one space for each three students or one space per three seats in the main auditorium;

5. For a vocational or commercial school, one space per teacher, plus one space per administrative employee, plus one space per two students;

6. For auditoriums and meeting rooms, one space per three seats;

7. Where there is no fixed seating, the standard shall be one space per 21 square feet of seating area;

E. Commercial amusements:

1. For a stadium, arena or theater, one space per two seats;

2. For a bowling alley, five spaces per alley plus one space per two employees;

3. For dance halls and skating rinks, one space per 50 feet of floor area plus one space per two employees;

4. For other commercial amusements where there is no fixed seating, the standard shall be one space per 21 square feet of seating area;

F. Commercial:

1. For a retail store, except as provided in subsection F.2 of this section, two spaces per 300 square feet of floor space;

2. For a service or repair shop, or a retail store handling exclusively bulky merchandise such as automobiles and furniture, 1½ spaces per 300 square feet of floor area;

3. For offices other than medical and dental, one space per 300 square feet of floor area;

4. For medical and dental clinics, two spaces per 300 square feet of floor area plus one space per two employees;

5. For an eating or drinking establishment, one space per three seats;

6. For mortuaries, one space per three seats;

G. Industrial:

1. For a storage warehouse, manufacturing establishment, or an air, rail or trucking freight terminal, two spaces per three employees,

2. For wholesale establishments, one space per employee plus one space per 500 square feet of patron serving area;

H. For uses not specified, the number of required parking spaces shall be specified by the director of planning of the city with consent of the planning commission, based upon usage, square footage and other criteria as set forth in this chapter.

I. This section shall not apply to land uses for which off-street parking requirements are not required pursuant to subsection 17.20.010.F of this Chapter.

Section 3. Section 17.20.025 of the Louisville Municipal Code is hereby amended to read as follows (words to be deleted ~~stricken~~; words to be added underlined):

Sec. 17.20.025.Parking standards designated for Downtown Louisville.

A. Within Downtown Louisville, at the time of any building construction, expansion or modification that creates additional floor area, off-street parking spaces shall be provided at a ratio of one parking space per 500 square feet of all nonresidential new floor area rounded to nearest 500 square feet. Where residential square footage is proposed, the parking requirements in the following table will be used:

All Residential Uses [Note 1]:	
1-bedroom unit	Minimum: 1 space per unit Maximum: 1.25 spaces per unit
2-bedroom unit	Minimum: 2 spaces per unit
3-or-more-bedroom unit	Minimum: 2.0 spaces per unit
Additional guest parking [Note 2]	1 space per dwelling unit in addition to the minimum off-street parking spaces

Notes to Table 1:

1. Off-street parking spaces located in an enclosed parking garage, including those in an accessory residential garage shall not be counted toward the maximum amount of spaces permitted.
2. On-street parking spaces abutting the property line(s) of the primary building housing the use may be counted toward the required number of residential guest parking spaces.
3. Off-street parking shall not be required for the following land uses, provided they are located within an Applicable Transit Service Area, as defined in Section 29-36-102(3) of the Colorado Revised Statutes and identified on the official map maintained by the Colorado Department of Local Affairs:
    a. New multi-unit or multifamily developments; and
    b. Adaptive reuse developments in which residential dwelling units occupy fifty percent (50%) or more of the total floor area.

Section 4. If any portion of this ordinance is held to be invalid for any reason, such decision shall not affect the validity of the remaining portions of this ordinance. The City Council hereby declares that it would have passed this ordinance and each part hereof irrespective of the fact that any one part be declared invalid.

Section 5. The repeal or modification of any provision of the Municipal Code of the City of Louisville by this ordinance shall not release, extinguish, alter, modify, or change in whole or in part any penalty, forfeiture, or liability, either civil or criminal, which shall have been incurred under such provision, and each provision shall be treated and held as still remaining in force for the purpose of sustaining any and all proper actions, suits, proceedings, and prosecutions for the enforcement of the penalty, forfeiture, or liability, as well as for the purpose of sustaining any judgment, decree, or order which can or may be rendered, entered, or made in such actions, suits, proceedings, or prosecutions.

Section 6. All other ordinances or portions thereof inconsistent or conflicting with this ordinance or any portion hereof are hereby repealed to the extent of such inconsistency or conflict.

INTRODUCED, READ, PASSED ON FIRST READING AND ORDERED PUBLISHED this 3rd day of June, 2025.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Genny Kline, Interim City Clerk

APPROVED AS TO FORM:

Kelly PC

_____
Kathleen Kelly, City Attorney

PUBLIC HEARING AND SECOND READING WILL BE THE 8th DAY OF JULY, 2025, AT 6:00 P.M. AT LOUISVILLE CITY HALL, 749 MAIN STREET, LOUISVILLE, CO 80027.

PASSED AND ADOPTED ON SECOND AND FINAL READING, this __ day of _____, 2025.

_____

Christopher M. Leh, Mayor

ATTEST:

_____
Genny Kline, Interim City Clerk

RESOLUTION NO. 8
SERIES 2025

A RESOLUTION RECOMMENDING APPROVAL OF AN ORDINANCE AMENDING TITLE 17 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING PARKING MINIMUMS FOR MULTIFAMILY AND ADAPTIVE REUSE DEVELOPMENT

WHEREAS, the City of Louisville (the "City"), is a Colorado home rule municipal corporation duly organized and existing under laws of the State of Colorado and the City of Louisville Home Rule Charter (the "City Charter");

WHEREAS, the Colorado General Assembly enacted House Bill 24-1304, codified in Section 29-20-115, Colorado Revised Statutes, concerning parking requirements within Metropolitan Planning Organizations; and

WHEREAS, House Bill 24-1304 requires local governments within Metropolitan Planning Organization areas, including the City, to eliminate minimum parking requirements for certain new multifamily residential developments and adaptive reuse projects within designated transit areas; and

WHEREAS, the City recognizes that reducing or eliminating parking minimums in strategic locations supports goals of increasing housing affordability, encouraging transit-oriented development, promoting environmental sustainability, and complying with state law; and

NOW THEREFORE, BE IT RESOLVED that the Planning Commission of the City of Louisville, Colorado does hereby recommend approval of an ordinance amending Louisville Municipal Code to prohibit the enforcement of parking minimums for multifamily and adaptive reuse development.

PASSED AND ADOPTED this 8th day of May, 2025.

By: Steve Brauneis
Steve Brauneis, Chair
Planning Commission

Attest: Cullen Choi
Cullen Choi, Secretary
Planning Commission

City of Louisville
COLORADO • SINCE 1878

Planning Commission
Meeting Minutes
May 8, 2025
City Hall, Council Chambers
749 Main Street
6:30 PM

Call to Order – Chair **Brauneis** called the meeting to order at 6:30 PM.

Roll Call was taken, and the following members were present:

Commission Members Present:	Steve Brauneis, Chair Cullen Choi, Secretary David Bangs Jennifer Hunt Jonathan Mihaly Jeff Moline
Commission Members Absent:	Debra Baskett, Vice Chair
Staff Members Present:	Rob Zuccaro, Director of Community Development Jeff Hirt, Planning Manager Matt Post, Senior Planner Emily Cline-Gibson, Planner II Ben Jackson, Planning Clerk

APPROVAL OF AGENDA
Motion to approve the agenda was moved by **Moline**, seconded by **Hunt**, and adopted by voice vote.

PUBLIC COMMENTS ON ITEMS NOT ON THE AGENDA
None were heard.

PUBLIC HEARING ITEMS – NEW BUSINESS
a. **General Development Plan (GDP) Yard and Bulk Requirements Code Amendment** – Resolution 6, Series 2025 recommending to the City Council approval

of an ordinance amending Louisville Municipal Code Section 17.72.190 regarding Yard and Bulk Requirements for General Development Plans.

Staff Presentation:
Zuccaro introduced the presentation on proposed changes to the yard and bulk requirements. He noted that it was proposed by a property owner, but that it would still apply to the whole city. He explained that the change was intended to provide clarity when amending or approving a general development plan.

Staff Recommendation:
Staff recommended approval of Resolution 6, Series 2025.

Commissioner Questions of Staff:
Hunt asked to clarify the implications of the change. She asked whether this simply allowed applicants to define changes to the standards at the GDP stage rather than requiring waivers at the PUD stage.
Zuccaro said that the change provided additional flexibility, and would make it so that changes to the standards could be made at either the GDP stage or as waivers to the PUD stage as was currently the case.
Hunt asked whether staff would still work with applicants to determine appropriate zoning for the development.
Zuccaro said yes, applicants would still be required to work with staff if the proposed yard and bulk standards were significantly different from the normal standards, and to explain why this would be necessary.
Hunt asked whether the changes would give developers more certainty over their final designs.
Zuccaro said that this change would give developers more assurance that they would be able to proceed with their desired designs.
Hunt asked whether staff would still look at the other uses to set the yard and bulk requirements if the applicant opted not to do it during the GDP process.
Zuccaro said yes, and that they left this language in the ordinance as there were some GDPs that did not have yard and bulk standards.
Bangs asked whether developers would need to seek waivers from the yard and bulk requirements if the Commission did not approve the proposed code amendment.
Zuccaro said yes.
Bangs asked to clarify what comparable zone districts meant.
Zuccaro said that it was generally up to staff to determine which zoning type the proposed development would be most comparable to, though there was a general lack of clarity around this.

Zuccaro added that the proposals from applicants also had to be consistent with the Comprehensive Plan or another adopted policy of the City, and consistent with the desired character of the district.
Bangs asked why the change was necessary given the current waiver process seemed to work.
Zuccaro said that it was not always possible to guide applicants on what would be appropriate and passable waivers, making the process more complicated than it needed to be.
Bangs asked whether the code amendment would make it harder for the Commission to object to changes to the yard and bulk standards.
Zuccaro said that it would provide more predictability for the Commission and City Council.
Hunt asked whether the Planning Commission would still get a say on changes to the yard and bulk standards in the GDP process.
Zuccaro said that the Commission would still get a say on this when they consider a GDP or GDP amendment. He added that staff would analyze all proposals and provide recommendations to Commissioners.
Bangs asked how much definition of the standards would be in the Comprehensive Plan.
Zuccaro said that the Plan would not include any specific details.
Bangs asked about the downsides and risks of the proposal.
Zuccaro said that the main downside would be making a decision on the yard and bulk standards without seeing the final design, and that Commissioners would not have as specific information.
Brauneis noted that applicants could still apply for waivers beyond what would be approved in the GDP.
Choi asked to clarify whether the amendment would only apply to areas of 30 acres or larger that had a single owner.
Zuccaro said yes, and noted that it would only apply to properties zoned PCZD.
Choi asked how many of these properties existed in the city.
Zuccaro said he believed there were no more than 6.
Choi asked whether the property could then be sub-divided and sold off.
Zuccaro said that the 30 acre requirement only applied at the time of the establishment of the original GDP, and that future property owners could amend the GDP for their individual parcels.
Choi asked about the language regarding potential legal challenges in the amendment.
Zuccaro said that changes to the yard and bulk standards during the GDP process could be subject to legal action relating to their general conformance with the code.
Moline asked when a GDP was required.
Zuccaro said that a GDP was required when an applicant requested the PCZD zone district. He added that this was likely to mainly apply to GDP amendments given the limited scope for the creation of new PCZD zoned areas.

Brauneis asked when the last time an outside party requested a code amendment was.
Zuccaro said that it was pretty rare, and that he did not recall any in the last decade.

Applicant Presentation:
Mark Smith, resident, representing Advent Health Avista, He noted that Advent Health had purchased a 40 acre site in the Red Tail Ridge development, and were planning its future development. He said that they were in favor of the change as it would provide greater predictability and certainty in their planning and design process.

