City Council

Agenda

Tuesday, March 19, 2024
Council Chambers
749 Main Street
6:00 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. APPROVAL OF AGENDA

4. 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.

5. 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. Approval of Bills
B. Award Contracts for the 2024 Concrete Replacement Project; 2024 Street Resurfacing Project; and 2024 On-Call Inspections

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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 (303.335.4536 or 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 303.335.4536 o 303.335.4574 o email ClerksOffice@LouisvilleCO.gov.

C. Approval of City Council Summer Meeting Schedule
D. Award Bid for 2024 Storm System Maintenance Project
E. Approval of a Construction Contract Between the City of Louisville and Krische Construction Inc. for Playground Improvements at Joe Carnival and Meadows Parks
F. Approval of Resolution No. 13, Series 2024 – A Resolution Approving an Intergovernmental Agreement with the City of Boulder for Support to Establish a Regional Affordable Homeownership and Rental Compliance Program
G. Approval of First Amendment to Planned Community Zone District Zoning Agreement Regarding Grading Permits for Redtail Ridge
H. Approval of Purchase of Wing Plow and Two V-Plows
I. Approval of 2024 Annual Fuel Purchase
J. Approval of Sole Source Agreement with Golden Automation LLC for SCADA Support
K. Approval of Resolution No. 14, Series 2024 – A Resolution Approving a Fourth Amendment to the Agreement with the Urban Drainage and Flood Control District D/B/A Mile High Flood District for Drainage and Flood Control Improvements for Coal Creek Drainageway A-1 at Garfield Avenue
L. Approval of Resolution No. 15, Series 2024 – A Resolution Authorizing Applications for Temporary Modification of Liquor Licensed Premises to be Administratively Approved

6. COUNCIL INFORMATIONAL COMMENTS ON PERTINENT ITEMS NOT ON THE AGENDA (Council general comments are scheduled at the end of the Agenda.)

7. CITY MANAGER'S REPORT

8. REGULAR BUSINESS

A. RESOLUTION NO. 16, SERIES 2024 – A RESOLUTION AUTHORIZING THE TEMPORARY CLOSURE OF PORTIONS OF MAIN STREET IN DOWNTOWN LOUISVILLE FOR OUTDOOR DINING AREAS AND ACTIVATION

- Staff Presentation
- Public Comments (Please limit to three minutes each)
- Council Questions & Comments
- Action

B. UPDATE – COMMUNITY RESILIENCE, MARSHALL FIRE RECOVERY

- Staff Presentation
- Public Comments (Please limit to three minutes each)
- Council Questions & Comments
- Action

C. RESOLUTION NO. 17, SERIES 2024 – A RESOLUTION SETTING CERTAIN WATER, WASTEWATER, STORMWATER AND OTHER FEES, RATES, AND CHARGES FOR THE CITY OF LOUISVILLE, COLORADO

- Staff Presentation
- Public Comments (Please limit to three minutes each)
- Council Questions & Comments
- Action

D. ORDINANCE NO. 1870, SERIES 2024 – AN ORDINANCE RENAMING THE ARTS & CULTURE ADVISORY BOARD AND AMENDING THE LOUISVILLE MUNICIPAL CODE TO REFLECT THE SAME – 2nd READING – PUBLIC HEARING (advertised *Daily Camera* 3/10/24)

- Mayor Opens Public Hearing
- Staff Presentation
- Public Comments (Please limit to three minutes each)
- Council Questions & Comments
- Additional Public Comments (Please limit to three minutes each)
- Mayor Closes Public Hearing
- Action

E. ORDINANCE NO. 1871, SERIES 2024 – AN ORDINANCE AMENDING CHAPTER 15.18.030 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE – 1ST READING – SET PUBLIC HEARING 4/16/24

- Introduction
- Action

F. ORDINANCE NO. 1872, SERIES 2024 – AN ORDINANCE AMENDING TITLE 17 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING ELECTRIC VEHICLE CHARGING INFRASTRUCTURE – 1ST READING – SET PUBLIC HEARING 4/16/24

- Introduction
- Action

9. CITY ATTORNEY'S REPORT

10. COUNCIL COMMENTS, COMMITTEE REPORTS, AND IDENTIFICATION OF FUTURE AGENDA ITEMS

11. ADJOURN

ITEMS TENTATIVELY SCHEDULED FOR REGULAR MEETING 4/2/24.

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

- Wastewater Treatment Plan Solids Handling Construction Contract
- Contract for Hole 13 Cart Path Construction
- Water Treatment Plant Filter Media Replacement
- Memorandum of Understanding with Xcel Regarding Decarbonization Plan
- Marshall Fire Pet Memorial
- Community Decarbonization Plan Update
- Rocky Mountain Metropolitan Airport Update
- Public Art Process Updates – 1st Reading

CASH ACCOUNT: 001000 101001 WARRANT: 022924 02/29/2024

VENDOR	VENDOR NAME	PURPOSE	AMOUNT
15381	HICKS CONTRACTORS SERVICES LLC	REPAIR ASPHALT AT SOUTH P	1,800.00
14097	L.A.W.S.	Upfitting 2023 Ford PI Ut	28,760.57
99999	JENNIFER REILLY	PER DIEM 3/11/24-3/15/24	102.00
15497	SENERGY PETROLEUM LLC	CUST ID #84627	11,137.81
15497	SENERGY PETROLEUM LLC	CUST ID #84627	15,363.52
10884	WORD OF MOUTH CATERING INC	LUNCHES SERVED 2/22/24 -	2,441.25
3875	XCEL ENERGY	ACCT #53-1879600-8	4,696.16
13790	ZAYO GROUP LLC	ACCT #936665	871.20
	8 INVOICES	WARRANT TOTAL	65,172.51

CASH ACCOUNT: 001000 101001 WARRANT: 030724 03/07/2024

VENDOR	VENDOR NAME	PURPOSE	AMOUNT
5255	FAMILY SUPPORT REGISTRY	Payroll Run 1 - Warrant 0	173.53
15235	GRAVES CONSULTING LLC	MARKET UPDATE	1,750.00
14002	KANSAS PAYMENT CENTER/ SN20DM0	Payroll Run 1 - Warrant 0	21.53
15526	MINES AND ASSOCIATES INC.	BAL DUE ON INV CUST ID	515.20
15526	MINES AND ASSOCIATES INC.	BAL DUE ON INV CUST ID	502.40
99999	CORVUS NIDUS LLC	REFUND CREDIT BALANCE FOR	3,000.00
99999	KIANA FREEMAN	FEB 2024 MILEAGE REIMBUR	198.19
99999	NICK PROSSER	COMPUTER LOAN	799.00
10951	PINNACOL ASSURANCE	POLICY #4206615	30,643.93
10351	US BANK	ACCT #211970000	7,865.00
10884	WORD OF MOUTH CATERING INC	LUNCHES SERVED 2/29/24 -	2,048.75
3875	XCEL ENERGY	ACCT #53-1879596-1	395,294.81
3875	XCEL ENERGY	ACCT #53-1879600-8	12.73
	13 INVOICES	WARRANT TOTAL	442,825.07

CASH ACCOUNT: 001000 101001 WARRANT: 031924 03/19/2024

VENDOR	VENDOR NAME	PURPOSE	AMOUNT
14599	120 WATER, INC.	Lead and Copper Sampling	2,362.50
14599	120 WATER, INC.	Lead and Copper Sampling	136.03
312	ADVANCED EXERCISE EQUIPMENT IN	AriRaid Bike and Climber	3,750.00
14669	AG INVESTIGATIONS LLC	PRE-EMPLOYMENT BACKGROUND	800.00
14737	ALEX THOELE	GUITAR LESSONS 2/6/24 - 2	1,736.00
8933	ARKANSAS VALLEY SEED INC	ACCT #5413	2,000.00
15788	ARROW STAGE LINES	2/9/24 UNION STATION	2,490.00
15788	ARROW STAGE LINES	2/9/24 UNION STATION	-330.00
13881	ASLAN CONSTRUCTION INC	SCWTP Drainage Manhole an	63,693.00
13881	ASLAN CONSTRUCTION INC	WWTP Solids Handling RDT	18,000.00
480	AV-TECH ELECTRONICS INC	CUST #10-LOU1002	552.60
480	AV-TECH ELECTRONICS INC	CUST #10-LOU1002	1,400.00
15520	BACKFLOW SOLUTIONS INC	ANNUAL BSI AND FOG	2,995.00
10801	BADGER METER INC	CUST #51080	108.00
14282	BIBLIOTHECA LLC	CUST #C0000970-US	23,913.80
11605	BOBCAT OF THE ROCKIES LLC	ACCT #021884	930.61
11605	BOBCAT OF THE ROCKIES LLC	ACCT #021884	1,516.98
640	BOULDER COUNTY	2024 FORENSIC LAB FISCAL	10,000.00
7785	BOULDER COUNTY TREASURER	FARRELL & DIGIOVANNI 4/29	1,000.00
8371	BOULDER VALLEY SCHOOL DISTRICT	GYM RENTAL RESERVATION #5	512.00
8371	BOULDER VALLEY SCHOOL DISTRICT	GYM RENTAL RESERVATION #5	2,414.50
8371	BOULDER VALLEY SCHOOL DISTRICT	GYM RENTAL RESERVATION #5	180.00
1122	BRETSA	EMPLOYEE #424	19.30
14403	CALLAWAY GOLF	ACCT #18883	254.28
10900	CAROL CREECH	2024 SPRING CLASSES	115.00
248	CDW GOVERNMENT	CUST #5143572	7,033.44
248	CDW GOVERNMENT	CUST #5143572	887.28
248	CDW GOVERNMENT	CUST #5143572	115.32
248	CDW GOVERNMENT	CUST #5143572	2,413.19
248	CDW GOVERNMENT	CUST #5143572	652.22
248	CDW GOVERNMENT	CUST #5143572	1,482.31
248	CDW GOVERNMENT	CUST #5143572	77.18

CASH ACCOUNT: 001000 101001 WARRANT: 031924 03/19/2024

VENDOR	VENDOR NAME	PURPOSE	AMOUNT
248	CDW GOVERNMENT	CUST #5143572	38.59
14036	CENTER COPY BOULDER INC	BITE QUARANTINE FORMS	141.61
980	FOWLER CHEVROLET	KEYS VEHICLE #3130	17.12
13352	CGRS INC	PROJ #2-8687-15859	2,141.97
2220	CHEMTRADE CHEMICALS US LLC	Water Plant Chemicals - A	6,701.39
4025	CINTAS CORPORATION NO. 2	CUST #12522401	320.75
4025	CINTAS CORPORATION NO. 2	CUST #12522401	320.75
13260	CLIFTON LARSON ALLEN LLP	ACCT #A509999	10,171.35
1120	COLORADO ANALYTICAL LABORATORI	ANNUAL GRIT & RAGS	387.00
1120	COLORADO ANALYTICAL LABORATORI	WWTP - REG - 85 - MONTHLY	391.51
1120	COLORADO ANALYTICAL LABORATORI	WWTP - CTC LIFT STATION	280.80
1120	COLORADO ANALYTICAL LABORATORI	WWTP - EFFLUENT - MONTHLY	189.00
1120	COLORADO ANALYTICAL LABORATORI	WWTP - INFLUENT - MONTHLY	384.00
1120	COLORADO ANALYTICAL LABORATORI	WWTP - INFLUENT - WEEKLY	126.00
1120	COLORADO ANALYTICAL LABORATORI	WWTP - INFLUENT - WEEKLY	126.00
1120	COLORADO ANALYTICAL LABORATORI	WWTP - INFLUENT - WEEKLY	126.00
1120	COLORADO ANALYTICAL LABORATORI	WWTP - SOLIDS - MONTHLY	240.00
1120	COLORADO ANALYTICAL LABORATORI	WWTP - UPSTREAM METALS -	237.60
1120	COLORADO ANALYTICAL LABORATORI	CITY OF LOUISVILLE CO0107	381.00
1120	COLORADO ANALYTICAL LABORATORI	CITY OF LOUISVILLE CO0107	99.00
1120	COLORADO ANALYTICAL LABORATORI	CITY OF LOUISVILLE CO0107	16.20
1120	COLORADO ANALYTICAL LABORATORI	CITY OF LOUISVILLE CO0107	207.00
1120	COLORADO ANALYTICAL LABORATORI	CITY OF LOUISVILLE CO0107	171.00
1120	COLORADO ANALYTICAL LABORATORI	CITY OF LOUISVILLE CO0107	126.00
15761	COLORADO OUTHOUSE LLC	CUST ID #C147	155.53
15761	COLORADO OUTHOUSE LLC	CUST ID #C147	310.78
15761	COLORADO OUTHOUSE LLC	CUST ID #C147	155.53
15761	COLORADO OUTHOUSE LLC	CUST ID #C147	201.53
12182	COLORADO STORMWATER COUNCIL	CO STORMWATER COUNCIL 202	525.00
15388	COMMUNITY COLLEGE OF AURORA	J.PADILLA STUDENT ID #S03	1,935.00
14917	CONSERVE-A-WATT LIGHTING INC	CUST #11167	672.63
15611	CONTROLOGY STUDIO LLC	FEB 2024 CONTROLOGY PILAT	1,008.00
13162	CORE & MAIN LP	ACCT #103796	95.51
13207	CTC I OWNERS ASSOCIATION INC	ACCT #1596012001	562.38
13207	CTC I OWNERS ASSOCIATION INC	ACCT #1596003701	1,446.90
13207	CTC I OWNERS ASSOCIATION INC	ACCT #1596013101	552.24

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VENDOR	VENDOR NAME	PURPOSE	AMOUNT
15036	DAVID J. THROWER	FEB 2024	2,800.00
7760	DBA OF LOUISVILLE	STREET FAIRE	81,250.00
11476	DBC IRRIGATION SUPPLY	CUST #1268	73.33
11476	DBC IRRIGATION SUPPLY	CUST #1268	90.62
15382	DELLACAVA/TEBO DEVELOPMENT CO.	MAR 2024 1805 HWY 42, S	6,560.00
1635	DEMCO INC	CUST #050007440	1,435.49
11142	DESIGN CONCEPTS	FEB 2024 PROJ #22219.00	10,417.70
13746	ERIE LANDMARK COMPANY	LANDMARK PLAQUES	1,337.00
1945	FALCON ENVIRONMENTAL CORP	Wastewater Collection Par	1,575.53
2020	FISHER SCIENTIFIC CO LLC	ACCT #481513-002	973.35
2020	FISHER SCIENTIFIC CO LLC	ACCT #481513-002	847.75
2020	FISHER SCIENTIFIC CO LLC	ACCT #481513-002	631.05
14070	FORENSIC TRUTH VERIFICATION GR	PRE-EMPLOYMENT POLYGRAPH	165.00
15443	FOUNTAIN PEOPLE INC. A PLAYCOR	CUST #0306029	6,313.35
15358	FRONT RANGE WINWATER WORKS CO	CUST #00369-001891	11,850.00
15737	FRONTLINE PUBLIC SAFETY SOLUTI	Training & Cloud-Based So	7,500.00
6847	GENERAL AIR SERVICE & SUPPLY	FEB 2024 ACCT #42580500	93.15
246	GREEN MILL SPORTSMAN CLUB	RANGE USE 2/12 & 2/16/24	300.00
2405	HACH COMPANY	ACCT #094039	420.00
2415	HARCROS CHEMICALS INC	CUST #01605450-GOL10	931.00
15381	HICKS CONTRACTORS SERVICES LLC	TRAC VAC REPAIR	1,900.00
15381	HICKS CONTRACTORS SERVICES LLC	Install 4'x6' gate	2,100.00
15619	ICON ENGINEERING INC	SERVICES THROUGH 2/23/24	138.75
15619	ICON ENGINEERING INC	SERVICES THROUGH 1/26/24	149.00
15261	WESTERN PAPER DISTRIBUTORS	CUST ID #244097	136.60
15261	WESTERN PAPER DISTRIBUTORS	CUST ID #244097	174.20
15261	WESTERN PAPER DISTRIBUTORS	CUST ID #244097	176.09
15261	WESTERN PAPER DISTRIBUTORS	CUST ID #244097	239.40
15261	WESTERN PAPER DISTRIBUTORS	CUST ID #244097	100.61

CASH ACCOUNT: 001000 101001 WARRANT: 031924 03/19/2024

VENDOR	VENDOR NAME	PURPOSE	AMOUNT
15261	WESTERN PAPER DISTRIBUTORS	CUST ID #244097	892.77
2615	INGRAM LIBRARY SERVICES INC	ACCT #2050766	188.20
2615	INGRAM LIBRARY SERVICES INC	ACCT #2050766	400.50
2615	INGRAM LIBRARY SERVICES INC	ACCT #2050766	357.82
2615	INGRAM LIBRARY SERVICES INC	ACCT #2050766	162.47
2615	INGRAM LIBRARY SERVICES INC	ACCT #2050766	510.74
2615	INGRAM LIBRARY SERVICES INC	ACCT #2050766	219.61
2615	INGRAM LIBRARY SERVICES INC	ACCT #2050766	198.19
2615	INGRAM LIBRARY SERVICES INC	ACCT #2050766	835.22
2615	INGRAM LIBRARY SERVICES INC	ACCT #2050766	331.36
2615	INGRAM LIBRARY SERVICES INC	ACCT #2050766	514.96
2615	INGRAM LIBRARY SERVICES INC	ACCT #2050766	299.04
2615	INGRAM LIBRARY SERVICES INC	ACCT #2050766	254.23
2615	INGRAM LIBRARY SERVICES INC	ACCT #2050766	272.72
2615	INGRAM LIBRARY SERVICES INC	ACCT #2050766	484.35
2615	INGRAM LIBRARY SERVICES INC	ACCT #2050766	270.08
2615	INGRAM LIBRARY SERVICES INC	ACCT #2050766	694.30
2615	INGRAM LIBRARY SERVICES INC	ACCT #2050766	295.65
2615	INGRAM LIBRARY SERVICES INC	ACCT #2050766	140.55
9761	INTERMOUNTAIN SWEEPER CO	SHIP #76730-1	266.49
13778	INVISION GIS LLC	FEB 2024 Implementation	3,697.50
13637	ISDC	3/15/24 DANCE PERFORMANCE	175.00
14239	JC GOLF ACCESSORIES	ACCT #COALCRK	431.88
14922	JOHN BRUNNER & COMPANY INC	MAIN POOL BOILER WORK	1,721.19
11289	JVA INC	JAN 2024 PROJ #220059.EN	1,026.00
15762	KATHERINE KRISTINE MULLER	YOGA NIDRA CLASS	224.00
15499	KATHRYN A MIHELIC	FEB 2024 PICKLEBALL	1,218.00
2360	KELLY PC	FEB 2024 LEGAL SERVICES	28,610.50
8002	KINSCO LLC	C.NORTHROP	535.48
14097	L.A.W.S.	Upfitting 2023 Ford PI Ut	28,760.57
15340	LESLIE ANN HOFFMANN	1/2/24 - 2/22/24 STRENGTH	1,293.60
14426	LEXIPOL LLC	4/1/24 - 3/31/25 ANNUAL L	11,149.30
13782	LEXISNEXIS RISK DATA MANAGEMEN	BILLING ID #1236104	380.25
13692	LIGHTNING MOBILE SERVICES LLC	LIBRARY BI-MONTHLY SWEEPI	335.00

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VENDOR	VENDOR NAME	PURPOSE	AMOUNT
14068	MAC EQUIPMENT INC	CONTACT ID #394	81.36
6663	MARSHALLVILLE DITCH CO	2024 MARSHALLVILLE DITCH	4,620.00
14071	MARY RITTER	FEB 2024 RUNNING H2O CLAS	1,075.20
11463	MATTHEW BENDER & CO INC	ACCT #2522381001	122.63
15592	MATTHEW CLAYTON DOUBEK	FACE PAINTING 6/1/24 TOUC	745.00
13703	MCDONALD FARMS ENTERPRISES INC	CUST #30-0002790	1,425.00
14214	MICROAGE	CUST ID #106967	18,632.80
14214	MICROAGE	CUST ID #106967	5,149.20
15526	MINES AND ASSOCIATES INC.	CUST ID #LOUISVILLE	1,596.80
14768	MOJOS CLEANING SERVICES INC	MARCH 2024	33,533.41
14768	MOJOS CLEANING SERVICES INC	FEB 2024 PARKS	3,300.00
13712	MOORE IACOFANO GOLTSMAN INC	11/1/23 - 12/31/23	42,155.84
15308	NAMASTE SOLAR	ANNUAL PREV MAINT WATER T	2,500.00
15308	NAMASTE SOLAR	ANNUAL PREV MAINT WASTEWA	2,500.00
12853	NEOGOV	3/31/24 - 3/30/25	11,660.95
14370	NORTHWESTERN UNIVERSITY	7/22/24 - 8/2/24 Supervi	2,200.00
99999	JANET GENT	REFUND LOUISVILLE REC CEN	123.00
99999	AMANDA MCMANUS	REFUND LOUISVILLE REC CEN	411.85
99999	CAITLIN ARCE	REFUND LOUISVILLE REC CEN	137.50
99999	ERICH THANHARDT	REFUND LOUISVILLE REC CEN	126.00
99999	ISABELLE NORVIL	REFUND LOUISVILLE REC CEN	130.00
99999	PEOPLE & POLLINATORS ACTION NE	2/29/24 PRESENTATION TO L	100.00
99999	CHRISTINA NORMAN	REFUND LOUISVILLE REC CEN	60.00
99999	SIERRA NEVADA CORP	REFUND LOUISVILLE REC CEN	115.00
99999	CHARLES PLUCKER	REFUND LOUISVILLE REC CEN	133.00
99999	ANNAMARIE BURTNESS	REFUND LOUISVILLE REC CEN	246.00
99999	MID CITY CORPORATION	REFUND HYDRANT METER RENT	500.00
99999	STUDIO STRONGWATER	REFUND 6/30/23 SALES TAX	216.00
99999	SCOTT RASHID	AMERICAN KESTREL PROGRAM	200.00
13649	OVERDRIVE INC	CUST ID #1100-1006	522.85
13649	OVERDRIVE INC	CUST ID #0011-0005	614.21
14580	PARK PLACE TECHNOLOGIES LLC	CUST ID #0128537	2,490.00
13589	PIPESTONE EQUIPMENT LLC	CUST ID #LOUISVILLE CUST	1,200.00

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VENDOR	VENDOR NAME	PURPOSE	AMOUNT
15645	POWERDMS, INC.	CUST #A-613	2,650.00
14160	PRECISE MRM LLC	CUST #679650	320.00
14394	PROS PLUS LLC	BASKETBALL REFEREES	1,313.00
14394	PROS PLUS LLC	BASKETBALL REFEREE	909.00
15131	RACE FORWARD	2024 CORE MEMBERSHIP DUES	1,000.00
13464	RAINBOW BOOK COMPANY	DOC #233550	71.80
13464	RAINBOW BOOK COMPANY	DOC #233550	3,001.39
14844	REPUBLIC SERVICES INC #535	ACCT #3-0535-9535390	130,219.34
13419	ROADSAFE TRAFFIC SYSTEMS CORP	CUST #11720	3,307.00
15550	ROCKY MOUNTAIN POLICE AND FIRE	2024 ANNUAL RMPFC MEMBERS	400.00
13695	ROCKY MOUNTAIN PUMP & CONTROLS	60HP Premium Efficient US	7,445.00
15556	ROCKY MOUNTAIN TAP & GARDEN	2023 BAP REBATE	19,659.45
14696	SALT LAKE WHOLESALE SPORTS	S.O. NO. 15313	3,885.00
14560	SAMEDAY OFFICE SUPPLY	ACCT #A12877	164.97
11395	SHRED-IT USA LLC	CUST #1000157150	183.54
15594	SIMPLER SYSTEMS, INC	FEB 2024	1,000.00
15517	SOLENIS LLC	PAYER #823583	8,805.12
14612	SOME LIKE IT GREEN	MARCH 2024 PLANT CARE	94.00
15724	STEWART ARCHITECTURE	TROTT-DOWNER CABINS INTER	6,000.00
11302	SUMMIT RECREATION LLC	Playground replacement pa	3,907.60
7404	SUN BADGE COMPANY	CUST #4402	514.50
15451	SYLVESTER'S MAINTENANCE & MECH	2/28/24 BAY DOOR 36	387.50
14729	THE PURPLE PIANO LLC	2/19/24 LITTLE YOGIS & MI	455.00
6609	THE TRAVELERSE INDEMNITY COMPA	ACCT #3667M0083 POLIC #	54.80
13603	TOSHIBA BUSINESS SOLUTIONS INC	CUST #T0B5E4W	313.47
4765	UNCC	FEB 2024	1,656.36

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VENDOR	VENDOR NAME	PURPOSE	AMOUNT
11087	UNITED SITE SERVICES OF COLORA	CUST #ACT-00002162	228.00
11087	UNITED SITE SERVICES OF COLORA	CUST #ACT-00002162	478.18
15560	USABLUEBOOK	CUST #69261	3,752.84
15050	UTILITY ASSOCIATES INC	CUST #LOUISVILLE CO POLIC	54,400.00
14792	VEOLIA WATER TECHNOLOGIES TREA	CUST #491718	5,216.96
14373	WEIFIELD GROUP CONTRACTING INC	2/8/24 SCWTP	2,219.82
14373	WEIFIELD GROUP CONTRACTING INC	2/15/24 7000 Marshall Rd	1,875.00
14609	WILBUR-ELLIS COMPANY LLC	ACCT #2157891	2,475.00
	198 INVOICES	WARRANT TOTAL	818,986.94

CITY OF LOUISVILLE
PURCHASE CARD SUMMARY
STATEMENT PERIOD 1/20/24 - 2/20/24

SUPPLIER	SUPPLIER LOCATION	CARDHOLDER	DEPARTMENT	TRANS DATE	AMOUNT
1000BULBS.COM	8006244488	KEVIN FREY	FACILITIES	01/25/2024	109.30
21ST CENTURY EQUIPMENT	LONGMONT	LANCE PFEIFER	GOLF COURSE	01/23/2024	86.91
2511 - CPS DSTRBTRS	ARVADA	DAVID DEAN	GOLF COURSE	01/19/2024	1,037.44
7SHIFTS	WILMINGTON	DAVID BARIL	GOLF COURSE	02/12/2024	76.99
ABPA	WEST JORDAN	MINDY OLKJER	PUBLIC WORKS	02/05/2024	155.00
ADAMSON POLICE PRODUCT	FREDERICK	SANDRA ANDRETICH	OPERATIONS	02/14/2024	6.95
ADOBE INC.	4085366000	KURT KOWAR	PUBLIC WORKS	02/08/2024	31.12
ADOBE INC.	4085366000	DEREK COSSON	CITY MANAGER	02/02/2024	79.99
ALLDATA	800-859-3282	MASON THOMPSON	OPERATIONS	02/02/2024	125.00
AMAZON RET* 101441-550	SEATTLE	KEVIN FREY	FACILITIES	02/13/2024	5.88
AMAZON RET* 111-507915	SEATTLE	JILL SIEWERT	LIBRARY	02/06/2024	10.99
AMAZON RET* 111-507915	SEATTLE	JILL SIEWERT	LIBRARY	01/30/2024	13.98
AMAZON RET* 111-622543	SEATTLE	JILL SIEWERT	LIBRARY	01/26/2024	27.98
AMAZON RET* 111-750954	SEATTLE	CHAD ROOT	BUILDING SAFETY	02/13/2024	121.23
AMAZON RET* 113-284226	SEATTLE	ALINA KIRCHNER	HUMAN RESOURCES	02/15/2024	46.00
AMAZON RET* 113-998953	SEATTLE	JILL SIEWERT	LIBRARY	02/12/2024	22.89
AMAZON RET* 114-846151	SEATTLE	PATRICIA MORGAN	REC CENTER	02/17/2024	171.87
AMAZON.COM*R25OW0XL2	SEATTLE	LINDSEY WITTY	REC CENTER	02/02/2024	13.65
AMAZON.COM*R88NQ0702	SEATTLE	KATIE TOFTE	REC CENTER	01/22/2024	27.24
AMAZON.COM*RB32699O1	SEATTLE	SANDRA ANDRETICH	OPERATIONS	02/15/2024	89.09
AMAZON.COM*RI3GY5GO2	SEATTLE	SANDRA ANDRETICH	OPERATIONS	02/15/2024	112.25
AMAZON.COM*RI3TH21Q2	SEATTLE	JILL SIEWERT	LIBRARY	02/15/2024	127.13
AMAZON.COM*RI8D13JN0	SEATTLE	NICK PROSSER	IT	02/11/2024	259.00
AMERICAN LIBRARY ASSOC	860-347-6933	PEGGY NORRIS	LIBRARY	02/13/2024	79.00
AMERICAN RED CROSS	800-733-2767	NICK PAPPAS	REC CENTER	01/31/2024	46.00
AMERICAN RED CROSS	800-733-2767	DANNY WEIONSTOCK	REC CENTER	01/23/2024	152.00
AMERICAN RED CROSS	800-733-2767	DANNY WEIONSTOCK	REC CENTER	01/23/2024	38.00
AMERICAN RED CROSS	800-733-2767	NICK PAPPAS	REC CENTER	01/20/2024	46.00
AMERICAN RED CROSS	800-733-2767	NICK PAPPAS	REC CENTER	01/20/2024	138.00
AMZN MKTP US	SEATTLE	PATRICIA MORGAN	REC CENTER	01/28/2024	236.64
AMZN MKTP US	SEATTLE	KATIE TOFTE	REC CENTER	01/23/2024	7.98
AMZN MKTP US*R07797MF0	SEATTLE	DEVIN MADIGAN	WASTEWATER	01/23/2024	149.69
AMZN MKTP US*R202S9L62	SEATTLE	KATIE BEASLEY	REC CENTER	01/31/2024	17.88
AMZN MKTP US*R209S6N81	SEATTLE	JULIE SEYDEL	REC CENTER	02/02/2024	24.99
AMZN MKTP US*R24HL1H20	SEATTLE	KATIE BEASLEY	REC CENTER	01/31/2024	32.56
AMZN MKTP US*R258I5LY2	SEATTLE	NICK PROSSER	IT	01/31/2024	31.97
AMZN MKTP US*R25Q88X00	SEATTLE	ALINA KIRCHNER	HUMAN RESOURCES	01/30/2024	9.99
AMZN MKTP US*R27D13UR0	SEATTLE	JULIE SEYDEL	REC CENTER	02/02/2024	189.12
AMZN MKTP US*R287Q5P11	SEATTLE	DEVIN MADIGAN	WASTEWATER	02/04/2024	140.13
AMZN MKTP US*R29AD1OV2	SEATTLE	SANDRA ANDRETICH	OPERATIONS	01/30/2024	212.35
AMZN MKTP US*R29TF1QJ2	SEATTLE	GREG VENETTE	WATER	02/03/2024	28.88
AMZN MKTP US*R85FT3SP2	SEATTLE	ERIK SWIATEK	PARKS	01/22/2024	24.95
AMZN MKTP US*RB4078ZE0	SEATTLE	GREG VENETTE	WATER	02/04/2024	150.78
AMZN MKTP US*RB6W69S91	SEATTLE	SANDRA ANDRETICH	OPERATIONS	02/14/2024	55.26
AMZN MKTP US*RI0AH3LK1	SEATTLE	SANDRA ANDRETICH	OPERATIONS	02/17/2024	19.96
AMZN MKTP US*RI59N0BP0	SEATTLE	SANDRA ANDRETICH	OPERATIONS	02/13/2024	119.49
AMZN MKTP US	AMZN.COM/BILL	RONDA HENGER	HUMAN RESOURCES	02/08/2024	53.77
AMZN MKTP US	AMZN.COM/BILL	SANDRA ANDRETICH	OPERATIONS	02/06/2024	39.16
AMZN MKTP US*R00EQ4N41	AMZN.COM/BILL	LANCE PFEIFER	GOLF COURSE	01/26/2024	51.80
AMZN MKTP US*R01WQ26E0	AMZN.COM/BILL	DANNY WEIONSTOCK	REC CENTER	01/24/2024	7.98
AMZN MKTP US*R02GF0EM1	AMZN.COM/BILL	DAVID BARIL	GOLF COURSE	01/27/2024	29.96
AMZN MKTP US*R02JZ73C2	AMZN.COM/BILL	MINDY OLKJER	PUBLIC WORKS	01/25/2024	5.99
AMZN MKTP US*R02KE9XK0	AMZN.COM/BILL	SANDRA ANDRETICH	OPERATIONS	01/23/2024	49.79
AMZN MKTP US*R02OI32T2	AMZN.COM/BILL	LINDSEY WITTY	REC CENTER	01/28/2024	129.02
AMZN MKTP US*R02RR7HA0	AMZN.COM/BILL	JILL SIEWERT	LIBRARY	01/23/2024	7.99
AMZN MKTP US*R03DH6TL1	AMZN.COM/BILL	LIGEA FERRARO	CITY MANAGER	01/27/2024	298.90
AMZN MKTP US*R03I791K2	AMZN.COM/BILL	JILL SIEWERT	LIBRARY	01/26/2024	39.92
AMZN MKTP US*R03RK4T80	AMZN.COM/BILL	DEVIN MADIGAN	WASTEWATER	01/21/2024	141.97
AMZN MKTP US*R05340K10	AMZN.COM/BILL	MINDY OLKJER	PUBLIC WORKS	01/25/2024	7.99