Commissioner Questions of Applicant:
Brauneis asked about the applicant's reasoning for their proposed major code change.
Smith said that they felt that the change would give them the clarity needed to make the project viable.
Bangs asked about how this would improve their design process over the existing PUD waiver process.
Valerie Wilkins, non-resident, of the development team, said that they can get through more comprehensive design planning earlier, and that they hope to simplify and speed up this process.
Bangs asked whether the yard and bulk requirements were clear for this development.
Zuccaro said that they were not clear on the GDP, particularly with regards to desired heights.
Bangs asked how long it would be before the applicant came before the Commission with their proposed designs.
Zuccaro said that they were currently discussing this with the applicant.
Wilkins said that they were going through the concept design, and intended to have a PUD ready by the end of the year.

Public Comment:
Tamar Krantz, resident, pooled with **Cindy Bodell**, resident, asked what changes Advent Health from the existing yard and bulk standards. She was concerned that it would just be a means to alter the existing GDP. She also objected to the unusual manner in which this proposal was brought before the Planning Commission.

Applicant Closing Statement:
Wilkins said that they were not planning any changes to setbacks for their future GDP amendment, and that this was just an example brought up in conversation.

Additional Commissioner Questions of Staff:
Mihaly asked how this would affect the GDP amendment process.
Zuccaro said that it would not affect existing GDPs or the GDP amendment process.

Hunt asked to clarify that the references to general conformance would only apply to GDPs that did not specify yard and bulk requirements.
Zuccaro confirmed this.

Commissioner Discussion:
Hunt said that she was in support, and that she liked the idea of providing more certainty to developers.
Moline said that he in support, and that the added clarity would be a benefit to the code and a benefit to the community.
Choi said that he was in support, and thought it would help ease the development process.
Mihaly said that his initial concerns were allayed by the presentations, and that he thought it would help make the city more business friendly. He was in support.
Bangs said that while he did not feel the existing PUD waiver process was broken such that it warranted major changes, he was supportive of the amendment as it would help improve the efficiency of the development process. He was in support.
Brauneis said that he was in support, and said that this would be beneficial for both developers and the city.

Motion to approve Resolution 6, Series 2025, was moved by **Hunt** and seconded by **Moline**. The motion was adopted by a vote of 6 to 0.

b. Advent Health PUD Amendment (Signage) - Resolution 7, Series 2025, recommending approval of a request for a Planned Unit Development (PUD) Amendment to replace existing freestanding signs and add a new wall sign on the hospital campus.

Staff Presentation:
Cline-Gibson introduced the presentation for the PUD amendment. She noted the location of the property, and where the changes to the existing signage were proposed. There had been previous changes to signage in 1997 and 2002 in accordance with periodic hospital rebranding. She also covered proposed waivers for the freestanding and wall signs. Staff found that the application met all of the criteria in the sign code. Staff also found that the requested waivers were appropriate.

Staff Recommendation:
Staff recommended approval of Resolution 7, Series 2025.

Commissioner Questions of Staff:
Choi asked whether all of the signs were proposed to be internally illuminated.
Cline-Gibson said yes.

Choi asked whether there would be a change in lumen output from the new signs.
Cline-Gibson said that there would not be any change.
Moline asked about the requirement for architectural base and border in the new code.
Cline-Gibson said that this was a requirement for freestanding signs, but was largely targeted at entrance signs rather than the wayfinding signs proposed here, hence the waiver.
Bangs asked about the current height of the sign facing US-36.
Cline-Gibson said she was not sure, but would check.
Brauneis wondered about the need and value of the sign facing the golf course and open space.
Cline-Gibson deferred to the applicant, but suggested that it was meant to be viewed from US-36.

Applicant Presentation:
Mark Smith, resident, CEO of Advent Health Avista, spoke to the importance of clear and visible signage for the hospital campus.

Commissioner Questions of Applicant:
Brauneis asked about the need for the sign facing the golf course.
Smith said that their desire was for the sign to be visible from US-36, as it is otherwise difficult to see the building from the freeway.
Brauneis asked whether the sign adjacent to US-36 would accomplish this.
Smith said that they would prefer to have both.
Hunt asked to confirm that the wall sign would directed towards eastbound US-36 traffic.
Smith said yes.
Moline asked whether there was an existing wall sign.
Brauneis said no.

Public Comment:
None were heard.

Applicant Closing Statement:
Smith thanked the Commission for their time.

Staff Closing Statement:
None was heard.

Additional Commissioner Questions of Staff:
Bangs asked whether there was any other illuminate signage in Louisville that faced US-36.
Cline-Gibson said not as far as she could recall.

Mihaly asked how the wall sign would look if it conformed to the sign code.
Cline-Gibson said that it would be somewhat smaller.

Commissioner Discussion:
Hunt said she thought the requests were reasonable, and was in support.
Bangs agreed.
Moline said he was in support.
Mihaly said that he was supportive, and thought that the waivers were minor enough to be reasonable.
Choi said that he was in support.
Brauneis said that he still had some concerns about the wall sign, but was ultimately in support.

Motion to approve Resolution 7, Series 2025, was moved by **Mihaly** and seconded by **Bangs**. The motion was adopted by a vote of 6 to 0.

c. **Parking Minimums Code Amendment** - Resolution 8, Series 2025 recommending to the City Council approval of an ordinance amending Title 17 of the Louisville Municipal Code (LMC) concerning parking minimums for multifamily and adaptive reuse development to comply with HB24-1304.

Staff Presentation:
Post introduced the presentation for the ordinance. He said that the change was required to bring the City into compliance with a new state law that prohibited minimum parking requirements in some circumstances. He outlined the parts of the city were parking minimums would no longer be permitted, and how the new policy would be implemented.

Staff Recommendation:
Staff recommended approval of Resolution 8, Series 2025.

Commissioner Questions of Staff:
Hunt asked whether the City can still apply its EV charging and accessibility requirements if developers choose to provide parking spaces.
Post said yes.
Brauneis asked whether the 228 bus met the definition of frequent transit.
Post said no because it only ran every 60 minutes instead of the 30 minute standard set by the legislation.
Brauneis asked whether a private shuttle that met the requirements could be considered a transit service.
Post said that this was considered by DOLA and could factor into the transit service area.

Bangs asked about the number of units that could be added with a reduced number of parking spaces.
Post said that he would expect the bill to produce greater density, though he noted that the City's density limits still applied.

Public Comment:
None were heard.

Staff Closing Statement:
None was heard.

Commissioner Discussion:
Hunt said that she was in favor.
Bangs said that he was in favor.
Moline said that he was in support.
Mihaly said that he was in support.
Choi said that he was in support.
Brauneis said that he was in support, and said that he would encourage staff and City Council to consider abolishing parking minimums in other areas of the city.

Motion to approve Resolution 8, Series 2025, was moved by **Moline** and seconded by **Bangs**. The motion was adopted by a vote of 6 to 0.

PLANNING COMMISSION COMMENTS

None were heard.

STAFF COMMENTS

None were heard.

ADJOURNMENT

Motion to adjourn was moved by **Mihaly**, and adopted by voice vote.
The Commission adjourned at 8:35pm.

Version 1 published September 27, 2024

HB24-1304 Guidance

Concerning Parking Requirements within Metropolitan Planning Organizations.

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Version 1 published September 27, 2024

Section 1: Background

The Legislative Declaration of HB24-1304 emphasizes that requirements for minimum amounts of off-street parking limit the amount of housing that can be built on many sites, and that many parking spaces provided for residential developments remain unused. One recent study of multifamily housing near RTD stations found that approximately 40 percent of parking spaces for market rate housing and 50 percent of parking spaces for income-restricted housing are unused by residents at peak times.[1] Minimum parking requirements that exceed what is necessary for the residents and visitors not only increase the cost of housing but also lower development density, which is associated with higher vehicle ownership, more vehicle miles traveled, more greenhouse gas emissions, and reduced walking and bicycling.[2] Lowering residential development density also increases the costs of building and maintaining infrastructure needed to serve residential projects.[3]

Section 2: Summary of Law

In general, communities subject to the law are prohibited from enacting or enforcing minimum off-street parking requirements on multifamily housing developments and some mixed-use developments in specific locations. The law contains some exceptions to its basic requirements, and addresses additional issues not covered in this summary. This section summarizes the key requirements of HB24-1304 but does not substitute for a close reading of the law itself.

This document explains how DOLA will determine local government compliance. It does not constitute legal advice, and local governments are encouraged to consult with their municipal or county attorney for that purpose.

The law's provisions take effect on June 30, 2025. All capitalized terms in this guidance are defined in the law.

Section 2.1: Applicability

C.R.S. 29-36-103(1) and (2)

HB24-1304 applies to:

- Those portions of Colorado Home Rule or statutory cities and towns, Territorial Charter cities and towns, and consolidated cities and counties, that are located

[1] Residential Parking in Stations Areas: A Study of Metro Denver
[2] What do residential lotteries show us about transportation choices? - Adam Millard-Ball, Jeremy West, Nazanin Rezaei, Garima Desai, 2022
Effects of Parking Provision on Automobile Use in Cities: Inferring Causality - Christopher T. McCahill, Norman Garrick, Carol Atkinson-Palombo, Adam Polinski, 2016
Households with constrained off-street parking drive fewer miles | Transportation
[3] Relationships between Density and per Capita Municipal Spending in the United States

in a Metropolitan Planning Organization (MPO) and in an Applicable Transit Service Area, as shown on the maps produced by the Department of Local Affairs (hosted on the DOLA website), regardless of the population of those areas; and

- Those portions of Colorado counties, including Home Rule counties, that are located in a Metropolitan Planning Organization (MPO) and in Applicable Transit Service Area, as shown on the map produced by the Department of Local Affairs, regardless of the populations of those areas.

A list of communities that contain an Applicable Transit Service Area subject to the new law as of the publication of this guidance can be found at the end of this document.

Section 2.2: Key Terms Used in the Law

Summarized from C.R.S. 29-36-102

This section lists several key terms defined in the law. Please note that the law contains numerous additional definitions that may be important in specific contexts.

"Adaptive Reuse" means the conversion of an existing structure from the use for which it was constructed to a new use by maintaining elements of the structure and adapting such elements to a new use.

"Applicable Transit Plan" means a plan of a transit agency whose service territory is within a metropolitan planning organization, including a system optimization plan or a transit master plan that: (a) has been approved by the governing body of a transit agency on or after January 1, 2019, and on or before January 1, 2024; (b) identifies the planned frequency and span of service for transit service or specific transit routes; and (c) identifies specific transit routes for short-term implementation according to that plan, or implementation before January 1, 2027.

"Applicable Transit Service Area" means an area designated by the map created in Section 29-36-106. (see below for more detail on this process and criteria)

"Commuter Bus Rapid Transit Service" means a bus rapid transit service that operates for a majority of its route on a freeway with access that is limited to grade-separated interchanges.

"Land Use Approval" means any final action of a local government that has the effect of authorizing the use or development of a particular parcel of real property.

“Loading Space” means an off-street space or berth that: (a) is on the same site with a building or contiguous to a group of buildings; (b) is designated for the temporary parking of either: (I) a commercial vehicle while materials are loaded in or unloaded

from the vehicle; or (II) a vehicle while passengers board or disembark from the vehicle; and (c) abuts upon a street, alley, or other means of access.

"Maximum Parking Requirement" means a requirement established in local law that limits the number of parking spaces that may be made available in connection with a real property.

"Minimum Parking Requirement" means a requirement established in local law that a number of parking spaces be made available in connection with a real property.

"Parking Space" means an off-street space designated for motor vehicle parking. A parking space does not include a loading space.

"Regulated Affordable Housing" means affordable housing that: (a) has received loans, grants, equity, bonds, or tax credits from any source to support the creation, preservation, or rehabilitation of affordable housing that, as a condition of funding, encumbers the property with a restricted use covenant or similar recorded agreement to ensure affordability, or has been income-restricted under a local inclusionary zoning ordinance or other regulation or program; (b) restricts or limits maximum rental or sale price for households of a given size at a given area median income, as established annually by the united states department of housing and urban development; and (c) ensures occupancy by low- to moderate-income households for a specified period detailed in a restrictive use covenant or similar recorded agreement.

> ***NOTE**: This statute does not define multifamily housing. C.R.S. 38-45-101 offers a reasonable definition of multifamily, which reads ""Multi-family dwelling" means any improved real property used or intended to be used as a residence and that contains more than one dwelling unit. Multi-family dwelling includes a condominium or cooperative." Another common definition of multifamily housing is any building with three or more residential units, which is how building codes typically delineate residential building types. If your jurisdiction's definition of multifamily differs significantly from these common definitions, please reach out to DOLA early to discuss.*

Section 2.3: What Does the Law Require Local Governments to do?

Summarized from C.R.S. 29-36-103(1) and (2) and 29-36-106

HB 24-1304 prohibits local governments that are subject to the law from enacting or enforcing Minimum Parking Requirements on multifamily housing developments located in Applicable Transit Service Areas on or after June 30, 2025. DOLA must produce an official map for use by subject jurisdictions of the Applicable Transit Service Areas by September 30, 2024. The prohibition applies to all new multifamily

residential development, regardless of whether it is a freestanding residential building or part of a mixed-use building or development that also contains some non-residential uses. In addition, the prohibition applies to Adaptive Reuse of an existing building for completely residential purposes, and to Adaptive Reuse of an existing building for a mix of uses in which at least 50 percent of the resulting use is residential. Importantly, the law does not prohibit residential or mixed-use developers from including off-street parking in the development; it simply prohibits the local government from requiring that parking as part of its zoning or land development regulations or procedures.

Section 2.4: What Types of Local Parking Regulations Are Still Allowed in Applicable Transit Service Areas?

Summarized from C.R.S. 29-36-103(3)

The law clarifies that nothing prevents local governments from addressing several parking-related issues in Applicable Transit Service Areas, including:

- **Residential parking voluntarily provided by the developer.** If the developer voluntarily includes off-street parking in a residential or mixed use development, the local government may:
    - Require that those parking spaces include the same number of spaces for persons with disabilities that would be required under the Americans with Disabilities Act.
    - Require that those spaces include the number and type of electric vehicle charging spaces required by the Colorado Model Electric Ready and Solar Ready Code developed pursuant to HB22-1362.
    - Impose maximum limits on the amount of off-street parking spaces voluntarily provided (i.e. Maximum Parking Requirements).
    - Require that the developer charge for the use of those parking spaces (i.e., not make them available free of charge to residents, businesses, or patrons of the development).
    - Require that the developer contribute to a parking enterprise, parking permitting system, or a shared parking plan.
- **Bicycle parking**. The local government may adopt or enforce minimum requirements for bicycle parking.
- **Compliance with affordable housing funding conditions.** If the local government has obtained funding to support affordable housing development, and that funding requires that a minimum number of parking spaces be

included in the development, the local government may accept the funding and may impose and enforce the parking requirements necessary to comply with those funding conditions. If the developer has obtained funding to support affordable housing development, and that funding requires that a minimum number of parking spaces be included in the development, the developer may voluntarily provide those parking spaces.

- **Parking agreements entered prior to the Effective Date.** If the local government has entered into agreements before July 1, 2025, to encourage the production of affordable housing by reducing otherwise-applicable Minimum Parking Requirements for one or more specific developments, the local government may continue to enforce those agreements after July 1, 2025.

Section 2.5: Is There an Exception Allowing Minimum Parking Standards?

Summarized from C.R.S. 29-36-104

Local governments subject to the law can impose a Minimum Parking Requirement of up to one space per dwelling unit in limited circumstances. Each exception is only available for a specific project (not an entire community) that (a) contains 20 or more housing units, or (b) is a Regulated Affordable Housing project. The process to obtain an exception is not simple, and use of the exception requires the local government to submit periodic reports to DOLA to ensure that use of the exception does not undermine the purpose of the law.

To impose this Minimum Parking Requirement, the local government must, within 90 days after receipt of a completed application for an eligible project, conduct (or have someone conduct) a project-specific analysis and publish specific findings. The findings must:

(a) Be supported by substantial evidence that supports a finding of substantial negative impact on safe pedestrian, bicycle, or emergency access to the housing development project, or on existing on- or off-street parking spaces within one-eighth mile of the project;

(b) Include parking utilization data collected from the area within one-eighth mile of the project;

(c) Be reviewed and approved by a professional engineer; and

(d) Demonstrate that the local government implementation of strategies to manage demand for on-street parking for the area within one eighth-mile of the project would not be effective to mitigate a substantial negative impact found pursuant to this section. Guidance for implementing strategies to

manage parking will be included in the parking management best practices resource that DOLA is required to publish by December 31, 2024.

If the required findings are published within 90 days and the local government imposes a minimum off-street parking requirement, then the local government will be required to submit information regarding the use of the exception to DOLA no later than December 31, 2026, and annually thereafter.

Section 2.6: Reporting Requirement

Summarized from C.R.S. 29-36-104(3)

If a local government uses the limited exception detailed in C.R.S. 29-36-104 and imposes a Minimum Parking Requirement of up to one parking space per unit on a multifamily residential development in an Applicable Transit Service Area, the local government must file information, in a form and manner that will be specified by DOLA at a later date, regarding the use of that exception with DOLA no later than December 31, 2026, and annually thereafter.

Section 2.7: What does the Law Require DOLA to do?

Summarized from C.R.S. 29-36-105 and 106

To assist local governments to comply with the requirements of HB24-1304, the law requires DOLA to prepare an official map of Applicable Transit Service Areas no later than September 30, 2024, for use by subject jurisdictions to identify the areas where the law applies. As indicated in the definition of this key term, the map includes areas within one-quarter mile of:

- Existing commuter and light rail stations with planned or scheduled service that has a frequency of every 30 minutes or more frequent between 7am and 10am, and 4pm and 7pm;
- Existing Commuter Bus Rapid Transit stations, such as those served by RTD's Flatiron Flyer routes; or
- Planned or existing stops served by public bus routes that have a planned or scheduled frequency of 30 minutes or more frequent on weekdays, excluding seasonal service.

In addition, the law requires DOLA to work with the Colorado Department of Transportation and the Colorado Energy Office to engage with stakeholders to develop and publish best practices and technical assistance materials to support local governments in optimizing parking supply and managing parking demand. The resources must focus on increasing affordable housing production and housing supply, and cover topics including Maximum Parking Requirements, transportation demand

management, parking benefit districts and on-street parking management, right-sizing parking, shared parking, and addressing parking needs for affordable housing. DOLA, CEO, and CDOT will be conducting stakeholder engagement in the fall and summer of 2024 to develop these resources, and the law requires that the results be published no later than December 31, 2024.

Section 3: Guidance

Colorado local governments subject to HB24-1304 who are reviewing current zoning laws and regulations for alignment with the law's requirements should focus on:

Section 3.1: Applicability statements for Minimum Parking Requirements

Many local zoning and development codes that impose Minimum Parking Requirements on new development or adaptive reuse projects begin with an applicability statement clarifying where those standards apply. Compliance with the law can be accomplished by modifying that statement to clarify that Minimum Parking Requirements for multifamily residential development and the types of Adaptive Reuse projects covered by the law do not apply to the areas shown on the Applicable Transit Service Area map published by the Colorado Department of Local Affairs (DOLA) by September 30, 2024. To increase transparency and user-friendliness, a map of those areas, or a cross-reference to the DOLA map, can be included in the zoning and development code.

If the local government wants to take advantage of the limited exceptions allowing imposition of a one-space-per-unit Minimum Parking Requirements in certain cases, that exception should be included in the applicability statement. For example, the applicability statement could be modified to state that minimum parking standards shall not apply in the areas shown on the DOLA map except as permitted by C.R.S. Section 29-36-104.

> ***NOTE:*** *A growing number of communities around the country are removing Minimum Parking Requirements altogether. Despite the limited scope of HB24-1304, Colorado communities subject to the law may want to consider removing Minimum Parking Requirements for all uses within their Applicable Transit Service Areas, or for multi-family housing developments in each of the zoning districts that have any overlap with their Applicable Transit Service Areas, or from the entire community, in order to simplify implementation, avoid potential overregulation of parking, and further reduce housing costs.*

Section 3.2: Parking standards in zoning districts or a parking table

Many zoning and development codes include a Minimum Parking Requirement in one or more zoning districts and some codes consolidate that information into a parking table. These sections of the zoning and development code should be revised to eliminate the Minimum Parking Requirement for types of multifamily and Adaptive Reuse mixed use development covered by the law. If the local government wants to take advantage of the limited exceptions allowing imposition of up to one space per unit Minimum Parking Requirements in certain cases, that exception should be noted or cross-referenced in this section. The example in Section 4 below illustrates one way to do so.

Section 3.3: Criteria or standards for approving multifamily housing developments

If the local government wants to take advantage of the limited exceptions allowing imposition of up to a one space per unit Minimum Parking Requirement in certain cases, it should also revise the criteria used to review and approve multifamily residential development and Adaptive Reuse projects covered by the law to state that a Minimum Parking Requirement of up to one space per unit may only be imposed if the local government publishes the findings required by the law within 90 days after receiving a completed application for the project. These revisions can be incorporated into use-specific standards, or into the criteria applicable to approval of conditional use or site plan approvals for multifamily residential developments or Adaptive Reuse projects covered by the law.

Section 3.4: Demonstrating Compliance

The simplest method by which Subject Jurisdictions may comply with the requirements of HB24-1304 is by revising local zoning and land use regulations so that any revisions necessary to comply with the law be completed by June 30, 2025. If a Subject Jurisdiction is uncertain about their ability to revise their regulations prior to the compliance deadline, they are urged to contact DOLA as soon as possible.

Section 4: Examples

The following two examples are from zoning ordinances currently in use in Colorado, with ~~red strikeout text~~ used to show text that could be deleted and red underlined text that could be added to comply with the law. These examples are presented not as recommended approaches, but to illustrate examples of the minimum changes necessary to comply with the requirements of HB 24-1304.

Example 1

In this example, we assume that the community does not want to implement the exceptions that would allow it to require one parking space per dwelling unit in those circumstances allowed by the law.

Sec. [1] General provisions.

a) Off-street parking is an accessory use in all districts and is subject to [Section X], except for the area limitations. Off-street parking in the Transit Oriented Development District can be considered either a main use or an accessory use. An SUP is required for off-street parking as a main use in the TOD district.

(b) The off-street parking requirements for each use are listed in [Section 2 below]. However, no off-street parking shall be required for new multiple dwelling development or in any adaptive reuse development in which more than 50 percent of the gross floor area of the development is in residential dwelling use, within those areas designated by statute and identified by a map maintained by the Colorado Department of Local Affairs as Applicable Transit Service Areas.

[. . .]

(h) In all districts, required off-street parking shall be available as free parking, except up to one-half of the required parking may be contract parking on other than an hourly or daily fee basis.

(i) Except as specifically permitted in this article, all off-street parking shall be provided on the lot occupied by the main use. When adequate cross-access agreements are in place, off-street parking for a main use may be permitted on an adjacent lot.

Sec. [2] Off-street parking and loading requirements chart.