AMZN MKTP US*R053V3C22	AMZN.COM/BILL	GIGI YANG	LIBRARY	01/24/2024	100.87
AMZN MKTP US*R05825P42	AMZN.COM/BILL	ALINA KIRCHNER	HUMAN RESOURCES	01/26/2024	65.69
AMZN MKTP US*R05I11PS2	AMZN.COM/BILL	ALINA KIRCHNER	HUMAN RESOURCES	01/26/2024	119.60
AMZN MKTP US*R06P868L0	AMZN.COM/BILL	GIGI YANG	LIBRARY	01/24/2024	16.65
AMZN MKTP US*R071N2OW2	AMZN.COM/BILL	LINDSEY WITTY	REC CENTER	01/24/2024	124.85
AMZN MKTP US*R08TG1C52	AMZN.COM/BILL	GIGI YANG	LIBRARY	01/24/2024	58.96
AMZN MKTP US*R08YD18O0	AMZN.COM/BILL	MASON THOMPSON	OPERATIONS	01/24/2024	29.98
AMZN MKTP US*R08ZP3O92	AMZN.COM/BILL	LINDSEY WITTY	REC CENTER	01/24/2024	16.95
AMZN MKTP US*R09970RA2	AMZN.COM/BILL	GIGI YANG	LIBRARY	01/29/2024	41.79
AMZN MKTP US*R09PY01P2	AMZN.COM/BILL	MASON THOMPSON	OPERATIONS	01/26/2024	6.99
AMZN MKTP US*R09V72532	AMZN.COM/BILL	GIGI YANG	LIBRARY	01/27/2024	11.87
AMZN MKTP US*R20V12BM0	AMZN.COM/BILL	SANDRA ANDRETICH	OPERATIONS	01/31/2024	50.35
AMZN MKTP US*R21WX02H1	AMZN.COM/BILL	DANIEL WOOLDRIDGE		02/06/2024	54.99
AMZN MKTP US*R22U68ZU1	AMZN.COM/BILL	DEVIN MADIGAN	WASTEWATER	02/02/2024	98.98
AMZN MKTP US*R23LV1CA2	AMZN.COM/BILL	KATIE BEASLEY	REC CENTER	01/30/2024	12.98
AMZN MKTP US*R23NZ5KF2	AMZN.COM/BILL	GREG VENETTE	WATER	02/04/2024	93.65
AMZN MKTP US*R23WE06Z1	AMZN.COM/BILL	TREVOR DEPEW	WATER	02/06/2024	124.94
AMZN MKTP US*R24CD7MY1	AMZN.COM/BILL	JILL SIEWERT	LIBRARY	02/05/2024	258.35
AMZN MKTP US*R25124PI2	AMZN.COM/BILL	JEFF OWENS	WATER	02/01/2024	19.99
AMZN MKTP US*R25EK7RT1	AMZN.COM/BILL	PATRICIA MORGAN	REC CENTER	02/08/2024	16.99
AMZN MKTP US*R25NE48P1	AMZN.COM/BILL	TREVOR DEPEW	WATER	02/06/2024	137.99
AMZN MKTP US*R25NV2O70	AMZN.COM/BILL	KEVIN FREY	FACILITIES	01/27/2024	59.99
AMZN MKTP US*R26T02R52	AMZN.COM/BILL	JILL SIEWERT	LIBRARY	02/05/2024	17.68
AMZN MKTP US*R273Q4WE1	AMZN.COM/BILL	PATRICIA MORGAN	REC CENTER	02/08/2024	105.45
AMZN MKTP US*R27EY9W42	AMZN.COM/BILL	GREG VENETTE	WATER	02/05/2024	23.73
AMZN MKTP US*R27F20M10	AMZN.COM/BILL	LIGEA FERRARO	CITY MANAGER	01/30/2024	99.99
AMZN MKTP US*R27KJ5QT1	AMZN.COM/BILL	DANIEL WOOLDRIDGE		02/06/2024	180.96
AMZN MKTP US*R27U63EV2	AMZN.COM/BILL	DEVIN MADIGAN	WASTEWATER	02/01/2024	183.71
AMZN MKTP US*R28JB9601	AMZN.COM/BILL	LANCE PFEIFER	GOLF COURSE	02/06/2024	169.00
AMZN MKTP US*R28LG8SR1	AMZN.COM/BILL	GREG VENETTE	WATER	02/06/2024	125.16
AMZN MKTP US*R80RU8DT1	AMZN.COM/BILL	JILL SIEWERT	LIBRARY	01/23/2024	197.21
AMZN MKTP US*R81LP8Y22	AMZN.COM/BILL	LINDSEY WITTY	REC CENTER	01/23/2024	28.55
AMZN MKTP US*R840T55G2	AMZN.COM/BILL	PATRICIA MORGAN	REC CENTER	01/21/2024	40.91
AMZN MKTP US*R852Z7BN1	AMZN.COM/BILL	KEVIN FREY	FACILITIES	01/22/2024	38.99
AMZN MKTP US*R87FX8RR1	AMZN.COM/BILL	MINDY OLKJER	PUBLIC WORKS	01/24/2024	75.13
AMZN MKTP US*R88NH67N1	AMZN.COM/BILL	KATIE TOFTE	REC CENTER	01/24/2024	9.99
AMZN MKTP US*R89T55RI2	AMZN.COM/BILL	LINDSEY WITTY	REC CENTER	01/23/2024	46.45
AMZN MKTP US*RB0256BW0	AMZN.COM/BILL	SANDRA ANDRETICH	OPERATIONS	02/07/2024	35.90
AMZN MKTP US*RB0ND8OH2	AMZN.COM/BILL	RONDA HENGER	HUMAN RESOURCES	02/05/2024	80.64
AMZN MKTP US*RB1AW6ZG1	AMZN.COM/BILL	DANNY WEIONSTOCK	REC CENTER	02/09/2024	185.63
AMZN MKTP US*RB1E21HK0	AMZN.COM/BILL	DANIEL WOOLDRIDGE		02/07/2024	246.94
AMZN MKTP US*RB1P450C0	AMZN.COM/BILL	GREG VENETTE	WATER	02/05/2024	18.19
AMZN MKTP US*RB2KR2TX2	AMZN.COM/BILL	DEVIN MADIGAN	WASTEWATER	02/07/2024	81.61
AMZN MKTP US*RB2MB33M2	AMZN.COM/BILL	DANIEL WOOLDRIDGE		02/06/2024	9.98
AMZN MKTP US*RB2PV5WC1	AMZN.COM/BILL	SANDRA ANDRETICH	OPERATIONS	02/16/2024	209.36
AMZN MKTP US*RB2U96KE1	AMZN.COM/BILL	PATRICIA MORGAN	REC CENTER	02/14/2024	107.94
AMZN MKTP US*RB3L304A1	AMZN.COM/BILL	RONDA HENGER	HUMAN RESOURCES	02/09/2024	46.98
AMZN MKTP US*RB3XE7GJ0	AMZN.COM/BILL	TREVOR DEPEW	WATER	02/06/2024	39.99
AMZN MKTP US*RB4IY1AH0	AMZN.COM/BILL	DEVIN MADIGAN	WASTEWATER	02/05/2024	111.95
AMZN MKTP US*RB4LO8R41	AMZN.COM/BILL	PEGGY NORRIS	LIBRARY	02/15/2024	59.98
AMZN MKTP US*RB5CM7GW0	AMZN.COM/BILL	TREVOR DEPEW	WATER	02/06/2024	19.78
AMZN MKTP US*RB5G60TP2	AMZN.COM/BILL	TREVOR DEPEW	WATER	02/07/2024	34.75
AMZN MKTP US*RB5Q62BI0	AMZN.COM/BILL	TREVOR DEPEW	WATER	02/07/2024	23.39
AMZN MKTP US*RB6183CC0	AMZN.COM/BILL	PATRICIA MORGAN	REC CENTER	02/03/2024	83.61
AMZN MKTP US*RB7JJ5KA0	AMZN.COM/BILL	KRISTEN BODINE	LIBRARY	02/08/2024	47.02
AMZN MKTP US*RB87T82Q0	AMZN.COM/BILL	GIGI YANG	LIBRARY	02/08/2024	150.95
AMZN MKTP US*RB88X57X1	AMZN.COM/BILL	NICK PROSSER	IT	02/15/2024	7.59
AMZN MKTP US*RB8NB8762	AMZN.COM/BILL	KAYLA BETZOLD	CITY MANAGER	02/11/2024	31.96
AMZN MKTP US*RB9G92210	AMZN.COM/BILL	LINDSEY WITTY	REC CENTER	02/08/2024	67.23
AMZN MKTP US*RB9OV0R10	AMZN.COM/BILL	GENEVIEVE KLINE	CITY CLERK	02/09/2024	43.77
AMZN MKTP US*RB9UP7S91	AMZN.COM/BILL	BENJAMIN FRANCISCO	OPERATIONS	02/14/2024	8.79
AMZN MKTP US*RI04B0ZL2	AMZN.COM/BILL	SANDRA ANDRETICH	OPERATIONS	02/13/2024	34.32
AMZN MKTP US*RI1KX4JL2	AMZN.COM/BILL	JULIE SEYDEL	REC CENTER	02/14/2024	283.00
AMZN MKTP US*RI2GV9TQ0	AMZN.COM/BILL	ABBY MCNEAL	PARKS	02/11/2024	22.13

AMZN MKTP US*RI3MU39B2	AMZN.COM/BILL	JEFF OWENS	WATER	02/18/2024	39.58
AMZN MKTP US*RI45A34Q0	AMZN.COM/BILL	BENJAMIN FRANCISCO	OPERATIONS	02/10/2024	24.88
AMZN MKTP US*RI4EV7HV0	AMZN.COM/BILL	GENEVIEVE KLINE	CITY CLERK	02/13/2024	15.74
AMZN MKTP US*RI4NE0M70	AMZN.COM/BILL	CHAD ROOT	BUILDING SAFETY	02/13/2024	55.58
AMZN MKTP US*RI51C4FY2	AMZN.COM/BILL	SANDRA ANDRETICH	OPERATIONS	02/13/2024	21.99
AMZN MKTP US*RI5AH9IU0	AMZN.COM/BILL	SANDRA ANDRETICH	OPERATIONS	02/15/2024	39.99
AMZN MKTP US*RI5MY7EL1	AMZN.COM/BILL	KEVIN FREY	FACILITIES	02/18/2024	29.69
AMZN MKTP US*RI62E1I80	AMZN.COM/BILL	PATRICIA MORGAN	REC CENTER	02/15/2024	48.00
AMZN MKTP US*RI67541O2	AMZN.COM/BILL	LANCE PFEIFER	GOLF COURSE	02/15/2024	24.87
AMZN MKTP US*RI6FM76A0	AMZN.COM/BILL	NICK PROSSER	IT	02/14/2024	8.99
AMZN MKTP US*RI6N51X50	AMZN.COM/BILL	NICK PROSSER	IT	02/12/2024	95.48
AMZN MKTP US*RI6O75PF2	AMZN.COM/BILL	AMANDA PERERA	REC CENTER	02/15/2024	261.11
AMZN MKTP US*RI89S7CB0	AMZN.COM/BILL	JEFF OWENS	WATER	02/09/2024	17.33
AMZN MKTP US*RI8MS3T30	AMZN.COM/BILL	TREVOR DEPEW	WATER	02/11/2024	119.87
AMZN MKTP US*RI9172580	AMZN.COM/BILL	PAULINA BENNETT	IT	02/13/2024	1,783.50
AMZN MKTP US*RI9IP31Z0	AMZN.COM/BILL	TREVOR DEPEW	WATER	02/12/2024	16.99
AMZN MKTP US*RI9N51K10	AMZN.COM/BILL	KEVIN FREY	FACILITIES	02/15/2024	13.59
AMZN MKTP US*RI9V83GG2	AMZN.COM/BILL	AMANDA PERERA	REC CENTER	02/15/2024	11.50
ANC*ANCESTRY.COM	LEHI	GIGI YANG	LIBRARY	02/15/2024	49.99
APPLE.COM/US	800-676-2775	TANYA SCOTT	FINANCE	02/04/2024	4,999.00
APPLE.COM/US	800-676-2775	TANYA SCOTT	FINANCE	02/04/2024	359.00
APWA - WORK ZONE	KANSAS CITY	PENNY FORD	HUMAN RESOURCES	01/26/2024	375.00
ARROWHEAD AWARDS	BOULDER	GENEVIEVE KLINE	CITY CLERK	02/15/2024	167.50
ARROWHEAD AWARDS	BOULDER	LIGEA FERRARO	CITY MANAGER	02/14/2024	27.50
ARROWSTAGELINES.COM	OMAHA	KATIE BEASLEY	REC CENTER	01/24/2024	1,645.00
ARTS COMPLEX GARAGE	DENVER	STEVEN HUIZENGA	PARKS	01/31/2024	10.00
ASFPM	MADISON	CAMERON FOWLKES	PUBLIC WORKS	01/23/2024	180.00
ATSSA	FREDERICKSBUR	SHANE MAHAN	OPERATIONS	02/15/2024	770.00
ATSSA	FREDERICKSBUR	SHANE MAHAN	OPERATIONS	02/15/2024	770.00
ATSSA	FREDERICKSBUR	SHANE MAHAN	OPERATIONS	02/15/2024	770.00
ATSSA	FREDERICKSBUR	BENJAMIN FRANCISCO	OPERATIONS	02/12/2024	770.00
ATSSA	FREDERICKSBUR	VICKIE ILKO	OPERATIONS	02/12/2024	260.00
ATSSA	FREDERICKSBUR	RENEE LEWELLYN	OPERATIONS	02/12/2024	770.00
ATSSA	FREDERICKSBUR	JACK MANIAN	OPERATIONS	02/12/2024	510.00
ATSSA	540-3681701	BENJAMIN FRANCISCO	OPERATIONS	02/06/2024	450.00
ATT*COURT ORDER CHGS	800-635-6840	SANDRA ANDRETICH	OPERATIONS	01/31/2024	195.00
AWWA.ORG	303-347-6197	JACK MANIAN	OPERATIONS	01/31/2024	255.00
AMAZON.COM*R009G5FN2	AMZN.COM/BILL	JILL SIEWERT	LIBRARY	01/24/2024	14.96
AMAZON.COM*R03JS9VW2	AMZN.COM/BILL	JILL SIEWERT	LIBRARY	01/27/2024	17.99
AMAZON.COM*R06VA93U2	AMZN.COM/BILL	TANYA SCOTT	FINANCE	01/25/2024	16.00
AMAZON.COM*R08A99CX0	AMZN.COM/BILL	JULIE SEYDEL	REC CENTER	01/19/2024	49.95
AMAZON.COM*R09BN8QI0	AMZN.COM/BILL	JESSE DEGRAW	REC CENTER	01/24/2024	165.54
AMAZON.COM*R23XU27U1	AMZN.COM/BILL	KELLY THARP	OPERATIONS	02/07/2024	22.45
AMAZON.COM*R24DE6SV1	AMZN.COM/BILL	ALINA KIRCHNER	HUMAN RESOURCES	02/06/2024	24.38
AMAZON.COM*R808B9Y71	AMZN.COM/BILL	DANIEL BIDLEMEN	REC CENTER	01/25/2024	32.09
AMAZON.COM*RB0IF6B70	AMZN.COM/BILL	KELLY THARP	OPERATIONS	02/07/2024	44.90
AMAZON.COM*RB1N54Y71	AMZN.COM/BILL	KELLY THARP	OPERATIONS	02/16/2024	44.28
AMAZON.COM*RB6BX1SU1	AMZN.COM/BILL	JILL SIEWERT	LIBRARY	02/14/2024	49.96
AMAZON.COM*RB7Q48VR2	AMZN.COM/BILL	GENEVIEVE KLINE	CITY CLERK	02/08/2024	8.44
AMAZON.COM*RB85C1WF0	AMZN.COM/BILL	RONDA HENGER	HUMAN RESOURCES	02/09/2024	6.79
AMAZON.COM*RI0W17970	AMZN.COM/BILL	ALINA KIRCHNER	HUMAN RESOURCES	02/15/2024	5.48
AMAZON.COM*RI4F35Y00	AMZN.COM/BILL	DEVIN MADIGAN	WASTEWATER	02/16/2024	78.03
ARVADA ARMY NAVY SURPL	ARVADA	STEVEN HUIZENGA	PARKS	01/26/2024	202.49
BATTERIES+BULBS #0777	LAFAYETTE	DEVIN MADIGAN	WASTEWATER	02/16/2024	110.00
BATTERIES+BULBS #0777	LAFAYETTE	NICHOLAS POTOPCHUK	PARKS	01/23/2024	110.37
BITWARDEN	SANTA BARBARA	ANDY SQUIRES	IT	02/08/2024	420.00
BIZWEST-DIGITAL	FORT COLLINS	ROBERT ZUCCARO	PLANNING	02/12/2024	11.00
BLT*DURAWEAR.COM	FLEMINGTON	SHANE MAHAN	OPERATIONS	02/06/2024	155.65
BOOT BARN #143	THORNTON	JOSEPH CAMPANA	OPERATIONS	01/30/2024	197.99
BOOT BARN #310	NORTHGLENN	JOSEPH CAMPANA	OPERATIONS	02/12/2024	283.48
BOOT BARN #310	NORTHGLENN	JOSEPH CAMPANA	OPERATIONS	02/12/2024	225.00
BOSS PRINTING	BROOMFIELD	ROBERT ZUCCARO	PLANNING	02/17/2024	42.78
BOSS PRINTING	BROOMFIELD	ROBERT ZUCCARO	PLANNING	01/26/2024	73.47
BROADCAST SUPPLY WORLD	2535652301	SANDRA ANDRETICH	OPERATIONS	02/15/2024	167.24

BROADCAST SUPPLY WORLD	2535652301	SANDRA ANDRETICH	OPERATIONS	02/15/2024	8.24
BTS*HERITAGELANDSCAPE	MCKINNEY	NORMAN MERLO	GOLF COURSE	02/06/2024	271.50
CANVA* I04062-1553904	CAMDEN	ERIN OWEN	LIBRARY	02/14/2024	119.40
CARRIER WEST	DENVER	MATTHEW ROWE	FACILITIES	02/09/2024	500.31
CASA ALEGRE	LOUISVILLE	RONDA HENGER	HUMAN RESOURCES	01/23/2024	73.43
CCCMA	LOUISVILLE	LIGEA FERRARO	CITY MANAGER	01/25/2024	340.00
CCCMA	LOUISVILLE	LIGEA FERRARO	CITY MANAGER	01/25/2024	340.00
CDW GOVT #PP77291	800-808-4239	DANIEL WOOLDRIDGE		02/14/2024	440.20
CENTER COPY PRINTING	303-4406000	ERIN OWEN	LIBRARY	02/19/2024	91.83
CENTER COPY PRINTING	303-4406000	DEREK COSSON	CITY MANAGER	01/22/2024	540.00
CHILDHEALTHCONNECTION	FORT COLLINS	AMANDA PERERA	REC CENTER	02/16/2024	80.00
CLUBCONNECT	9136615569	LINDSEY WITTY	REC CENTER	02/01/2024	149.00
CO BOULDER CO SVS	DENVER	AMANDA PERERA	REC CENTER	02/07/2024	174.59
CO BOULDER CO SVS	DENVER	DAVID DEAN	GOLF COURSE	02/06/2024	93.24
CO E-GOVERNMENT SERVIC	DENVER	JEN KENNEY	POLICE	01/22/2024	103.02
CO GOVT SERVICES	DENVER	AMANDA PERERA	REC CENTER	02/02/2024	494.63
CO MOTOR VEH SERV EMV	DENVER	MASON THOMPSON	OPERATIONS	02/06/2024	34.77
COAL CREEK ACE HARDWAR	LOUISVILLE	JOHN BROOKS	POLICE	02/15/2024	9.98
COLOGRAPHIC INC	COMMERCE CITY	MASON THOMPSON	OPERATIONS	01/30/2024	240.00
COLORADO ANALYTICAL	BRIGHTON	MINDY OLKJER	PUBLIC WORKS	02/01/2024	240.00
COLORADO ANALYTICAL	BRIGHTON	MINDY OLKJER	PUBLIC WORKS	02/01/2024	81.00
COLORADO ARBORISTS	303-8507587	CATHERINE JEPSON	PARKS	01/31/2024	365.00
COLORADO CWP	719-5456748	JOSEPH CAMPANA	OPERATIONS	02/07/2024	50.00
COLORADO CWP	719-5456748	JOSEPH CAMPANA	OPERATIONS	02/07/2024	50.00
COLORADO CWP	719-5456748	TREVOR DEPEW	WATER	01/30/2024	50.00
COLORADO CWP	719-5456748	JACK MANIAN	OPERATIONS	01/29/2024	50.00
COLORADO CWP	719-5456748	JACK MANIAN	OPERATIONS	01/29/2024	50.00
COLORADO CWP	719-545-6748	JACK MANIAN	OPERATIONS	01/23/2024	85.00
COLORADO CWP	719-545-6748	TREVOR DEPEW	WATER	01/22/2024	50.00
COLORADO EMERGENCY MAN	CENTENNIAL	KIANA FREEMAN	CITY MANAGER	01/26/2024	250.00
COLORADO GOLF AND TURF	303-761-3332	LANCE PFEIFER	GOLF COURSE	02/05/2024	322.02
COLORADO GOLF ASSN	303-3664653	PAMELA PETERSON-HOHS	GOLF COURSE	02/07/2024	200.00
COLORADOMU* CO MUNICIP	NORTHGLENN	GENEVIEVE KLINE	CITY CLERK	02/06/2024	79.47
COLORADOMU* CO MUNICIP	NORTHGLENN	GENEVIEVE KLINE	CITY CLERK	02/06/2024	137.38
COMCAST CABLE COMM	800-COMCAST	SANDRA ANDRETICH	OPERATIONS	02/13/2024	127.48
COMCAST CABLE COMM	800-COMCAST	SHARON NEMECHEK	LIBRARY	02/13/2024	111.95
COMCAST CABLE COMM	800-COMCAST	MARLA OLSON	PARKS	01/28/2024	458.62
COMCAST DENVER	800-266-2278	JILL SIEWERT	LIBRARY	02/14/2024	129.89
COMCAST DENVER	800-266-2278	LESLIE RINGER	HUMAN RESOURCES	02/01/2024	440.33
CONCENTRA INC	MECHANICSBURG	LESLIE RINGER	HUMAN RESOURCES	01/31/2024	195.00
CONCENTRA INC	MECHANICSBURG	LESLIE RINGER	HUMAN RESOURCES	01/31/2024	376.00
COSTAR GROUP INC	WASHINGTON	AUSTIN BROWN	CITY MANAGER	01/19/2024	447.93
CRAIGSLIST.ORG	415-399-5200	ALINA KIRCHNER	HUMAN RESOURCES	02/06/2024	25.00
CRAIGSLIST.ORG	415-399-5200	ALINA KIRCHNER	HUMAN RESOURCES	02/06/2024	45.00
CS* EUVCC4DXPO	LOUISVILLE	LIGEA FERRARO	CITY MANAGER	01/29/2024	80.00
D J*WALL-ST-JOURNAL	800-568-7625	JILL SIEWERT	LIBRARY	02/18/2024	679.02
DBC IRRIGATION SUPPLY	BROOMFIELD	STEVEN HUIZENGA	PARKS	02/16/2024	72.27
DBC IRRIGATION SUPPLY	BROOMFIELD	LUKE LAYTON	PARKS	02/15/2024	29.98
DBC IRRIGATION SUPPLY	BROOMFIELD	STEVEN HUIZENGA	PARKS	01/23/2024	43.91
DEN PUBLIC PARKING	DENVER	ADAM BLACKMORE	PARKS	02/08/2024	60.00
DK HARDWARE SUPPLY LLC	3058512811	KEVIN FREY	FACILITIES	01/24/2024	9.21
DK HARDWARE SUPPLY LLC	3058512811	KEVIN FREY	FACILITIES	01/22/2024	242.29
DOCS ROADHOUSE	WINTER PARK	KATIE BEASLEY	REC CENTER	02/09/2024	59.77
DOLLAR TREE	LAFAYETTE	PAMELA LEMON	REC CENTER	02/08/2024	58.75
DOLLARTREE	LOUISVILLE	PAMELA LEMON	REC CENTER	02/19/2024	35.00
DOLLARTREE	LOUISVILLE	PAMELA LEMON	REC CENTER	02/08/2024	53.75
DONORBOX PLATFORM	ALEXANDRIA	GIGI YANG	LIBRARY	02/03/2024	9.48
DRI*ID.MYCOMMERCE.COM	MINNETONKA	MASON THOMPSON	OPERATIONS	02/09/2024	749.00
E 470 EXPRESS TOLLS	AURORA	SANDRA ANDRETICH	OPERATIONS	02/14/2024	1.60
E 470 EXPRESS TOLLS	AURORA	SANDRA ANDRETICH	OPERATIONS	02/14/2024	1.60
E 470 EXPRESS TOLLS	AURORA	TANYA SCOTT	FINANCE	01/30/2024	3.20
EVENT* SAVING PLACES 2	TYSONS CORNER	ROBERT ZUCCARO	PLANNING	01/23/2024	450.00
EVENTBRITE.COM ORG FEE	SAN FRANCISCO	DEREK COSSON	CITY MANAGER	01/23/2024	29.00
EZCATERPAPA JOHNS	8004881803	ALINA KIRCHNER	HUMAN RESOURCES	02/14/2024	368.72

FASTENAL COMPANY 01COB	LAFAYETTE	MASON THOMPSON	OPERATIONS	01/31/2024	109.92
FASTENAL COMPANY 01COB	LAFAYETTE	STEVEN HUIZENGA	PARKS	01/25/2024	56.79
FASTSIGNS 371501	BROOMFIELD	CATHERINE JEPSON	PARKS	01/26/2024	156.24
FEDEX OFFIC74200007427	LOUISVILLE	SANDRA ANDRETICH	OPERATIONS	02/14/2024	92.66
FEDEX OFFIC74200007427	LOUISVILLE	SANDRA ANDRETICH	OPERATIONS	02/12/2024	46.33
FEDEX OFFIC74200007427	LOUISVILLE	SANDRA ANDRETICH	OPERATIONS	01/24/2024	46.33
FEDEX270736190827	MEMPHIS	JEFF OWENS	WATER	02/08/2024	57.01
FEDEX598478707	800-4633339	DAVID BARIL	GOLF COURSE	01/30/2024	26.81
FEDEX599159110	800-4633339	DAVID BARIL	GOLF COURSE	02/04/2024	20.95
FEDEX75004731	800-4633339	GREG VENETTE	WATER	02/16/2024	13.00
FIRST CHOICE-BOYER S C	303-9649400	GREG VENETTE	WATER	01/31/2024	146.95
FIRST CHOICE-BOYER S C	303-9649400	DAVID DEAN	GOLF COURSE	01/31/2024	77.96
FIRST CHOICE-BOYER S C	303-9649400	LIGEA FERRARO	CITY MANAGER	01/31/2024	178.52
FLIPSNACK.COM	STERLING HEIG	DEREK COSSON	CITY MANAGER	01/22/2024	420.00
FORMS FULFILLMENT CENT	ELMSFORD	TANYA SCOTT	FINANCE	01/19/2024	613.61
FS COM INC	NEW CASTLE	DANIEL WOOLDRIDGE		02/07/2024	274.40
FS COM INC	NEW CASTLE	LIGEA FERRARO	CITY MANAGER	02/05/2024	1,809.08
FSP*CAL-COASSOCLIBRARI	ARVADA	KRISTEN BODINE	LIBRARY	02/05/2024	120.00
FSP*CAL-COASSOCLIBRARI	ARVADA	KRISTEN BODINE	LIBRARY	01/31/2024	120.00
FSP*CGFOA	BOULDER	RYDER BAILEY	FINANCE	01/29/2024	40.00
FSP*CGFOA	BOULDER	RYDER BAILEY	FINANCE	01/29/2024	40.00
FSP*CGFOA	BOULDER	RYDER BAILEY	FINANCE	01/29/2024	65.00
FSP*CGFOA	BOULDER	RYDER BAILEY	FINANCE	01/29/2024	40.00
FSP*CGFOA	BOULDER	RYDER BAILEY	FINANCE	01/29/2024	40.00
FSP*CGFOA	BOULDER	RYDER BAILEY	FINANCE	01/29/2024	65.00
FUN EXPRESS	OMAHA	AMANDA PERERA	REC CENTER	01/22/2024	100.94
GAYLORD BROS INC	N. SYRACUSE	GIGI YANG	LIBRARY	01/23/2024	163.37
GIS CERTIFICATION INST	8478247768	JENNIFER REILLY	IT	01/31/2024	200.00
GLWD HOT SPRINGS LODGE	GLENWOOD SPRI	LIGEA FERRARO	CITY MANAGER	01/25/2024	329.00
GOLF AND SPORT SOLUTIO	LA SALLE	DAVID DEAN	GOLF COURSE	02/06/2024	448.85
GOLF AND SPORT SOLUTIO	LA SALLE	DAVID DEAN	GOLF COURSE	02/06/2024	491.47
GOVERNMENT FINANCE OFF	CHICAGO	KIMBERLY BAKER	FINANCE	02/09/2024	199.00
GOVOS BOULDER RECORDS	DALLAS	GENEVIEVE KLINE	CITY CLERK	02/09/2024	20.00
GRAINGER	LAKE FOREST	TREVOR DEPEW	WATER	01/22/2024	301.90
GRAINGER	LAKE FOREST	TREVOR DEPEW	WATER	01/22/2024	444.55
GRAINGER	LAKE FOREST	TREVOR DEPEW	WATER	01/22/2024	138.43
GRAINGER	LAKE FOREST	TREVOR DEPEW	WATER	01/22/2024	66.22
GRAINGER	LAKE FOREST	TREVOR DEPEW	WATER	01/22/2024	32.94
GRAINGER	LAKE FOREST	TREVOR DEPEW	WATER	01/22/2024	75.46
GRAINGER	LAKE FOREST	TREVOR DEPEW	WATER	01/22/2024	100.71
GRAMMARLY COMMSVOUM	8883186146	GINGER CROSS	GOLF COURSE	01/30/2024	139.95
GREELEY POLICE DEPT	GREELEY	SANDRA ANDRETICH	OPERATIONS	01/26/2024	250.00
GREEN CO2 SYSTEMS	970-482-0203	DANIEL BIDLEMEN	REC CENTER	02/06/2024	818.94
GREEN CO2 SYSTEMS	970-482-0203	DANIEL BIDLEMEN	REC CENTER	02/05/2024	958.90
GREENDISK INC	425-3928700	JILL SIEWERT	LIBRARY	01/23/2024	27.95
HACH COMPANY	9706631377	DEVIN MADIGAN	WASTEWATER	02/19/2024	140.00
HACH COMPANY	9706631377	DEVIN MADIGAN	WASTEWATER	02/09/2024	371.58
HEARTLAND HONDA	SPRINGDALE	BRYCE LINN	PARKS	02/16/2024	55.76
HEARTSMART	WOODRUFF	JACOB MARINKOVICH	PARKS	02/16/2024	40.50
HEARTSMART	WOODRUFF	JACOB MARINKOVICH	PARKS	01/19/2024	492.46
HOBART ESTORE	TROY	KATIE BEASLEY	REC CENTER	01/29/2024	1,121.00
HOBBY-LOBBY #0034	LONGMONT	LARISSA HOFFMAN	REC CENTER	02/01/2024	39.58
HOBBY-LOBBY #0034	LONGMONT	LARISSA HOFFMAN	REC CENTER	01/27/2024	25.12
HOLLAND SUPPLY INC	HOLLAND	KERRY KRAMER	PARKS	02/02/2024	524.09
HOO*HOOTSUITE INC	HOUSTON	DEREK COSSON	CITY MANAGER	02/11/2024	1,188.00
IACP	ALEXANDRIA	RAFAEL GUTIERREZ	POLICE	02/05/2024	190.00
ICSC-NY	NEW YORK	LIGEA FERRARO	CITY MANAGER	02/12/2024	975.00
ID EDGE INC	LOUISVILLE	JULIE SEYDEL	REC CENTER	02/02/2024	690.92
IIMC	9099444162	GENEVIEVE KLINE	CITY CLERK	01/25/2024	625.00
IN *CHANNELBOUND, LLC	844-4381095	LESLIE RINGER	HUMAN RESOURCES	01/25/2024	2,000.00
IN *KAISER LOCK & KEY	303-4493880	GIGI YANG	LIBRARY	01/29/2024	7.50
IN *PELICANS, LLC, DBA	800-262-3246	DEVIN MADIGAN	WASTEWATER	02/08/2024	531.60
INFORMATION STATION SP	ZEELAND	SANDRA ANDRETICH	OPERATIONS	02/16/2024	.10
INFORMATION STATION SP	ZEELAND	SANDRA ANDRETICH	OPERATIONS	02/14/2024	89.95