Off-Street Parking and Loading Requirements		
Use	***Required Off-Street Parking***	***Required Off-Street Loading***
Part VIII. Residential Uses		
Multiple dwellings [A]	*a) One space for each 500 square feet of floor area, up to a maximum of three for each dwelling unit.*	*None.*
	b) One guest space shall be provided for each five dwelling units and shall be distributed throughout the site.	

Off-Street Parking and Loading Requirements		
Use	***Required Off-Street Parking***	***Required Off-Street Loading***
Retirement housing [A]	*Seven-tenths of a space for each dwelling unit or suite, plus one space for each 300 square feet of floor area not in a dwelling unit or suite.*	*None*
A. No off-street parking shall be required for new multiple dwelling development or for adaptive reuse development in which more than 50 percent of the gross floor area of the development is in residential use, within those areas designated by the statute and identified in a map maintained by the Colorado Department of Local Affairs as Applicable Transit Service Areas.		

Example 2

In this example, we assume that the community wants to implement the exceptions that would allow it to require one parking space per dwelling unit in those circumstances allowed by the law.

ARTICLE X. - PARKING AND LOADING

DIVISION X-1. - PURPOSE AND APPLICATION OF ARTICLE

X-1-1. - Purpose of article. *The purpose of this Article is to specify minimum requirements for the provision and design of off-street parking and loading areas, in proportion to the parking, loading, and transportation demands of different land uses throughout the City. The standards in this Article are intended to provide for adequate off-street parking and loading while supporting walkable urbanism in appropriate locations, and allowing the flexibility needed to accommodate alternative parking solutions. Off-street parking requirements in this Article shall apply to automobile, motorized vehicle, and bicycle parking.*

X-1-2. - Application of article. *The divisions within this Article are applied as follows:*

A. Division X-2. Parking and Loading Calculations, sets out standards for calculating the number of required parking and loading spaces based on the anticipated demand for parking and loading generated by the use of the subject property. The Division also provides for certain exemptions from parking requirements, as well as methodologies for reducing the amount of required parking. Notwithstanding other provisions of Division X-2, no off-street parking shall be required for new multifamily development or for

adaptive reuse development in which more than 50 percent of the gross floor area of the development is in residential use, within those areas designated by the statute and identified in a map maintained by Colorado Department of Local Affairs as Applicable Transit Service Areas, unless the provisions of Section Y-3-2D apply, in which case a minimum parking requirement of 1 space per dwelling unit shall apply.

B. *Division X-3, Parking and Loading Design, sets out standards for the design of parking and loading areas.*

C. *Division X-4. Use and Maintenance of Parking Areas, sets out standards for how parking areas may be used, as well as minimum standards for their ongoing maintenance.*

DIVISION X-2. - PARKING AND LOADING CALCULATIONS

X-2-1. - Calculation of required parking spaces.

A. *Generally. Section X-2-2, Parking Requirements Tables, sets out the number of parking spaces that are required for additions, significant redevelopment, and new developments for each land use that is listed in [Division A] Land Use by Zoning District.*

. . .

X-2-2. - Parking requirements tables.

A. *Residential Land Uses. The required off-street parking for residential land uses is set out in Table X-2-2A, Residential Land Use Parking Standards.*

Table X-2-2A: Residential Land Use Parking Standards	
Land Use	***Minimum Required Parking***
Standard Housing Types	
Multifamily and Multiplex [1]	*efficiency units: 1.4 sp./du*
	1 BR units: 1.6 sp./du
	2 BR units: 2.1 sp./du
	3+ BR units: 2.5 sp./du
Multifamily, Affordable [2,1]	*efficiency units/1 BR units: 1.4 sp./du*
	2 + BR units: 2.0 sp./du
Multifamily, Senior [3, 1]	*1 sp./du*
TABLE NOTES: [1] No off-street parking shall be required for new multifamily development or for adaptive reuse development in which more than 50 percent of the gross	

Table X-2-2A: Residential Land Use Parking Standards	
Land Use	**Minimum Required Parking**
floor area of the development is in residential use, within those areas designated by the statute and identified in a map maintained by Colorado Department of Local Affairs as Applicable Transit Service Areas, unless the requirements of Section Y-3-2.D have been met, in which case the provision of 1 space per dwelling unit applies. [2] Projects that receive Low Income Housing Tax Credits. [3] Age restricted projects for residents 62 years and older.	

Y-3-2. - Residential standards.

A. Single-Family Detached.

1. In the MX-S and MX-U zoning districts, in order to buffer existing single-family detached dwellings, the single-family detached lot shall only adjoin or be located across a local street from an existing or approved single-family residential subdivision. The lot width that is used for the housing type shall be within 25 percent of the average lot width of the adjoining lots or the lots that are directly across the local street (as applicable) that are developed with single-family detached dwelling units.
2. In the MX-N district, single-family detached units shall not be adjacent to arterial streets.

B. Duplex.

1. Each individual duplex dwelling unit shall have a separate exterior entrance and separate utility meters.

C. Townhome.

1. Each individual townhome dwelling unit shall have direct access to a street, alley, or shared open space.

D. Multifamily.

1. No off-street parking shall be required for new multifamily development or for adaptive reuse development in which more than 50 percent of the gross floor area of the development is in multifamily use, within those areas designated by the statute and identified in a map maintained by Colorado Department of Local Affairs as Applicable Transit Service Areas, unless the provisions of Subsection D.2 below apply, in which case one space per dwelling unit shall be provided.

2. *The City may require that up to one off-street parking space be provided for each dwelling unit if all of the following requirements are met:*

   (a) The multifamily project is a new development project containing 20 or more dwelling units, or contains regulated affordable housing as defined in C.R.S. 29-36-102;

   (b) Within 90 days after receipt of a complete application for the proposed multifamily development, the City has published written findings that not imposing or enforcing a minimum parking standard in connection with the proposed multifamily development would have a substantial negative impact on:

      (i) Safe pedestrian, bicycle, or emergency access to the multifamily development, or;

      (ii) Existing on- or off-street parking spaces within one-eighth mile of the multifamily development;

   (c) The findings required in Subsection D.2 must:

      (i) Be supported by substantial evidence in support of such findings:

      (ii) Include parking utilization data collected from the area within one-eighth mile of the multifamily development;

      (iii) Demonstrate that the City's implementation of strategies to manage demand for on-street parking in the area within one-eighth mile of the multifamily development would not be effective to mitigate the substantial negative impacts contained in such findings; and

      (iii) Have been reviewed and approved by a professional engineer, as defined in C.R.S. 12-120-202(7).

Section 5: List of jurisdictions with areas subject to HB24-1304

This law applies to Applicable Transit Service Areas in each of the following communities. Please refer to the Applicable Transit Service Areas map on the DOLA website to see areas in each community subject to the new law.

1. Arvada
2. Aurora
3. Boulder
4. Broomfield
5. Centennial
6. Cherry Hills Village
7. Colorado Springs
8. Columbine Valley
9. Commerce City
10. Denver
11. Edgewater
12. Englewood
13. Erie
14. Evans
15. Federal Heights
16. Fort Collins
17. Fountain
18. Foxfield
19. Garden City
20. Glendale
21. Golden
22. Greeley
23. Greenwood Village
24. Lafayette
25. Lakeside
26. Lakewood
27. Littleton
28. Lone Tree
29. Longmont
30. Louisville
31. Loveland
32. Manitou Springs
33. Mountain View
34. Northglenn
35. Pueblo
36. Sheridan
37. Superior
38. Thornton
39. Unincorporated Adams County
40. Unincorporated Arapahoe County
41. Unincorporated Boulder County
42. Unincorporated Douglas County
43. Unincorporated El Paso County
44. Unincorporated Jefferson County
45. Unincorporated Larimer County
46. Unincorporated Pueblo County
47. Unincorporated Weld County
48. Westminster
49. Wheat Ridge

HOUSE BILL 24-1304

BY REPRESENTATIVE(S) Vigil and Woodrow, Bacon, Boesenecker, deGruy Kennedy, Epps, Froelich, Hernandez, Herod, Jodeh, Joseph, Kipp, Mabrey, Rutinel, Sirota, Lindsay, Mauro, Parenti, Weissman, Willford, McCluskie;
also SENATOR(S) Priola and Hinrichsen, Cutter, Gonzales, Jaquez Lewis.

CONCERNING PARKING REQUIREMENTS WITHIN METROPOLITAN PLANNING ORGANIZATIONS.

Be it enacted by the General Assembly of the State of Colorado:

SECTION 1. In Colorado Revised Statutes, **add** article 36 to title 29 as follows:

ARTICLE 36
Strategic Growth

29-36-101. Legislative declaration. (1) THE GENERAL ASSEMBLY FINDS, DETERMINES, AND DECLARES THAT:

(a) THERE IS AN EXTRATERRITORIAL IMPACT WHEN LOCAL GOVERNMENTS ENACT LAND USE DECISIONS THAT REQUIRE A MINIMUM

Capital letters or bold & italic numbers indicate new material added to existing law; dashes through words or numbers indicate deletions from existing law and such material is not part of the act.

AMOUNT OF PARKING SPACES;

(b) RESIDENTIAL DEVELOPMENTS FREQUENTLY HAVE MORE PARKING THAN IS UTILIZED, WHICH ADDS TO HOUSING COSTS AND ENCOURAGES ADDITIONAL VEHICLE OWNERSHIP AND VEHICLE MILES TRAVELED. ACCORDING TO THE REGIONAL TRANSPORTATION DISTRICT STUDY TITLED "RESIDENTIAL PARKING IN STATION AREAS: A STUDY OF METRO DENVER", UNSUBSIDIZED HOUSING DEVELOPMENTS NEAR REGIONAL TRANSPORTATION DISTRICT STATIONS PROVIDE FORTY PERCENT MORE PARKING THAN RESIDENTS UTILIZE AT PEAK TIMES, AND INCOME-RESTRICTED HOUSING DEVELOPMENTS PROVIDE FIFTY PERCENT MORE PARKING THAN IS USED.

(c) THE 2021 STUDY "PARKING & AFFORDABLE HOUSING" OF PARKING UTILIZATION AT AFFORDABLE HOUSING DEVELOPMENTS ALONG THE FRONT RANGE FOUND THAT HALF OF PARKING SPACES BUILT ON AVERAGE GO UNUSED, AND THAT REQUIREMENTS CAN BE UP TO FIVE TIMES THE NEED ESPECIALLY FOR BUILDINGS SERVING LOWER AREA MEDIAN INCOMES;

(d) LOCAL GOVERNMENT LAND USE DECISIONS THAT REQUIRE A MINIMUM AMOUNT OF PARKING SPACES BEYOND WHAT IS NECESSARY TO MEET MARKET DEMAND INCREASE VEHICLE MILES TRAVELED AND ASSOCIATED GREENHOUSE GAS EMISSIONS. ACCORDING TO A UNIVERSITY OF CALIFORNIA INSTITUTE OF TRANSPORTATION STUDIES ARTICLE TITLED "WHAT DO RESIDENTIAL LOTTERIES SHOW US ABOUT TRANSPORTATION CHOICES?", HIGHER AMOUNTS OF FREE PARKING PROVIDED IN RESIDENTIAL DEVELOPMENTS CAUSE HIGHER RATES OF VEHICLE OWNERSHIP, HIGHER RATES OF VEHICLE MILES TRAVELED, AND LESS FREQUENT TRANSIT USE.