INFRATECH	TEL3103541250	KEVIN FREY	FACILITIES	02/16/2024	224.64
INFRATECH	TEL3103541250	KEVIN FREY	FACILITIES	01/26/2024	265.67
INSIGHT PUBLIC SECTOR	CHANDLER	LIGEA FERRARO	CITY MANAGER	02/10/2024	16.03
INSIGHT PUBLIC SECTOR	CHANDLER	LIGEA FERRARO	CITY MANAGER	02/03/2024	16.03
INST OF TRANSP ENG	2027850060	MINDY OLKJER	PUBLIC WORKS	01/29/2024	149.00
INSTANT IMPRINTS LOUIS	LOUISVILLE	BARBARA NICKERSON	HUMAN RESOURCES	02/08/2024	364.58
JAX - 06	LAFAYETTE	DANIEL SALAS ROBLES	PARKS	02/09/2024	118.99
JAX - 06	LAFAYETTE	MATTHEW ROWE	FACILITIES	02/08/2024	195.46
JAX - 06	LAFAYETTE	ANDY ELLIS	PARKS	02/08/2024	119.02
JAX - 06	LAFAYETTE	JEFF ROBISON	FACILITIES	02/06/2024	102.02
JAX - 06	LAFAYETTE	TREVOR DEPEW	WATER	02/06/2024	169.99
JAX - 06	LAFAYETTE	LUKE LAYTON	PARKS	01/23/2024	89.98
JERSEY MIKES 22024	LOUISVILLE	SANDRA ANDRETICH	OPERATIONS	01/31/2024	47.40
JLC GOLF	416-298-6265	DAVID BARIL	GOLF COURSE	02/09/2024	489.61
JONES SCHOOL SUPPLY CO	COLUMBIA	KAYLA CORCELLI	PARKS	02/07/2024	29.47
KBS GOLF SHAFTS	303-444-2226	DAVID BARIL	GOLF COURSE	01/30/2024	103.50
KING SOOPERS #0013	LOUISVILLE	PATRICIA MORGAN	REC CENTER	02/09/2024	143.42
KING SOOPERS #0013	LOUISVILLE	KATIE TOFTE	REC CENTER	02/09/2024	34.95
KING SOOPERS #0013	LOUISVILLE	PATRICIA MORGAN	REC CENTER	02/07/2024	34.95
KING SOOPERS #0013	LOUISVILLE	JILL SIEWERT	LIBRARY	02/06/2024	61.45
KING SOOPERS #0013	LOUISVILLE	AMANDA PERERA	REC CENTER	02/02/2024	261.10
KING SOOPERS #0013	LOUISVILLE	REBECCA STORES	REC CENTER	02/01/2024	51.12
KING SOOPERS #0013	LOUISVILLE	PATRICIA MORGAN	REC CENTER	01/31/2024	126.05
KING SOOPERS #0013	LOUISVILLE	CAMERON FOWLKES	PUBLIC WORKS	01/30/2024	40.88
KING SOOPERS #0013	LOUISVILLE	LIGEA FERRARO	CITY MANAGER	01/30/2024	101.93
KING SOOPERS #0013	LOUISVILLE	ROBERT ZUCCARO	PLANNING	01/29/2024	43.96
KING SOOPERS #0013	LOUISVILLE	PATRICIA MORGAN	REC CENTER	01/24/2024	83.26
KING SOOPERS #0013	LOUISVILLE	MARLA OLSON	PARKS	01/23/2024	44.46
KING SOOPERS #0013	LOUISVILLE	MICHELLE CLINGAN	HUMAN RESOURCES	01/23/2024	43.44
KING SOOPERS #0013	LOUISVILLE	MINDY OLKJER	PUBLIC WORKS	01/22/2024	2.99
LAFAYETTE LUMBER	LAFAYETTE	NICHOLAS POTOPCHUK	PARKS	01/31/2024	533.70
LANDS END BUS OUTFITTE	DODGEVILLE	JEN KENNEY	POLICE	02/14/2024	49.84
LANGUAGE LINE	MONTEREY	MEREDYTH MUTH	CITY MANAGER	02/16/2024	23.83
LES MILLS US TRADING	CHICAGO	LINDSEY WITTY	REC CENTER	02/07/2024	389.00
LOCO HERMANOS	LOUISVILLE	LIGEA FERRARO	CITY MANAGER	02/13/2024	135.64
LOCO HERMANOS	LOUISVILLE	PAULINA BENNETT	IT	02/01/2024	60.48
LOCO HERMANOS	LOUISVILLE	MINDY OLKJER	PUBLIC WORKS	01/30/2024	230.70
LOUISVILLE CHAMBER OF	LOUISVILLE	AUSTIN BROWN	CITY MANAGER	01/31/2024	55.00
LOUISVILLE PUBLIC LIBR	LOUISVILLE	TANYA SCOTT	FINANCE	01/29/2024	1.00
LS AEROSUDS, INC.	BROOMFIELD	ERIK SWIATEK	PARKS	01/25/2024	625.00
MAC EQUIPMENT INC (LON	LONGMONT	LANCE PFEIFER	GOLF COURSE	01/30/2024	73.28
MAC EQUIPMENT INC (LON	LONGMONT	LANCE PFEIFER	GOLF COURSE	01/30/2024	587.60
MAD GREENS MG0118	LOUISVILLE	MINDY OLKJER	PUBLIC WORKS	02/08/2024	36.48
MAILCHIMP *MISC	MAILCHIMP.COM	DEREK COSSON	CITY MANAGER	02/18/2024	514.25
MAPO.CLUBEXPRESS.COM	WHEAT RIDGE	DAVID DEAN	GOLF COURSE	02/13/2024	50.00
METAL SUPERMARKETS DEN	DENVER	KERRY KRAMER	PARKS	01/22/2024	364.34
METAL SUPERMARKETS DEN	DENVER	KERRY KRAMER	PARKS	01/22/2024	364.34
METAL SUPERMARKETS DEN	DENVER	KERRY KRAMER	PARKS	01/18/2024	364.34
METAL SUPERMARKETS WHE	GOLDEN	RENEE LEWELLYN	OPERATIONS	01/23/2024	84.14
MICHAELS STORES 2059	SUPERIOR	NICK PAPPAS	REC CENTER	02/07/2024	5.99
MICHAELS STORES 5049	WESTMINSTER	LANA FAUVER	REC CENTER	01/31/2024	95.91
MMM SPEC AGG QUARRY	DENVER	BRYCE LINN	PARKS	01/19/2024	401.11
MORRELL PRINTING SOLUT	LAFAYETTE	GIGI YANG	LIBRARY	02/01/2024	958.68
MORRISON EDUCATION	ARVADA	MINDY OLKJER	PUBLIC WORKS	02/05/2024	750.00
MORRISON EDUCATION	ARVADA	BELAN CARRILLO	PUBLIC WORKS	01/25/2024	750.00
MOTHER CABRINI	GOLDEN	PATRICIA MORGAN	REC CENTER	01/28/2024	100.00
MOUNTAIN STATE EMPLOYE	3038395177	ROBIN BROOKHART	HUMAN RESOURCES	01/22/2024	895.00
MOUNTAIN STATE EMPLOYE	3038395177	PAULA KNAPEK	HUMAN RESOURCES	01/18/2024	895.00
MOUNTAIN STATE EMPLOYE	3038395177	RONDA HENGER	HUMAN RESOURCES	01/18/2024	895.00
MOVING UP GARAGE 877 3	VOLO	KEVIN FREY	FACILITIES	02/10/2024	70.66
NALCO COMPANY POST-INV	EAGAN	TREVOR DEPEW	WATER	02/07/2024	27.17
NALCO COMPANY POST-INV	EAGAN	TREVOR DEPEW	WATER	02/07/2024	339.68
NATIONAL OUTDOOR FURNI	RIVERHEAD	ERIN OWEN	LIBRARY	02/05/2024	143.00
NORTHWEST PARKWAY LLC	303-9262500	TANYA SCOTT	FINANCE	01/24/2024	38.00

NPC*NEW PIG CORP	800-468-4647	VICKIE ILKO	OPERATIONS	01/24/2024	660.76
NPC*NEW PIG CORP	800-468-4647	VICKIE ILKO	OPERATIONS	01/21/2024	219.96
NRPA OPERATING	ASHBURN	ADAM BLACKMORE	PARKS	01/29/2024	95.00
NRPA OPERATING	ASHBURN	ADAM BLACKMORE	PARKS	01/25/2024	35.00
NRPA OPERATING	ASHBURN	ADAM BLACKMORE	PARKS	01/23/2024	35.00
NRPA OPERATING	ASHBURN	ADAM BLACKMORE	PARKS	01/19/2024	130.00
ONLINE-DENVER MUSEUM	303-370-6000	LINDSEY WITTY	REC CENTER	02/16/2024	120.00
OVERHEAD DOOR NKY ONLI	859-341-6646	KEVIN FREY	FACILITIES	01/19/2024	135.74
PAYFLOW/PAYPAL	LAVISTA	TANYA SCOTT	FINANCE	02/02/2024	19.95
PAYFLOW/PAYPAL	LAVISTA	TANYA SCOTT	FINANCE	02/02/2024	59.95
POLICE TECHNICAL	TERRE HAUTE	RYAN MORRIS	POLICE	01/31/2024	275.00
PRAIRIE MOUNTAIN MEDIA	BOULDER	TANYA SCOTT	FINANCE	02/13/2024	662.64
PRAIRIE MOUNTAIN MEDIA	BOULDER	TANYA SCOTT	FINANCE	01/29/2024	1,067.44
PRAIRIE MOUNTAIN MEDIA	BOULDER	TANYA SCOTT	FINANCE	01/19/2024	23.50
PROPONENT GROUP	LAKE MARY	DAVID BARIL	GOLF COURSE	02/07/2024	425.00
PSI SERVICES INC	18188476180	JOSEPH CAMPANA	OPERATIONS	02/14/2024	100.00
PSI SERVICES INC	18188476180	BENJAMIN FRANCISCO	OPERATIONS	02/14/2024	100.00
PSI SERVICES INC	18188476180	JACK MANIAN	OPERATIONS	02/05/2024	100.00
PSI SERVICES INC	18188476180	JACK MANIAN	OPERATIONS	02/05/2024	100.00
PSI SERVICES INC	18188476180	TREVOR DEPEW	WATER	02/05/2024	100.00
PSI SERVICES INC	18188476180	TREVOR DEPEW	WATER	02/05/2024	100.00
PSI SERVICES INC	18188476180	TREVOR DEPEW	WATER	01/30/2024	100.00
PY *AUDUBON INTERNATIO	TROY	DAVID DEAN	GOLF COURSE	02/06/2024	411.60
PY *STORQUEST-LOUISVIL	LOUISVILLE	GIGI YANG	LIBRARY	01/30/2024	429.00
PET SCOOP	DENVER	ABBY MCNEAL	PARKS	02/01/2024	558.00
POWER SYSTEMS-800-321-	KNOXVILLE	LINDSEY WITTY	REC CENTER	01/29/2024	947.66
QDOBA 2526 ONLINE	720-890-7877	LIGEA FERRARO	CITY MANAGER	02/16/2024	334.25
QUALITY LAPEL PINS	LITTLETON	LIGEA FERRARO	CITY MANAGER	02/08/2024	508.49
RED WING SHOE STORE 1	ARVADA	VICKIE ILKO	OPERATIONS	01/30/2024	225.00
RED WING SHOE STORE 1	ARVADA	RENEE LEWELLYN	OPERATIONS	01/23/2024	225.00
REI*MATTHEW BENDER &CO	800-833-9844	JILL SIEWERT	LIBRARY	02/02/2024	32.94
RMWEA	3037480321	JEFF OWENS	WATER	02/02/2024	525.00
ROCKY MTN RANGER ASSOC	DENVER	BENJAMIN WHITE-PATARINO	PARKS	02/11/2024	150.00
RUBBERFORM	716-478-0404	KEVIN FREY	FACILITIES	01/24/2024	1,663.28
RVT*BOULDER VALLEY SCH	BOULDER	TANYA SCOTT	FINANCE	02/01/2024	3,106.50
SAFEWAY #2812	LOUISVILLE	GIGI YANG	LIBRARY	02/17/2024	19.98
SAFEWAY #2812	LOUISVILLE	LANA FAUVER	REC CENTER	02/13/2024	56.49
SAFEWAY #2812	LOUISVILLE	ERICA BERZINS	POLICE	01/24/2024	7.99
SAFEWAY #2812	LOUISVILLE	NICK PAPPAS	REC CENTER	01/20/2024	13.95
SAMEDAY OFFICE SUPPLY	303-7902777	LIGEA FERRARO	CITY MANAGER	02/16/2024	365.00
SAMEDAY OFFICE SUPPLY	MORGAN@SAMEDA	MARLA OLSON	PARKS	01/31/2024	22.48
SAMEDAY OFFICE SUPPLY	MORGAN@SAMEDA	KAYLA CORCELLI	PARKS	01/31/2024	46.80
SAMEDAY OFFICE SUPPLY	MORGAN@SAMEDA	LIGEA FERRARO	CITY MANAGER	01/29/2024	575.00
SAMEDAY OFFICE SUPPLY	MORGAN@SAMEDA	ALINA KIRCHNER	HUMAN RESOURCES	01/25/2024	12.27
SAMEDAY OFFICE SUPPLY	MORGAN@SAMEDA	MARLA OLSON	PARKS	01/23/2024	356.82
SHERWIN WILLIAMS 70348	LAFAYETTE	ANDY ELLIS	PARKS	02/16/2024	49.74
SHERWIN WILLIAMS 70348	LAFAYETTE	ANDY ELLIS	PARKS	02/13/2024	99.48
SHOPEYS PIZZA	LOUISVILLE	MINDY OLKJER	PUBLIC WORKS	01/30/2024	101.00
SIP.US	ALPHARETTA	DEVIN MADIGAN	WASTEWATER	02/09/2024	30.96
SMK*SURVEYMONKEY.COM	PALO ALTO	AUSTIN BROWN	CITY MANAGER	01/24/2024	468.00
SNARFS 34 LOUISVILLE	LOUISVILLE	GIGI YANG	LIBRARY	02/17/2024	55.99
SNARFS LOUISVILLE LLC	LOUISVILLE	MINDY OLKJER	PUBLIC WORKS	01/25/2024	68.98
SOCIETYFORHUMANRESOURC	ALEXANDRIA	RONDA HENGER	HUMAN RESOURCES	02/02/2024	244.00
SOCIETYFORHUMANRESOURC	ALEXANDRIA	ROBIN BROOKHART	HUMAN RESOURCES	01/29/2024	244.00
SOUTHWEST AIRLINES	800-435-9792	CHAD ROOT	BUILDING SAFETY	02/09/2024	589.95
SOUTHWEST AIRLINES	800-435-9792	MICHELLE CLINGAN	HUMAN RESOURCES	01/26/2024	506.96
SOUTHWEST AIRLINES	800-435-9792	LESLIE RINGER	HUMAN RESOURCES	01/26/2024	506.96
SP AV NOW INC.	SANTA CRUZ	LINDSEY WITTY	REC CENTER	02/09/2024	807.00
SP GOLF CARS OF HOUSTO	HOUSTON	LANCE PFEIFER	GOLF COURSE	01/31/2024	538.00
SP NOTARYSTAMP.COM	BROOKFIELD	BEN REDARD	POLICE	02/17/2024	56.92
SP RETAILPICKLEBALL	CANYON LAKE	JESSE DEGRAW	REC CENTER	02/08/2024	574.75
SPI*CENTURYLINK/LUMEN	MONROE	TANYA SCOTT	FINANCE	01/28/2024	2,720.30
SQ *FORNEY MUSEUM OF T	DENVER	KATIE BEASLEY	REC CENTER	02/07/2024	435.00
SQ *MOXIE BREAD CO.	LOUISVILLE	LIGEA FERRARO	CITY MANAGER	02/05/2024	244.95

SQ *ORGANIC SANDWICH C	GOSQ.COM	BARBARA NICKERSON	HUMAN RESOURCES	02/08/2024	217.24
SQ *ORGANIC SANDWICH C	LOUISVILLE	LIGEA FERRARO	CITY MANAGER	01/29/2024	34.13
SQ *PICA'S LOUISVILLE	LOUISVILLE	JEFF DURBIN	CITY MANAGER	02/02/2024	63.19
SQ *PICA'S LOUISVILLE	LOUISVILLE	ROBERT ZUCCARO	PLANNING	01/29/2024	148.20
SQ *PICA'S LOUISVILLE	LOUISVILLE	MEREDYTH MUTH	CITY MANAGER	01/29/2024	85.68
SQ *TRAVEL BERKELEY SP	GOSQ.COM	TANYA SCOTT	FINANCE	02/01/2024	45.00
STAPLS7625804264000001	877-8267755	JILL SIEWERT	LIBRARY	02/09/2024	194.65
STAPLS7626552620000001	877-8267755	MARLA OLSON	PARKS	02/18/2024	44.49
STERICYCLE INC/SHRED-I	BANNOCKBURN	SANDRA ANDRETICH	OPERATIONS	02/19/2024	30.00
STERICYCLE INC/SHRED-I	BANNOCKBURN	TANYA SCOTT	FINANCE	02/05/2024	34.17
STERICYCLE INC/SHRED-I	BANNOCKBURN	MEREDYTH MUTH	CITY MANAGER	02/05/2024	30.00
STERICYCLE INC/SHRED-I	BANNOCKBURN	LESLIE RINGER	HUMAN RESOURCES	02/01/2024	30.00
STK*SHUTTERSTOCK	8666633954	GINGER CROSS	GOLF COURSE	02/02/2024	979.00
STUDENT MARKETING AGEN	ENGLEWOOD	JEFF FISHER	POLICE	02/13/2024	80.92
STUDENT MARKETING AGEN	ENGLEWOOD	JEFF FISHER	POLICE	01/26/2024	77.10
STAPLES INC VT	888-7534103	SANDRA ANDRETICH	OPERATIONS	02/14/2024	196.25
TARGET 00017699	SUPERIOR	JESSE DEGRAW	REC CENTER	02/18/2024	20.00
TARGET 00017699	SUPERIOR	GIGI YANG	LIBRARY	01/27/2024	12.62
THE DENVER ATHLETIC CL	DENVER	LUKE LAYTON	PARKS	02/01/2024	30.00
THE ECONOMIST	NEW YORK	JILL SIEWERT	LIBRARY	02/11/2024	6.86
THE ECONOMIST	NEW YORK	JILL SIEWERT	LIBRARY	02/01/2024	144.36
THE HOME DEPOT #1506	LOUISVILLE	DANIEL SALAS ROBLES	PARKS	02/16/2024	48.85
THE HOME DEPOT #1506	LOUISVILLE	DANIEL SALAS ROBLES	PARKS	02/16/2024	8.94
THE HOME DEPOT #1506	LOUISVILLE	LANCE PFEIFER	GOLF COURSE	02/16/2024	135.12
THE HOME DEPOT #1506	LOUISVILLE	BRIAN SCHMID	OPERATIONS	02/15/2024	49.00
THE HOME DEPOT #1506	LOUISVILLE	AARON GRANT	PARKS	02/15/2024	7.47
THE HOME DEPOT #1506	LOUISVILLE	CATHERINE JEPSON	PARKS	02/15/2024	58.73
THE HOME DEPOT #1506	LOUISVILLE	AARON GRANT	PARKS	02/15/2024	37.63
THE HOME DEPOT #1506	LOUISVILLE	JEFF ROBISON	FACILITIES	02/15/2024	60.39
THE HOME DEPOT #1506	LOUISVILLE	AARON GRANT	PARKS	02/15/2024	6.07
THE HOME DEPOT #1506	LOUISVILLE	DAVID DEAN	GOLF COURSE	02/14/2024	4.26
THE HOME DEPOT #1506	LOUISVILLE	MATTHEW ROWE	FACILITIES	02/14/2024	47.18
THE HOME DEPOT #1506	LOUISVILLE	STEVEN HUIZENGA	PARKS	02/14/2024	33.23
THE HOME DEPOT #1506	LOUISVILLE	VICKIE ILKO	OPERATIONS	02/13/2024	69.96
THE HOME DEPOT #1506	LOUISVILLE	MATTHEW ROWE	FACILITIES	02/13/2024	44.94
THE HOME DEPOT #1506	LOUISVILLE	JOSEPH CAMPANA	OPERATIONS	02/13/2024	12.78
THE HOME DEPOT #1506	LOUISVILLE	JOSEPH CAMPANA	OPERATIONS	02/13/2024	224.03
THE HOME DEPOT #1506	LOUISVILLE	AARON GRANT	PARKS	02/13/2024	9.95
THE HOME DEPOT #1506	LOUISVILLE	AARON GRANT	PARKS	02/13/2024	10.46
THE HOME DEPOT #1506	LOUISVILLE	NICHOLAS POTOPCHUK	PARKS	02/13/2024	68.91
THE HOME DEPOT #1506	LOUISVILLE	JEFF ROBISON	FACILITIES	02/13/2024	52.89
THE HOME DEPOT #1506	LOUISVILLE	STEVEN HUIZENGA	PARKS	02/13/2024	8.97
THE HOME DEPOT #1506	LOUISVILLE	LANCE PFEIFER	GOLF COURSE	02/12/2024	11.84
THE HOME DEPOT #1506	LOUISVILLE	ANDY ELLIS	PARKS	02/12/2024	62.85
THE HOME DEPOT #1506	LOUISVILLE	MATTHEW ROWE	FACILITIES	02/12/2024	119.00
THE HOME DEPOT #1506	LOUISVILLE	DANIEL SALAS ROBLES	PARKS	02/12/2024	134.61
THE HOME DEPOT #1506	LOUISVILLE	DAVID BARIL	GOLF COURSE	02/10/2024	82.86
THE HOME DEPOT #1506	LOUISVILLE	DAVID BARIL	GOLF COURSE	02/10/2024	256.97
THE HOME DEPOT #1506	LOUISVILLE	KEN MATHEWS	OPERATIONS	02/09/2024	222.55
THE HOME DEPOT #1506	LOUISVILLE	JEFF OWENS	WATER	02/09/2024	35.10
THE HOME DEPOT #1506	LOUISVILLE	DANIEL SALAS ROBLES	PARKS	02/09/2024	41.16
THE HOME DEPOT #1506	LOUISVILLE	LUKE LAYTON	PARKS	02/08/2024	103.80
THE HOME DEPOT #1506	LOUISVILLE	DANIEL SALAS ROBLES	PARKS	02/08/2024	8.48
THE HOME DEPOT #1506	LOUISVILLE	JEFF ROBISON	FACILITIES	02/08/2024	5.47
THE HOME DEPOT #1506	LOUISVILLE	TREVOR DEPEW	WATER	02/07/2024	25.03
THE HOME DEPOT #1506	LOUISVILLE	AARON GRANT	PARKS	02/07/2024	5.27
THE HOME DEPOT #1506	LOUISVILLE	DANIEL SALAS ROBLES	PARKS	02/07/2024	40.34
THE HOME DEPOT #1506	LOUISVILLE	MIKE MILLER	POLICE	02/07/2024	52.50
THE HOME DEPOT #1506	LOUISVILLE	DAVID DEAN	GOLF COURSE	02/07/2024	60.33
THE HOME DEPOT #1506	LOUISVILLE	MIKE MILLER	POLICE	02/07/2024	79.62
THE HOME DEPOT #1506	LOUISVILLE	JOSEPH CAMPANA	OPERATIONS	02/07/2024	68.51
THE HOME DEPOT #1506	LOUISVILLE	JACOB MARINKOVICH	PARKS	02/06/2024	94.99
THE HOME DEPOT #1506	LOUISVILLE	JEFF ROBISON	FACILITIES	02/06/2024	52.58
THE HOME DEPOT #1506	LOUISVILLE	JEFF ROBISON	FACILITIES	02/06/2024	109.00

THE HOME DEPOT #1506	LOUISVILLE	RENEE LEWELLYN	OPERATIONS	02/06/2024	36.95
THE HOME DEPOT #1506	LOUISVILLE	RENEE LEWELLYN	OPERATIONS	02/06/2024	104.80
THE HOME DEPOT #1506	LOUISVILLE	DANIEL BIDLEMEN	REC CENTER	02/06/2024	40.74
THE HOME DEPOT #1506	LOUISVILLE	DANIEL SALAS ROBLES	PARKS	02/06/2024	18.60
THE HOME DEPOT #1506	LOUISVILLE	DANIEL SALAS ROBLES	PARKS	02/05/2024	108.87
THE HOME DEPOT #1506	LOUISVILLE	JEFF ROBISON	FACILITIES	02/05/2024	17.89
THE HOME DEPOT #1506	LOUISVILLE	JEFF ROBISON	FACILITIES	02/05/2024	38.59
THE HOME DEPOT #1506	LOUISVILLE	DAVID BARIL	GOLF COURSE	02/04/2024	59.44
THE HOME DEPOT #1506	LOUISVILLE	JEFF OWENS	WATER	02/03/2024	44.25
THE HOME DEPOT #1506	LOUISVILLE	MATT LOOMIS	PARKS	02/02/2024	19.46
THE HOME DEPOT #1506	LOUISVILLE	JOSEPH CAMPANA	OPERATIONS	02/02/2024	90.82
THE HOME DEPOT #1506	LOUISVILLE	JEFF ROBISON	FACILITIES	02/02/2024	46.03
THE HOME DEPOT #1506	LOUISVILLE	MATTHEW ROWE	FACILITIES	02/01/2024	138.52
THE HOME DEPOT #1506	LOUISVILLE	RENEE LEWELLYN	OPERATIONS	02/01/2024	20.97
THE HOME DEPOT #1506	LOUISVILLE	DANIEL SALAS ROBLES	PARKS	01/31/2024	34.98
THE HOME DEPOT #1506	LOUISVILLE	JACOB MARINKOVICH	PARKS	01/31/2024	26.84
THE HOME DEPOT #1506	LOUISVILLE	MATTHEW ROWE	FACILITIES	01/30/2024	215.93
THE HOME DEPOT #1506	LOUISVILLE	MATT ISABELL	PARKS	01/30/2024	50.60
THE HOME DEPOT #1506	LOUISVILLE	JOSEPH CAMPANA	OPERATIONS	01/30/2024	63.31
THE HOME DEPOT #1506	LOUISVILLE	DAVID BARIL	GOLF COURSE	01/30/2024	26.94
THE HOME DEPOT #1506	LOUISVILLE	DAVID BARIL	GOLF COURSE	01/30/2024	29.44
THE HOME DEPOT #1506	LOUISVILLE	NATHANIEL GOECKNER	PARKS	01/29/2024	78.38
THE HOME DEPOT #1506	LOUISVILLE	DANIEL SALAS ROBLES	PARKS	01/29/2024	34.98
THE HOME DEPOT #1506	LOUISVILLE	TREVOR DEPEW	WATER	01/28/2024	60.49
THE HOME DEPOT #1506	LOUISVILLE	KERRY KRAMER	PARKS	01/25/2024	172.93
THE HOME DEPOT #1506	LOUISVILLE	MIKE MILLER	POLICE	01/25/2024	92.91
THE HOME DEPOT #1506	LOUISVILLE	MIKE MILLER	POLICE	01/25/2024	72.48
THE HOME DEPOT #1506	LOUISVILLE	DANIEL SALAS ROBLES	PARKS	01/25/2024	7.14
THE HOME DEPOT #1506	LOUISVILLE	RENEE LEWELLYN	OPERATIONS	01/25/2024	207.85
THE HOME DEPOT #1506	LOUISVILLE	MINDY OLKJER	PUBLIC WORKS	01/24/2024	16.98
THE HOME DEPOT #1506	LOUISVILLE	DANIEL SALAS ROBLES	PARKS	01/24/2024	55.58
THE HOME DEPOT #1506	LOUISVILLE	JACOB MARINKOVICH	PARKS	01/24/2024	46.73
THE HOME DEPOT #1506	LOUISVILLE	MIKE MILLER	POLICE	01/24/2024	120.86
THE HOME DEPOT #1506	LOUISVILLE	DANIEL SALAS ROBLES	PARKS	01/23/2024	15.04
THE HOME DEPOT #1506	LOUISVILLE	DANIEL SALAS ROBLES	PARKS	01/22/2024	48.14
THE HOME DEPOT #1506	LOUISVILLE	DAVID DEAN	GOLF COURSE	01/22/2024	110.51
THE HOME DEPOT #1506	LOUISVILLE	JEFF ROBISON	FACILITIES	01/22/2024	139.00
THE HOME DEPOT #1506	LOUISVILLE	ANDY ELLIS	PARKS	01/22/2024	28.38
THE HOME DEPOT #1506	LOUISVILLE	MATTHEW ROWE	FACILITIES	01/22/2024	127.88
THE HOME DEPOT #1506	LOUISVILLE	GIGI YANG	LIBRARY	01/21/2024	702.78
THE HOME DEPOT #1506	LOUISVILLE	GIGI YANG	LIBRARY	01/21/2024	27.49
THE HOME DEPOT #1506	LOUISVILLE	GIGI YANG	LIBRARY	01/21/2024	19.59
THE HOME DEPOT #1506	LOUISVILLE	DANIEL SALAS ROBLES	PARKS	01/19/2024	131.55
THE HOME DEPOT #1506	LOUISVILLE	JACOB MARINKOVICH	PARKS	01/18/2024	36.92
THE HOME DEPOT #1506	LOUISVILLE	MATTHEW ROWE	FACILITIES	01/18/2024	44.94
THE HOME DEPOT #1506	LOUISVILLE	DANIEL SALAS ROBLES	PARKS	01/18/2024	35.07

TST* BITTERSWEET - CAF	LOUISVILLE	RYDER BAILEY	FINANCE	02/09/2024	15.75
TST* BITTERSWEET - CAF	LOUISVILLE	LIGEA FERRARO	CITY MANAGER	02/07/2024	69.00
TST* BITTERSWEET - CAF	LOUISVILLE	MINDY OLKJER	PUBLIC WORKS	02/07/2024	25.73
TST* MUDROCK'S TAP & T	LOUISVILLE	CHAD ROOT	BUILDING SAFETY	01/23/2024	52.19
TST* MURPHYS TAP HOUSE	LOUISVILLE	CHAD ROOT	BUILDING SAFETY	01/30/2024	76.25
TST* RUBY RU'S - CENTA	LAFAYETTE	PAULINA BENNETT	IT	02/14/2024	40.23
TST* THE HUCKLEBERRY	LOUISVILLE	ROBERT ZUCCARO	PLANNING	01/29/2024	24.96
TST* VERDE - LOUISVILL	LOUISVILLE	JEFF DURBIN	CITY MANAGER	01/23/2024	104.00
TST* WATERLOO	LOUISVILLE	RONDA HENGER	HUMAN RESOURCES	02/08/2024	42.75
TST* WATERLOO	LOUISVILLE	KATIE BEASLEY	REC CENTER	02/01/2024	23.00
TVY*SILVERSNEAKERS	480-444-5154	LINDSEY WITTY	REC CENTER	02/14/2024	27.00
TYLER USER CONFERENCE	800-646-2633	MICHELLE CLINGAN	HUMAN RESOURCES	01/26/2024	1,199.00
TYLER USER CONFERENCE	800-646-2633	MICHELLE CLINGAN	HUMAN RESOURCES	01/26/2024	1,199.00
THE SOCIETY OF ROCKY M	FORT COLLINS	GIGI YANG	LIBRARY	01/26/2024	25.00
TRANSPARENT INFORMATIO	3032178747	LESLIE RINGER	HUMAN RESOURCES	02/03/2024	438.45
U.S. SAWS INC WEBSITE	TAMPA	BENJAMIN FRANCISCO	OPERATIONS	02/09/2024	990.00
U.S. SAWS INC WEBSITE	TAMPA	BENJAMIN FRANCISCO	OPERATIONS	02/09/2024	751.00
UNITED AIRLINES	UNITED.COM	GENEVIEVE KLINE	CITY CLERK	01/29/2024	30.00
UNITED AIRLINES	UNITED.COM	GENEVIEVE KLINE	CITY CLERK	01/29/2024	209.10
UNITED AIRLINES	UNITED.COM	LIGEA FERRARO	CITY MANAGER	01/25/2024	38.00
UNITED AIRLINES	UNITED.COM	LIGEA FERRARO	CITY MANAGER	01/25/2024	592.18
UNITED AIRLINES	UNITED.COM	LIGEA FERRARO	CITY MANAGER	01/25/2024	592.18
UNITED AIRLINES	UNITED.COM	LIGEA FERRARO	CITY MANAGER	01/25/2024	38.00
UNITED AIRLINES	UNITED.COM	LIGEA FERRARO	CITY MANAGER	01/25/2024	38.00
UNITED AIRLINES	UNITED.COM	LIGEA FERRARO	CITY MANAGER	01/25/2024	38.00
UNITED RENTALS 1314	SOUTH ST PAUL	BENJAMIN FRANCISCO	OPERATIONS	02/12/2024	540.00
USABLUEBOOK	ATLANTA	DEVIN MADIGAN	WASTEWATER	02/09/2024	625.79
USERWAY.ORG	WILMINGTON	TANYA SCOTT	FINANCE	01/31/2024	272.00
USPS KIOSK 0756709550	SUPERIOR	LINDSEY WITTY	REC CENTER	02/12/2024	18.40
USPS KIOSK 0756709550	SUPERIOR	DAVID DEAN	GOLF COURSE	02/05/2024	1.63
USPS PO 0756700237	SUPERIOR	BENJAMIN KURTZ	POLICE	02/15/2024	9.35
USPS PO 0756700237	SUPERIOR	JILL SIEWERT	LIBRARY	01/29/2024	41.57
USPS PO 0756700237	SUPERIOR	KATIE TOFTE	REC CENTER	01/23/2024	68.00
VAN GO AUTO GLASS	3034641500	MASON THOMPSON	OPERATIONS	02/09/2024	308.00
VZWRLSS*MY VZ VB P	800-922-0204	TANYA SCOTT	FINANCE	02/02/2024	2,783.57
VZWRLSS*MY VZ VB P	800-922-0204	TANYA SCOTT	FINANCE	01/24/2024	914.49
VZWRLSS*MY VZ VB P	800-922-0204	TANYA SCOTT	FINANCE	01/24/2024	3,014.57
VZWRLSS*PRPAY AUTOPAY	888-294-6804	MINDY OLKJER	PUBLIC WORKS	02/08/2024	20.00
WESTJET AIRLINES	CALGARY	GENEVIEVE KLINE	CITY CLERK	01/29/2024	256.98
WHITESIDES BOOTS AND C	BRIGHTON	TANYA SCOTT	FINANCE	02/09/2024	119.99
WHITESIDES BOOTS AND C	BRIGHTON	BRYCE LINN	PARKS	01/31/2024	75.00
WHITESIDES BOOTS AND C	BRIGHTON	LUKE LAYTON	PARKS	01/30/2024	189.99
WHITESIDES BOOTS AND C	BRIGHTON	MATT LOOMIS	PARKS	01/26/2024	109.99
WHITESIDES BOOTS AND C	BRIGHTON	AARON GRANT	PARKS	01/24/2024	219.99
WHITESIDES BOOTS AND C	BRIGHTON	KERRY KRAMER	PARKS	01/22/2024	189.99
WHITESIDES BOOTS AND C	BRIGHTON	MATT ISABELL	PARKS	01/22/2024	114.99
WILBUR ELLIS DENVER	DENVER	DAVID DEAN	GOLF COURSE	01/22/2024	414.30
WILBUR ELLIS DENVER	DENVER	DAVID DEAN	GOLF COURSE	01/22/2024	385.00
WINGSAIRSPACEMSM	DENVER	JILL SIEWERT	LIBRARY	01/30/2024	500.00
WWW.APWA.NET	KANSAS CITY	CORY PETERSON	PUBLIC WORKS	01/26/2024	238.00
XEROX BUSINESS SOLUTIO	PAYMYINVOICE@	TANYA SCOTT	FINANCE	01/30/2024	967.29
YOURMEMBERSHIP	7278270046	PENNY FORD	HUMAN RESOURCES	01/26/2024	299.00
ZOOM.US 888-799-9666	SAN JOSE	LINDSEY WITTY	REC CENTER	01/24/2024	4.64
ZOOM.US 888-799-9666	SAN JOSE	BARBARA NICKERSON	HUMAN RESOURCES	01/24/2024	15.97
ZOOM.US 888-799-9666	SAN JOSE	PAULA KNAPEK	HUMAN RESOURCES	01/24/2024	156.64
ZOOM.US 888-799-9666	SAN JOSE	ROBERT ZUCCARO	PLANNING	01/24/2024	41.54
ZOOM.US 888-799-9666	SAN JOSE	ALINA KIRCHNER	HUMAN RESOURCES	01/24/2024	2.06
EBAY O*11-11206-81733	SAN JOSE	DAVID BARIL	GOLF COURSE	02/20/2024	29.35
EBAY O*22-11191-85706	SAN JOSE	DAVID BARIL	GOLF COURSE	02/18/2024	55.20
				Total	$123,052.02
				R. Morris	-$2.03
				Grant Total	$123,049.99

CITY OF LOUISVILLE
EXPENDITURE APPROVALS $25,000.00 - $99,999.99
FEBRUARY 2024

DATE	P.O. #	VENDOR	DESCRIPTION	AMOUNT
2/1/2024	*2024050*	*Otak, Inc.*	***Marshall Fire Site Supervisor Services*** *Additional 3 months of site Supervisor Services for reconstruction of the Marshall Fire destroyed homes.*	***$ 44,137.00***
2/1/2024	*2024052*	*Be Accessible, Inc.*	***Website Accessibility Audit*** *In 2021, the Colorado Legislature adopted HB21-1110, which established minimum digital accessibility standards for all technology, hardware, and software utilized by Colorado government entities, which must be met by July 1, 2024. The bill also created a process by which noncompliant government* entities can be fined $3,500 per violation. In 2023, the Legislature adopted a cleanup bill (SB23-244), *and the state's Office of Information Technology is currently conducting a rulemaking process, which is expected to further clarify government entities' obligations under the law and outline in more detail the process for complaints and potential fines.*	***$ 25,000.00***
2/7/2024	*2024059*	*US Fleet Source*	***Community Design Vehicle*** *The Operations Superintendent is recommending the purchase of a new 2024 Hyundai Tucson Hybrid. This vehicle is equipped with all-wheel drive to be able to handle all driving conditions as well as having efficient cargo carrying capacity to fit the needs of the building departments personnel that will utilize the vehicle. This vehicle will be purchased from U.S. Fleet Source as they are an approved vendor through the Colorado price agreement with a contracted government price, contract number 185156*	***$ 33,931.00***
2/14/2024	*2024078*	*Park Consulting Group*	***Consulting Support for EnerGov*** *As a result of the CMO/IT/CommDev discussion late last year searching for a cost-effective way to support the City's planning and permitting software, this is an agreement between the City of Louisville and Park Consulting, a company specializing in third-party professional services and support for Tyler Enterprise Permitting and Licensing (EnerGov).*	***$ 38,400.00***
2/27/2024	*2024084*	*Brannan Sand & Gravel*	***2024 Hot Mix Asphalt*** *Public Works Operations division performs numerous asphalt patches and pothole repairs, many of these are from water/sewer repairs, or road failure. Asphalt hot mix is the key material for maintaining the streets of Louisville and repairing damaged roads.*	***$ 25,000.00***
2/27/2024	*2024085*	*Brannan Sand & Gravel*	***2024 Roadbase and Squeegee*** *Public Works Operations division performs many asphalt patches, Water/Sewer Main Failure repairs, and* other excavations throughout the year. These jobs require the Operations Division to use Road Base for compaction, and Pipe Bedding (squeegee) to secure our Water/Sewer lines to prevent future failures.	***$ 40,000.00***
2/27/2024	*2024083*	*Johnson Auto Plaza*	***Replacing work truck for Parks Dept.***	***$56,595.00***
2/27/2024	*2024089*	*L.A.W.S*	***Upfitting 2023 Ford PI Utility, Vehicle #2120*** Purchase of equipment and installation of emergency vehicle components.	***$28,760.57***

SUBJECT: **AWARD CONTRACTS FOR THE 2024 CONCRETE REPLACEMENT PROJECT; 2024 STREET RESURFACING PROJECT; AND 2024 ON-CALL INSPECTIONS**

DATE: **MARCH 19, 2024**

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

SUMMARY:
Staff recommends approval of:

- 2024 Concrete Replacement contract with Triple M Construction, LLC for the base bid amount of $1,330,451 plus a 15% contingency in the amount of $200,000.
- 2024 Street Resurfacing Project contract with Oldcastle SW Group, Inc. dba APC Construction Co. for the base bid amount of $2,227,453 plus a 10% contingency in the amount of $223,000.
- On-Call Field Inspection Services contract with Rocksol Consulting Group, Inc. for $30,000.