(e) ACCORDING TO THE STUDY "EFFECTS OF PARKING PROVISION ON AUTOMOBILE USE IN U.S. CITIES: INFERRING CAUSALITY" IN THE JOURNAL TRANSPORTATION RESEARCH RECORD, AN INCREASE IN PARKING PROVISIONS FROM ONE-TENTH TO ONE-HALF PARKING SPACE PER PERSON IS ASSOCIATED WITH AN INCREASE IN AUTOMOBILE MODE SHARE OF ROUGHLY THIRTY PERCENT;

(f) ACCORDING TO THE ARTICLE "HOUSEHOLDS WITH CONSTRAINED OFF-STREET PARKING DRIVE FEWER MILES" IN THE JOURNAL TRANSPORTATION, VEHICLE OWNERSHIP RATES ARE FOURTEEN PERCENT HIGHER FOR HOUSEHOLDS WITH MORE THAN ONE AVAILABLE PARKING SPACE PER UNIT COMPARED TO THOSE WITH ONE OR FEWER, AND FOR EVERY

ADDITIONAL VEHICLE PER HOUSEHOLD, THE HOUSEHOLD TRAVELS ON AVERAGE SEVENTEEN MORE MILES OF TOTAL VEHICLE MILES TRAVELED PER DAY;

(g) COLORADANS DRIVE MORE MILES PER PERSON THAN THEY USED TO, WHICH PUTS STRESS ON TRANSPORTATION INFRASTRUCTURE AND INCREASING HOUSEHOLD COSTS. SINCE 1981, PER CAPITA VEHICLE MILES TRAVELED IN COLORADO HAVE RISEN BY OVER TWENTY PERCENT ACCORDING TO DATA FROM THE FEDERAL HIGHWAY ADMINISTRATION.

(h) INCREASED VEHICLE OWNERSHIP AND THE RESULTING VEHICLE MILES TRAVELED IMPACT NEIGHBORING JURISDICTIONS BY INCREASING CONGESTION, ROADWAY INFRASTRUCTURE MAINTENANCE COSTS, AIR POLLUTION, NOISE, AND GREENHOUSE GAS EMISSIONS;

(i) GIVEN THE CLOSE PROXIMITY AND INTERCONNECTED NATURE OF JURISDICTIONS WITHIN COLORADO'S METROPOLITAN REGIONS, MANY RESIDENTS TRAVEL FREQUENTLY BETWEEN JURISDICTIONS FOR WORK, SHOPPING, RECREATION, AND OTHER TRIPS;

(j) IN COLORADO'S MAJOR CITIES, A SIGNIFICANT SHARE OF EMPLOYEES COMMUTE TO JOBS IN THE CITY BUT LIVE ELSEWHERE, INCLUDING SEVENTY PERCENT OF EMPLOYEES IN DENVER, FORTY-FIVE PERCENT IN COLORADO SPRINGS, SIXTY PERCENT IN FORT COLLINS, FIFTY PERCENT IN PUEBLO, AND SIXTY-FIVE PERCENT IN GRAND JUNCTION, ACCORDING TO 2021 DATA FROM THE FEDERAL CENSUS;

(k) EXCESSIVE PARKING REQUIREMENTS LIMIT COMPACT, WALKABLE DEVELOPMENT BY MANDATING ADDITIONAL SPACE BETWEEN USES, WHICH THEN NECESSITATES DRIVING TO REACH MOST DESTINATIONS;

(l) LOWER DENSITY DEVELOPMENT HAS LOWERED REVENUE AND INCREASED CAPITAL AND MAINTENANCE COSTS COMPARED TO MORE COMPACT DEVELOPMENT. NATIONAL STUDIES, SUCH AS THE ARTICLE "RELATIONSHIPS BETWEEN DENSITY AND PER CAPITA MUNICIPAL SPENDING IN THE UNITED STATES", PUBLISHED IN URBAN SCIENCE, HAVE FOUND THAT LOWER DENSITY COMMUNITIES HAVE HIGHER GOVERNMENT CAPITAL AND MAINTENANCE COSTS FOR WATER, SEWER, AND TRANSPORTATION INFRASTRUCTURE AND LOWER PROPERTY AND SALES TAX REVENUE. THESE INCREASED COSTS ARE OFTEN BORNE BY BOTH STATE AND LOCAL

GOVERNMENTS.

(m) VEHICLE TRAFFIC, WHICH INCREASES WHEN LAND USE PATTERNS ARE MORE DISPERSED, CONTRIBUTES TWENTY PERCENT OF NITROGEN OXIDE EMISSIONS, A KEY OZONE PRECURSOR, ACCORDING TO THE EXECUTIVE SUMMARY OF THE MODERATE AREA OZONE STATE IMPLEMENTATION PLAN FOR THE 2015 OZONE NATIONAL AMBIENT AIR QUALITY STANDARDS BY THE REGIONAL AIR QUALITY COUNCIL;

(n) THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY HAS CLASSIFIED THE DENVER METRO AREA AND THE NORTH FRONT RANGE AREA AS BEING IN SEVERE NONATTAINMENT FOR OZONE AND GROUND LEVEL OZONE, WHICH HAS SERIOUS IMPACTS ON HUMAN HEALTH, PARTICULARLY FOR VULNERABLE POPULATIONS;

(o) ACCORDING TO THE GREENHOUSE GAS POLLUTION REDUCTION ROADMAP, PUBLISHED BY THE COLORADO ENERGY OFFICE AND DATED JANUARY 14, 2021, THE TRANSPORTATION SECTOR IS THE SINGLE LARGEST SOURCE OF GREENHOUSE GAS POLLUTION IN COLORADO;

(p) NEARLY SIXTY PERCENT OF THE GREENHOUSE GAS EMISSIONS FROM THE TRANSPORTATION SECTOR COME FROM LIGHT-DUTY VEHICLES, THE MAJORITY OF CARS AND TRUCKS THAT COLORADANS DRIVE EVERY DAY;

(q) SECTION 43-1-128 (3) DIRECTS THE DEPARTMENT OF TRANSPORTATION TO ESTABLISH GREENHOUSE GAS REDUCTION TARGETS, GUIDELINES, AND PROCEDURES FOR STATE AND REGIONAL TRANSPORTATION PLANS, AND THE RESULTING GREENHOUSE GAS PLANNING RULE AND ASSOCIATED MITIGATION POLICY DIRECTIVES INCLUDE A LIST OF GREENHOUSE GAS MITIGATION MEASURES TO ACHIEVE THOSE TARGETS, INCLUDING THE ELIMINATION OF MINIMUM PARKING REQUIREMENTS AND OTHER PARKING MANAGEMENT STRATEGIES;

(r) LOCAL GOVERNMENT LAND USE DECISIONS THAT REQUIRE A MINIMUM AMOUNT OF PARKING SPACES INCREASE THE COST OF NEW RESIDENTIAL PROJECTS, WHICH INCREASES HOUSING COSTS. ACCORDING TO THE REGIONAL TRANSPORTATION DISTRICT STUDY TITLED "RESIDENTIAL PARKING IN STATION AREAS: A STUDY OF METRO DENVER", STRUCTURED PARKING SPACES IN THE DENVER METROPOLITAN AREA COST TWENTY-FIVE THOUSAND DOLLARS EACH TO BUILD IN 2020 AND USE SPACE THAT WOULD

OTHERWISE BE USED FOR REVENUE GENERATING RESIDENTIAL UNITS, DECREASING THE PROFITABILITY OF RESIDENTIAL DEVELOPMENT. AS A RESULT, PARKING REQUIREMENTS THAT NECESSITATE THE CONSTRUCTION OF STRUCTURED PARKING SPACES MAY DISCOURAGE DEVELOPERS FROM BUILDING NEW RESIDENTIAL PROJECTS, OR, IF THEY DO MOVE FORWARD WITH PROJECTS, FORCE THEM TO RECOUP THE COSTS OF BUILDING EXCESSIVE PARKING BY INCREASING HOUSING PRICES.

(s) OFF-STREET SURFACE PARKING COSTS UP TO TEN THOUSAND DOLLARS PER SPACE, AND EACH SPACE REQUIRES UP TO TWO AND ONE-HALF TIMES ITS SQUARE FOOTAGE TO ACCOMMODATE. AS A RESULT, OFF-STREET SURFACE PARKING REQUIREMENTS ALSO MAY DISCOURAGE DEVELOPERS FROM BUILDING NEW RESIDENTIAL PROJECTS, OR, IF THEY DO MOVE FORWARD WITH PROJECTS, FORCE THEM TO BUILD FEWER UNITS THAN THEY OTHERWISE COULD AND RECOUP THE EXCESSIVE COST BY INCREASING HOME PRICES AND RENTS. AN ANALYSIS CONDUCTED BY THE PARKING REFORM NETWORK FOUND THAT AN OFF-STREET PARKING SPACE CAN ADD BETWEEN TWO HUNDRED AND FIVE HUNDRED DOLLARS PER MONTH IN RENT. WHETHER THESE COSTS ARE NECESSARY VARIES FROM ONE BUILDING PROJECT TO THE NEXT, AND THOSE VARIABLES ARE NOT ACCOUNTED FOR IN MANDATED PARKING MINIMUMS.

(t) MINIMUM PARKING REQUIREMENTS PUT SMALL BUSINESSES AT A DISADVANTAGE RELATIVE TO LARGE CORPORATIONS. LARGE CORPORATIONS HAVE MORE CAPITAL AT THEIR DISPOSAL TO FULFILL COSTLY PARKING REQUIREMENTS AND ARE LESS RELIANT ON FOOT TRAFFIC, HUMAN-SCALE VISIBILITY, AND A SENSE OF PLACE TO ATTRACT CUSTOMERS.

(u) IMPERVIOUS SURFACES SUCH AS THOSE BUILT FOR VEHICLE PARKING CREATE AN URBAN HEAT ISLAND EFFECT, CONTRIBUTING TO RISING TEMPERATURES, INCREASING ENERGY COSTS FOR AIR CONDITIONING, AND WORSENING GROUND LEVEL AIR QUALITY. EXCESSIVE LAND COVERAGE OF THIS KIND MAKES STORMWATER MANAGEMENT DIFFICULT AND EXPENSIVE, AND CONTRIBUTES TO FLASH FLOODING AND EROSION, CAUSING INTERJURISDICTIONAL CONFLICTS AND LEGAL DISPUTES.

(2) THEREFORE, THE GENERAL ASSEMBLY DECLARES THAT THE REQUIRED MINIMUM AMOUNT OF PARKING SPACES FOR A REAL PROPERTY IS A MATTER OF MIXED STATEWIDE AND LOCAL CONCERN.

29-36-102. Definitions. AS USED IN THIS ARTICLE 36, UNLESS THE CONTEXT OTHERWISE REQUIRES:

(1) "ADAPTIVE REUSE" MEANS THE CONVERSION OF AN EXISTING STRUCTURE FROM THE USE FOR WHICH IT WAS CONSTRUCTED TO A NEW USE BY MAINTAINING ELEMENTS OF THE STRUCTURE AND ADAPTING SUCH ELEMENTS TO A NEW USE.

(2) "APPLICABLE TRANSIT PLAN" MEANS A PLAN OF A TRANSIT AGENCY WHOSE SERVICE TERRITORY IS WITHIN A METROPOLITAN PLANNING ORGANIZATION, INCLUDING A SYSTEM OPTIMIZATION PLAN OR A TRANSIT MASTER PLAN THAT:

(a) HAS BEEN APPROVED BY THE GOVERNING BODY OF A TRANSIT AGENCY ON OR AFTER JANUARY 1, 2019, AND ON OR BEFORE JANUARY 1, 2024;

(b) IDENTIFIES THE PLANNED FREQUENCY AND SPAN OF SERVICE FOR TRANSIT SERVICE OR SPECIFIC TRANSIT ROUTES; AND

(c) IDENTIFIES SPECIFIC TRANSIT ROUTES FOR SHORT-TERM IMPLEMENTATION ACCORDING TO THAT PLAN, OR IMPLEMENTATION BEFORE JANUARY 1, 2027.

(3) "APPLICABLE TRANSIT SERVICE AREA" MEANS AN AREA DESIGNATED BY THE MAP CREATED IN SECTION 29-36-106.

(4) "BUS RAPID TRANSIT SERVICE" MEANS A TRANSIT SERVICE THAT:

(a) IS IDENTIFIED AS BUS RAPID TRANSIT BY A TRANSIT AGENCY, IN A METROPOLITAN PLANNING ORGANIZATION'S FISCALLY CONSTRAINED LONG RANGE TRANSPORTATION PLAN OR IN AN APPLICABLE TRANSIT PLAN; AND

(b) INCLUDES ANY NUMBER OF THE FOLLOWING:

(I) SERVICE THAT IS SCHEDULED TO RUN EVERY FIFTEEN MINUTES OR LESS FOR FOUR HOURS OR MORE ON WEEKDAYS, EXCLUDING SEASONAL SERVICE;

(II) DEDICATED LANES OR BUSWAYS;

(III) TRAFFIC SIGNAL PRIORITY;

(IV) OFF-BOARD FARE COLLECTION;

(V) ELEVATED PLATFORMS; OR

(VI) ENHANCED STATIONS.

(5) "COMMUNITY-BASED ORGANIZATION" MEANS A COLORADO-BASED NONPROFIT ENTITY THAT:

(a) HAS A MISSION TO IMPROVE THE ENVIRONMENTAL, ECONOMIC, SOCIAL, CULTURAL, OR QUALITY OF LIFE CONDITIONS OF A COMMON COMMUNITY OF INTEREST;

(b) IS ACCESSIBLE FOR RESIDENTS OF ALL AGES, INCOMES, LANGUAGES, AND ABILITIES; OR

(c) ADDRESSES THE NEEDS OF DISPROPORTIONATELY IMPACTED AND MARGINALIZED COMMUNITIES IN THE REGION AND CENTERS VOICES OF MARGINALIZED COMMUNITIES IN TRANSPORTATION PLANNING, BOTH IN THEIR COMMUNITY AND AROUND THE REGION.

(6) "COMMUTER BUS RAPID TRANSIT SERVICE" MEANS A BUS RAPID TRANSIT SERVICE THAT OPERATES FOR A MAJORITY OF ITS ROUTE ON A FREEWAY WITH ACCESS THAT IS LIMITED TO GRADE-SEPARATED INTERCHANGES.

(7) "COUNTY" MEANS A COUNTY, INCLUDING A HOME RULE COUNTY BUT EXCLUDING A CITY AND COUNTY.

(8) "LAND USE APPROVAL" MEANS ANY FINAL ACTION OF A LOCAL GOVERNMENT THAT HAS THE EFFECT OF AUTHORIZING THE USE OR DEVELOPMENT OF A PARTICULAR PARCEL OF REAL PROPERTY.

(9) "LOADING SPACE" MEANS AN OFF-STREET SPACE OR BERTH THAT:

(a) IS ON THE SAME SITE WITH A BUILDING OR CONTIGUOUS TO A GROUP OF BUILDINGS;

(b) IS DESIGNATED FOR THE TEMPORARY PARKING OF EITHER:

(I) A COMMERCIAL VEHICLE WHILE MATERIALS ARE LOADED IN OR UNLOADED FROM THE VEHICLE; OR

(II) A VEHICLE WHILE PASSENGERS BOARD OR DISEMBARK FROM THE VEHICLE; AND

(c) ABUTS UPON A STREET, ALLEY, OR OTHER MEANS OF ACCESS.

(10) "LOCAL GOVERNMENT" MEANS A MUNICIPALITY THAT IS WITHIN A METROPOLITAN PLANNING ORGANIZATION OR A COUNTY THAT HAS UNINCORPORATED AREAS WITHIN A METROPOLITAN PLANNING ORGANIZATION.

(11) "LOCAL LAW" MEANS ANY CODE, LAW, ORDINANCE, POLICY, REGULATION, OR RULE ENACTED BY A LOCAL GOVERNMENT THAT GOVERNS THE DEVELOPMENT AND USE OF LAND, INCLUDING LAND USE CODES, ZONING CODES, AND SUBDIVISION CODES.

(12) "MAXIMUM PARKING REQUIREMENT" MEANS A REQUIREMENT ESTABLISHED IN LOCAL LAW THAT LIMITS THE NUMBER OF PARKING SPACES THAT MAY BE MADE AVAILABLE IN CONNECTION WITH A REAL PROPERTY.

(13) "METROPOLITAN PLANNING ORGANIZATION" MEANS A METROPOLITAN PLANNING ORGANIZATION UNDER THE "FEDERAL TRANSIT ACT OF 1998", 49 U.S.C. SEC. 5301 ET SEQ., AS AMENDED.

(14) "MINIMUM PARKING REQUIREMENT" MEANS A REQUIREMENT ESTABLISHED IN LOCAL LAW THAT A NUMBER OF PARKING SPACES BE MADE AVAILABLE IN CONNECTION WITH A REAL PROPERTY.

(15) "MUNICIPALITY" MEANS A HOME RULE OR STATUTORY CITY OR TOWN, TERRITORIAL CHARTER CITY OR TOWN, OR CITY AND COUNTY.

(16) "PARKING SPACE" MEANS AN OFF-STREET SPACE DESIGNATED FOR MOTOR VEHICLE PARKING. A PARKING SPACE DOES NOT INCLUDE A LOADING SPACE.

(17) "REGULATED AFFORDABLE HOUSING" MEANS AFFORDABLE

HOUSING THAT:

(a) HAS RECEIVED LOANS, GRANTS, EQUITY, BONDS, OR TAX CREDITS FROM ANY SOURCE TO SUPPORT THE CREATION, PRESERVATION, OR REHABILITATION OF AFFORDABLE HOUSING THAT, AS A CONDITION OF FUNDING, ENCUMBERS THE PROPERTY WITH A RESTRICTED USE COVENANT OR SIMILAR RECORDED AGREEMENT TO ENSURE AFFORDABILITY, OR HAS BEEN INCOME-RESTRICTED UNDER A LOCAL INCLUSIONARY ZONING ORDINANCE OR OTHER REGULATION OR PROGRAM;

(b) RESTRICTS OR LIMITS MAXIMUM RENTAL OR SALE PRICE FOR HOUSEHOLDS OF A GIVEN SIZE AT A GIVEN AREA MEDIAN INCOME, AS ESTABLISHED ANNUALLY BY THE UNITED STATES DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT; AND

(c) ENSURES OCCUPANCY BY LOW- TO MODERATE-INCOME HOUSEHOLDS FOR A SPECIFIED PERIOD DETAILED IN A RESTRICTIVE USE COVENANT OR SIMILAR RECORDED AGREEMENT.

29-36-103. Limitations on minimum parking requirements. (1) ON OR AFTER JUNE 30, 2025, A MUNICIPALITY SHALL NEITHER ENACT NOR ENFORCE LOCAL LAWS THAT ESTABLISH A MINIMUM PARKING REQUIREMENT THAT APPLIES TO A LAND USE APPROVAL FOR A MULTIFAMILY RESIDENTIAL DEVELOPMENT, ADAPTIVE RE-USE FOR RESIDENTIAL PURPOSES, OR ADAPTIVE RE-USE MIXED-USE PURPOSES WHICH INCLUDE AT LEAST FIFTY PERCENT OF USE FOR RESIDENTIAL PURPOSES THAT IS WITHIN THE MUNICIPALITY, A METROPOLITAN PLANNING ORGANIZATION, AND AT LEAST PARTIALLY WITHIN AN APPLICABLE TRANSIT SERVICE AREA.

(2) ON OR AFTER JUNE 30, 2025, A COUNTY SHALL NEITHER ENACT NOR ENFORCE LOCAL LAWS THAT ESTABLISH A MINIMUM PARKING REQUIREMENT THAT APPLIES TO A LAND USE APPROVAL FOR A MULTIFAMILY RESIDENTIAL DEVELOPMENT, ADAPTIVE RE-USE FOR RESIDENTIAL PURPOSES, OR ADAPTIVE RE-USE MIXED-USE PURPOSES WHICH INCLUDE AT LEAST FIFTY PERCENT OF USE FOR RESIDENTIAL PURPOSES THAT IS WITHIN THE UNINCORPORATED AREA OF THE COUNTY, A METROPOLITAN PLANNING ORGANIZATION, AND AT LEAST PARTIALLY WITHIN AN APPLICABLE TRANSIT SERVICE AREA.

(3) NOTHING IN THIS SECTION:

(a) LOWERS THE PROTECTIONS PROVIDED FOR PERSONS WITH DISABILITIES, INCLUDING THE NUMBER OF PARKING SPACES FOR PERSONS WHO ARE MOBILITY IMPAIRED, UNDER THE FEDERAL "AMERICANS WITH DISABILITIES ACT OF 1990", 42 U.S.C. SEC. 12101 ET SEQ., AND PARTS 6 AND 8 OF ARTICLE 34 OF TITLE 24;

(b) PREVENTS A LOCAL GOVERNMENT FROM ENACTING OR ENFORCING LOCAL LAWS THAT ESTABLISH A MAXIMUM PARKING REQUIREMENT;

(c) PREVENTS A LOCAL GOVERNMENT OR A DEVELOPER FROM BEING AWARDED FUNDING FOR AFFORDABLE HOUSING THAT REQUIRES A RATIO OF A CERTAIN NUMBER OF PARKING SPACES;

(d) AFFECTS THE ABILITY OF A LOCAL GOVERNMENT TO ENFORCE ANY AGREEMENT MADE IN CONNECTION WITH A LAND USE APPROVAL PRIOR TO THE EFFECTIVE DATE OF HOUSE BILL 24-1304, ENACTED IN 2024, TO PROVIDE REGULATED AFFORDABLE HOUSING IN EXCHANGE FOR REDUCING MINIMUM PARKING REQUIREMENTS;

(e) PREVENTS A LOCAL GOVERNMENT FROM ENACTING OR ENFORCING LOCAL LAWS THAT ESTABLISH A MINIMUM REQUIREMENT FOR BICYCLE PARKING; OR

(f) PREVENTS A LOCAL GOVERNMENT FROM IMPOSING THE FOLLOWING REQUIREMENTS ON A PARKING SPACE THAT IS VOLUNTARILY PROVIDED IN CONNECTION WITH A LAND USE APPROVAL:

(I) THAT THE OWNERS OF SUCH A PARKING SPACE CHARGE FOR THE USE OF THE SPACE;

(II) THAT THE OWNER OF A SUCH A PARKING SPACE CONTRIBUTE TO A PARKING ENTERPRISE, PERMITTING SYSTEM, OR SHARED PARKING PLAN; AND

(III) THAT SUCH A PARKING SPACE ALLOWS FOR ELECTRIC VEHICLE CHARGING STATIONS IN ACCORDANCE WITH EXISTING LAW.

29-36-104. Limitations on minimum parking requirements. (1) NOTWITHSTANDING SECTION 29-36-103, A LOCAL GOVERNMENT MAY

IMPOSE OR ENFORCE A MINIMUM PARKING REQUIREMENT IN CONNECTION WITH A HOUSING DEVELOPMENT PROJECT THAT IS INTENDED TO CONTAIN TWENTY UNITS OR MORE OR CONTAIN REGULATED AFFORDABLE HOUSING BY REQUIRING NO MORE THAN ONE PARKING SPACE PER DWELLING UNIT IN THE HOUSING DEVELOPMENT.