2024 CONCRETE REPLACEMENT PROJECT
Staff advertised the 2024 Concrete Replacement Project on January 31 and February 7, 2024. Bids were received on February 29, 2024. Bids received are as follows:

Contractor	Base Bid
Triple M Construction, LLC	$1,330,451.00
CASI	$1,417,344.80
Essential Contractors	$1,477,328.14
Silva Construction, Inc.	$1,555,648.00
Stone & Concrete	$1,762,707.19
ABC Asphalt & Concrete	$1,793,056.00
Metro Pavers, Inc.	$1,863,255.64

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

Base Bid concrete work being approved supports the 2024 Street Resurfacing Project by completing repairs to cracked and heaving sidewalks, replacing non-compliant ADA ramps, improving pedestrian crossings, and miscellaneous repairs to concrete within parks and open spaces.

Refer to the attached map for locations (attachment 2) included with the base bid. This work is concrete work in a variety of areas, including pavement management concrete improvements, miscellaneous citywide concrete issues, and Parks and Open Space requests.

2024 STREET RESURFACING PROJECT

Staff advertised the 2024 Street Resurfacing Project on February 7 and 14, 2024. Bids were received on March 5, 2024. Bids received are as follows:

Contractor	Base Bid
APC Construction	$2,227,452.50
Martin Marietta	$2,374,070.06
ABC Asphalt & Concrete	$2,667,589.40
CASI	$2,770,411.45
Metro Pavers, Inc.	$2,772,130.87

Staff recommends awarding to Oldcastle SW Group, Inc dba APC Construction Co. (APC Construction) as the low bid contractor based upon staff review of bid line items, adherence to bid requirements, and contractor reference checks. The Base Bid is within budget and unit prices are comparable to recent years.

Please refer to the attached map for locations included with the base bid. The current weighted average PCI for all locations included in the 2024 Street Resurfacing Project is 49.0. The existing city-wide PCI is 72.6 and after this maintenance work the city-wide PCI will increase to 73.0 supporting Council's city-wide goal of a PCI of 75.

GEOTECHNICAL QUALITY TESTING SERVICES (FUTURE RECOMMENDATION)

The City awards a geotechnical testing contract for material and quality testing each year for the streets, concrete, sewer, and water maintenance projects. Staff estimates the streets and concrete portions of this contract to be $137,000. This will be bid and awarded in a future council communication that includes all geotechnical testing services.

ON-CALL FIELD INSPECTION SERVICES

Staff recommends approval of an on-call inspection contract of up to approximately $30,000 with Rocksol Consulting Group, Inc. for construction inspection assistance on an as needed basis. This contract will be used to support City inspection staff. Rocksol was selected from the City's 2021 Engineering On-Call list that was procured on a qualifications-based public solicitation.

PAVEMENT AND CURB RAMP CONDITION SURVEY (FUTURE RECOMMENDATION)

The City uses a contractor to conduct a pavement condition survey every three years to determine the pavement condition index (PCI) for each City-maintained street to use when planning the 6-year pavement maintenance program. Mapping and

measurements of each curb ramp will be included in this survey to create an inventory of curb ramps within the City of Louisville. The curb ramp measurements and inventory will determine if existing curb ramps are in compliance with ADA regulations, including slope, width, and landing dimensions. This information will help staff determine appropriate budgets for both street resurfacing and curb ramp repairs and replacements. Staff estimates this contract will be approximately $120,000. This contract will be a part of a separate recommendation that staff will bring to a future City Council meeting if the cost exceeds $100,000 per the City's Purchasing Policies.

2025 CONCRETE AND RESURFACING DRAFTING SERVICES (FUTURE RECOMMENDATION)

Staff anticipates the need for professional consulting services for AutoCAD drafting for the 2025 concrete replacement and street resurfacing projects. These services were used for the 2024 concrete replacement and street resurfacing projects due to a vacant Engineering Technician position within the Engineering Division. Staff estimates this effort to be approximately $60,000.

2024 ALLEYS, RAISED CROSSWALKS, PATCHING (FUTURE RECOMMENDATION)

Staff will advertise for bids for alley maintenance, installation of raised crosswalks for traffic calming and pedestrian safety, asphalt patching, and on-call concrete replacement city-wide. The current estimated costs are $150,000 for alley maintenance, $100,000 for raised crosswalk installation, and $250,000 for asphalt patching. This work will be a part of a separate recommendation that staff will bring to a future City Council meeting.

HERITAGE 2 SLURRY (FUTURE RECOMMENDATION)

Staff will advertise for bids for slurry seal within the Heritage 2 subdivision as part of preventative maintenance. The current estimated cost for this work is $105,000. This work will be a part of a separate recommendation that staff will bring to a future City Council meeting.

FISCAL IMPACT

Based on the above project awards and estimates compared to project funding shown below, staff is anticipating this year's program will have a budget *remaining balance* of approximately $1,729,096. Excess funding is due to favorable bid pricing and not as much Marshall Fire area paving as anticipated in 2024 due to construction still underway. Surplus funding will be allocated back to fund reserves for future work and capital project planning.

Projected Funding:

Description	Account	Amount Available
2024 Parks Concrete	211751-547110	$18,000
2024 Pavement Management	301312-660012	$6,536,000
2024 Concrete Replacement	301312-660022	$108,000
	Total Funding:	**$6,662,000**

Projected Expenses:

Description (This Recommendation)	Amount
2024 Concrete Base Bid	($1,330,451)
2024 Concrete 15% Contingency	($200,000)
Sub-Total (2024 Concrete Costs):	***($1,530,451)***
Description (This Recommendation)	**Amount**
2024 Street Resurfacing Base Bid	($2,227,453)
2024 Resurfacing 10% Contingency	($223,000)
Sub-Total (2024 Pavement Costs):	***($2,450,453)***
Description	**Amount**
2024 Geotechnical Testing Services *	($137,000)
Pavement and Curb Ramp Condition Survey*	($120,000)
2025 Concrete and Resurfacing Drafting Services*	($60,000)
2024 Alleys*	($150,000)
2024 Raised Crosswalks*	($100,000)
2024 Patching*	($250,000)
Heritage 2 Slurry*	($105,000)
On-Call Field Inspection Services (This Communication)	($30,000)
Sub-Total Other Work:	***($952,000)***

*Estimated costs (Future Award)

Total Expenses: **($4,932,904)**

Summary

Total Funding	$6,662,000
Total Expenses	($4,932,904)
Total Difference	**$1,729,096**

PROGRAM/SUB-PROGRAM:
The recommended contracts support the Transportation-Infrastructure Maintenance goal of providing a safe, well-maintained effective and efficient multimodal transportation system at a reasonable cost.

STAFF RECOMMENDATION:

1) Staff recommends approval and award of the 2024 Concrete Replacement Project contract with Triple M Construction, LLC for $1,330,451 plus a 15% contingency in the amount of $200,000 for a total authorized amount of $1,530,451 and authorize the Mayor, City Manager, Public Works Director, and City Clerk to sign and execute contract documents on behalf of the City.

2) Staff recommends approval and award of the 2024 Street Resurfacing Project contract with Oldcastle SW Group, Inc. dba APC Construction Co. for $2,227,453 plus a 10% contingency in the amount of $223,000 for a total authorized amount of $2,450,453 and authorize the Mayor, City Manager, Public Works Director, and City Clerk to sign and execute contract documents on behalf of the City.

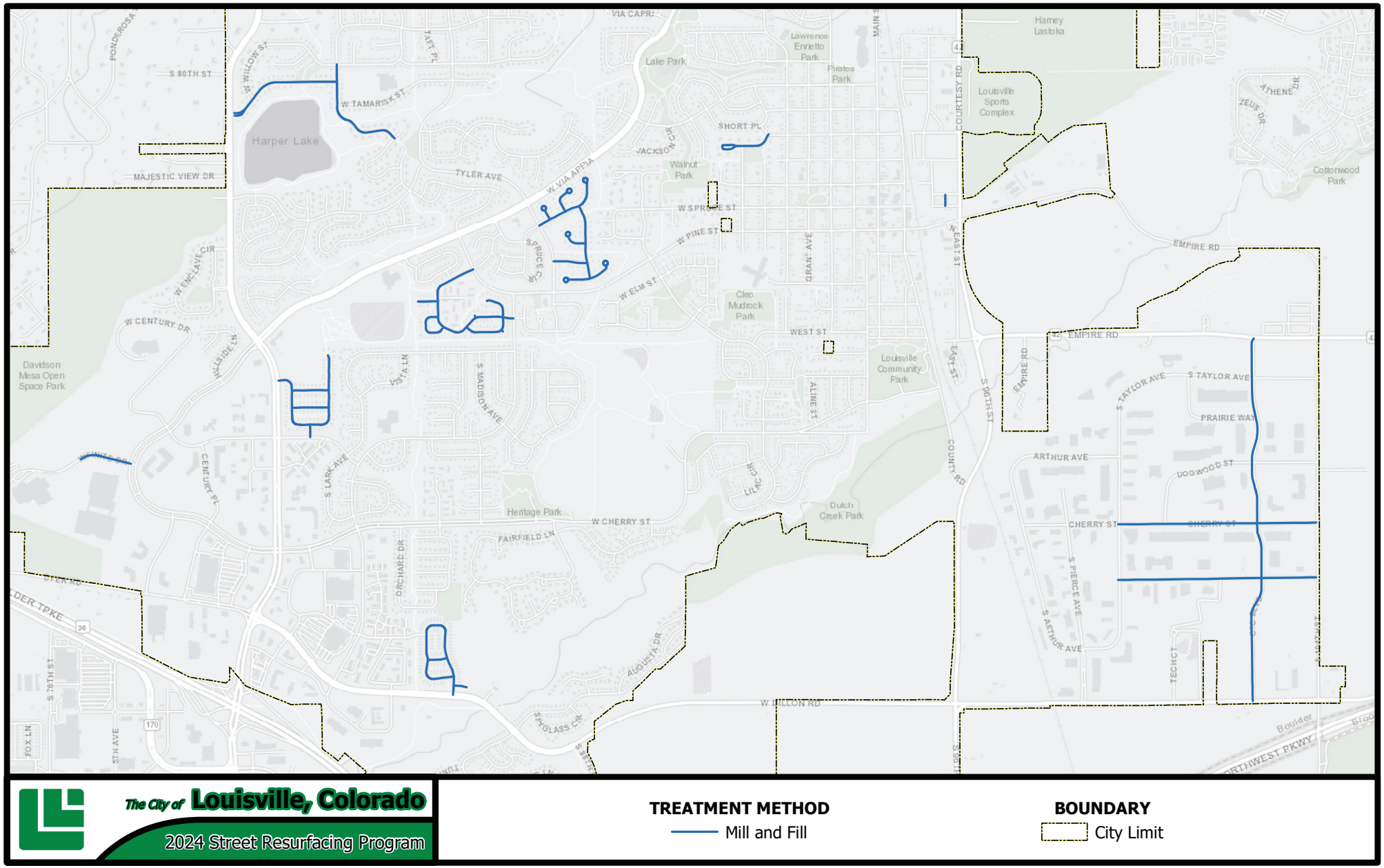
3) Staff recommends Council authorize the Mayor, City Manager, Public Works Director, and City Clerk to sign and execute On-Call Field Inspection Services contract documents with Rocksol Consulting Group, Inc. on behalf of the City for approximately $30,000.

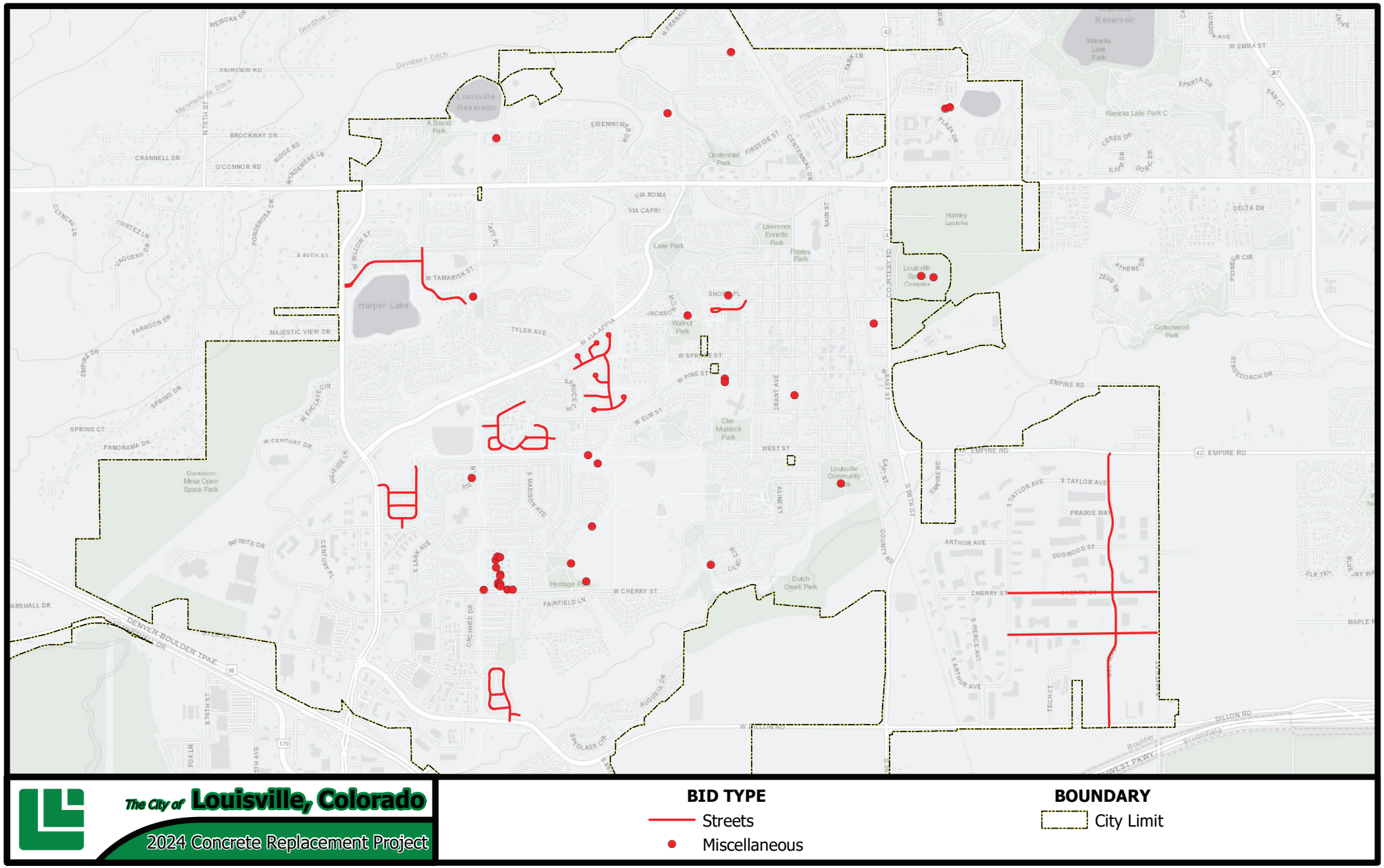
ATTACHMENT(S):

1. 2024 Pavement Program Map
2. 2024 Concrete Replacement Map
3. Triple M Construction, LLC Contract (Concrete)
4. Oldcastle SW Group, Inc. dba APC Construction Co. Contract (Street Resurfacing)
5. Rocksol Consulting Group, Inc. On-Call Field Inspection Services Contract

STRATEGIC PLAN IMPACT:

☒	**Financial Stewardship & Asset Management**	☒	**Reliable Core Services**
☒	**Vibrant Economic Climate**	☒	**Quality Programs & Amenities**
☐	**Engaged Community**	☐	**Healthy Workforce**
☐	**Supportive Technology**	☐	**Collaborative Regional Partner**


The City of Louisville, Colorado
2024 Street Resurfacing Program
TREATMENT METHOD
Mill and Fill
BOUNDARY
City Limit
Harper Lake
Lake Park
Walnut Park
Cleo Mudrock Park
Louisville Community Park
Heritage Park
Dutch Creek Park
Davidson Mesa Open Space Park
Harney Lastoka
Lawrence Ennetto Park
Pirates Park
Louisville Sports Complex
Cottonwood Park
W TAMARISK ST
TYLER AVE
W VIA APPIA
SHORT PL
W SPRUCE ST
W PINE ST
W ELM ST
WEST ST
EMPIRE RD
W CENTURY DR
W CHERRY ST
FAIRFIELD LN
S TAYLOR AVE
PRAIRIE WAY
ARTHUR AVE
DOGWOOD ST
CHERRY ST
S PIERCE AVE
S ARTHUR AVE
TECH CT
W DILLON RD
COURTESY RD
S 96TH ST
S MADISON AVE
S LARK AVE
ORCHARD DR
AUGUSTA DR
MAJESTIC VIEW DR
S 80TH ST
S 76TH ST
COUNTY RD
Boulder


The City of Louisville, Colorado
2024 Concrete Replacement Project
BID TYPE
Streets
Miscellaneous
BOUNDARY
City Limit

Agreement

THIS AGREEMENT is made and entered into this __ day of _____ in the year 2024 by and between:

CITY OF LOUISVILLE, COLORADO
(hereinafter called OWNER)

and

Triple M Construction, LLC
(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: **2024 CONCRETE REPLACEMENT PROJECT**
PROJECT NUMBER: **301312-660022**

Article 2. Contract Times

2.1. The CONTRACTOR shall substantially complete all work within **80 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 _____dollars $ _____ 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 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. Drawings with each sheet bearing the title: **2024 Concrete Replacement Project.**
6.10. Change Orders, Addenda and other documents which may be required or specified including:
- 6.10.1. Addenda No. 2 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

6.11. 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.

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 _____, 2024.

OWNER: CITY OF LOUISVILLE, COLORADO

By: _____
Christopher M. Leh, Mayor

(CORPORATE SEAL)

Attest: _____
Meredyth Muth, City Clerk

Address for giving notices:

749 Main Street
Louisville, Colorado
80027

Attention: City Engineer

CONTRACTOR: _____

By: _____

(CORPORATE SEAL)

Attest: _____

Address for giving notices:

_____

_____

_____

Agreement

THIS AGREEMENT is made and entered into this __ day of _____ in the year 2024 by and between:

CITY OF LOUISVILLE, COLORADO
(hereinafter called OWNER)

and

Oldcastle SW Group, Inc. dba APC Construction Co.
(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: **2024 STREET RESURFACING PROJECT**
PROJECT NUMBER: **301312-660012**

Article 2. Contract Times

2.1. The CONTRACTOR shall substantially complete all work within **50 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. OWNER and CONTRACTOR agree and recognize that time is of the essence in this contract and that 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, OWNER and CONTRACTOR agree that as liquidated damages, and not as a penalty, for delay in performance CONTRACTOR shall pay 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 CONTRACTOR's delay in performance, and shall not include litigation or attorneys' fees incurred by OWNER, or other incidental or consequential damages suffered by OWNER due to CONTRACTOR's performance. If OWNER charges liquidated damages to CONTRACTOR, this shall not preclude OWNER from commencing an action against CONTRACTOR for other actual harm resulting from CONTRACTOR's performance, which is not due to CONTRACTOR's delay in performance.

Article 3. Contract Price

3.1. 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 Two million two hundred twenty seven thousand four hundred fifty two and 50 cents dollars $ 2,227,452.50 set forth in the Bid Form of the CONTRACTOR dated 3/5/2024.

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

Nothing contained in this provision shall preclude 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 CONTRACTOR in performing the Work and 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. Drawings with each sheet bearing the title: **2024 Street Resurfacing Project.**
6.10. Change Orders, Addenda and other documents which may be required or specified including:
- 6.10.1. Addenda No. 2 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

6.11. 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.

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 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 _____, 2024.

OWNER: CITY OF LOUISVILLE, COLORADO

By: _____
Christopher M. Leh, Mayor

(CORPORATE SEAL)

Attest: _____
Meredyth Muth, City Clerk

Address for giving notices:

749 Main Street
Louisville, Colorado
80027

Attention: City Engineer

CONTRACTOR: Oldcastle SW Group, Inc. dba APC Construction Co.

By: _____
Jeffrey W. Keller, V.P. / General Manager

OLDCASTLE SW GROUP, INC. CORPORATE SEAL COLORADO

(CORPORATE SEAL)

Attest: _____
Thomas Davisson, Assistant Secretary

Address for giving notices:

14802 W. 44th Ave.

Golden, CO 80403

Attention: Keary Brown

AN AGREEMENT BY AND BETWEEN THE CITY OF LOUISVILLE AND ROCKSOL CONSULTING GROUP, INC. FOR CONSULTING SERVICES

1.0 PARTIES

This AGREEMENT FOR CONSULTING SERVICES (this "Agreement") is made and entered into this ____ day of _____, 2024 (the "Effective Date"), by and between the **City of Louisville**, a Colorado home rule municipal corporation, hereinafter referred to as the "City", and RockSol Consulting Group, Inc., a New Mexico corporation hereinafter referred to as the "Consultant".

2.0 RECITALS AND PURPOSE

2.1 The City desires to engage the Consultant for the purpose of providing on-call professional inspection 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 Mary Hamann 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 Mary Hamann and such person's designees.

5.2 The Consultant designates Stephany Westhusin 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 Stephany Westhusin 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 December 31, 2024, 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

Except as provided in section 22.0 hereof, 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: City Manager
749 Main Street
Louisville, Colorado 80027
Telephone: (303) 335-4533
Fax: (303) 335-4550

If to the Consultant:

RockSol Consulting Group
12076 Grant Street
Thornton, CO 80241

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.

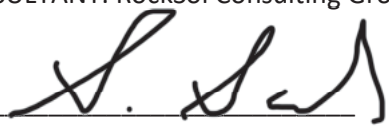
In witness whereof, the parties have executed this Agreement to be effective on the date first above written.

CITY OF LOUISVILLE,
a Colorado Municipal Corporation

By:_____
Christopher M. Leh, Mayor

Attest:_____
Meredyth Muth, City Clerk

CONSULTANT: RockSol Consulting Group, Inc.

By: 

Title: President

Exhibit A – Scope of Services

February 27, 2024

Mary K. Hamann, P.E.
Department of Public Works
City of Louisville
749 Main Street
Louisville, CO 80026

Subject: Proposal for City of Louisville 2024 Inspection On-call Services

Dear Ms. Hamann:

Thank you for reaching out for a proposal for 2024 Construction Inspection On- Call Services to support existing staff on an as needed basis per the On-call Construction Management solicitation in late 2021.

We were happy to provide this service last year. Based on this previous work, we have gained an understanding of Louisville's expectations. We understand we will use this task order to fill in for the existing Louisville inspection staff. Louisville will schedule this work, as needed, and RockSol will provide available staff for the requested work tasks. We plan to have Red Bushell, Construction Inspector II available for inspection again as much as possible.

Attached to this letter is a fee proposal listing a variety of staff experience levels. The person and experience level will be determined based on the City's needs and the availability of staff. RockSol will only charge the time spent dedicated to your project. We invest heavily in our employees training and development so that we can provide quality services to our clients.

We appreciate the opportunity to provide this proposal and look forward to continuing our relationship with the City. **Please contact Stephany Westhusin at 303.253.4028 or via e-mail at westhusin@rocksol.com, if you have any questions and if we can be of any assistance**.

Sincerely,

Stephany Westhusin, PE
Project Principal

Exhibit B - Compensation

City of Louisville On-call Inspection Services for 2024:

Prepared February 27, 2024

Title	Fee	Proposed Hours	Total
Inspection:			
Engineer-in-Training I	$104.62	45	$4707.90
Engineer-in-Training II	$116.77	45	$5254.65
Const. Mgr/Insp I (<3 yrs.)	$93.26	40	$3730.40
Const. Mgr/Insp II (3-10yrs.)	$125.44	100	$12,544.00
Const. Mgr/Insp III (10-20yrs.)	$157.74	10	$1577.40
		Inspection Total:	**$27,814.35**
Administration – Coordination and Billing:			
Sen. Transportation Eng	$232.35	4	$929.40
Project Control and Admin	$105.61	10	$1056.10
		Admin Total:	**$ 1,985.50**
Proposal Total:			**$29,799.85**

SUBJECT: **APPROVAL OF CITY COUNCIL MEETING SCHEDULE FOR JUNE AND JULY, 2024**

DATE: **MARCH 19, 2024**

PRESENTED BY: **MEREDYTH MUTH, CITY CLERK**

SUMMARY:
The City Council generally takes a short break from meetings around the July 4th holiday. Staff recommends Council adopt a schedule for June and July now so that Council, staff, and applicants can plan accordingly and so that meeting schedule changes are not done on short notice later.

This schedule below allows for a short break from meetings while still having the requisite two regular meetings each month.

- June 4 Regular Meeting
- June 11 Study Session or Special Meeting
- June 18 Regular Meeting
- June 25 Cancel
- July 2 Cancel
- July 9 Cancel
- July 16 Regular Meeting
- July 23 Study Session or Special Meeting
- July 24 Special Meeting for Budget Retreat
- July 30 Regular Meeting

FISCAL IMPACT:
None

RECOMMENDATION:
Approve June/July meeting schedule.

ATTACHMENT(S):
None

SUBJECT: **AWARD BID FOR 2024 STORM SYSTEM MAINTENANCE PROJECT**

DATE: **MARCH, 19 2024**

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

SUMMARY:
Staff recommends City Council award the 2024 Storm System Maintenance Project to Diaz Construction Group, LLC for $218,221.94, plus contingency in the amount of $25,000.00 for additional work, project contingency, and authorize the Mayor, Public Works Director and City Clerk to sign and execute contract documents on behalf of the City.

Staff advertised the Storm System Maintenance Project on February 14th, and February 21st. Bids were received on March 1, 2024. Bids received are as follows:

CONTRACTOR	BASE BID
Diaz Construction Group, LLC	$218,221.94

This year's Storm System Maintenance Project includes work in the following areas:

Storm System Maintenance

- This work consists of various improvements throughout the City including replacing damaged concrete trickle channels, replacing damaged flared end sections, removing invasive trees damaging storm drainage infrastructure, and regrading detention ponds to ensure proper drainage. This portion of work accounts for $70,400.00 of the base bid and will paid for out of the City's Detention Pond Maintenance Fund.

Storm Sewer Line Jetting

- This portion of work involves jetting / cleaning and videoing of approximately 17,500LF of storm sewer lines that were impacted by the Marshall fire. This portion of work accounts for $147,821.94 of the base bid and will be reimbursed by FEMA/insurance following the project completion. Finance is working on a budget amendment to fund this account prior to the reimbursement.

The contract work is anticipated to begin in April 2024 and finish in the summer of 2024.

A map of this year's 2024 Storm System Maintenance Project is attached.

City staff has determined the work consisting of this year's project by evaluating recommendations made in the 2015 Storm Water Master Plan. This year's project also consists of areas identified as being in need of repair or cleaning by City staff and FEMA following the Marshall Fire.

FISCAL IMPACT

The breakdown of estimated project costs that includes construction, and contingency are listed below:

Projected Funding:

Description	Account	Amount Available
2024 Detention Pond Maintenance	503499-630096	$623,784
Marshall Fire Services	503432-532909	$191,869
	Total Funding:	**$815,653**

Projected Expenses:

Description – Detention Pond Maintenance Fund	Amount
2024 Storm System Maintenance Work	($70,400)
Storm System Maintenance Contingency	*(10,000)*
Sub-Total (2024 Storm System Maint. Costs):	***($80,400)***
Description – Marshall Fire Services Fund	**Amount**
2024 Storm Line Jetting & FEMA Approved Repairs	($147,822)
Storm Line Jetting & FEMA Approved Repairs Contingency	*(15,000)*
Sub-Total (2024 FEMA Approved Work):	***($162,822)***
Total Expenses:	**($243,222)**

Summary

Total Funding	$815,653
Total Expenses	($243,222)
Total Difference	**$572,431**

PROGRAM/SUB-PROGRAM IMPACT: Storm System Maintenance

This project helps meet the program objectives by improving drainage and storm water quality across the city.

RECOMMENDATION:
Staff recommends City Council award the 2024 Storm System Maintenance project to Diaz Construction Group, LLC for $218,221.94, plus contingency of $25,000.00, and authorize the Mayor, Public Works Director and City Clerk to sign and execute contract documents on behalf of the City.

ATTACHMENT(S):
1. Agreement
2. Map of Project Locations

STRATEGIC PLAN IMPACT:

☐	**Financial Stewardship & Asset Management**	☐	**Reliable Core Services**
☐	**Vibrant Economic Climate**	☒	**Quality Programs & Amenities**
☐	**Engaged Community**	☐	**Healthy Workforce**
☐	**Supportive Technology**	☐	**Collaborative Regional Partner**

Agreement

THIS AGREEMENT is made and entered into this 19 day of March in the year 2024 by and between:

CITY OF LOUISVILLE, COLORADO
(hereinafter called OWNER)

and

Diaz Construction Group, LLC
(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: **2024 STORM SYSTEM MAINTENANCE PROJECT**
PROJECT NUMBER: **503499-630096**

Article 2. Contract Times

2.1. The CONTRACTOR shall substantially complete all work within **80 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 Two Hundred Eighteen Thousand Dollars, Two Hundred and Twenty Two Dollars, Ninety Four Cents dollars $ 218,221.94 set forth in the Bid Form of the CONTRACTOR dated March 1st.

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. Drawings with each sheet bearing the title: **2024 STORM SYSTEM MAINTENANCE PROJECT .**
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
- 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

6.11. 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.

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 March 19th, 2024.

OWNER: CITY OF LOUISVILLE, COLORADO

By: _____
Christopher M. Leh, Mayor

(CORPORATE SEAL)

Attest: _____
Meredyth Muth, City Clerk

Address for giving notices:

749 Main Street
Louisville, Colorado
80027

Attention: City Engineer

CONTRACTOR: Diaz Construction Group, LLC

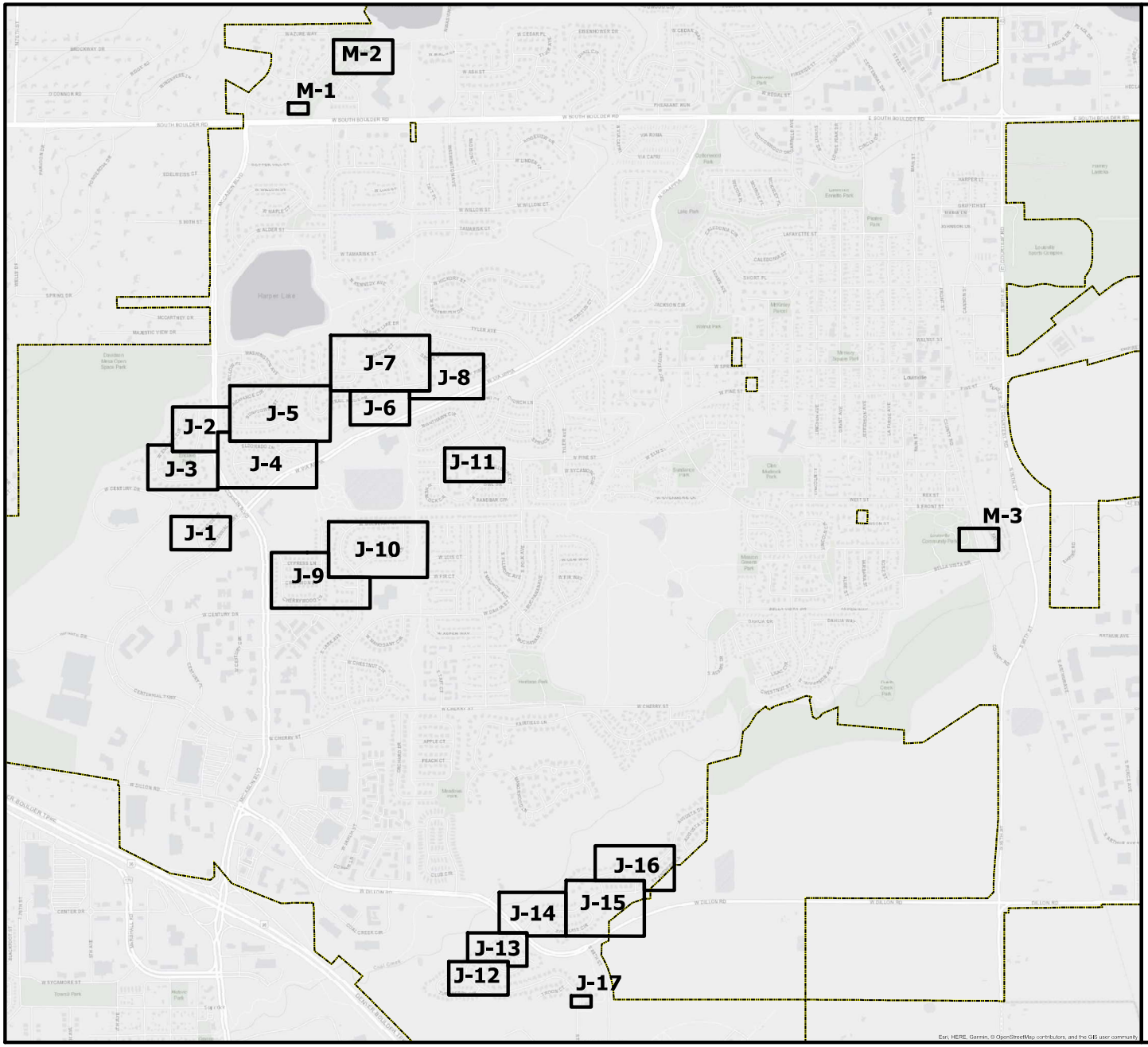
By: _____
CHANELLE DIAZ, MANAGING MEMBER

(CORPORATE SEAL)

Attest: _____
LUIS DIAZ, MANAGING MEMBER

Address for giving notices:

1090 S WADSWORTH BLVD UNIT C-244 LAKEWOOD CO 80226



CITY OF LOUISVILLE 2024 STORM SYSTEM MAINTENANCE

Page Index

N-1: General Notes

J-1: Jetting - Centennial Heights West Subdivision

J-2: Jetting - Enclave Subdivision (1)

J-3: Jetting - Enclave Subdivision (2)

J-4: Jetting - Cornerstone Subdivision

J-5: Jetting - Centennial 8 Subdivision

J-6: Jetting - Centennial 6 Subdivision

J-7: Jetting - Centennial 7 Subdivision

J-8: Jetting - Centennial 4 Subdivision

J-9: Jetting - Cherrywood 2 Subdivision

J-10: Jetting - Centennial Heights Subdivision

J-11: Jetting - Wildflower Condominiums

J-12: Jetting - Coal Creek Ranch 3 Subdivision (1)

J-13: Jetting - Coal Creek Ranch 3 Subdivision (2)

J-14: Jetting - Coal Creek Ranch 4 Subdivision (1)

J-15: Jetting - Coal Creek Ranch 4 Subdivision (2)

J-16: Jetting - Coal Creek Ranch 4 Subdivision (3)

J-17: Jetting - Health Park 5 Subdivision

M-1: Maintenance - Pond E-1

M-2: Maintenance - Pond E-4

M-3: Maintenance - County Rd.