(2) (a) IN ORDER TO IMPOSE A MINIMUM PARKING REQUIREMENT PURSUANT TO SUBSECTION (1) OF THIS SECTION IN CONNECTION WITH A HOUSING DEVELOPMENT PROJECT, A LOCAL GOVERNMENT MUST, NO LATER THAN NINETY DAYS AFTER RECEIVING A COMPLETED APPLICATION FOR THE HOUSING DEVELOPMENT PROJECT, PUBLICLY PUBLISH WRITTEN FINDINGS THAT FIND THAT NOT IMPOSING OR ENFORCING A MINIMUM PARKING REQUIREMENT IN CONNECTION WITH THE HOUSING DEVELOPMENT PROJECT WOULD HAVE A SUBSTANTIAL NEGATIVE IMPACT.

(b) A LOCAL GOVERNMENT'S WRITTEN FINDINGS PUBLISHED PURSUANT TO SUBSECTION (2)(a) MUST:

(I) BE SUPPORTED BY SUBSTANTIAL EVIDENCE THAT SUPPORTS THE FINDING OF A SUBSTANTIAL NEGATIVE IMPACT ON:

(A) SAFE PEDESTRIAN, BICYCLE, OR EMERGENCY ACCESS TO THE HOUSING DEVELOPMENT PROJECT; OR

(B) EXISTING ON- OR OFF-STREET PARKING SPACES WITHIN ONE EIGHTH-MILE OF THE HOUSING DEVELOPMENT PROJECT;

(II) BE REVIEWED AND APPROVED BY A PROFESSIONAL ENGINEER, AS DEFINED IN SECTION 12-120-202 (7).

(III) INCLUDE PARKING UTILIZATION DATA COLLECTED FROM THE AREA WITHIN ONE EIGHTH-MILE OF THE HOUSING DEVELOPMENT PROJECT; AND

(IV) DEMONSTRATE THAT THE LOCAL GOVERNMENT IMPLEMENTATION OF STRATEGIES TO MANAGE DEMAND FOR ON-STREET PARKING FOR THE AREA WITHIN ONE EIGHTH-MILE OF THE HOUSING DEVELOPMENT PROJECT WOULD NOT BE EFFECTIVE TO MITIGATE A SUBSTANTIAL NEGATIVE IMPACT FOUND PURSUANT TO THIS SECTION.

(3) ON OR BEFORE DECEMBER 31, 2026, AND EVERY DECEMBER 31ST THEREAFTER, IF APPLICABLE, A LOCAL GOVERNMENT SHALL, IN A FORM AND MANNER DETERMINED BY THE DEPARTMENT OF LOCAL AFFAIRS, SUBMIT INFORMATION REGARDING A MINIMUM PARKING REQUIREMENT IMPOSED OR ENFORCED PURSUANT TO THIS SECTION TO THE DEPARTMENT OF LOCAL AFFAIRS.

(4) THE DEPARTMENT OF LOCAL AFFAIRS MAY ISSUE POLICIES AND PROCEDURES AS NECESSARY TO IMPLEMENT THIS SECTION.

29-36-105. Parking management technical assistance. (1) (a) ON OR BEFORE DECEMBER 31, 2024, THE DEPARTMENT OF LOCAL AFFAIRS, IN CONSULTATION WITH THE DEPARTMENT OF TRANSPORTATION, AND THE COLORADO ENERGY OFFICE, SHALL, WITHIN EXISTING RESOURCES, TO THE EXTENT FEASIBLE, DEVELOP AND PUBLISH BEST PRACTICES AND TECHNICAL ASSISTANCE MATERIALS CONCERNING OPTIMIZING PARKING SUPPLY AND MANAGING PARKING IN WAYS THAT INCREASE THE PRODUCTION OF AFFORDABLE HOUSING AND HOUSING SUPPLY. THESE BEST PRACTICES AND TECHNICAL ASSISTANCE MATERIALS MUST INCLUDE, BUT ARE NOT LIMITED TO, ELEMENTS RELATED TO:

(I) THE IMPLEMENTATION OF LOCAL PARKING MAXIMUMS;

(II) SAMPLE LANGUAGE TO REPLACE EXISTING LOCAL PARKING CODES WITH OTHER INCENTIVES FOR THE PRODUCTION OF AFFORDABLE HOUSING, TRANSPORTATION DEMAND MANAGEMENT STRATEGIES, AND OTHER DESIRED OUTCOMES;

(III) THE DESIGN AND IMPLEMENTATION OF PARKING BENEFIT DISTRICTS AND ON-STREET PARKING MANAGEMENT;

(IV) STRATEGIES FOR DEVELOPERS TO MANAGE THE SUPPLY AND PRICE OF PARKING SPACES TO MINIMIZE PARKING DEMAND BASED ON DIFFERENT LOCATION AND LAND USE CHARACTERISTICS AND TAKING INTO CONSIDERATION THE NUMBER OF RESIDENTS WHO NEED ACCESS TO PARKING AND ACCESS TO MASS TRANSIT;

(V) STRATEGIES THAT PRIORITIZE THE TRANSPORTATION NEEDS OF RESIDENTS OF REGULATED AFFORDABLE HOUSING, LOW-INCOME COMMUNITIES, AND COMMUNITIES WITH LOW RATES OF CAR OWNERSHIP;

(VI) STRATEGIES TO OPTIMIZE THE USE OF EXISTING PARKING THROUGH SHARED PARKING AGREEMENTS AND OTHER STRATEGIES; AND

(VII) INFORMATION FROM AFFORDABLE HOUSING PROVIDERS AND EXISTING STUDIES ON PARKING NEEDS FOR RESIDENTS OF REGULATED AFFORDABLE HOUSING BASED ON DIFFERENT LOCATION AND LAND USE CHARACTERISTICS.

(b) (I) IN DEVELOPING THE MATERIALS AND BEST PRACTICES DESCRIBED IN SUBSECTION (1)(a) OF THIS SECTION, THE DEPARTMENT OF LOCAL AFFAIRS SHALL CONSULT WITH VARIOUS STAKEHOLDERS, INCLUDING LOCAL GOVERNMENTS, METROPOLITAN PLANNING ORGANIZATIONS, DISPROPORTIONATELY IMPACTED COMMUNITIES, COMMUNITY-BASED ORGANIZATIONS, AFFORDABLE HOUSING PROVIDERS, TRANSIT AGENCIES, AND ACTIVE TRANSPORTATION ORGANIZATIONS. IN CONSULTING WITH THESE STAKEHOLDERS, THE DEPARTMENT OF LOCAL AFFAIRS MAY COLLECT THIS FEEDBACK THROUGH MULTIPLE MEANS, INCLUDING ONLINE OR IN-PERSON SURVEYS OR PUBLIC FEEDBACK SESSIONS.

(2) DURING THE FIRST REGULAR SESSION OF THE SEVENTY-FIFTH GENERAL ASSEMBLY, THE DEPARTMENT OF LOCAL AFFAIRS SHALL PRESENT THE MATERIALS AND BEST PRACTICES DESCRIBED IN SUBSECTION (1)(a) OF THIS SECTION TO THE LOCAL GOVERNMENT AND HOUSING COMMITTEE OF THE SENATE AND THE TRANSPORTATION, HOUSING AND LOCAL GOVERNMENT COMMITTEE OF THE HOUSE OF REPRESENTATIVES OR THEIR SUCCESSOR COMMITTEES.

29-36-106. Applicable transit service areas map. (1) ON OR BEFORE SEPTEMBER 30, 2024, THE DEPARTMENT OF LOCAL AFFAIRS, IN CONSULTATION WITH THE DEPARTMENT OF TRANSPORTATION, COLORADO ENERGY OFFICE, METROPOLITAN PLANNING ORGANIZATIONS, AND TRANSIT AGENCIES THAT OPERATE WITHIN METROPOLITAN PLANNING ORGANIZATIONS, SHALL PUBLISH A MAP THAT DESIGNATES APPLICABLE TRANSIT SERVICE AREAS TO BE USED BY LOCAL GOVERNMENTS IN COMPLYING WITH THIS PART 1.

(2) IN PUBLISHING THE MAP DESCRIBED IN SUBSECTION (1) OF THIS SECTION, THE DEPARTMENT OF LOCAL AFFAIRS SHALL DESIGNATE APPLICABLE TRANSIT SERVICE AREAS AS AREAS THAT ARE WITHIN:

(a) ONE-QUARTER MILE OF EXISTING STATIONS SERVED BY ROUTES IDENTIFIED IN AN APPLICABLE TRANSIT PLAN FOR:

(I) COMMUTER BUS RAPID TRANSIT;

(II) COMMUTER RAIL WITH PLANNED OR SCHEDULED SERVICE THAT IS SCHEDULED TO RUN EVERY THIRTY MINUTES OR MORE FREQUENT BETWEEN SEVEN A.M. AND TEN A.M. AND BETWEEN FOUR P.M. AND SEVEN P.M.;

(III) LIGHT RAIL WITH PLANNED OR SCHEDULED SERVICE THAT IS SCHEDULED TO RUN EVERY THIRTY MINUTES OR MORE FREQUENT BETWEEN SEVEN A.M. AND TEN A.M. AND BETWEEN FOUR P.M. AND SEVEN P.M.; AND

(IV) A PUBLIC BUS ROUTE THAT HAS A PLANNED OR SCHEDULED FREQUENCY OF EVERY THIRTY MINUTES OR MORE FREQUENT FOR FOUR HOURS OR MORE ON WEEKDAYS, EXCLUDING SEASONAL SERVICE;

(b) ONE-QUARTER MILE OF CURRENTLY PLANNED OR EXISTING STATIONS AND STOPS SERVED BY PUBLIC BUS ROUTES THAT:

(I) HAVE A PLANNED OR SCHEDULED FREQUENCY OF EVERY THIRTY MINUTES OR MORE FREQUENT FOR FOUR HOURS OR MORE ON WEEKDAYS, EXCLUDING SEASONAL SERVICE; AND

(II) ARE IDENTIFIED WITHIN AN APPLICABLE TRANSIT PLAN FOR SHORT-TERM IMPLEMENTATION OR IMPLEMENTATION BEFORE JANUARY 1, 2030, ACCORDING TO THAT PLAN; OR

(c) FOR TRANSIT AGENCIES WITHIN METROPOLITAN PLANNING ORGANIZATIONS THAT DO NOT HAVE APPLICABLE TRANSIT PLANS, ONE-QUARTER MILE OF PUBLIC BUS ROUTES WITH EXISTING TRANSIT SERVICE LEVELS AS OF JANUARY 1, 2024, WITH A SCHEDULED FREQUENCY OF EVERY THIRTY MINUTES OR MORE FREQUENT DURING THE FOUR HOURS OR MORE ON WEEKDAYS, EXCLUDING SEASONAL SERVICE.

SECTION 2. In Colorado Revised Statutes, 29-20-104, **amend** (1) introductory portion as follows:

29-20-104. Powers of local governments - definition. (1) Except

as expressly provided in section 29-20-104.2, ~~or~~ SECTION 29-20-104.5, AND ARTICLE 36 OF THIS TITLE 29, the power and authority granted by this section does not limit any power or authority presently exercised or previously granted. Except as provided in section 29-20-104.2, each local government within its respective jurisdiction has the authority to plan for and regulate the use of land by:

SECTION 3. In Colorado Revised Statutes, 30-15-401, **amend** (1)(h)(I)(B) as follows:

30-15-401. General regulations - definitions. (1) In addition to those powers granted by sections 30-11-101 and 30-11-107 and by parts 1, 2, and 3 of this article 15, the board of county commissioners may adopt ordinances for control or licensing of those matters of purely local concern that are described in the following enumerated powers:

(h) (I) To control and regulate the movement and parking of vehicles and motor vehicles on public property; except that:

(B) For the purposes of any minimum parking requirement a board of county commissioners imposes, the board of county commissioners is subject to ~~section 30-28-140~~ ARTICLE 36 OF TITLE 29 AND SECTION 30-28-140; and

SECTION 4. Act subject to petition - effective date. This act takes effect at 12:01 a.m. on the day following the expiration of the ninety-day period after final adjournment of the general assembly; except that, if a referendum petition is filed pursuant to section 1 (3) of article V of the state constitution against this act or an item, section, or part of this act within such period, then the act, item, section, or part will not take effect unless approved by the people at the general election to be held in

November 2024 and, in such case, will take effect on the date of the official declaration of the vote thereon by the governor.

Julie McCluskie
SPEAKER OF THE HOUSE
OF REPRESENTATIVES

Steve Fenberg
PRESIDENT OF
THE SENATE

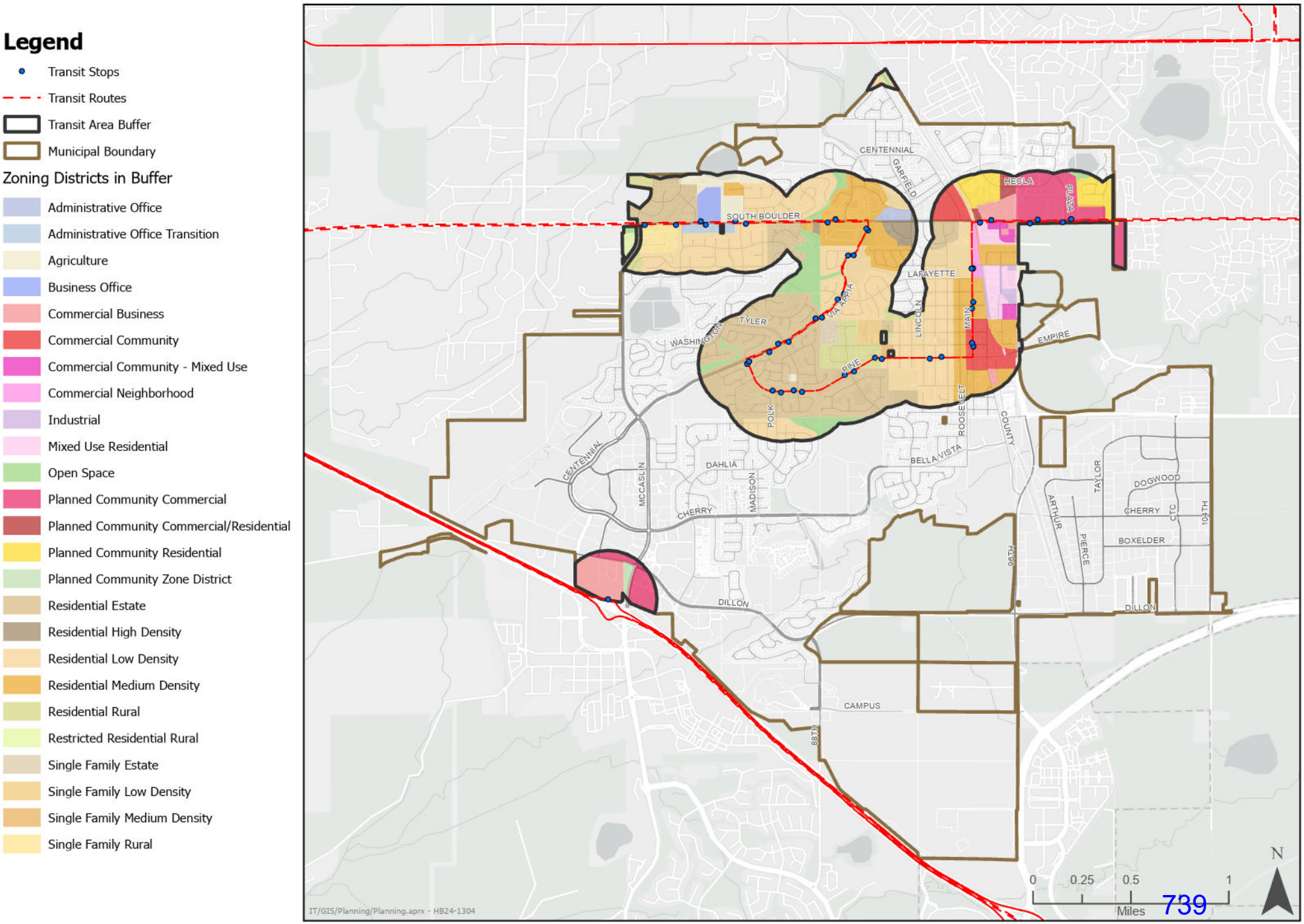
Robin Jones
CHIEF CLERK OF THE HOUSE
OF REPRESENTATIVES

Cindi L. Markwell
SECRETARY OF
THE SENATE

APPROVED Friday May 10th 2024 at 12:15pm
(Date and Time)

Jared S. Polis
GOVERNOR OF THE STATE OF COLORADO

HB24-1304 - Minimum Parking Requirement Buffer & Zones



City Council Public Hearing

July 8, 2025

Parking Minimums: Public Hearing

Approval of Ordinance No. 1897, Series 2025 approval of an ordinance amending Title 17 of the Louisville Municipal Code (LMC) concerning parking minimums for multifamily and adaptive reuse development.

Presented by: Matt Post, Senior Planner

City of Louisville

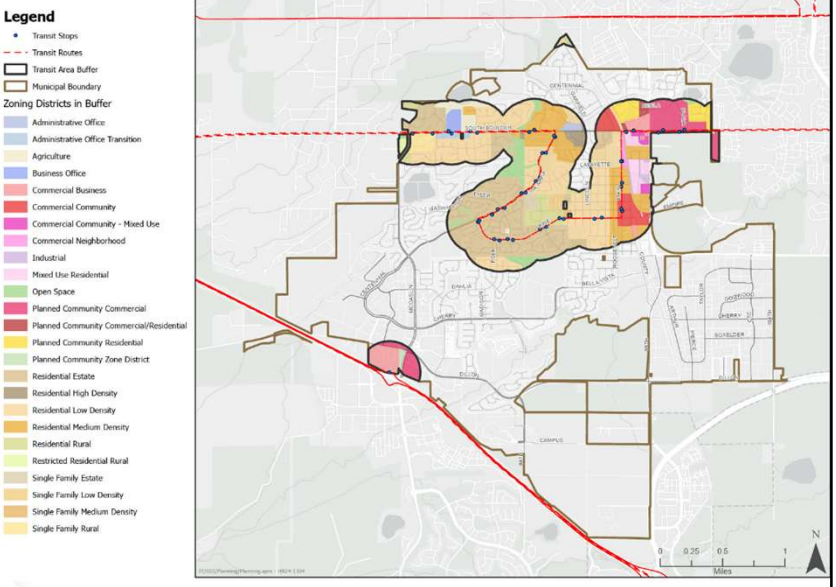
Summary: Parking Minimums

- HB24-1304 was adopted in 2024 by the Colorado General Assembly
- Requires local governments within *Metropolitan Planning Organizations (MPOs)* to eliminate **minimum parking requirements** for the following uses when located in Applicable Transit Service Areas (ATSA):
  - New multifamily developments
  - New residential adaptive reuse developments
- 44 transit stops qualify as ATSAs in Louisville
- Local governments prohibited from enforcing parking minimums after June 30, 2025

City of Louisville

Background: Parking Minimums

- HB24-1304 applies to properties that at least partially intersect with ATSAs
- ATSAs are areas within ¼ quarter mile of transit stops that provide service at intervals of 30 minutes or less during peak hours
  - DASH
  - Flatiron Flyer
- 44 transit stops that qualify as ASTAs



City of Louisville

Background: Parking Minimums

- Within ATSAs, the City may no loner enforce parking minimums for:
  - New multifamily developments
  - New mixed-use development that contain residential uses
    - The City may require minimum parking for non-residential uses
  - Residential adaptive reuse
  - Adaptive reuse containing at least 50% residential use
- Importantly, a **developer may voluntarily provide parking for the listed uses within ATSAs**

City of Louisville

Background: Parking Minimums

- The law clarifies that nothing prevents a local jurisdiction from:
  - Parking compliance with affordable housing funding conditions.
  - Requiring bicycle parking.
  - Requiring accessible (ADA) parking spaces and electric vehicle charging stations when a developer voluntarily provides on-site parking
- Multifamily is not defined in the law, we may use our own definition
  - *building used by two or more families living independently of each other in separate dwelling units, but does not include hotels, motels or resorts*
  - Closely aligns with the state definition
  - No other definitions are proposed

City of Louisville

Background: Parking Minimums

- Zoning & Review Process for Multifamily and Mixed-Use Residential Development in ATSAs:
  - Zoning determines whether multi-unit/mixed-use residential projects are permitted **by-right** or require **Special Review Use (SRU)** approval.
  - **SRU review (LMC Sec. 17.40)** ensures compatibility by evaluating:
    - Location and nature of the proposed use
    - Character of surrounding development
    - Potential adverse impacts
    - Parking **may not** be imposed as a condition of approval for SRUs
  - **SRU-required zoning districts** include:
    - R-E, R-L, R-R, B-O, C-B, C-C, C-N
  - **By-right multifamily zoning districts** include:
    - R-M, R-H, MU-R, PCZD

City of Louisville

Analysis: Parking Minimums

- Law states that the City may not enforce parking minimums for eligible projects by June 30th, 2025.
- Housing Plan Findings on Parking Requirements
  - The City's Housing Plan identifies **minimum parking requirements** as a barrier to housing development
  - Parking minimums:
    - Increase development costs
    - Reduce buildable area on constrained sites
    - Undermine financial feasibility, particularly near transit
  - Study found that reducing parking ratios greater positive impact on project viability than increasing building height
  - Study Recommends lower parking ratios and parking-related incentives in transit corridors and Downtown Louisville; areas that directly correspond to ATSAs identified by HB24-1304

City of Louisville

Analysis: Parking Minimums

- A **developer may voluntarily provide parking** for eligible projects within ATSAs
- Staff anticipate most projects will continue to provide off-street parking **voluntarily**, due to:
  - **Market feasibility**: Parking remains key to leasing and occupancy, especially in suburban areas like Louisville.
  - **Financing requirements**: Lenders and investors often require on-site parking to ensure project viability.
- Potential concerns:
  - Risk of **spillover parking** in adjacent neighborhoods or commercial areas.
  - Actual impacts remain **uncertain** and will vary by project location, scale, and design.
  - Staff will monitor development trends and **evaluate policy responses** as needed.

City of Louisville

Proposal: Parking Minimums

- LMC Chapter 17 updates to align with HB24-1304
- Key code changes:
  - New Subsection in LMC 17.20.010 (General Parking Requirements):
    - Prohibits enforcement of off-street parking for qualifying projects in ATSAs
    - Supersedes existing design standards, PUDs, and GDPs
  - Revisions to LMC 17.20.020.A (Per-Use Parking Standards):
    - Exceptions added referencing new **Section 17.20.010.F** for one-family and multifamily dwellings
    - New **Subsection I** clarifies Section 17.20.020 does not apply where parking is exempt under 17.20.010.F
  - Updates to LMC 17.20.025.A (Downtown Standards)
    - Prohibits enforcement of off-street parking for qualifying projects in ATSAs

City of Louisville

Recommendation: Parking Minimums

On May 8, 2025, The Planning Commission recommended approval of Resolution 8, Series 2025, approval of an ordinance amending Title 17 of the Louisville Municipal Code (LMC) concerning parking minimums for multifamily and adaptive reuse development to comply with HB24-1304.

Approval of Ordinance No. 1897, Series 2025 approval of an ordinance amending Title 17 of the Louisville Municipal Code (LMC) concerning parking minimums for multifamily and adaptive reuse development.

City of Louisville