D-1: Project Details

Approved by: Tyler Trojan - Civil Engineer II

Drawings by: Michael O'Keefe - Engineering Technician

SUBJECT: **APPROVAL OF A CONSTRUCTION CONTRACT BETWEEN THE CITY OF LOUISVILLE AND KRISCHE CONSTRUCTION, INC. FOR PLAYGROUND IMPROVEMENTS AT JOE CARNIVAL AND MEADOWS PARKS**

DATE: **MARCH 19, 2024**

PRESENTED BY: **BRYON WEBER, PROJECT MANAGER**
ADAM BLACKMORE, DIRECTOR OF PARKS, RECREATION, AND OPEN SPACE

SUMMARY:
On May 8th, 2023 following a competitive bidding process, Council approved an award for Construction Manager/General Contractor (CM/GC) services to Krische Construction Inc. (KCI) related to the playground renovations of Joe Carnival, Meadows, Sunflower & Enclave Parks. At that time Council approved an initial agreement for pre-construction 'Construction Manager' services with the intention that any future agreement(s) for 'General Contractor' services would be approved by Council at a future date.

On January 16th, 2024 following design and cost estimating efforts by staff and consultants, Council approved an overall budget and funding strategy not to exceed $850,000 for the construction of Joe Carnival & Meadows Parks.

Staff now requests approval of a construction proposal in the amount of $731,488 to advance KCI to the next phase of the CM/GC agreement, securing them as General Contractor for playground improvements at Joe Carnival and Meadows Parks. Approval is also requested for staff to spend up to $49,127 additional as an approximate 6.5% contingency.

Per the enclosed drawings, renovation work is to include the following at each respective park:

Meadows Park: Removal of existing play equipment, seat bench, sand safety surfacing and limited concrete within the play area. Installation will include a new bench, new play equipment featuring universally accessible components and new safety surfacing with a combination of pour-in-place rubber and engineered wood fiber.

Joe Carnival: Removal of existing play equipment, sand safety surfacing, concrete walls around the existing swings, concrete plaza stairs and limited landscaping including one deciduous tree. Installation will include a new swing area in a more centralized location, new play equipment, new engineered wood fiber safety surfacing and new concrete stairs with handrail.

Note: Sunflower and Enclave parks are still in the design and public input process. A future agreement for construction of those two parks is anticipated to be submitted to Council in summer of 2024.

FISCAL IMPACT:
The Playground improvements at Joe Carnival and Meadows Parks are within the $850,000 spending limits approved by Council on January 16th, 2024. A summary of funding sources is outlined below:

Estimated Budget	
Acct. No. 301511-630048 (Playgrounds 2023)	$80,615
Acct. No. 301511-630048 (Playgrounds 2024)	$100,000
Acct. No. 202511-630048 (Conservation Trust Fund 2023)	$400,000
Proceeds from Denver Broncos Sale	$200,000
Total Available:	**$780,615**

Expenditures	
Krische Construction Inc. (KCI)	$731,488
Staff Requested Contingency (~6.5%)	$49,127
Total Expenditures:	**$780,615**
Budget Remaining	($0)

SCHEDULE:
Construction will be dependent on lead times for playground equipment, which is currently anticipated at 12 weeks from time of purchase. A late March equipment order date should allow construction to begin by June. Substantial completion would then be anticipated in mid-August.

PROGRAM/SUB-PROGRAM IMPACT:
The recommended contract supports the Parks Division's goal of providing quality amenities, the City's vision to provide a vibrant and healthy community and City's mission to enhance the quality of life in our community.

RECOMMENDATION:
Staff recommends City Council award the construction agreement to Krische Construction Inc. per their bid of $731,488.00, authorize staff to execute change orders up to $49,127 as an ~6.5% project contingency and authorize the Mayor, City Manager, Parks, Recreation, and Open Space Director and City Clerk to sign and execute contract documents on behalf of the City.

ATTACHMENT(S):

1. Krische Construction Inc. (KCI) Bid Packet Materials
2. Drawings showing proposed playground improvements
3. Sample Contractor Agreement

STRATEGIC PLAN IMPACT:

☐	**Financial Stewardship & Asset Management**	☐	**Reliable Core Services**
☐	**Vibrant Economic Climate**	☒	**Quality Programs & Amenities**
☐	**Engaged Community**	☐	**Healthy Workforce**
☐	**Supportive Technology**	☐	**Collaborative Regional Partner**

BID FORM

PROJECT: Playground Replacements – Joe Carnival & Meadows Parks
PROJECT NUMBER: 301511-630048
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
n/a	n/a

   (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 is 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 including existing underground and/or overhead facilities. BIDDER's may not rely on oral, written or graphic representations made by the OWNER 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 notify OWNER in writing of any supplemental examinations, investigations, and/or 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 and notification, 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 the Contract Documents.

(d) BIDDER has given OWNER written notice of all conflicts, errors, ambiguities or discrepancies that BIDDER has discovered in the Contract Documents and the written resolution thereof by OWNER 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.

(e) 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 price(s) shown below in the Schedule of Unit Prices. Each unit price will be deemed to include an amount considered by BIDDER to be adequate to cover BIDDER's overhead and profit for each separately identified item. BIDDER acknowledges that quantities are not guaranteed and final payment will be based on actual quantities determined as provided in the Contract Documents.

5. The following documents are enclosed and made a condition of this Bid:

   (a) Lump Sum Price

   (b) Schedule of Subcontractors (Any persons and organizations proposed to perform the Work are required to be identified submitted in this Bid)

   (c) 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:

   Name: Craig Kisling Telephone No. 970-222-5973

   Email: ckisling@kciconst.com

   Address: 605 Weaver Park Road, Longmont, CO 80501

SUBMITTED on 2/23 **, 2024.**

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 K Rische Construction INC.
(Corporation Name)

(State of incorporation)

By Karl Risch Title President
(Name of person authorized to sign)

(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.)

LUMP SUM PRICE

PROJECT: Playground Replacements – Joe Carnival & Meadows Parks
PROJECT NUMBER: 301511-630048
OWNER: CITY OF LOUISVILLE, COLORADO

LUMP SUM PRICE:	$ 731,488.00
TOTAL BID WRITTEN OUT:	Seven hundred thirty one thousand four hundred eighty eight dollars and zero cents
SIGNATURE:	[signature]
AVAILABLE TO BEGIN WORK (DATE):	April 15 - 2024
PROJECT COMPLETION (DATE):	Aug. 1 - 2024
COMPANY:	Krische Construction Inc. (KCI)
ADDRESS:	605 Weaver Park Rd. Longmont, CO 80501
TELEPHONE:	303-776-7643
EMAIL:	VmpilK@KCIconst.com

SCHEDULE OF SUBCONTRACTORS

PROJECT: Playground Replacements – Joe Carnival & Meadows Parks
PROJECT NUMBER: 301511-630048
OWNER: CITY OF LOUISVILLE, COLORADO

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

Name: Rodo's Contracting, LLC Telephone No. 303-664-4297
Address: 201 River Rd.
City: Platteville State: CO Zip Code: 80651
Services/equipment to be provided: Demolition, excavation, concrete flatwork, landscaping, site furnishing installation

Name: Altitude Recreation Telephone No. 720-339-4676
Address: 720 Austin Ave. STE 203
City: Erie State: CO Zip Code: 80516
Services/equipment to be provided: Play equipment, Play equipment installation, safety surface installation

Name: Ground Solutions Telephone No. 970-776-8150
Address: 607 Ventura St.
City: Aurora State: CO Zip Code: 80011
Services/equipment to be provided: Engineered wood Fibar safety surface installation.

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

DISCLOSURE STATEMENT

PROJECT: Playground Replacements – Joe Carnival & Meadows Parks
PROJECT NUMBER: 301511-630048
OWNER: CITY OF LOUISVILLE, COLORADO

Vendor must disclose any possible conflict of interest with the City of Louisville including, but not limited to, any relationship with any City of Louisville elected official or employee.

Your response must disclose if a known relationship exists between any principal of your firm and any City of Louisville elected official or employee. If, to your knowledge, no relationship exists, this should also be stated in your response.

Failure to disclose such a relationship may result in cancellation of a contract as a result of your response. This form must be completed and returned in order for your proposal to be eligible for consideration.

☒ NO KNOWN RELATIONSHIPS EXIST

☐ RELATIONSHIP EXISTS (Please explain relationship)

I CERTIFY THAT:

1. I, as an officer of this organization, or per the attached letter of authorization, am duly authorized to certify the information provided herein are accurate and true as of the date; and

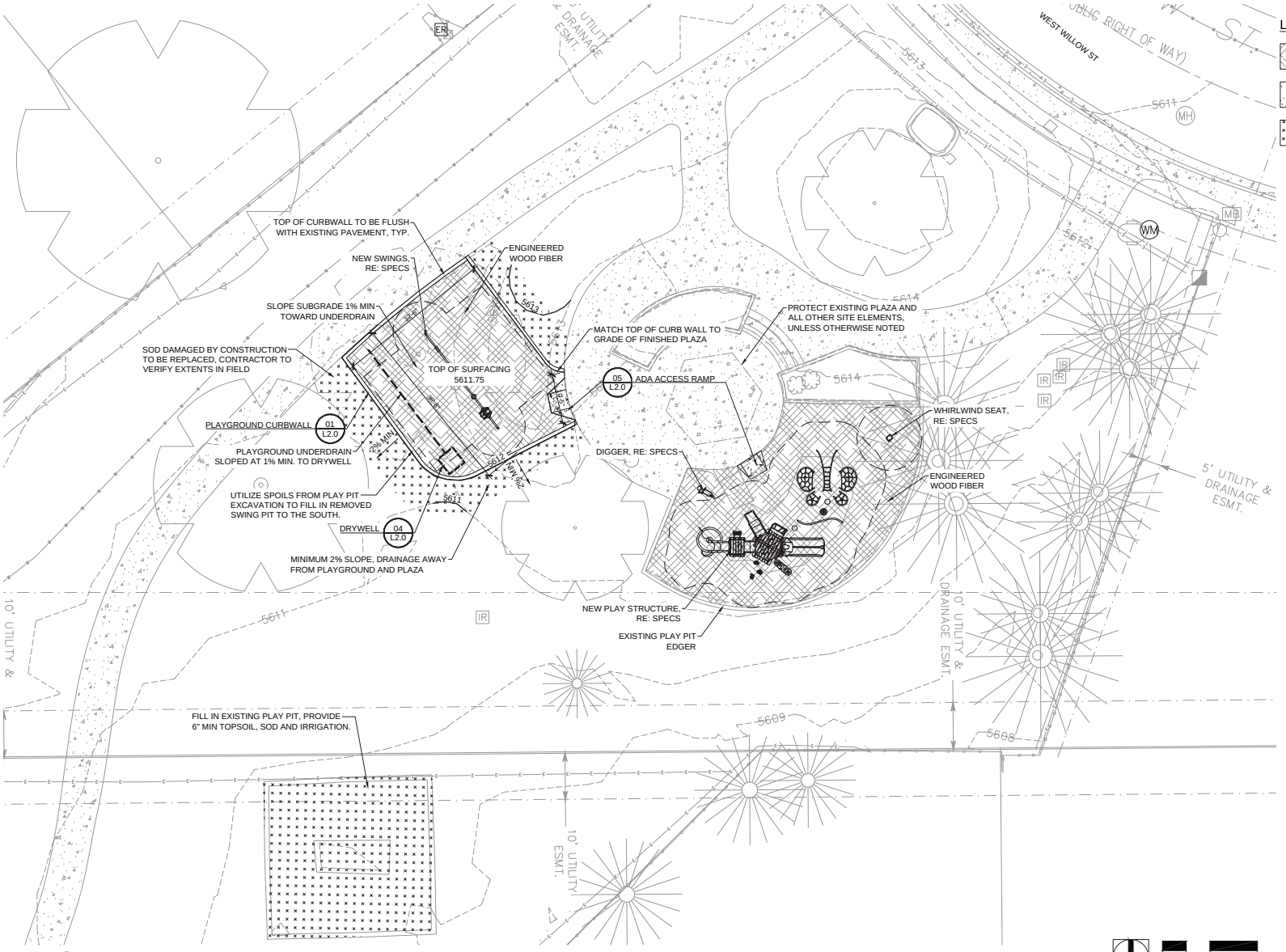
2. My organization shall comply with all State and Federal Equal Opportunity and Non-Discrimination requirements and conditions of employment.

V. Mark Pilkington — Printed or Typed Name

President — Title

V. Mark Pilkington — Signature

3-6-2024 — Date



1 SITE PLAN
Scale: 1" = 10'

LEGEND

- ENGINEERED WOOD FIBER
- CONCRETE
- SOD DAMAGED BY CONSTRUCTION TO BE REPLACED

NORTH 0 10' 20'
SCALE: 1" = 10'-0"

DESIGN CONCEPTS

JOE CARNIVAL PARK PLAYGROUND REPLACEMENT

912 W WILLOW ST
LOUISVILLE, CO 80027

Project No.: 22219.00

Issued For:	Date:
100% CDs	03.01.24

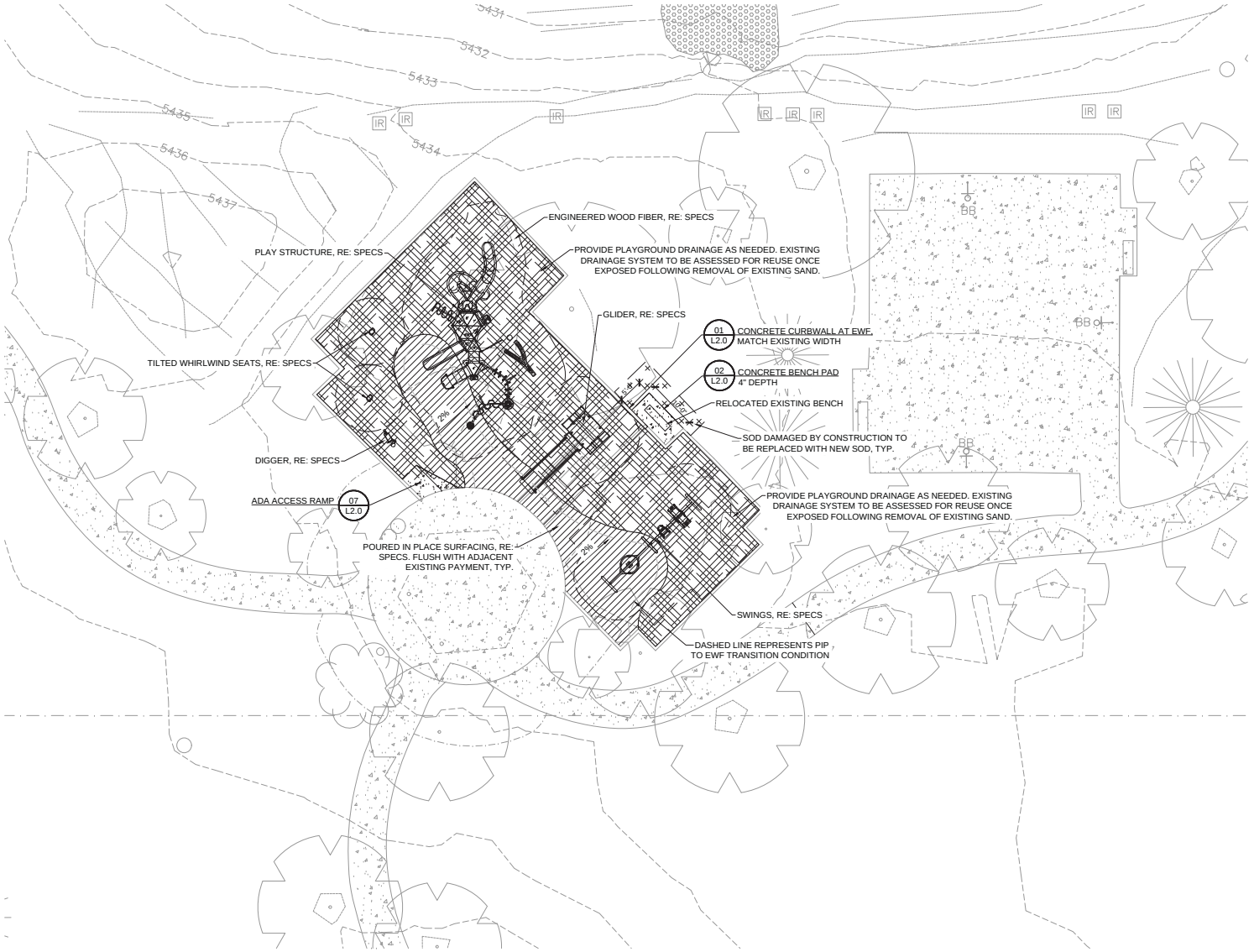
Drafted By: EMS
Checked By: CM, ES

All drawings and written material appearing herein constitute original and unpublished work of Design Concepts and may not be duplicated, used or disclosed.

SITE PLAN

L1.0

Joe Carnival Park



1 SITE PLAN
Scale: 1" = 10'

NORTH 0 10' 20'
SCALE: 1" = 10'-0"

LEGEND

- POURED-IN-PLACE SURFACE - 50% TEAL / 50% BLACK
- CONCRETE
- ENGINEERED WOOD FIBER
- SOD TO BE REPAIRED
- BENCH

DESIGN CONCEPTS

MEADOWS PARK PLAYGROUND REPLACEMENT

772 ORCHARD DR
LOUISVILLE, CO 80027

Project No.: 22219.00

Issued For:	Date:
100% CDs	03.01.24

Drafted By: EMS
Checked By: CM, ES

All drawings and written material appearing herein constitute original and unpublished work of Design Concepts and may not be duplicated, used or disclosed.

SITE PLAN

L1.0

Meadows Park

City of Louisville
COLORADO • SINCE 1878

AGREEMENT

THIS AGREEMENT is made and entered into this **19th day of March** in the year 2024 by and between:

CITY OF LOUISVILLE, COLORADO
(hereinafter called OWNER)

and

KRISCHE CONSTRUCTION INC (KCI)
(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: PLAYGROUND REPLACEMENTS – JOE CARNIVAL & MEADOWS
PROJECT NUMBER: 301511-630048

ARTICLE 2. CONTRACT TIMES

2.1 The CONTRACTOR shall substantially complete all work within **108 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 Hundred and 00/100 dollars ($100.00)** 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 **SEVEN HUNDRED THIRTY ONE THOUSAND FOUR HUNDRED EIGHTY EIGHT and 00/100 dollars ($731,488.00)** set forth in the bid form of the CONTRACTOR dated March 5th, 2024.

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 PROJECT MANAGER 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 PROJECT MANAGER, 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 PROJECT MANAGER 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 6.8) 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 PROJECT MANAGER 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 PROJECT MANAGER written notice of all conflicts, errors, ambiguities or discrepancies that CONTRACTOR has discovered in the Contract Documents and the written resolution thereof by PROJECT MANAGER 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 This Agreement

6.2 Documentation submitted by CONTRACTOR prior to Notice of Award, as applicable:

6.2.1 Bid Form
6.2.2 Lump Sum Price
6.2.2 Schedule of Subcontractors
6.2.3 Disclosure Statement

6.3 General Conditions

6.4 Supplementary Conditions

6.5 General Requirements

6.6 Technical Specifications

6.7 Drawings with each sheet bearing the title: **Meadows Park Playground Replacement 100% Construction Set & Joe Carnival Playground Replacement 100% Construction Set**

6.8 Other documents which may be required or specified including:

6.8.1 Addenda No. 1 to 3 exclusive
6.8.2 Notice of Award
6.8.3 Performance Bond
6.8.4 Labor and Material Payment Bond
6.8.5 Certificates of Insurance
6.8.6 Notice to Proceed
6.8.7 Change Order
6.8.8 Field Order
6.8.9 Work Change Directive
6.8.10 Application for Payment
6.8.11 Contractor Proposal Request
6.8.12 Contractor Overtime Request
6.8.13 Certificate of Substantial Completion
6.8.14 Claim Release
6.8.15 Claim Release for Subcontractors
6.8.16 Final Inspection Report
6.8.17 Certificate of Final Completion
6.8.18 Guarantee Period Inspection Report

6.9 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.

6.10 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 **March 19th, 2024.**

OWNER: CITY OF LOUISVILLE, COLORADO

By: _____
Chris Leh, Mayor

(CORPORATE SEAL)

Attest: _____
Meredyth Muth, City Clerk

Address for giving notices:

749 Main Street
Louisville, Colorado
80027

Attention: Project Manager - PROS

CONTRACTOR: KRISCHE CONSTRUCTION INC. (KCI)

By: _____
Mark Teplitsky, VP Business Operations

(CORPORATE SEAL)

Attest: _____

Address for giving notices:

605 Weaver Park Rd
Longmont, CO
80501

Attention: Mark Teplitsky

SUBJECT: **APPROVAL OF RESOLUTION NO. 13, SERIES 2024 – A RESOLUTION APPROVING AN INTERGOVERNMENTAL AGREEMENT WITH THE CITY OF BOULDER FOR SUPPORT TO ESTABLISH A REGIONAL AFFORDABLE HOMEOWNERSHIP AND RENTAL COMPLIANCE PROGRAM**

DATE: **MARCH 19, 2024**

PRESENTED BY: **JEFF HIRT, AICP, PLANNING MANAGER**

SUMMARY:

Staff recommends approval of an Intergovernmental Agreement (IGA) that establishes the City of Boulder will provide administrative services to the City of Louisville ("City") for the next two years as part of a regional affordable housing program. The City of Louisville does not have any programs or resources dedicated to such support, yet housing affordability is increasingly one of the region's most pressing issues. This IGA recognizes the need for regional collaboration and the need for more resources to address this issue in Louisville. The specific support this IGA provides is to ensure any restricted affordable housing unit in Louisville complies with affordability requirements.

BACKGROUND

The City has taken several steps in recent years to address housing affordability. In 2017, the City agreed to a goal of ensuring a minimum of 12% of the housing inventory will be permanently affordable to low, moderate, and middle-income households by 2035. The City subsequently joined the Boulder County Regional Housing Partnership ("BCRHP") to address regional housing challenges. The BCRHP agreed to establish a centralized compliance program for rental and homeownership services and dedicate the resources needed to address this issue that led to this IGA. In 2021, the City adopted an inclusionary housing ordinance that requires any residential project requiring a Planned Unit Development (PUD) or Final Plat to provide at least 12% of the units as restricted affordable. To date, the City has not approved any projects subject to the inclusionary ordinance.

The administrative support in this IGA is an important part of the implementation of any related programs, policies, or regulations like the inclusionary ordinance. The City of Boulder's administrative support to the City is set forth in Attachment 2, page 2 (Covenants, Section 3). The City's responsibilities under this IGA are set forth in Attachment 2, page 2 (Covenants, Section 4) and Exhibit A but are generally to comply with the City of Boulder's procedures for program administration. The IGA does not change any existing City policies or regulations related to housing affordability.

FISCAL IMPACT:
Approval of this IGA will not have a fiscal impact on the City at this time. The IGA establishes that the City of Boulder will provide the City with administrative services to support the Regional Affordable Homeownership and Rental Compliance Program for two years. After two years, the IGA specifies that the two cities must agree to any changes to the IGA, including those related to financial support. The City of Boulder is using Boulder County American Rescue Plan Act (ARPA) funds to provide the administrative support.

RECOMMENDATION:
Staff recommends approval of Resolution No. 13, Series 2024 to approve the intergovernmental agreement with the City of Boulder and authorize the Mayor to sign and execute related documents on behalf of the City.

ATTACHMENTS:
1. Resolution No. 13, Series 2024
2. Intergovernmental Agreement Establishing Regional Affordable Homeownership and Rental Compliance Program Services with City of Boulder

STRATEGIC PLAN IMPACT:

☐	**Financial Stewardship & Asset Management**	☐	**Reliable Core Services**
☒	**Vibrant Economic Climate**	☒	**Quality Programs & Amenities**
☐	**Engaged Community**	☒	**Healthy Workforce**
☐	**Supportive Technology**	☒	**Collaborative Regional Partner**

RESOLUTION NO. 13
SERIES 2024

A RESOLUTION APPROVING AN INTERGOVERNMENTAL AGREEMENT WITH THE CITY OF BOULDER FOR SUPPORT TO ESTABLISH A REGIONAL AFFORDABLE HOMEOWNERSHIP AND RENTAL COMPLIANCE PROGRAM

WHEREAS, the City of Louisville (the "City"), is part of the Boulder County Regional Housing Partnership (BCRHP) that was established to address regional housing affordability challenges; and

WHEREAS, the BCRHP agreed to establish a centralized program for the administration of rental and homeownership services; and

WHEREAS, the City currently does not have any resources dedicated to administering any affordable housing programs; and

WHEREAS, the City of Boulder has agreed to provide support for administering any affordable housing programs for least two years in the City; and

WHEREAS, there has been prepared an intergovernmental agreement (the " IGA") to set forth the City and City of Boulder's respective rights and obligations; and

WHEREAS, by this resolution the City Council desires to approve and authorize the Mayor to execute the IGA.

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

Section 1. The Intergovernmental Agreement, by and between the City of Louisville and the City of Boulder for support to establish a regional affordable homeownership and rental compliance program, is hereby approved in essentially the same form as the copy of such IGA that accompanies this resolution.

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

PASSED AND ADOPTED this 19th day of March, 2024.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Meredyth Muth, City Clerk

Intergovernmental Agreement
Establishing Regional Affordable Homeownership and Rental Compliance Program Services

This Intergovernmental Agreement ("IGA") establishing a regional affordable homeownership and rental compliance program is entered into by and among the City of Louisville, a Colorado home rule city, ("City of Louisville") and the City of Boulder, a Colorado home rule city, ("City of Boulder"), effective this ____ day of ____ 2024 (the "Effective Date").

RECITALS

A. The Parties are authorized to enter into this IGA pursuant to C.R.S. § 29-1-203; and

B. Boulder County and areas of Weld County are in a housing crisis resulting in home prices and rents that are unaffordable; and

C. The housing crisis is, in part, a manifestation of racial inequity, following similar national trends on racial disparities for homeownership, rental opportunities, affordability, and adequate housing; and

D. The affordable housing challenge is regional and is shared by each jurisdiction in Boulder County, and a few in Weld County; and

E. Regional cooperation and action are needed to produce equitable solutions to the challenge to produce an adequate amount of affordable housing and distribute it across the area; and

F. Boulder County communities and residents are committed to and have made strong investments in affordable housing; and

G. In 2017, Boulder County communities agreed to a goal of ensuring a minimum of 12% of the housing inventory will be permanently affordable to low, moderate, and middle-income households by 2035; and

H. Boulder County communities created the Boulder County Regional Housing Partnership ("BCRHP") to address regional housing challenges and through the BCRHP agreed to establish a centralized compliance program for rental and homeownership services and dedicate the resources needed to address the housing needs of the community; and

I. For over two decades, the City of Boulder has operated a Rental and Homeownership Program ("Rental Compliance Program") that includes administrative and compliance processes. The Rental Compliance Program includes resources to market affordable homes and process applications, verify eligibility of applicants, and provide monitoring and record-keeping. The Rental Compliance Program focuses on training, technical assistance, monitoring, record keeping, and does not act as a property manager; and

J. Through this IGA, the Parties are making a clear commitment to racial equity as a central tenet in this collaborative regional work. Shared regional housing challenges are rooted in historical practices, processes, and policies that have systematically racialized space by limiting access for Black, Indigenous, and People of Color (collectively "BIPOC") to safe, stable, and affordable housing in the communities in which they choose to live. Interrupting the history of racial segregation is an intended consequence of this collaborative regional work; and

K. While the City of Louisville is individually responsible for centering racial equity in its local affordable housing rental and homeownership programs, the Parties will strive to collectively achieve housing access for BIPOC communities, and foster support and accountability in this process. Collaborative activities may include collecting racialized housing data, leading community engagement activities, including those targeted and co-created with BIPOC communities, and ensuring elected officials, when making policy decisions, are aware of and considering racial equity impacts; and

The interests of the public are best served by the Parties entering into this IGA.

NOW THEREFORE, in consideration of the Recitals, terms, conditions, and covenants included in this IGA, the Parties agree as follows:

COVENANTS

1. **Purpose**. The purpose of this IGA is to create the Regional Affordable Homeownership and Rental Compliance Program (the "Program") and define the structure of the Program and govern the financial contributions from the Parties in support of this provision of services.

2. **Term**. The term of this IGA shall commence as of the Effective Date. The IGA shall continue for a term of seven years unless a Party elects to terminate this IGA at the end of any calendar year, after giving 180 days' written notice.

3. **Services Provided by the City of Boulder**.

   The City of Boulder will provide the following administrative services ("Services") while supporting City of Louisville independence and autonomy:

   a. Homeownership Services. The City of Boulder will provide administrative services to market homes and process applications, verify eligibility of applicants, prepare legal documents to add affordable restrictions to homes, and provide record-keeping;

   b. Rental Services. The City of Boulder will provide administrative services to the City of Louisville and property management companies within the jurisdiction which include providing training, technical assistance, monitoring, and direction of rental properties to ensure owners/managers are adequately marketing their properties,

processing applications, properly determining eligibility, and provide record-keeping to satisfy HUD requirements;

c. The City of Boulder will provide a main point of contact for each Service: a Regional Compliance Program Manager and a Regional Homeownership Program Manager; and

d. Additional details of the Services provided are described in **Exhibit A**.

4. **Expectations to Receive Services Provided**.

a. The City of Louisville will abide by the current policies and procedures of the Program as established and amended by the City of Boulder, in cooperation with the City of Louisville, as described in **Exhibit A**.

b. The City of Louisville will use the current City of Boulder restricted covenants as template language to ensure consistency of Program administration. The current covenant templates are summarized in **Exhibit B** (Homeownership) and **Exhibit C** (Rental). Using a different covenant may be grounds to terminate the agreement by the City of Boulder. If amendment of the covenant template(s) is required to comply with the City of Louisville's local law, the City of Louisville and the City of Boulder agree to work in good faith to amend the template(s) for that City of Louisville. A Jurisdiction-specific template(s) shall be reviewed and approved by both the City of Boulder and that City of Louisville prior to implementation.

c. The City of Louisville agrees to abide by all applicable existing policies and procedures (as described in **Exhibit A**) related to Program compliance. Advising on future changes to policies and procedures will be the responsibility of the Policy Advisory Committee, as described in Section 4.d. below.

d. The City of Louisville will identify a point of contact to coordinate all activities related to the administration of the Program. In addition, the City of Louisville will appoint one member to provide an advisory role of Program activity in their community and along with members from other jurisdictions accepting similar services from the City of Boulder will be known as the Policy Advisory Committee. This Policy Advisory Committee will meet, at a minimum, twice annually to review data and recommend adjustments to the Program as needed.

5. **Funding**.

a. Boulder County American Rescue Plan Act (ARPA) funds of approximately $1,259,549 will be utilized by the City of Boulder for years one and two of the Program to pay for staff, database modifications and licenses, and to create a revolving loan fund to be used for foreclosure prevention.

b. Starting in year three, or later if the ARPA funds are not fully expended, the City of Boulder will provide administrative services with financial support from the City of Louisville, expressly subject to Subsection 5.c., below. The Parties will agree to a funding mechanism through an amendment to this IGA (e.g., flat yearly fee, fee based on percentage of homes in the Program, or some combination of the two) to continue Program services. Failure to make the contribution will be grounds to terminate this IGA by the City of Boulder. Contributions will be due annually on December 31.

c. The Parties understand and acknowledge that this IGA is subject to Article X, § 20 of the Colorado Constitution ("TABOR"). The Parties do not intend to violate the terms and requirements of TABOR by the execution of this IGA. It is understood and agreed that this IGA does not create a multiple fiscal year direct or indirect debt or obligation within the meaning of TABOR and not withstanding anything in this IGA to the contrary, all payment obligations of the Parties are expressly dependent and conditioned upon the continuing availability of funds beyond the term of the Parties' current fiscal period ending upon the next succeeding December 31. Financial obligations of the Parties payable after the current fiscal year are contingent upon funds for that purpose being appropriated, budgeted, and otherwise made available in accordance with the rules, regulations, ordinances and resolutions of the Parties and applicable law. Any failure of a Party to annually to appropriate adequate monies to finance the obligations under this IGA will terminate this IGA at such time as such then-existing appropriations are to be depleted. Notice will be given promptly to the other Party of any failure to appropriate such adequate monies.

6. **Liability**. Each Party agrees to be responsible for its own actions and omissions, and those of its officers, agents and employees in the performance or failure to perform work under this IGA. By agreeing to this provision, the Parties do not waive or intend to waive the limitations on liability which are provided to the Parties under the Colorado Governmental Immunity Act, C.R.S. § 24-10-101, *et seq*., as amended.

7. **Dispute Resolution**. Prior to terminating this IGA, the Parties will attempt in good faith to resolve any dispute or claim arising out of or in relation to this IGA through negotiations.

8. **No Third-Party Beneficiaries**. The enforcement of the terms and conditions of this IGA and all rights of action relating to such enforcement will be strictly reserved to the Parties, and nothing contained in this IGA will give or allow any claim or right of action whatsoever by any other or third person. It is the express intent of the Parties to this IGA that any person receiving services or benefits under this IGA will be deemed an incidental beneficiary only.

9. **Notices**. All notice provided under this IGA must be in writing and sent by First Class U.S. Mail, electronic mail, or hand-delivery to the addresses set forth below. For mailing, notice periods will begin to run on the day after the postmarked date of mailing. For electronic mail or hand delivery, notice periods will begin to run on the date of delivery.

If to the City of Boulder:
Kurt Firnhaber
Director of Housing & Human Services
City of Boulder
P.O. Box 791
Boulder, CO 80302

If to the City of Louisville:
Rob Zuccaro
Community Development Director
City of Louisville
749 Main Street
Louisville, CO 80027

10. **Entire Agreement**. This IGA contains the entire agreement between the Parties. This IGA may be modified or extended only by written agreement signed by the Parties. If any provision of this IGA is deemed to be illegal, invalid, or otherwise unenforceable, such provision will be severed, and the balance of the IGA will continue in full force and effect.

11. **Governmental Immunity**. The Parties do not waive or intend to waive, the limitations on liability which are provided to the Parties under the Colorado Governmental Immunity Act, C.R.S. §§ 24-10-101, *et seq*. ("CGIA"). The provisions of C.R.S. § 29-5-108 will not apply to activities conducted pursuant to this IGA.

12. **Independent Contractor**. The relationship between the Parties is one of an independent contractor and not an employment relationship. Neither the City of Boulder nor any agent or employee of the City of Boulder shall be deemed to be an agent or employee of the City of Louisville. The City and its employees and agents are not entitled to unemployment insurance or workers compensation benefits through the City of Louisville and the City of Louisville shall not pay for or otherwise provide such coverage for the City of Boulder or any of its agents or employees.

13. **Choice of Law; Venue**. Colorado law, and rules and regulations issued pursuant thereto, shall be applied in the interpretation, execution, and enforcement of this IGA. Any provision included or incorporated herein by reference which conflicts with said laws, rules, and regulations shall be null and void. Any provision incorporated herein by reference which purports to negate this in whole or in part shall not be valid or enforceable or available in any action at law, whether by way of complaint, defense, or otherwise. Any provision rendered null and void by the operation of this provision shall not invalidate the remainder of this IGA, to the extent capable of execution. Venue for any legal action arising out of this IGA shall be in Boulder County, Colorado.

14. **Authority**. Each of the individuals whose signature appears below represents and warrants that he or she has full authority to execute this IGA on behalf of the Party on whose behalf he or she has affixed his or her signature to this IGA.

WHEREFORE, the Parties have entered to this IGA as of the Effective Date.

City of Boulder,
a Colorado home rule city

By: _____

Nuria Rivera-Vandermyde,
City Manager

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:

_____
City Attorney's Office

City of Louisville,
a Colorado home rule city

By: _____

Christopher M. Leh, Mayor

ATTEST:

_____

Meredyth Muth, City Clerk

Exhibit A – Scope of Services

Purpose

The purpose of the Program is to centralize homeownership and rental compliance program services through the Boulder County Regional Housing Partnership (BCRHP). The Program will achieve several goals:

- Create policy alignment
- Use resources efficiently
- Encourage regional collaboration
- Apply consistent best practices and processes
- Support newly adopted affordable housing programs
- Provide streamlined access to multiple programs for residents
- Ensure racial equity is centered as a primary objective of the collaborative work through encouraging prioritization of first meeting the affordable housing needs of the most underserved in our community.

The Program is a transformational idea in that it has been a longstanding goal of the BCRHP to create regional services in alignment with the 2017 Regional Housing Strategy and can support the program infrastructure needed for more municipalities within the BCRHP to implement affordable housing programs.

Throughout the Program, equity and accessibility will be addressed through the adopted policies and procedures that dictate the practices. Current local affordable housing programs have shown to dramatically increase access to housing to households with racial diversity.

The Need & Lead Roles

Currently, there are several municipalities within the BCRHP that do not have dedicated resources or program infrastructure for homeownership and/or rental compliance programs. Boulder County Housing Authority (BCHA), the City of Longmont, and the City of Boulder manage most of the compliance for homes which they have developed or funded. However, as other municipalities continue to grow their affordable housing programs, there will be a growing need to maintain high-quality, specialized expertise in compliance. The BCRHP believes that is possible with a regionalized approach, administered by City of Boulder staff.

Similarly for homeownership programs, some municipalities in the BCRHP manage for-sale units on a case-by-case basis without a formalized team, which has been appropriate in the past given the small number of affordable for-sale units in the region. As the BCRHP continues to grow for-sale housing stock, there will be a similar need to administer a homeownership program at the regional level to create efficiencies in marketing units, qualifying buyers, facilitating sales / re-sales, preventing foreclosure, and implement industry best practices. The City of Longmont and City of Boulder manage their own homeownership programs.

Under the BCRHP, the City of Boulder Department of Housing and Human Services will take responsibility for Program administration. For the homeownership and rental program this responsibility will commence when an affordable home is brought into the program or when the program designated covenant is attached to an existing home. Specifically, the regional homeownership program will not participate in the management or sale of homes with covenants different from the regional homeownership covenant (i.e., existing affordable homeownership units).

Resources & Funding

The Program presents a two-year funding proposal to startup the program and establish a one-time revolving fund for region-wide foreclosure prevention:

	Budget
Rental & ownership compliance, implementation, administration and strategic leadership staff	$584,243
Database licenses & support	$13,098
Foreclosure prevention (revolving fund)	$662,000
Total 2-Year Budget	**$1,259,341**

This funding will address all resources needed to implement the Program for two years. Thereafter, a permanent funding source from each of the municipalities or County will create a sustainable approach for the Services. Similar programs today work regionally and are paid for between jurisdictions. These programs include: the County's Housing Help Line, Longmont's housing rehab program, and Boulder's Mediation and Resolution Program. Participating jurisdictions contribute a share of the costs to the administering jurisdiction.

Program Policy Setting

The Program will incorporate a committee structure to advise on policy setting for the Program:

	Policy Setting Committee	**Policy Exceptions Committee** (homeownership)
Committee Participation (5-year term)	› One member from each participating jurisdiction › Regional Homeownership Program Manager › Regional Compliance Program Manager	› External volunteer participation › Regional Homeownership Program Manager
Committee Structure	› Purpose is to provide jurisdiction's with an advisory role of program activity in their community. › Twice annual meeting to review data; recommend adjustments to program as needed	› Considers unique and individual (case-by-case) circumstances that don't meet current procedures › Makes a recommendation to the jurisdiction's liaison, who makes final decision
	Example: The program mortgage policy needs to be updated to reflect the changing lending environment.	**Example:** A new home-buyer would like to make an investment 1-year ahead of the policy allowance, due to their personal and unique circumstance of moving into their new home.

The Policy Setting Committee will be responsible for guiding the program alongside the BCRHP and the City of Boulder as the administrative jurisdiction. Success will be measured by how closely the established goals are met.

The Homeownership Policy Exceptions Committee will be administered by the Program and each participating jurisdiction will be collectively responsible for recruiting members to ensure broad representation.

Policies and Procedures (Homeownership Program)
Affordable homes in the programs will be marketed and sold to qualified buyers according to the existing policies and procedures developed by the City of Boulder and the Participating Jurisdiction. These policies and procedures are living documents that will evolve to meet the needs of the Homeownership Program and will continue to evolve with the involvement of the participating jurisdictions through the Policy Committee.

One of the first tasks to launch the Program will be to modify current written materials (e.g., policies, procedures, marketing, website, etc.) from a City of Boulder focus to a regional approach to administration. Homes entering the Program from other jurisdictions will be administered to the benefit of that jurisdiction's work force per the current Program policies and procedures.

Policies
The following list of existing **policies** will be used as a basis to administer the Program specific to homeownership:

1. Eligibility Requirements
    a. Eligibility Requirements for Program Certification
    b. Applications Missing Documents – Applies to New Applications and Recertifications
    c. Income Limit Interpretation
    d. Income Change Policy
    e. Commission Based Income Policy
    f. Asset Limits
    g. Asset Decrease Policy
    h. Trusts
    i. Third Party Employment Verification
    j. Multiple Benefit
    k. Minimum and Maximum Number of Bedrooms
    l. Waiving Household Number + 1 Bedroom
    m. Homebuyer Education Class
    n. Gift Limitations
    o. Buyer's $2,000 Minimum Cash Contribution
    p. Ineligibility Policy
2. Selection Process Policies
    a. Work and One-Year Certification Preferences
    b. Preferences for 3 or More Bedroom Units
    c. Occupancy Preferences

   d. Accessible Unit/Special Feature Unit Housing Policy
   e. Displaced Renters and Homebuyer Preferences
   f. Selection Entry Requirements
   g. Applicant under contract may not enter fair selection process
   h. 24 Hours to Make an Offer After the Fair Selection
3. Homeowner Policies
   a. Capital Improvement/Capital Update Credit and Maintenance Policy
   b. Pre-purchase Upgrades
   c. Insurance Requirements for Town homes
   d. Homeownership Rental Policy
   e. Homeownership Rental Policy Regarding Resales
   f. Homeownership Rental Exception Policy
4. Resale & Developers
   a. AMI % Change for Resale Formula
   b. Home Income Limit Change
   c. Homeowner Resale Calculation Policy
   d. Resale Options Policy
   e. Sales Commissions
   f. Excessive Damage Assessment/Inspection Standard
   g. Subsidizing Resale Units
   h. Seller Concessions
   i. Developer Contracts
5. Mortgage Policy
6. Miscellaneous Policies
   a. Exception Requests
   b. Not Allowing Permanently Affordable Homes to go to Foreclosure
   c. Working with Developmentally-Challenged Applicants

Procedures
The following is a list of existing **procedures** that will form the basis to administer the Program specific to homeownership:

1. Applications
   a. Application Processing
   b. Application Check Processing/Deposits
   c. Application Waitlist Management
   d. Applicant Personally Identifiable Information
2. Sales
   a. Marketing A Home
   b. Holding a Fair Selection Process
   c. Sales - Post Selection Process to Closing
   d. Pre-Purchase Upgrades – New Construction
3. Post Purchase
   a. Capital Improvements
   b. Refinance
4. Other

a. Exception Request
b. Annual Income Number Update
c. Loan Repayment
d. Foreclosure and Purchase
e. Personally Identifiable Information (PII)

Foreclosure Prevention
A foreclosure prevention fund for the Program is an important tool to ensure homes remain affordable in perpetuity. The Program records a $10 Deed of Trust on all affordable homes. This ensures that the Homeownership Program Manager is notified in the event of foreclosure proceedings or an attempted sale outside of the Program. The Homeownership Program Manager will contact the owner to facilitate the sale of the home to an eligible buyer or in rare circumstances the Program will purchase the home prior to or after foreclosure. If the Program purchases a home, it will make all the necessary repairs and sell the home to an eligible buyer and the proceeds are returned to the fund. The $1.2M revolving fund ensures that sufficient resources are available in the event that 3-4 homes are required to be purchased at the same time to ensure the integrity of the Program. This is a revolving fund, so funds used to purchase an affordable home are returned at the time of sale. This revolving loan fund will also be used to cover any costs associated with the purchase (holding, repair, fees, etc.) in lieu of raising the price of the home to ensure deeper and longer affordability. However, in the majority of cases the Program will be able to work with the troubled homeowner to facilitate a sale to another eligible buyer and avoid the expense of foreclosure and the subsequent impact on the homeowner's credit score. The foreclosure prevention fund is only available for homes in Boulder County due restrictions in funding (i.e., ARPA).

Covenant Enforcement
Post-purchase, the Program continues to monitor to confirm owners comply with the agreements contained in the covenant. Renting an ownership unit outside of the parameters in the covenant is the primary violation. As a result, occupancy compliance work involves investigating potential rental violations, working with owners to get them back into compliance and, in some cases, commencing legal action. Program staff will work to regularly educate owners about occupancy requirements to prevent violations. Unfortunately, there are still issues and the Program is diligent about investigating issues. There will be instances where Program staff will need to partner with the local jurisdictions' staff and their legal counsel in the pursuit of resolution (e.g., confirm violation of owner occupancy through a home visit, preparing an existing document related to a purchase or foreclosure redemption, levy fines, etc.).

Policies and Procedures (Rental Program)
Affordable rentals in the Program will be marketed and available to eligible renters according to policies and procedures developed by the City of Boulder. The City of Boulder's Rental Compliance Program has been developed to not only ensure long-term compliance and preserve permanent affordability, but to also ensure that all publicly supported rental housing properties serve the most vulnerable residents. These policies and procedures are living documents that evolve to meet the needs of the Program and will continue to evolve with the involvement of the participating jurisdictions through the Policy Committee.

Like the Homeownership Policies and Procedures (described above), one of the first tasks to launch the rental Program will be to modify current written materials (e.g., policies, procedures, marketing, website, etc.) from a City of Boulder focus to a regional approach. Rental units entering the Program from other jurisdictions will be administered to the benefit of that jurisdiction's work force and residents per the modified Program policies and procedures.

The following list of **policies and procedures** will be used as a basis to administer the Program specific to rentals:

1. Roles and Responsibilities
    a. Rental Compliance Program
    b. Housing Sr Compliance Manager
    c. Housing Sr Program Manager
    d. Housing Project Manager
    e. Compliance and Monitoring Administrator
    f. Owner
    g. Property Manager/Property Management Company
    h. Changes in Ownership or Management of Property
2. Regulatory Requirements
    a. Rental Housing Licensing *(City of Boulder specific program)*
    b. Period of Affordability
    c. Unit Mix
    d. Fair Housing and Equal Opportunity
    e. Nondiscrimination in Housing *(City of Boulder specific program)*
    f. City of Boulder Human Rights Ordinance *(City of Boulder specific program)*
    g. ADA, Section 504 & Fair Housing Accessibility
    h. Section 504 & Disabilities Act (ADA)
    i. Section 405 & Disability Rights in Housing
    j. Housing for Older Persons
    k. Affirmative Marketing
    l. Limited English Proficiency
    m. Language Access Plan
    n. Marketing Requirements
    o. Screening & Selection Applicants
    p. Tenant Selection Plan
    q. Preferences for Tenants with Special Needs
    r. Notice to Applicants
    s. Waiting Lists Requirements
    t. Interest List
    u. Declaration of Citizenship
    v. Race & Ethnicity
3. Eligibility Requirements
    a. Occupancy Limits
    b. Authorized Guests & Visitors
    c. Restriction on Short-Term Rental & Subletting
    d. Electronic Signatures & Document Transmission

e. Student Policy
f. Definition of Income
g. Determining Income Eligibility
h. Income Calculation
i. Method of Income & Asset Verification
j. Acceptable Forms of Income Verification
k. Annual Recertification
l. Excluded Sources of Income
m. Effective Terms of Certification
n. Assets Limits
o. Increase in Housing Income
p. Changes in Household Composition
q. Unit Transfer
r. Unit Transfer with Change in Household Composition
s. Determining Rents
t. City Approval of Rent Adjustments
u. Utility Allowance

4. Tenant Rights & Protections
    a. No Eviction without Representation
    b. Minimum Lease Requirements
    c. Prohibited Lease Terms
    d. Required Lease Addendums
    e. Violence Against Women Act
    f. Termination of Tenancy
    g. Non-Renewal of Lease
    h. Charges & Fees
    i. Option Fees
    j. Non-Optional/Mandatory Fees
    k. Guidelines for Allowable Charges & Fees
    l. Prohibited Fees
    m. Conflict of Interest
    n. Dispute Resolution
    o. Mediation Services
5. Property Standards
    a. Minimum Property Standards
    b. Lead Based Paint Requirements
    c. Annual Inspections
6. Records and Reporting Requirements
    a. Maintaining Tenant Records
    b. Sample Tenant File Forms
    c. Record Retention
    d. Access to Records
    e. Reporting Requirements
7. Compliance Monitoring
    a. Monitoring Overview
    b. Monitoring Plan

c. Types of Monitoring
d. Site Review & Remote Monitoring Process
e. Technical Assistance
f. Monitoring Long-Term Viability
g. Non-Compliance
h. Term of Enforcement

Covenant Enforcement
Within 12 months of lease-up, the Program will monitor affordable rental properties to confirm owners/managers comply with the agreements contained in the covenant and Rental Compliance Manual. After initial lease-up, each property will be monitored every three years. Program staff will work to regularly educate owners/managers about rental compliance requirements to prevent issues of non-compliance. When issues of non-compliance arise, Program staff will need to partner with the local jurisdictions' staff and their legal counsel in the pursuit of resolution.

Data Requirements
A regional approach to affordable housing requires a regional database to facilitate application processing, facilitate transactions, track the inventory, monitor programs, and evaluate progress over time. The database is also integral to providing good client services to program participants and ensure ongoing compliance with local and federal rules associated with affordable housing funds. The City of Boulder recently converted an old Access database (HAL) to Salesforce (Housing Dataverse) with greater capabilities. The budget of $13,098 estimates the time required to hire a consultant to modify Salesforce to include the capabilities of keeping track of affordable housing units outside of the City of Boulder. It also includes the cost of licenses for the staff required to administer the Program for participating jurisdictions.

The City of Boulder's Affordable Housing Program has a history of better serving Black, Indigenous, and People of Color (BIPOC) than the broader housing market. Where possible, the work performed under this IGA should be informed through the use of racialized data and metrics in order to help ensure the outcomes of the programs and supports provided across the region are centered in racial equity.

Exhibit B – Homeownership Affordable Covenant Summary

All Permanently Affordable ownership homes are sold subject to a covenant that ensure the home remains perpetually affordable into the future. The buyer must accept all terms of the covenant to be eligible to purchase the home.

Covenant Key Points

- The maximum income and assets of a new buyer will be established in advance of sale or re-sale, and the home may not be sold to a buyer that exceeds the maximum income and asset limit.
- The home has a Maximum Resale Price Limit that includes limited appreciation and allows for specific capital improvements.
- Buyers are required to maintain their affordable home in a manner that protects the health, safety, and livability for future homeowners.
- Eligible capital improvements for which a homeowner can receive credit are limited in amount and type and must be pre-approved by the program to receive credit.
- The ability to refinance is limited to 90-93% of the Maximum Resale Price Limit. The program must be contacted prior to arranging refinancing with a lender to ensure this limit is not exceeded.
- The home must be occupied by the owner as the owner's principal place of residence unless the program has approved a rental arrangement.
- The home cannot be rented in its entirety during the first five years of ownership.
- After five years of ownership, the home may be rented for one year out of every seven. The program needs to be contacted prior to renting for approval.
- A long-term rental of only one room in the home may be permitted after the first year of ownership. Licensing regulations for each jurisdiction must be followed.

There are instances where the Program will require an Interim Covenant in exchange for funding or to meet a regulatory requirement. Interim covenants ensure affordability through a project design and development phase when the exact details of the project are unknown. Once a certificate of occupancy is issued for a home by a local jurisdiction, the interim covenant is replaced with a permanent covenant specific to that home.

Exhibit C– Rental Affordable Covenant Summary

All Permanently Affordable rental units are subject to a covenant that ensures the rental property/units remain perpetually affordable into the future. The Owner must accept all terms of the covenant and Rental Compliance Manual.

Rental Covenant Key Points

- Maximum Income: The maximum income limits at initial occupancy determine household income eligibility. Household income after initial occupancy may increase up to 84% AMI.
- Over-Income: Households that have an income at or above 84% are considered over income and therefore no longer eligible to occupy the affordable unit.
- Maximum Assets: The Asset Policy imposes a 55,000 liquid asset limit. Seniors and persons with disabilities are exempt from the liquid asset limit. The policy also imposes a restriction on ownership interest in residential property in which an applicant can legally reside.
- Maximum Rent & Rent Increases: Maximum rent is based on the Area Median Income outlined in the Covenant and the number of bedrooms. Rents can only be increased once per year up to the maximum rent published.
- Capital Reserves: The Owner must contribute a minimum amount of funds annually towards capital replacement reserve.
- Property Standards: Buyers are required to maintain their affordable home in a manner that protects the health, safety, and livability for future homeowners.
- Reporting Requirements: The Owner/Manager must submit Quarterly and Annual Reports to the City as outlined in the Rental Compliance Manual
- Record & Retention Requirements: The Owner/Manager must have complete records and meet the retention requirements as outlined in the Rental Compliance Manual.
- Tenant Selection Plan: The Owner/Manager must develop a Tenant Selection Plan which outlines the selection criteria. The Plan must be in compliance with the City's Tenant Selection Policies.
- Waiting List Requirements: The Owner/Manager must create and maintain a wait list.
- Lease Requirements & Prohibited Lease Terms: Leases between the Owner and residents of the specified permanently affordable units must be for not less than one year unless mutually agreed upon by the Owner and residents. The lease must not contain any of the prohibited lease terms as outlined in the Rental Compliance Manual.
- Termination of Tenancy: The Owner may not terminate the tenancy or refuse to renew the lease of a tenant of the Property except for serious or repeated violation of the terms and conditions of the lease; for violation of applicable federal, state or local law; or for other good cause as determined by the Owner and City of Boulder policies. Any termination of tenancy or refusal to renew must be preceded by not less than 30 days by service upon the tenant of a written notice from the Owner specifying the grounds for the action.

There are also instances where the Program will require an Interim Covenant in exchange for funding or to meet a regulatory requirement. Interim covenants ensure affordability through a project design and development phase when the exact details of the project are unknown. Once a certificate of occupancy is issued for an affordable rental property by a local jurisdiction, the interim covenant is replaced with a permanent covenant specific to that affordable property.

SUBJECT: **APPROVAL OF FIRST AMENDMENT TO PLANNED COMMUNITY ZONE DISTRICT ZONING AGREEMENT REGARDING GRADING PERMITS FOR REDTAIL RIDGE**

DATE: **MARCH 19, 2024**

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

SUMMARY:
On February 20, 2024, the City Council approved Resolution No. 80, Series 2023, A Resolution Approving the Redtail Ridge Filing No. 1 Preliminary Subdivision Plat. Resolution No. 80 contained five conditions of approval, one of which was:

4. Amend the Planned Community Zone District Zoning Agreement for the ConocoPhillips Colorado Campus General Development Plan to not allow site grading for a period of four months after February 20, 2024.

The attached First Amendment to Planned Community Zone District Zoning Agreement is provided for City Council approval to meet condition number 4 in Resolution No. 80.

FISCAL IMPACT:
None.

RECOMMENDATION:
City Council approve the First Amendment to Planned Community Zone District Zoning Agreement.

ATTACHMENT(S):
1. First Amendment to Planned Community Zone District Zoning Agreement.

FIRST AMENDMENT TO
PLANNED COMMUNITY ZONE DISTRICT ZONING AGREEMENT

THIS FIRST AMENDMENT to Planned Community Zone District Agreement (this "Amendment") is made and entered into this _____ day of _____, 2024, by and between the CITY OF LOUISVILLE, a Colorado home rule municipal corporation ("City"), and REDTAIL RIDGE PORTFOLIO, LLC, a Delaware limited liability company authorized to business in the State of Colorado ("Owner"). City and Owner may be referred to herein collectively as the "Parties" and each individually as a "Party."

WITNESSETH:

WHEREAS, Owner is the owner of certain real property in the City of Louisville, County of Boulder, and State of Colorado more particularly described in Exhibit A attached hereto (the "Property"); and

WHEREAS, on February 6 and 20, 2024, the Louisville City Council (the "Council") held a public hearing on Owner's application for the Redtail Ridge Filing No. 1 Preliminary Subdivision Plat (the "Preliminary Plat"), which Preliminary Plat affects the Property; and

WHEREAS, City and ConocoPhillips Company ("Conoco"), a predecessor in interest to Owner with respect to the Property, entered into that certain Planned Community Zone District Zoning Agreement dated April 20, 2010, and recorded in the official records of the Boulder County Clerk and Recorder on January 25, 2013, at Reception No. 03284516 (the "PCZD Agreement"), which PCZD Agreement sets forth certain restrictions and obligations affecting the Property; and

WHEREAS, the PCZD Agreement provides that the PCZD Agreement runs with the land and binds and inures to the benefit of successors in interest to Conoco, such as Owner; and

WHEREAS, Section 1.4 of the PCZD Agreement provides that Owner, as successor in interest to Conoco, may seek to commence overlot grading prior to approval of a final subdivision plat for the Property; and

WHEREAS, to address concerns related to the criteria for preliminary plat approval set forth in the Louisville Municipal Code, Owner offered to refrain from any grading activity on the Property until after the date that is four (4) months after February 20, 2024; and

WHEREAS, such commitment by Owner was memorialized by the City Council in Resolution No. 80, Series 2023 as a condition of preliminary plat approval that the PCZD Agreement be amended to provide that overlot grading would not occur on the Property for a period of four months after February 20, 2024.

NOW, THEREFORE, in consideration of the premises and the covenants herein set forth, the Parties agree as follows:

1. Incorporation of Recitals. The foregoing recitals are hereby incorporated into and made a part of this First Amendment as if fully set forth herein.

2. Grading. Owner covenants and agrees that Owner shall not cause any grading activity to occur on the Property prior to June 21, 2024 or approval of the final subdivision plat for the Property by the City, whichever occurs first.

3. PCZD Rights. Owner covenants and agrees that Owner will forebear, and shall not seek to enforce, any rights that Owner may have under the PCZD Agreement to commence overlot grading activity on the Property prior to June 21, 2024 or approval of the final subdivision plat for the Property by the City, whichever occurs first.

4. Binding Agreement. This First Amendment shall be binding upon and inure to the benefit of any transferees, successors, and assigns of Owner.

5. No Repeal of Laws. Nothing contained in this First Amendment shall constitute or be interpreted as a repeal of the City's ordinances or resolutions; a waiver of the City's legislative, governmental, or police powers to promote and protect the health, safety, and welfare of the City and its inhabitants; or a prohibition on the enactment or increase by the City of any tax or fee.

6. PCZD Agreement. Except as set forth in this First Amendment, the PCZD Agreement shall remain in full force and effect in accordance with its terms.

7. Further Amendments. As set forth in Section 4.6 of the PCZD Agreement, any further amendments shall be in writing and shall be recorded with the Boulder County Clerk and Recorder.

8. Recordation. This First Amendment shall be recorded with the Boulder County Clerk and Recorder at Owner's expense.

[Signature Page Follows]

IN WITNESS WHEREOF, the Parties have executed this First Amendment as of the date first above written.

CITY OF LOUISVILLE,
a Colorado home rule municipal corporation

By:_____
Christopher M. Leh, Mayor

ATTEST:

By: _____
Meredyth Muth, City Clerk

OWNER:

REDTAIL RIDGE PORTFOLIO, LLC
a Delaware limited liability company

By:_____
Name: Andrew Gloor
Title: Authorized Signatory

ACKNOWLEDGMENT

STATE OF IL)
) ss.
COUNTY OF COOK)

The above and foregoing signature of Andrew Gloor, as Authorized Signatory of Redtail Ridge Portfolio, LLC, a Delaware limited liability company, was subscribed and sworn to before me this 27th day of February, 2024.

Witness my hand and official seal.
My commission expires: Oct. 16, 2024

_____
Notary Public

JENNIFER STEINBORN
OFFICIAL SEAL
Notary Public, State of Illinois
My Commission Expires
October 16, 2024

Exhibit A

Legal Description of Property

A TRACT OF LAND SITUATED IN THE SOUTH HALF OF SECTION 20 AND THE NORTH HALF OF SECTION 29, TOWNSHIP 1 SOUTH, RANGE 69 WEST OF THE SIXTH PRINCIPAL MERIDIAN, CITY OF LOUISVILLE, BOULDER COUNTY, STATE OF COLORAOD, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE CENTER QUARTER CORNER OF SAID SECTION 20;
THENCE SOUTH 89°48'50" EAST ALONG THE NORTH LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 20, A DISTANCE OF 2,625.59 FEET;
THENCE SOUTH 00°02'13" EAST ALONG A LINE PARALLEL WITH AND 30 FEET WEST OF THE EAST LINE OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SAID SECTION 20, A DISTANCE OF 1,326.76 FEET TO A POINT ON THE SOUTH LINE OF THE NORTH HALF OF SAID SOUTHEAST QUARTER;
THENCE SOUTH 00°02'35" EAST ALONG A LINE PARALLEL WITH AND 30 FEET WEST OF THE EAST LINE OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SAID SECTION 20, A DISTANCE OF 85.45 FEET TO THE NORTH CORNER OF PARCEL TK-71-2 DESCRIBED AT RECEPTION NO. 2386686 IN THE RECORDS OF BOULDER COUNTY;
THENCE ALONG THE PERIMETER OF SAID PARCEL THE FOLLOWING THREE (3) COURSES:
1) SOUTH 33°27'26" WEST, A DISTANCE OF 60.64 FEET;
2) SOUTH 01°40'28" WEST, A DISTANCE OF 45.12 FEET;
3) SOUTH 88°19'32" EAST, A DISTANCE OF 34.84 FEET TO A POINT 30 FEET WEST OF SAID EAST LINE;
THENCE SOUTH 00°02'35" EAST ALONG A LINE PARALLEL WITH AND 30 FEET WEST OF SAID EAST LINE, A DISTANCE OF 404.28 FEET TO A POINT OF NON-TANGENT CURVATURE AT THE NORTH CORNER OF PARCEL TK-71 DESCRIBED AT RECEPTION NO. 2309730 IN THE RECORDS OF BOULDER COUNTY;
THENCE ALONG THE PERIMETER OF SAID PARCEL THE FOLLOWING THREE (3) COURSES:
1) ALONG THE ARC OF SAID CURVE TO THE LEFT AN ARC LENGTH OF 86.28 FEET, SAID CURVE HAVING A RADIUS OF 2,441.83 FEET, A CENTRAL ANGLE OF 02°01'28", AND A CHORD WHICH BEARS SOUTH 04°26'27" WEST A CHORD DISTANCE OF 86.27 FEET;
2) SOUTH 03°25'43" WEST, A DISTANCE OF 124.37 FEET;
3) SOUTH 00°02'35" EAST AND ALONG THE WEST LINE OF PARCEL TK-71-1 DESCRIBED AT RECEPTION NO. 2309730 IN THE RECORDS OF BOULDER COUNTY, A DISTANCE OF 529.71 FEET TO A POINT ON THE SOUTH LINE OF THE SAID SOUTHEAST QUARTER AND A POINT ON THE NORTH LINE OF PARCEL 12 AS DESCRIBED AT RECEPTION NO. 1560711 IN THE RECORDS OF BOULDER COUNTY;
THENCE ALONG THE PERIMETER OF SAID PARCEL 12 THE FOLLOWING FOUR (4) COURSES:
1) NORTH 89°42'42" WEST, A DISTANCE OF 55.73 FEET;
2) SOUTH 00°00'35" WEST, A DISTANCE OF 30.02 FEET;
3) SOUTH 44°51'26" EAST, A DISTANCE OF 35.44 FEET;
4) SOUTH 00°00'35" WEST, A DISTANCE OF 127.21 FEET TO A POINT ON THE NORTH LINE OF THAT PARCEL DESCRIBED AT RECEPTION NO. 520800 IN THE RECORDS OF BOULDER COUNTY;
THENCE ALONG THE PERIMETER OF SAID PARCEL THE FOLLOWING THREE (3) COURSES:
1) NORTH 89°59'25" WEST, A DISTANCE OF 55.00 FEET;
2) SOUTH 00°00'35" WEST, A DISTANCE OF 50.00 FEET;
3) SOUTH 89°59'25" EAST, A DISTANCE OF 55.00 FEET TO THE NORTHWEST CORNER OF PARCEL 10 AS DESCRIBED AT RECEPTION NO. 1560711 IN THE RECORDS OF BOULDER COUNTY;
THENCE ALONG THE PERIMETER OF SAID PARCEL 10 THE FOLLOWING TWO (2) COURSES:
1) SOUTH 00°00'35" WEST ALONG THE WEST LINE OF SAID PARCEL AND ALONG A LINE PARALLEL WITH AND 75 FEET WEST OF THE SAID EAST LINE, A DISTANCE OF 247.79 FEET;
2) SOUTH 16°40'03" EAST ALONG THE SOUTHEASTERLY LINE OF SAID PARCEL, A DISTANCE OF 93.77 FEET TO THE NORTH CORNER OF PARCEL TK-75 DESCRIBED AT RECEPTION NO. 2309730 IN THE RECORDS OF BOULDER COUNTY;
THENCE SOUTH 00°00'35" WEST ALONG A LINE PARALLEL WITH THE EAST LINE OF SAID SECTION 29 AND ALONG THE WEST LINE OF SAID TK-75, A DISTANCE OF 611.12 FEET;
THENCE SOUTH 89°48'45" EAST ALONG THE SOUTH LINE OF SAID TK-75, A DISTANCE OF 48.09 FEET TO A POINT ON THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 29;
THENCE SOUTH 00°00'35" WEST ALONG SAID EAST LINE, A DISTANCE OF 136.13 FEET TO A POINT ON THE SOUTH LINE OF THE NORTH HALF OF THE NORTHEAST QUARTER OF SAID SECTION 29;
THENCE NORTH 89°42'42" WEST ALONG SAID SOUTH LINE, A DISTANCE OF 2,308.62 FEET TO A POINT ON THE NORTHEAST LINE OF THE LAND CONVEYED TO THE CITY OF BROOMFIELD BY GIFT DEED RECORDED AT RECEPTION NO. 2013403 IN THE RECORDS OF BOULDER COUNTY;
THENCE ALONG THE PERIMETER OF SAID PARCEL THE FOLLOWING FIVE (5) COURSES:
1) NORTH 14°13'32" WEST, A DISTANCE OF 140.04 FEET;
2) NORTH 60°44'04" WEST, A DISTANCE OF 682.66 FEET;
3) NORTH 31°43'59" WEST, A DISTANCE OF 355.27 FEET;
4) NORTH 50°04'57" WEST, A DISTANCE OF 351.37 FEET;
5) NORTH 87°28'56" WEST, A DISTANCE OF 246.66 FEET TO THE EASTERN CORNER OF PARCEL 32B AS DESCRIBED BY SPECIAL WARRANTY DEED RECORDED AT RECEPTION NO. 3411796 IN THE RECORDS OF BOULDER COUNTY;
THENCE NORTH 58°29'24" WEST ALONG THE NORTHEASTERLY LINE OF SAID PARCEL, A DISTANCE OF 186.70 FEET TO A POINT ON THE RIGHT-OF-WAY OF HIGHWAY 36;
THENCE NORTH 50°07'12" WEST ALONG SAID RIGHT-OF-WAY, A DISTANCE OF 356.68 FEET TO A POINT ON THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 20 AND THE SOUTH CORNER OF PARCEL 32A OF SAID SPECIAL WARRANTY DEED;
THENCE CONTINUING NORTH 50°07'12" WEST ALONG THE NORTHEAST LINE OF SAID PARCEL 32A, A DISTANCE OF 1,028.45 FEET TO A POINT ON THE EAST LINE OF THAT PARCEL DESCRIBED AT BOOK 880, PAGE 98 IN THE RECORDS OF BOULDER COUNTY;
THENCE NORTH 25°26'59" WEST ALONG SAID EAST LINE AND ALONG THE EAST LINE OF THAT PARCEL DESCRIBED AT BOOK 878, PAGE 503, A DISTANCE OF 842.57 TO THE SOUTH CORNER OF THAT PARCEL DESCRIBED AT RECEPTION NO. 1989419 IN THE RECORDS OF BOULDER COUNTY;
THENCE ALONG THE PERIMETER OF SAID PARCEL THE FOLLOWING FOUR (4) COURSES:
1) NORTH 00°54'00" EAST, A DISTANCE OF 95.53 FEET;
2) NORTH 08°22'46" WEST, A DISTANCE OF 184.53 FEET;
3) NORTH 00°09'09" WEST ALONG A LINE PARALLEL WITH THE WEST LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 20, A DISTANCE OF 213.70 FEET;
4) SOUTH 89°50'51" WEST, A DISTANCE OF 34.06 FEET TO A POINT 25.00 FEET EAST OF THE WEST LINE OF SAID SOUTHWEST QUARTER;
THENCE NORTH 00°09'09" WEST ALONG A LINE PARALLEL WITH AND 25 FEET FROM THE SAID WEST LINE, A DISTANCE OF 473.64 FEET TO A POINT ON THE SOUTH LINE OF THAT PARCEL DESCRIBED AT RECEPTION NO. 1819920 IN THE RECORDS OF BOULDER COUNTY EXTENDED WESTERLY;
THENCE SOUTH 89°48'38" EAST ALONG SAID SOUTH LINE AND SAID SOUTH LINE EXTENDED, A DISTANCE OF 265.23 FEET TO THE SOUTHEAST CORNER OF SAID PARCEL;
THENCE NORTH 00°09'09" WEST ALONG THE EAST LINE OF SAID PARCEL, A DISTANCE OF 256.00 FEET TO A POINT ON THE SOUTH RIGHT-OF-WAY LINE OF CAMPUS DRIVE AS DEDICATED BY LOUISVILLE CAMPUS RECORDED AT RECEPTION NO. 1669751;
THENCE ALONG SAID SOUTH LINE THE FOLLOWING FOUR (4) COURSES:
1) SOUTH 89°48'38" EAST ALONG SAID NORTH LINE, A DISTANCE OF 50.02 FEET;
2) SOUTH 82°25'28" EAST, A DISTANCE OF 202.23 FEET TO A POINT OF NON-TANGENT CURVATURE;
3) ALONG THE ARC OF SAID CURVE TO THE LEFT AN ARC LENGTH OF 139.86 FEET, SAID CURVE HAVING A RADIUS OF 1,085.00 FEET, A CENTRAL ANGLE OF 07°23'09", AND A CHORD WHICH BEARS SOUTH 86°07'04" EAST A CHORD DISTANCE OF 139.77 FEET;
4) SOUTH 89°48'38" EAST, A DISTANCE OF 1,975.05 FEET TO A POINT ON THE EAST LINE SAID SOUTHWEST QUARTER;
THENCE NORTH 00°02'50" EAST ALONG SAID EAST LINE, A DISTANCE OF 35.00 FEET TO THE **POINT OF BEGINNING**;

EXCEPTING THEREFROM THAT PARCEL DESCRIBED BY DEED RECORDED AT RECEPTION NO. 531604 IN THE RECORDS OF BOULDER COUNTY;

SAID PARCEL CONTAINS 16,949,252 SQUARE FEET OR 389.10 ACRES, MORE OR LESS;

City of Louisville
COLORADO • SINCE 1878

CITY COUNCIL COMMUNICATION
AGENDA ITEM 5H

SUBJECT: **APPROVAL OF PURCHASE OF WING PLOW AND TWO V-PLOWS**

DATE: **MARCH 19, 2024**

PRESENTED BY: **KURT KOWAR, P.E., DIRECTOR OF PUBLIC WORKS**

SUMMARY:
Staff recommends approval for purchase of a patrol wing also known as a wing plow in the amount of $30,000 for Unit #3203 a 2020 International truck that is currently in the Operations fleet as a snowplow. In addition, staff is recommending purchase of two V style snowplows for two RAM 2500's currently in the Operations fleet in the amount of $19,000.

The addition of this wing plow would add an additional nine-foot snowplow to the passenger side of truck #3203 allowing snow plowing from drive lanes of arterial and collector streets in a more efficient operation with less miles driven by the vehicle and allows for more ground to be covered by one vehicle versus utilizing two vehicles.

The addition of the two v-plows onto existing fleet will allow staff to respond with additional resources to arterials and collectors as well as clear residential streets faster during post storm cleanup. This also provides backup vehicles when larger plow vehicles experience mechanical issues during storms.

The Operations Division has struggled maintaining full staffing levels and are experiencing more mechanical failures during storms as the snow plow fleet nears the end of its life cycle. These two purchases allow staff to cover more ground with the same amount of staff as well as provide contingency plans for the aging plow fleet as it comes up for replacement.

These are currently unbudgeted items. Staff is recommending the out of budget purchases to respond to ongoing staffing challenges and aging equipment mechanical trends that have recently started to become more frequent.

FISCAL IMPACT:
This purchase would be outside of the 2024 Budgeted purchases requiring a budget amendment. With added contingency for unforeseen issues with install, the total amount for these items is as follows.

WING PLOW	$28,944.78
TWO V-PLOWS	$18,928.98
CONTINGENCY	$5,000.00
TOTAL	$52,873.76

Staff will work with the City Manager's Office and Finance Department on a future budget amendment to incorporate these purchases into the adopted budget.

PROGRAM/SUB-PROGRAM IMPACT:
A safe well-maintained, effective and efficient snow plowing operation at a reasonable cost.

RECOMMENDATION:
Approve the Public Works Director to allow staff to procure hardware and installation of one nine foot wing plow for unit 3203 as well as two v-plow pickup truck mounted snowplows for residential plowing operations.

ATTACHMENT(S):
1. HOLMAN WING PLOW QUOTE
2. MAC EQUIPMENT V-PLOW QUOTE

STRATEGIC PLAN IMPACT:

☒	**Financial Stewardship & Asset Management**	☒	**Reliable Core Services**
☐	**Vibrant Economic Climate**	☐	**Quality Programs & Amenities**
☐	**Engaged Community**	☐	**Healthy Workforce**
☐	**Supportive Technology**	☐	**Collaborative Regional Partner**

Holman

Quote Prepared By:
Andy Beal
Andy.Beal@holman.com

Quote #: 205153
Quote Date: 08/08/2023
Expiration Date: 10/07/2023
Reference: 25323714

Customer Information:

Customer: City Of Louisville
Contact:
Email:

Sold To Customer:
Cdot Contract
Account # 14405

Bill To Customer:
City Of Louisville
Account # 1848

Vehicle Specification:

Year: 2020
Make: Intl
Model: HV513

Engine: CUMMINS
Fuel Type: Diesel
Body Type: REG

Drivetrain: 2WD
Wheelbase: 215.0
Cab/Axle: 131.0

Quoted Items:

Item	Description	Item Details	Price
1	PATROL WING	(1) HENDERSON 9' HWS PATROL WING Wing Configuration: Heavy Duty Wing System: Rear of Cab Wing Location: Right Hand Side Moldboard Height: 26" Height Cutting Edge: Std 5/8" x 8" One Piece AASHTO punch Whelen Wing Tip Strobe Lights Includes Relocating Force America Valve Enclosure and adding Valve Section and Control	$28,944.78

Total: $28,944.78

(Plus any applicable taxes and additional options selected)

See last page for Terms and Conditions

Terms and Conditions:

- Quote is valid until the expiration date shown at the top of the quote.
- Quote price is subject to adjustment by Auto Truck Group at any time. Auto Truck Group will provide Customer notice (which may occur via email, or telephone call) of any such adjustment to the price.
- Changes to number of units may affect price.
- Pricing is based on specific year, make and model of vehicle. Changes to the vehicle may affect pricing.
- Terms of payment are COD unless credit has been established or other arrangements have been agreed upon.
- Delays in customer supplied materials will affect scheduling and completion of vehicles. We will not schedule any work until we have received all customer-supplied materials.
- Taxes are not included except where noted.
- Prices subject to change based on tariffs and manufacturer surcharges.
- Vehicles on Auto Truck Group or its designee's property may be subject to maintenance and/or storage fees.
- All specification revisions are subject to approval at time of request. Specification revisions within 7 days of the scheduled start date may incur additional charges based on equipment or labor. Additional charges may include change order fees, expedited freight costs, handling, storage or other costs related to the customer request.
- We may charge a restocking fee for materials and equipment for orders that you cancel.
- Auto Truck Group is not responsible or liable for any delays due to supply constraints from the chassis or equipment manufacturer or any carrier delays.
- Risk of loss to Your vehicle or equipment shall be borne by You at all times, even when on Our property, or in possession of Our designee
- All shipments are FOB Auto Truck Group's installation facility unless otherwise specified in this quote.
- Acceptance of this Quote is expressly limited to the parties' acceptance of the terms and conditionsfound at the following link: https://www.autotruck.com/customer-terms/

Accepted By: _____ Date: _____

MAC EQUIPMENT INC
LOVELAND
2116 W 1st St
LOVELAND, CO 80537
Main: 970-593-9421
Fax: 970-663-4777

Status : **Open** Invoice # : **464149**
Type : **Major Unit Quote** Date : **02/07/2024**
Contact ID :**394**
Ref. # : **Mason**
Customer # : **(303)666-6565**
Tax Exempt # : **98-03558**

CITY OF LOUISVILLE

739 SOUTH 104TH STREET
LOUISVILLE, Colorado 80027
UNITED STATES
SANDRETICH@LOUISVILLECO.GOV
303-304-2313 - Home

Selected Units for Sale

N/U	Year	Make	Model	Unit Type	VIN/Serial	MSRP	Sale Price	DOC Fees	Off'l Fees	Prot. Pkg
	N/A	BOSS	BLADE CRATE (SNOWPLOW),8-2, STL V-XT,09+ MSC10182B MSC10182B | BLADE CRATE (SNOWPLOW),8-2, STL V-XT,09+	PLOW BLADE		$2,610.00	$1,957.50	$0.00	$0.00	$0.00
	N/A	BOSS	PLOW BOX,RT3-V,SH2 7-6/8-2/9-2,SL3 MSC15005C MSC15005C | PLOW BOX,RT3-V,SH2 7-6/8-2/9-2,SL3	PLOW BOX		$6,570.00	$4,927.50	$0.00	$0.00	$0.00

Item Number	Description	Qty Req	Qty Del	Item Price	Total Discount	Ext. Price
LTA04770D	UC/RT3,DODGE 2500/3500,03-18	1	0	$800.00	$200.00	$600.00
MSC09601	CONTROL-HANDHELD,V-BLADE,12V	1	0	$350.00	$87.50	$262.50
MSC25009	KIT-WIRING,RT3 SH2,12V,RAM 25-5500,15+	1	0	$400.00	$100.00	$300.00
MSC01565	SNOW DEFLECTOR	1	0	$376.92	$37.69	$339.23
HYD01704	FLUID, HYDRAULIC,CASE(12 QTS. PER)	3	0	$11.50	$1.74	$32.76
labor	Install	1	1	$1,045.00	$0.00	$1,045.00

Total Parts Requested : 8 Total Parts Delivered : 1

Disclaimer
We appreciate the opportunity to give you a quote on your equipment today. Please let us know if you have any other questions.

THIS QUOTE IS VALID FOR ONE DAY, THE DATE ISSUED, ONLY AND MAY NOT REFLECT SHIPPING COSTS.

All Special Order Pricing Is Subject To Change

RETURNS
Our policy lasts 30 days. If 30 days have gone by since your purchase, unfortunately we cannot offer you a refund or exchange. To be eligible for a return, your item must be unused, in original packaging, and in the same condition that you received it. Any returnable items will be subject to a 25% restocking fee + shipping.
WE DO NOT ACCEPT ANY RETURNS ON THE FOLLOWING: CARBURETORS | CLIMBING OR SAFETY GEAR | ELECTRICAL | GASKETS | SPECIAL ORDERS | SERIALIZED UNITS

MAC EQUIPMENT INC
LOVELAND
2116 W 1st St
LOVELAND, CO 80537
Main: 970-593-9421
Fax: 970-663-4777

Status : **Open** Invoice # : **464149**
Type : **Major Unit Quote** Date : **02/07/2024**
Contact ID :**394**
Ref. # : **Mason**
Customer # : **(303)666-6565**
Tax Exempt # : **98-03558**

CITY OF LOUISVILLE

739 SOUTH 104TH STREET
LOUISVILLE, Colorado 80027
UNITED STATES
SANDRETICH@LOUISVILLECO.GOV
303-304-2313 - Home

Other Charges

Item Total	+	$2,579.49
Total Other Charges=		$2,579.49

Special Order(s)

	Item Total	+	$601.73
***	S/O Total	=	$601.73
**	S/O Deposit	=	$601.73

Totals

	Sub Total	+	$8,862.76
***	Invoice Total	=	$8,862.76
**	S/O Deposit	+	$601.73
	Amount Paid	-	$0.00
***	Transaction Total	=	$9,464.49
	Balance Due =		**$9,464.49**

Deposit Paid $0.00

Tax Name	Tax Amount
Exempt	$0.00

Signature _____

City of Louisville
COLORADO • SINCE 1878

CITY COUNCIL COMMUNICATION
AGENDA ITEM 5I

SUBJECT: **APPROVAL OF 2024 ANNUAL FUEL PURCHASE**

DATE: **MARCH 19, 2024**

PRESENTED BY: **KURT KOWAR, P.E., DIRECTOR OF PUBLIC WORKS**

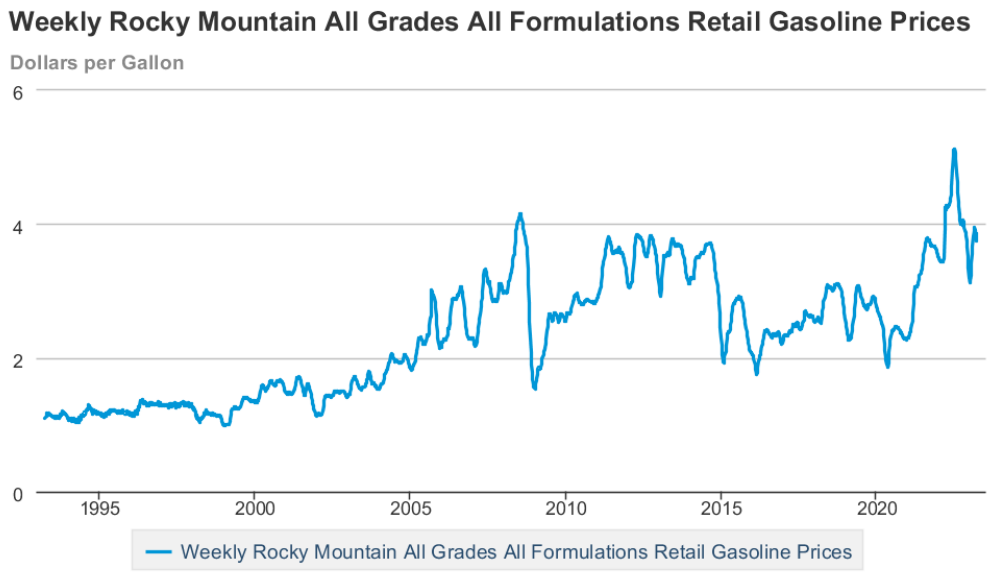
SUMMARY:
Staff recommends approval to purchase fuel from SENERGY PETROLEUM (Hill Petroleum) under the guidelines and price structure of the current RFP-22-22-MAPO agreement currently expiring on 7/31/2024.

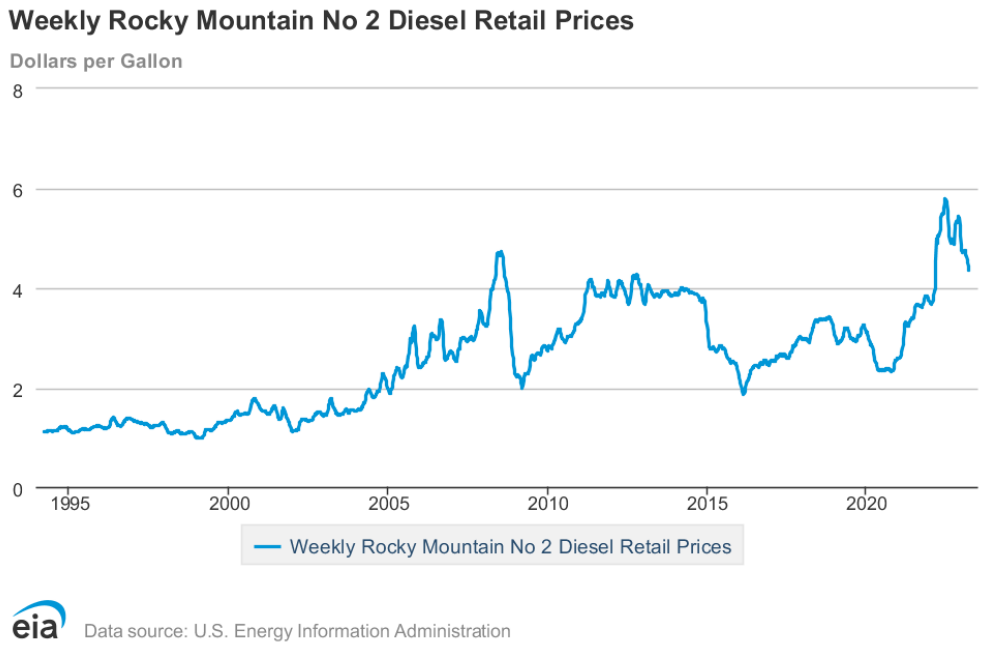
City staff purchase gasoline and diesel fuel on a monthly basis throughout the year for the city vehicle and golf course fleet. The City has used on an average 44,300 gallons of unleaded gasoline and 11,200 gallons of biodiesel fuel over the course of the last four years (2018-2023).

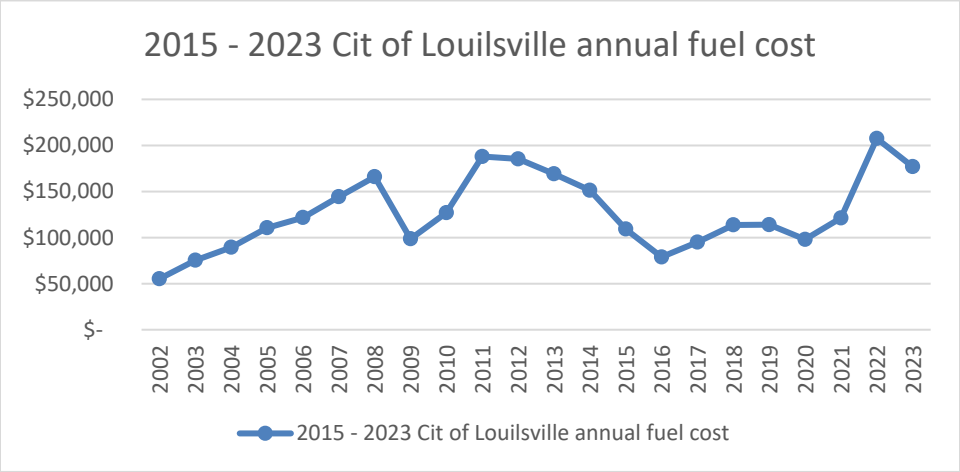
The supplier for the City's fuel is selected based upon the lowest bid available for the Colorado Municipal Assembly of Procurement Officials (MAPO). This bid, currently RFP-22-22-MAPO, was advertised in 2022 with Hill Petroleum, (now known as SENERGY PETROLEUM) as the successful bidder for Fuel Delivery Services. Louisville as a member of MAPO is able to participate under the terms of the agreement. Hill Petroleum (SENERGY PETROLEUM) has supplied fuel to the City for approximately nineteen years.

The City has budgeted $184,845 for fuel to be purchased in 2024. Budgeting for City fuel purchases is done by department and allocated across various cost centers in the operational budget. Actual 2023 fuel costs were $165,158.

The actual fuel cost will vary based upon market pricing of oil. City staff monitor fuel costs in conjunction with overall citywide budget trends to manage expenditures for each fiscal year. In the event of costs exceeding overall line items staff will recommend future budget amendments to align actual costs with line-item budgets.


Weekly Rocky Mountain All Grades All Formulations Retail Gasoline Prices
Dollars per Gallon
6
4
2
0
1995
2000
2005
2010
2015
2020
Weekly Rocky Mountain All Grades All Formulations Retail Gasoline Prices
eia
Data source: U.S. Energy Information Administration


Weekly Rocky Mountain No 2 Diesel Retail Prices
Dollars per Gallon
8
6
4
2
0
1995
2000
2005
2010
2015
2020
Weekly Rocky Mountain No 2 Diesel Retail Prices
eia
Data source: U.S. Energy Information Administration



FISCAL IMPACT:
The approved 2024 Budget provides for $184,845 for fuel and oil for citywide fleet and golf course expenditures.

PROGRAM/SUB-PROGRAM IMPACT:
A safe well-maintained, effective and efficient multi-modal transportation system at a reasonable cost.

RECOMMENDATION:
Approve the Public Works Director to continue the existing practice to purchase fuel from SENERGY PETROLEUM (Hill Petroleum) under the guidelines and price structure of the current RFP-22-22-MAPO agreement.

ATTACHMENT(S):
1. MAPO Notice of Award
2. SENERGY PETROLEUM Piggyback Letter

STRATEGIC PLAN IMPACT:

☒	**Financial Stewardship & Asset Management**	☒	**Reliable Core Services**
☐	**Vibrant Economic Climate**	☐	**Quality Programs & Amenities**
☐	**Engaged Community**	☐	**Healthy Workforce**
☐	**Supportive Technology**	☐	**Collaborative Regional Partner**

ARAPAHOE COUNTY
COLORADO'S FIRST

Department of Finance

PURCHASING DIVISION
5334 South Prince Street
Littleton, Colorado 80120-1136
Phone: 303-795-4430
Fax: 303-738-7929
www.arapahoegov.com

TODD WEAVER
Director

June 14, 2023

Gina Baker
Thomas Walker
Senergy Petroleum
6301 Ralston Rd.
Arvada, CO 80002
Gina.Baker@gosenergy.com
Thomas.Walker@gosenergy.com

RE: Bulk Fuel Purchase and Delivery for Colorado MAPO Agencies
RFP-22-22_MAPO

Dear Ms. Baker and Mr. Walker,

Hill Petroleum entered into an agreement for Bulk Fuel Purchase and Delivery for Colorado MAPO Agencies on August 01, 2022. Arapahoe County then consented to the assignment of the agreement from Hill Petroleum to Senergy Petroleum effective November 2, 2022. Please find attached with this letter the Extension of the Agreement.

Please sign and e-mail back a scanned copy, along with current pricing and an updated Certificate of Insurance, within ten (10) business days of the date of this letter.

Sincerely,

Sarah Huerta, CPPB

Sarah Huerta
Senior Purchasing Agent

Cc: Purchasing File

June 14, 2023

Gina Baker
Thomas Walker
Senergy Petroleum
6301 Ralston Rd.
Arvada, CO 80002
Gina.Baker@gosenergy.com
Thomas.Walker@gosenergy.com

RE: Bulk Fuel Purchase and Delivery for Colorado MAPO Agencies
RFP-22-22_MAPO

Arapahoe County and Senergy Petroleum entered into an agreement for Bulk Fuel Purchase and Delivery for Colorado MAPO Agencies on August 1, 2022. The parties may mutually agree upon an annual extension of this agreement pursuant to the provisions as set forth in the original Agreement for Services.

Senergy Petroleum hereby agrees to maintain market value pricing without additional increases, and all parties mutually agree upon an annual extension of this agreement pursuant to the provisions set forth in the solicitation.

Staff has determined that it is to the best interest of the County to extend this agreement from August 1, 2023, through July 31, 2024.

By executing the signature page, both parties agree to the extension of this Agreement for Services or Purchase Agreement.

SIGNATURE PAGE

CONTRACTOR: Senergy Petroleum

By: _____
(signature)

Title: Regional Sales Director

Date: 6/14/2023

ARAPAHOE COUNTY

By: _____
Chair, Board of County Commissioners
(Or representative authorized by resolution)

Date: 6-29-23

Purchasing Agreement Piggyback Letter

Date: August 1st, 2022

Name of Municipality_____

Purchasing/contracting Authority_____

This letter is to confirm the intentions of _____ to participate in the benefits, and be bound by the terms and conditions of the RFP 22-22 MAPO Fuel Agreement Hosted by Arapahoe County dated August 1, 2022

Purchasing/Contracting Authority Signature_____

Hill Petroleum Signature_____

This document will be forwarded to Arapahoe County Purchasing and a letter of addition will be forwarded to you. In addition Arapahoe County requested that each municipality wishing to participate provide one other piece of documentation. Please provide delivery address, product used, tank size and annual volume for each location that will be serviced on a separate document.

Thank You,

Gina Baker Distributor Sales Rep
Troy Hill VP Operations
Hill Petroleum

SUBJECT: **APPROVAL OF A SOLE SOURCE AGREEMENT WITH GOLDEN AUTOMATION LLC FOR SCADA SUPPORT**

DATE: **MARCH 19, 2024**

PRESENTED BY: **KURT KOWAR, P.E., PUBLIC WORKS DIRECTOR**

SUMMARY:
Staff is recommending entering into a sole source contract with Golden Automation LLC. (Golden) for Supervisory Controls and Data Acquisition (SCADA) system support related to utility technology upgrades.

In late 2023, Information Technology and Public Works engaged in the upgrades of various hardware and software components for both water treatment plants and the wastewater treatment plant for necessary technology performance and security improvements.

To facilitate these upgrades, the water treatment plants SCADA system required complementary upgrades. SCADA is a complex and critical system that monitors and operates the water plants automated equipment and is essential to providing effective treatment and maintaining regulatory compliance.

Golden Automation has been a steadfast partner to the City of Louisville for several years, demonstrating a deep understanding of the unique control systems and consistently providing exceptional service. Given the critical nature and the timing of these upgrades, Golden Automation is the most qualified entity to meet these needs and deliver superior results.

FISCAL IMPACT:

GL Account 501499-650015

SCADA Support – Golden (this communication)	$61,000
Technology Contingency (30%) – (this communication)	$18,000
Server Upgrades (2023 expense)	*$84,000*
Total Cost	**$163,000**

This proposed SCADA support is unbudgeted and exceeds available funding in 2024. The 2024 Water Fund reserves are sufficient to absorb these costs. This project has been coordinated with the Finance Department and will be included in a future budget amendment to account 501499-650015.

PROGRAM/SUB-PROGRAM IMPACT:
The program goal for Information Technology is to maintain a secure and connected network. The upgrades to serves and the SCADA system is essential to meeting this goal.

RECOMMENDATION:
Staff recommends the approval of the contract with Golden Automation LLC. for a total of $61,000, authorize staff to execute change orders up to $18,000 for additional work and project contingency, and authorize the Mayor, Public Works Director and City Clerk to sign and execute contract documents on behalf of the City.

ATTACHMENT(S):
1. Agreement between the City of Louisville and Golden Automation LLC.

STRATEGIC PLAN IMPACT:

☐	**Financial Stewardship & Asset Management**	☒	**Reliable Core Services**
☐	**Vibrant Economic Climate**	☐	**Quality Programs & Amenities**
☐	**Engaged Community**	☐	**Healthy Workforce**
☐	**Supportive Technology**	☐	**Collaborative Regional Partner**

AN AGREEMENT BY AND BETWEEN THE CITY OF LOUISVILLE AND _Golden Automation LLC_____ FOR CONSULTING SERVICES

1.0 PARTIES

This AGREEMENT FOR CONSULTING SERVICES (this "Agreement") is made and entered into this ____ day of _March_____, 2024___ (the "Effective Date"), by and between the **City of Louisville**, a Colorado home rule municipal corporation, hereinafter referred to as the "City", and Golden Automation_____ [Name of Contractor], a __Colorado Limited Liability Corporation_____ [State of Formation and Type of Entity] hereinafter referred to as the "Consultant".

2.0 RECITALS AND PURPOSE

2.1 The City desires to engage the Consultant for the purpose of providing _SCADA System Programming and Security Upgrade_____ 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. [Further revise as needed to reflect whether contract is hourly of flat amount]. 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 _Greg Venette_____ 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 __Greg Venette_____ and such person's designees.

5.2 The Consultant designates _____ as its project manager and as the principal in charge who shall be providing the Services under this Agreement. [The Services shall not be provided by persons other than _____.] [or] [Should any of the representatives be replaced, particularly _____, 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 __December 31st_____, 2024__, unless sooner terminated pursuant to Section 13, below. The Consultant's Services under this Agreement shall commence on [(the Effective Date) or (on another date desired by the City, after 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

Except as provided in section 22.0 hereof, 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: City Manager
749 Main Street
Louisville, Colorado 80027
Telephone: (303) 335-4533
Fax: (303) 335-4550

If to the Consultant:

_____
_____
_____
_____

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 Leh, Mayor

Attest:_____
Meredyth Muth, City Clerk

CONSULTANT:
_____

By:_____
Title:_____

Exhibit A – Scope of Services

Louisville Server Upgrade Project c/o Greg Venette
Estimate 12/21/2023 3:00 PM

Scope of Services:

Programming Proposal Proposal 2023-002

Golden Automation Krystle Zinth
4071 Easley Way
Golden, CO 80403
(918) 637-3134

12/21/202

Category	Item	Notes
Programming	Update HMI Screens	Update old screens to latest version
Programming	Change IP addresses system-wide, device level and at the PLCs and HMI driver	North and South Plant
Engineering	Update network diagram	North and South Plant
Engineering	Document IP Addresses	North and South Plant

Scope Limitations and Excluded Items:

Limitations
Scope of work is limited to the tasks listed above. Modifications to scope or level-of-effort may incur additional costs.
Engineering of electrical systems are provided by others.
Scope of work includes programming services only. No material or installation services are provided.
All programming services will be performed on computer hardware and software provided by the end customer (CoL).
Scope and pricing valid for 90 days

Pricing:

Price	Description

$60,400	Assist in installation of new remote servers, change IP addresses site-wide and update screens

CoLServerUpgrade.v4 Page 1 of 1 Prepared by K. Zinth

City of Louisville
COLORADO • SINCE 1878

CITY COUNCIL COMMUNICATION
AGENDA ITEM 5K

SUBJECT: **APPROVAL OF RESOLUTION NO. 14, SERIES 2024 – A RESOLUTION APPROVING A FOURTH AMENDMENT TO THE AGREEMENT WITH THE URBAN DRAINAGE AND FLOOD CONTROL DISTRICT D/B/A MILE HIGH FLOOD DISTRICT FOR DRAINAGE AND FLOOD CONTROL IMPROVEMENTS FOR COAL CREEK DRAINAGEWAY A-1 AT GARFIELD AVENUE**

DATE: **MARCH 19, 2024**

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

SUMMARY:

Staff recommends approval to amend the Intergovernmental Agreement (IGA) with Urban Drainage and Flood Control District D/B/A Mile High Flood District (District) for the allocation of additional funds to the Coal Creek Drainageway A-1 at Garfield Avenue project (hereinafter called Drainageway A-1 Project). This amendment would increase the project funding by $160,000 with the City and the District each contributing an additional $80,000.

This agreement between the City and the District will allocate additional funding for the Drainageway A-1 Project improvements currently being constructed in conjunction with the District. The additional funding request is due to the need for additional construction services during the project including inspection, material testing, and submittal of the Letter of Map Revision (LOMR) necessary for removing buildings adjacent to the project out of the floodplain. The additional funding will also provide a construction contingency, not previously included for the project. The Drainageway A-1 project will remove buildings from the floodplain at Cottonwood Drive and Garfield Avenue by upsized piping and channels increasing flow capacity. This project is currently in the construction phase with construction anticipated conclude in spring/summer of 2024. This amendment would include matching funds from the District for the Drainageway A-1 Project Improvements.

Council has previously approved a total of three amendments to the IGA (July 28, 2020, August 2, 2022, and June 20, 2023) to move the Bullhead Gulch Project funds to the Drainageway A-1 project, and to provide additional funding. With the new addition of funds and the originally planned funding, the District account will have $1,922,807 allocated to the Drainageway A-1 project. Upon completion of the Drainageway A-1 project, any leftover funding will be moved to future planned drainageway projects in conjunction with the District such as the Drainageway 7-1 project.

FISCAL IMPACT:
The $80,000 requested additional funds from the City will require a budget amendment to account 503499-630150. This amendment has been accounted for in the most recent utility rates for the storm water fund.

The project funding by year is as follows:

Current and Proposed Funds

YEAR	Drainageway A-1 Garfield / Cottonwood City Funds	The District Funds	Yearly Totals	Notes
2020	$483,258	$379,549	$862,807	Transfer from Bullhead Gulch Fund (Original IGA)
2020	$250,000	$250,000	$500,000	Amendment 1 Drainageway A-1 Funding for 2020
2022	$150,000	$150,000	$300,000	Amendment 2 Drainageway A-1 Funding 2022
2023	-	$100,000	$100,000	Amendment 3 Drainageway A-1 Funding 2023
2024	Proposed $80,000	Proposed $80,000	$160,000	Amendment 4 Drainageway A-1 Funding 2024
TOTAL	**$963,258**	**$959,549**	**$1,922,807**	

PROGRAM/SUB-PROGRAM IMPACT:
Maintain the City of Louisville storm water system to protect Coal Creek specifically and the natural and built environment generally. Proactively reduce pollutants in the water by educating the public, sweeping the streets, maintaining an efficient & effective storm water system and leveraging intergovernmental partnerships. The project improves storm drainage function and leverages intergovernmental partnerships.

RECOMMENDATION:
Staff recommends City Council pass Resolution No., Series 2024 authorizing the Mayor to sign the attached Agreement on behalf of the City.

ATTACHMENT(S):

1. Resolution
2. Amendment 4

STRATEGIC PLAN IMPACT:

☒	**Financial Stewardship & Asset Management**	☒	**Reliable Core Services**
☐	**Vibrant Economic Climate**	☐	**Quality Programs & Amenities**
☐	**Engaged Community**	☐	**Healthy Workforce**
☐	**Supportive Technology**	☐	**Collaborative Regional Partner**

RESOLUTION NO. 14
SERIES 2024

A RESOLUTION APPROVING A FOURTH AMENDMENT TO THE AGREEMENT WITH THE URBAN DRAINAGE AND FLOOD CONTROL DISTRICT D/B/A MILE HIGH FLOOD DISTRICT FOR DRAINAGE AND FLOOD CONTROL IMPROVEMENTS FOR COAL CREEK DRAINAGEWAY A-1 AT GARFIELD AVENUE

WHEREAS, the City of Louisville ("City") and Urban Drainage and Flood Control District d/b/a Mile High Flood District ("District") entered into that certain Agreement Regarding Final Design, Right-of-Way Acquisition and Construction of Drainage and Flood Control Improvements for Coal Creek Drainageway A-1 at Garfield Avenue, City of Louisville, dated July 30, 2020 ("Agreement"); and

WHEREAS, on December 1, 2020, the City and District amended the Agreement to increase the funding for the construction of drainage and flood control improvements covered under the Agreement by $500,000, with each party contributing $250,000 ("First Amendment"); and

WHEREAS, the City and District amended the Agreement for a second time to increase the funding for the construction of drainage and flood control improvements covered under the Agreement by $300,000, with each party contributing $150,000 ("Second Amendment"), bringing the City's total contribution under the Agreement, as amended, to $883,257.95; and

WHEREAS, the City and District desire to amend the Agreement for a third time to increase the funding for the construction of drainage and flood control improvements covered under the Agreement by $100,000, with the District contributing the entire amount ("Third Amendment"), keeping the City's total contribution under the Agreement, as amended, to $883,257.95; and

WHEREAS, the City and District desire to amend the Agreement for a fourth time to increase the funding for the construction of drainage and flood control improvements under the Agreement by $160,000, with half of this increase to be contributed by the City and the other half by the District, increasing the total project cost to $1,922,806.55, bringing the City's maximum contribution to $883,257.95.

WHEREAS, the City Council finds that the proposed Fourth Amendment is in the best interest of the City and its residents.

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

1. The City Council hereby approves the proposed Fourth Amendment to Agreement Regarding Final Design, Right-of-Way Acquisition, and Construction of

Drainage and Flood Control Improvements for Coal Creek Drainageway A-1 at Garfield Avenue City of Louisville ("Fourth Amendment"), in essentially the same form as the copy of such Fourth Amendment accompanying this Resolution.

2. The Mayor is authorized to execute the Fourth Amendment on behalf of the City, except that the Mayor is hereby further granted authority to negotiate and approve such revisions to said Fourth Amendment as the Mayor determines are necessary or desirable for the protection of the City, so long as the essential terms and conditions of the Fourth Amendment are not altered.

3. The Mayor, City Manager, Director of Public Works and City staff are hereby authorized to execute all documents and do all other things necessary on behalf of the City to perform the obligations of the City under the Agreement as amended by the First, Second, Third and Fourth Amendments.

PASSED AND ADOPTED this 19th day of March, 2024.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Meredyth Muth, City Clerk

FOURTH AMENDMENT TO
AGREEMENT REGARDING
FINAL DESIGN, RIGHT-OF-WAY ACQUISITION, AND CONSTRUCTION
OF DRAINAGE AND FLOOD CONTROL IMPROVEMENTS FOR
COAL CREEK DRAINAGEWAY A-1 AT GARFIELD AVENUE
CITY OF LOUISVILLE

Agreement No. 20-02.26D
Project No. 107315

THIS FOURTH AMENDMENT TO AGREEMENT (hereinafter called "FOURTH AMENDMENT"), by and between URBAN DRAINAGE AND FLOOD CONTROL DISTRICT D/B/A MILE HIGH FLOOD DISTRICT (hereinafter called "DISTRICT") and CITY OF LOUISVILLE (hereinafter called "CITY") and collectively known as "PARTIES";

WITNESSETH:

WHEREAS, PARTIES have entered into "Agreement Regarding Final Design, Right-of-Way Acquisition and Construction of Drainage and Flood Control Improvements for Coal Creek Drainageway A-1 at Garfield Avenue, City of Louisville" (Agreement No. 20-02.26) dated July 30, 2020, as amended (hereinafter called "AGREEMENT"); and

WHEREAS, PARTIES now desire to construct drainage and flood control improvements on Coal Creek Drainageway A-1 at Garfield Avenue (hereinafter called "PROJECT"); and

WHEREAS, PARTIES desire to increase the level of funding by $160,000; and

WHEREAS, DISTRICT's Board of Directors has authorized additional DISTRICT financial participation for PROJECT (Resolution No. 11, Series of 2024); and

WHEREAS, the City Council of CITY and the Board of Directors of DISTRICT have authorized, by appropriation or resolution, all of PROJECT costs of the respective PARTIES.

NOW, THEREFORE, in consideration of the mutual promises contained herein, PARTIES hereto agree as follows:

1. Paragraph 4. PROJECT COSTS AND ALLOCATION OF COSTS is deleted and replaced as follows:

4. PROJECT COSTS AND ALLOCATION OF COSTS

A. PARTIES agree that for the purposes of this AGREEMENT, PROJECT costs shall consist of and be limited to the following:

1. Final design services;
2. Delineation, description and acquisition of required rights-of-way/ easements;
3. Construction of improvements;
4. Contingencies mutually agreeable to PARTIES.

B. It is understood that PROJECT costs as defined above are not to exceed $1,922,806.55 without amendment to this AGREEMENT.

PROJECT costs for the various elements of the effort are estimated as follows:

	ITEM	AS AMENDED	PREVIOUSLY AMENDED
1.	Final Design	$ 200,000	$ 200,000
2.	Right-of-way	$ -0-	$ -0-
3.	Construction	$ 1,722,806.55	$ 1,562,806.55
4.	Contingency	$ -0-	$ -0-
	Grand Total	$ 1,922,806.55	$ 1,762,806.55

This breakdown of costs is for estimating purposes only. Costs may vary between the various elements of the effort without amendment to this AGREEMENT provided the total expenditures do not exceed the maximum contribution by all PARTIES plus accrued interest.

C. Based on total PROJECT costs, the maximum percent and dollar contribution by each party shall be:

	Percentage Share	Previously Contributed	Additional Contribution	Maximum Contribution
DISTRICT	49.9%	$879,548.60	$80,000	$959,548.60
Special Fund Transfer				
CITY	50.1%	$883,257.95	$80,000	$963,257.95
Special Fund Transfer				
TOTAL	100.00%	$1,762,806.55	$160,000	$1,922,806.55

2. Paragraph 5. MANAGEMENT OF FINANCES is deleted and replaced as follows:

5. MANAGEMENT OF FINANCES

As set forth in DISTRICT policy (Resolution No. 11, Series of 1973, Resolution No. 49, Series of 1977, and Resolution No. 37, Series of 2009), the funding of a local body's one-half share may come from its own revenue sources or from funds received from state, federal or other sources of funding without limitation and without prior Board approval.

Payment of each PARTY's full share (CITY - $1,008,257.95; DISTRICT - $1,004,548.60) shall be made to DISTRICT subsequent to execution of this AGREEMENT and within 30 days of request for payment by DISTRICT. The payments by PARTIES shall be held by DISTRICT in a special fund to pay for increments of PROJECT as authorized by PARTIES, and as defined herein. DISTRICT shall provide a periodic accounting of PROJECT funds as well as a periodic notification to CITY of any unpaid obligations. Any interest earned by the monies contributed by PARTIES shall be accrued to the special fund established by DISTRICT for PROJECT and such interest shall be used only for PROJECT upon approval by the contracting officers (Paragraph 13).

Within one year of completion of PROJECT if there are monies including interest earned remaining which are not committed, obligated, or disbursed, each party shall receive a share

of such monies, which shares shall be computed as were the original shares; or at CITY request, CITY share of remaining monies shall be transferred to another special fund held by DISTRICT.

3. All other terms and conditions of this AGREEMENT shall remain in full force and effect.

WHEREFORE, PARTIES hereto have caused this FOURTH AMENDMENT to be executed by properly authorized signatories as of the date and year written below.

URBAN DRAINAGE AND
FLOOD CONTROL DISTRICT D/B/A
MILE HIGH FLOOD DISTRICT

By_____

Name Laura A. Kroeger

Title Executive Director

Date_____

_____
Checked By

CITY OF LOUISVILLE

By_____

Name_____

Title_____

Date_____

City of Louisville
COLORADO • SINCE 1878

CITY COUNCIL COMMUNICATION
AGENDA ITEM 5L

SUBJECT: **APPROVAL OF RESOLUTION NO. 15, SERIES 2024 – A RESOLUTION AUTHORIZING APPLICATIONS FOR TEMPORARY MODIFICATIONS OF LIQUOR LICENSED PREMISES TO BE ADMINISTRATIVELY APPROVED**

DATE: **MARCH 19, 2024**

PRESENTED BY: **GENNY KLINE, DEPUTY CITY CLERK**

SUMMARY:
A restaurant cannot extend its liquor service area outside of its defined premises without approval from both the Local Licensing Authority and the State Liquor Enforcement Division. This is done through a Temporary Modification of Premise (TMOP) Application and a Revocable License Agreement between the licensee and the City.

Under normal circumstances for either a street closure or the installation of street patios, the TMOP application is submitted to the City Clerk's Office 1-2 months prior to the implementation of the change and scheduled for the next Local Licensing Authority (LLA) meeting. Once the application has been approved by the LLA, it is sent to the State for approval.

City Council's consideration of possibly closing Main Street this year has created a timing issue as restaurants have not submitted submit applications as they wait for a decision to be made and they know what modification to request. Should a decision be made on March 19, there is not enough time in the schedule for liquor license holders along Main Street to get final permissions prior to the suggested opening day of April 22 as the earliest TMOP applications can be scheduled for LLA consideration is April 22. If approved, the applications would then be sent to the State for approval. While the State does turn this type of application faster than other applications, in 2023 it took more than a week to issue approvals, meaning a Main Street licensee may not be able to serve alcohol in their outdoor areas for 7 days or more.

The proposed resolution would change this process to allow the Secretary to the LLA (the Deputy City Clerk) to approve TMOP applications administratively without a vote from the LLA. Should the Secretary deny an application, the applicant may request a hearing in front of the LLA. This would significantly shorten the time it takes to get local approvals for these applications and hopefully facilitate a licensee being able to serve alcohol in the outdoor area on April 22.

The City enacted this same procedure in 2020 during COVID to allow for summer dining changes to be made quickly.

It should be noted that all permanent modification of premise applications will continue to require a vote by the LLA.

RECOMMENDATION:
Approval of Resolution No. 15, Series 2024.

ATTACHMENT(S):
1. Resolution No. 15, Series 2024

STRATEGIC PLAN IMPACT:

☐	**Financial Stewardship & Asset Management**	☒	**Reliable Core Services**
☒	**Vibrant Economic Climate**	☐	**Quality Programs & Amenities**
☐	**Engaged Community**	☐	**Healthy Workforce**
☐	**Supportive Technology**	☐	**Collaborative Regional Partner**

RESOLUTION NO. 15
SERIES 2024

A RESOLUTION AUTHORIZING APPLICATIONS FOR TEMPORARY MODIFICATIONS OF LIQUOR LICENSED PREMISES TO BE ADMINISTRATIVELY APPROVED

WHEREAS, the City Council is considering taking action to authorize the closure of certain portions of Main Street to vehicular traffic in order to encourage and allow food and beverage establishments to utilize portions of the City right-of-way for outdoor dining areas; and

WHEREAS, an establishment wishing to serve liquor within an outdoor dining is required to submit an application to temporarily modify its premises with both the State and local licensing authorities; and

WHEREAS, the Louisville Local Licensing Authority (the "Authority') typically acts on applications for temporary modifications of premises, but the Authority meets only once a month and waiting for the Authority to act on applications at a regularly scheduled meeting would delay the start of the liquor service in outdoor dining areas; and

WHEREAS, in order to efficiently and expeditiously process applications for temporary modifications of premises, the City Council desires to authorize the Secretary of the Authority to administratively approve said applications, as set forth herein.

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

Section 1. The Secretary of the Authority, or the Secretary's designee, is hereby authorized to administratively approve applications for temporary modifications of liquor licensed premises, including communal outdoor dining area modification of premises applications. If an application is denied by the Secretary, the licensee may request a hearing before the Authority pursuant to 1 CCR 203-2, Regulation 47-302. Applications for permanent modifications of liquor licensed premises shall continue to be referred to and acted on by the Authority.

Section 2. If any portion of this resolution is held to be invalid for any reason, such decision shall not affect the validity of the remaining portions hereof.

Section 3. This resolution shall become effective upon adoption and continue in effect until June 1, 2024 unless rescinded or extended by the Louisville City Council.

PASSED AND ADOPTED this 19th day of March, 2024.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Meredyth Muth, City Clerk

SUBJECT: **RESOLUTION NO. 16, SERIES 2024 – A RESOLUTION AUTHORIZING THE TEMPORARY CLOSURE OF PORTIONS OF MAIN STREET IN DOWNTOWN LOUISVILLE FOR OUTDOOR DINING AREAS AND ACTIVATION**

DATE: **MARCH 19, 2024**

PRESENTED BY: **ROB ZUCCARO, AICP, COMMUNITY DEVELOPMENT DIRECTOR**
VANESSA ZARATE, CECD, ECONOMIC VITALITY MANAGER

SUMMARY:
The Downtown Business Association (DBA) wrote a letter to the Louisville City Council on December 11, 2023, requesting a temporary closure of the 600-900 blocks of Main Street, to non-emergency vehicular traffic, from March to November 2024. With their request letter, the DBA included results from three surveys they conducted. Of their three surveys, all showed a support rate for a temporary closure of at least 90% of the businesses surveyed. The DBA went on to highlight that feedback from previous closures resulted in high levels of support from residents and visitors to downtown.

The DBA has had conversations with the Louisville Revitalization Commission (LRC), the City of Louisville's urban renewal authority, about support for a temporary closure of Main Street. At the March 6, 2024, meeting of the LRC, the commission voted to write a letter of support for the closure. Commissioners spoke about the current state of downtown, to include increased vacancy, slower foot traffic and general growing negative sentiment surrounding the experience downtown. The LRC recognized the impacts to nearby residents and expressed a need to try new things to revitalize downtown. The LRC has a main mission of blight reduction, elimination, and prevention as well as revitalization of the Highway 42 Area Plan. The LRC wrote their letter of support with these goals in mind. The LRC has also expressed verbal interest in monetarily supporting the downtown closure. An official offer for financial support has not occurred yet. Details of what financial support looks like has yet to be determined but there is interest from the LRC in supporting businesses and the DBA with activation and beautification throughout the closure.

The Louisville Chamber of Commerce (Chamber) promotes and supports businesses throughout the City of Louisville. The Chamber has expressed support of the DBA's request to close Main Street and is interested in exploring options for their involvement and activation of a Main Street temporary closure.

Based on feedback received from businesses and residents, Staff is proposing a temporary closure from April to November 2024 of the 600 through 800 blocks of Main Street (Elm Street to Walnut Street). Staff needs a week for closure implementation and

a week for removal. The materials will start to be put out the last week of April and will be picked up the first week of November, after Halloween weekend. The closure would close Main Street block by block, keeping all east-west roads open to vehicular traffic. The City of Louisville has some materials for the proposed closure, from previous closures in 2020 and 2021. We would reuse these materials for the 2024 closure- to include barricades, barrels, and rope. There are a few needs for this year's closure to include additional barricades, asphalt tape/paint, lighting, and signage.

Material	**Already Have**	**Need**
Concrete Barricades	46	Potentially
Fences	49	Potentially
Barrels	38	Potentially
Lighting	X	Potentially
Patios	34	
Vehicular Signage	X	Potentially
Downtown Signage		X
Asphalt Markings		X
Sidewalk Markings		X
Beautification Elements		X

Fire access would be maintained through the closure by a 16-foot fire lane with two-foot buffers on either side. The 16-foot fire lane would be in the middle of the street closure and always remain clear of objects. The 2-foot buffers on either side can be programmed with light items such as tables and chairs, but only with items that can be easily moved if necessary. This configuration allows the Louisville Fire Department to utilize all their necessary trucks and equipment in case of emergency.

For the length of the closure, RTD would reroute its DASH bus to LaFarge Avenue. RTD based their decision on multiple factors to include ADA access, physical constraints of the bus such as turn radii and width, and proximity to downtown. Conversations are ongoing with RTD regarding short through long term route alternatives, but for the 2024 year, rerouting to LaFarge Avenue is the only available alternative. Staff will continue to work with RTD and explore short-through long-term alternatives.

The RTD DASH bus is the bus route that runs through Main Street. Monday through Friday, the bus runs half hour splits or hourly (from 520a through 1130p). At the peak times, there are 4 buses an hour, total, for both directions. At all other times, there are 2 buses total per hour. On Saturdays, the bus schedule alternates between half hour splits and running hourly with either 2 or 4 buses per hour total for both directions (from 7:15a through 11:40p). Sunday/holidays bus schedules are on an hour schedule, resulting in 2 buses an hour total for both directions (from 7:30a to 10:45p). These times are for the Main-Spruce stop. At the maximum frequency, there would be four buses

total, for both directions, per hour. (Scheduled total Trips: Weekday – 63 trips total for both directions. Saturday – 52 trips total for both directions. Sunday/holiday – 32 trips total for both directions.)

In 2023, the Patio Program supplied 32 patios to downtown businesses. The patios were installed from April 24, 2023, to November 6, 2023. In 2022, 34 patios were utilized by downtown businesses. Each patio was installed in one parking space adjacent to the business utilizing the patio. A closure of the 600-800 blocks of Main Street would result in a loss of 55 two-hour parking spaces (57 if the two fifteen-minute spots in front of City Hall are included. The 55 spaces would be 23 additional spaces than the Patio Program accommodated in 2023. Closing the 900 block of Main Street would result in an additional 19 two-hour parking spaces being eliminated for the closure. Installing the closure the last week of April and removing the closure the first week of November will be consistent with past downtown events, such as the Patio Program. Patios will still be available to interested businesses within and outside the closure area. The Patio Program will run the same length as the closure.

To help accommodate the loss of parking spaces on Main Street, staff has included a diagram of potential area signage. These signs would be used to communicate to vehicular traffic, hopefully before they reach the downtown area. These signs would encourage parking in downtown commercial areas, such as DELO, and direct visitors away from parking in neighborhoods. This parking information can be included in all City and DBA communications/marketing for the closure. Staff will work with business owners downtown to encourage employees to park in lots, and not in spaces directly in front of businesses. In addition, City staff is in communication with property owners to discuss potential parking agreements for downtown, including during the closure.

Below and attached is a summary map of where we could put variable message signs to help direct patrons and visitors to commercial parking areas.

Staff explored the possibility of implementing an entertainment district for a shared liquor service area but determined it would be unfeasible for the 2024 season. An entertainment district requires the formation and incorporation of an association, comprised of at least one member from each liquor license holder within the district. The association would be responsible for operating the area. Additional steps including a liquor application process are also required. Staff will continue to explore the possibility of creating an entertainment district within downtown Louisville.

If a street closure is approved, downtown liquor licensees will have the option to consider communal dining. This would be on a block-by-block basis and requires a communal dining application in addition to a temporary modification of premises. Communal dining allows a patron to purchase liquor at any establishment on the block then sit anywhere within the block. The licensees as a group would be responsible for proper liquor service on the block.

Seasonal events, such as Street Faire and the Labor Day Parade, will still occur if there is a temporary Main Street closure. The closure will be a supplement to ongoing events such as Street Faire and the seasonal Farmer' Market. Downtown can accommodate all

these events, and event liaisons will ensure coordination and communication between parties to support planning, communication, and promotion.

The DBA and the Chamber of Commerce are excited about the potential 2024 closure and have committed to various activation elements. The closure of Main Street is intended to be an activation event for downtown- attracting visitors, customers, and families. Activation throughout the closure will engage businesses, residents, and visitors to encourage lingering, enjoyment and return visits. Activation/engagement ideas include lawn games (such as cornhole and ladder ball), First Friday events, community barricade painting, barricade painting by local elementary school children, sidewalk sales, hopscotch, and additional to be determine events. Activation elements will be family friendly and intended to get a wide variety of community members engaged. Details of activation will be determined if a closure is approved.

Staff will create a communication plan and work with external partners to communicate the closure details to stakeholders. Closure communication will include timelines, parking options, alternative travel options, business support and neighborhood considerations. The City will communicate all these details and will work with partners and businesses to communicate through their channels as well.

FISCAL IMPACT:
The City of Louisville has many of the materials needed for the closure, that were also used in previous closures. There are additional needs this year that will be determined by the final layout and functionality of the closure. Potential needed elements include safety markets, barricades, placemaking elements, signage, and beautification components. the layout, safety markers and potential placemaking elements. In addition to staff time, the total financial need for the closure should be equal to or less than $10,000.

RECOMMENDATION:
The consideration is for the closure of the 600-800 blocks (Elm to Walnut) from late April to early November to non-emergency vehicles. Setup would occur the last week of April and pickup would occur the first week of November. A 16-foot fire line with two-foot buffers on either side would be maintained for fire access. The closure would be block by block, keeping all east-west streets open to vehicular traffic. The closure would be done through the use of barricades, similar to the 2021 closure.

In addition, staff would use a proposed signage and wayfinding plan to encourage visitors and employees to park in commercial areas downtown and away from the neighborhoods. There is a communications plan underway that would assist communication with visitors, businesses and the neighbors surrounding downtown.

Staff believes activation throughout the closure would be instrumental in the success of the closure, creating new opportunities for people to engage with the businesses and

larger downtown community. A lack of activation could result in negative connotations regarding the street closure and visits to downtown Louisville.

ATTACHMENT(S):

1. Resolution No. 16, Series 2024
2. DBA Request for March to November 2024 Closure of Main Street
3. Proposed Temporary Main Street Closure Map
4. Main Street Closure Materials and Needs
5. Temporary Main Street Closure Proposed Signage and Wayfinding Exhibit
6. Downtown Louisville Parking Map
7. RTD DASH Schedule
8. RTD Dash Map
9. Downtown Louisville Revenue 2018-2023
10. Main Street Supplemental Data
11. 2023 Patio Program Application
12. Old Town Neighbors March 9 Meeting Presentation (included by request of Mayor)
13. Downtown Fresno Partnership Experiment of Pedestrian Malls (included by request of Mayor)
14. Public Comments

STRATEGIC PLAN IMPACT:

☐	**Financial Stewardship & Asset Management**	☐	**Reliable Core Services**
☒	**Vibrant Economic Climate**	☐	**Quality Programs & Amenities**
☐	**Engaged Community**	☐	**Healthy Workforce**
☐	**Supportive Technology**	☐	**Collaborative Regional Partner**

RESOLUTION NO. 16
SERIES 2024

A RESOLUTION AUTHORIZING THE TEMPORARY CLOSURE OF PORTIONS OF MAIN STREET IN DOWNTOWN LOUISVILLE FOR OUTDOOR DINING AREAS AND ACTIVATION

WHEREAS, the Downtown Business Association requested the City of Louisville consider a temporary closure of portions of Main Street to non-emergency vehicular traffic for restaurant and business use, games and activities; and

WHEREAS, the City's bars, restaurants and other food and beverage establishments significantly contribute to the overall fabric of the City's economy and the health, welfare, and enjoyment of its residents; and

WHEREAS, Louisville is experiencing some large vacancies within the core of downtown; and

WHEREAS, the City Council believes it is important to take actions intended to help its residents and businesses with the impacts of inflation and vacancies; and

WHEREAS, in 2009, the Downtown Business Association started the City of Louisville's patio program to support Main Street restaurants by providing additional outdoor dining opportunities, which patio program has been run by the City since 2013; and

WHEREAS, businesses have an opportunity to temporarily modify their liquor license to accommodate expanded spaces and serving areas during the closure; and

WHEREAS, the closure of Main Street is designed to provide additional support to Main Street restaurants and businesses that are interested in techniques to revitalize downtown and encourage customer lingering and return visits; and

WHEREAS, it is the intent of the City Council and the Downtown Business Association that the closure of Main Street during 2024 is temporary and that the right of way of Main Street to remain public space; and

WHEREAS, the City Council finds that allowing food and beverage establishments to offer expanded outdoor dining areas in the City right-of-way will assist with the retention of downtown businesses and help with blight mitigation; and

WHEREAS, the City has broad authority to regulate the use of its streets and rights-of-way pursuant to its home rule authority and state law, including C.R.S. § 31-15-702; and

WHEREAS, the City Council finds that it should authorize the closure of certain portions of Main Street to vehicular traffic in order to encourage and allow food and beverage establishments to utilize portions of the City right-of-way for outdoor dining areas, allow the DBA and partner organizations to provide activities and games.

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

Section 1. The City Council hereby authorizes the closure of the following portions of Main Street to vehicular traffic: Walnut Street to Spruce Street, Spruce Street to Pine Street, and Pine Street to Elm Street (the "Designated Blocks"), with the east/west streets remaining open to traffic. The Designated Blocks will provide a dedicated emergency access lane for Police and Fire.

Section 2. The City Manager's Office is hereby authorized and directed to implement procedures allowing food and beverage establishments to utilize the City right-of-way within the Designated Blocks for outdoor seating and dining areas. Any such use of the City right-of-way shall be subject to approval by the City Manager's Office and shall be in compliance with applicable State and County public health orders, laws, and regulations. An establishment serving alcohol within such areas shall also obtain approval for a temporary modification of its liquor licensed premises.

Section 3. The Designated Blocks shall be closed commencing on April 29, 2024 based on approval of street layouts by the City Manager or her designee and shall remain closed until November 4, 2024.

Section 4. City staff is directed to erect signage to detour non-RTD traffic to Front Street during times that Front Street is open to through traffic.

PASSED AND ADOPTED this 19th day of March, 2024.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Meredyth Muth, City Clerk

From:	Rick Kron
To:	City Council
Cc:	Eric Reed; Jenni Hlawatsch; Tom Horst; Stephanie Schlageter; Mark Oberholzer; Ashley O"Connell; Greg Reedy; Heather Bingaman; Jeff Durbin; Austin Brown; Alexis Adler; Eric Lund
Subject:	DBA Request for March to November 2024 Closure of Main Street
Date:	Monday, December 11, 2023 5:06:43 PM

Dear Mayor and Council:

The Downtown Business Association of Louisville ("DBA") requests that the City close the 600 through 900 blocks of Main Street to non-emergency vehicular traffic from March to November, 2024.

With the exception of the addition of the 900 Block, the DBA is requesting that the closure be similar to the closure that was done in 2021 (the second year of the prior closures), with areas on the street to be used for restaurant and business use, emergency vehicles, games and activities-particularly for children, events, and non-motorized transportation.

To help support this request, the DBA has recently conducted three surveys.

First, a survey of the restaurants on and near Main Street showed over 90% supporting the closure (with two non-respondents). Second, a survey of 190 present and former DBA members for which we had email addresses also showed over 90% support. Third, a survey specifically addressing the businesses in the 900 block, showed 100% support among those who responded. The latter survey is ongoing. Experience with the prior two closures showed extremely strong support from residents and visitors alike.

In the past, the City requested that the DBA not engage with RTD concerning bus service, reserving those discussions to itself. The DBA has no objections to the City taking this role again, hopefully with results that will satisfy residents on LaFarge Street. Signage also helped a number of the traffic issues, and we have several months to consider other solutions.

To date, the DBA has discussed the Main Street closure with the LRC, and urges the City to do so as well. Our discussions show LRC support, which may include financial support, to help prevent or alleviate blight because the closure is expected to assist with business retention and attraction, and (of course), help increase business in the urban renewal area. Members of the LRC have also expressed interest in exploring over-the-street lighting improvements in some or all of the closure area, similar to Larimer Street in Denver.

Peter Kageyama, in his book 'for THE LOVE of CITIES" emphasizes the need for healthy cities to be "fun." As he put it:

"Cities are not directly responsible for being fun. Certainly they play a huge role in facilitating fun, but ultimately fun comes from people who live in the community. The city may be a squelcher of that fun, or it can figure out how to nurture, support and maybe even amplify the fun being produced by its citizens.

"How can cities help? By recognizing that the city is a venue, a stage, a playground, a canvas, a meeting place, and a market, as well as more traditional definitions."

Louisville's past experience has demonstrated that closing Main Street to vehicular traffic amplifies all of these functions in Downtown—venue, stage, playground, canvas, meeting place, and market—in other words, the closure encourages residents, visitors, kids, and even the businesses, to gather and have fun.

In conclusion, the DBA requests that the City nurture, support, and amplify the fun next year by again temporarily closing Main Street.

Thank you for your continued support of Downtown!

Sincerely,

Board of Directors,
Downtown Business Association of Louisville, Inc.

By: Rick Kron
Its: President

And as a Louisville resident since 1987.

Sent from my iPad

==CAUTION: EXTERNAL EMAIL==

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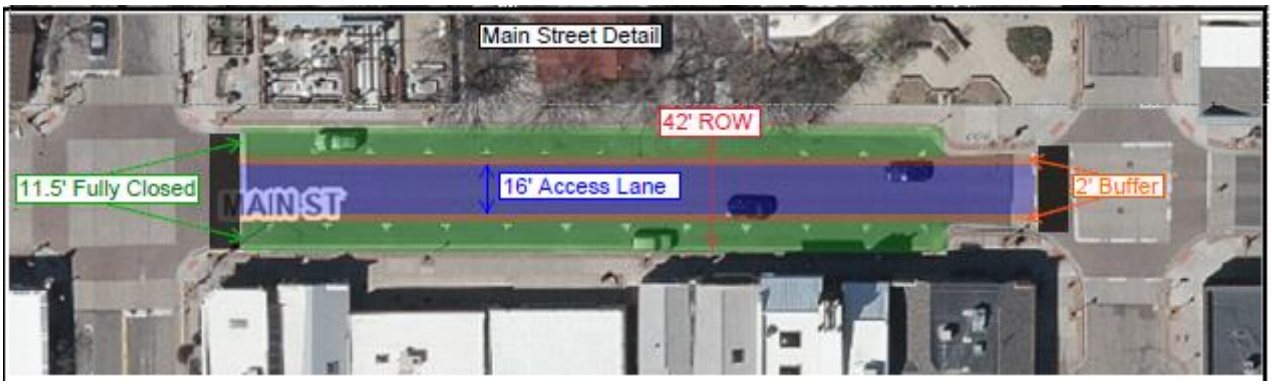
Proposed Closure Map

The proposed closure is for the 600-800 blocks of Main Street. The closure would be on a block by block basis, with all east-west streets reamining open to vehicular traffic. The closure would be done with barricades, similar to the 2021 closure.

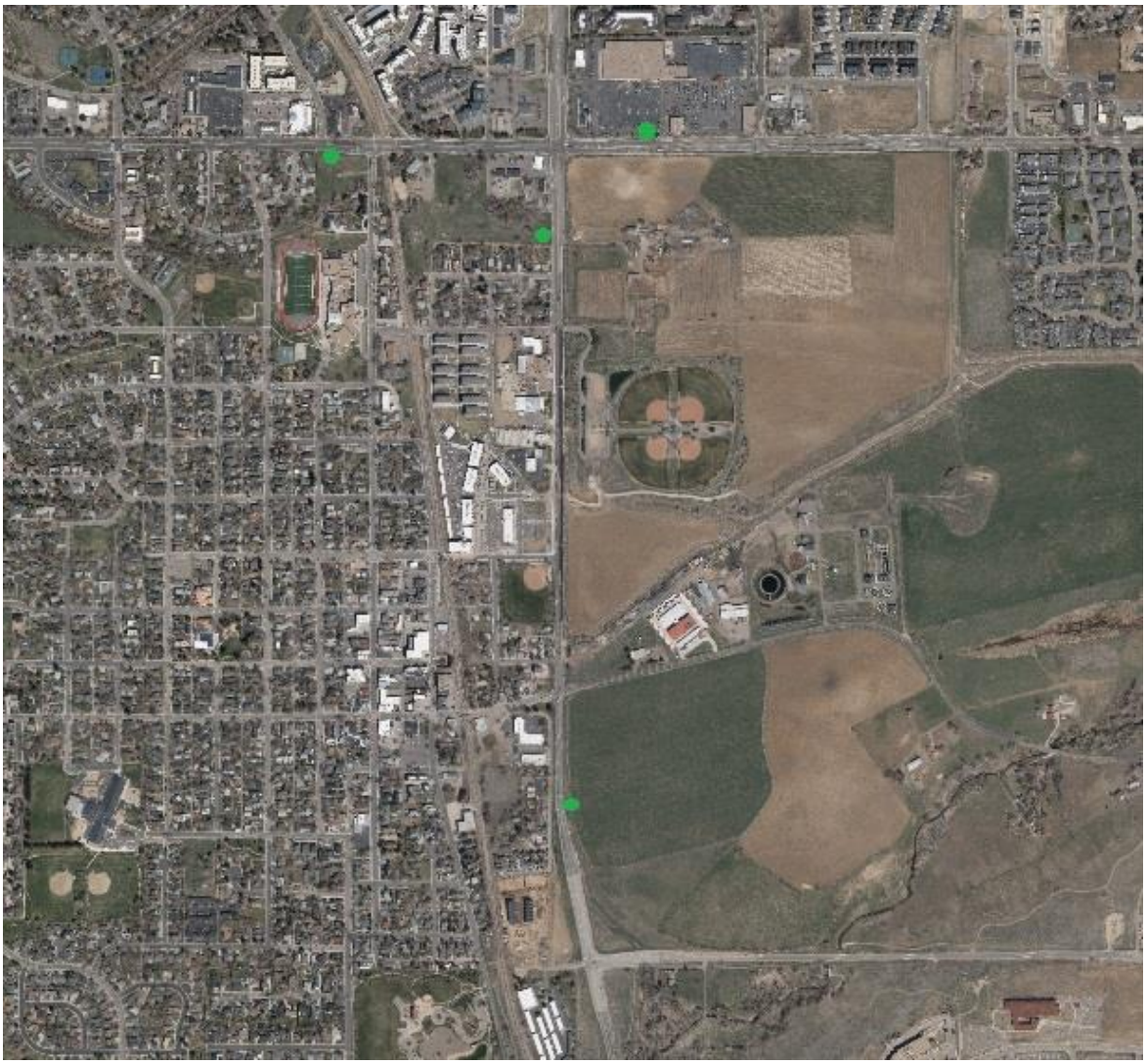

Main Street Detail
42' ROW
11.5' Fully Closed
MAIN ST
16' Access Lane
2' Buffer

Material	Already Have	Need
Concrete Barricades	46	Potentially
Fences	49	Potentially
Barrels	38	Potentially
Lighting	X	Potentially
Patios	X	
Vehicular Signage	X	Potentially
Downtown Signage		X
Asphalt Markings		X
Sidewalk Markings		X
Beautification Elements		X

*Exact needs will be based on length and configuration of closure and will be determined if a closure is approved.

Vehicular Signage

Potential locations for signage are indicated by a green dot. This level of signage is intended for vehicle traffic. These signs could be variable message signs, or other types of signs, that will direct traffic as vehicles are coming into downtown, and direct drivers to park in commercial areas such as DeLo. The exact locations are subject to change but the intent it to reach visitors on the major thoroughfares in each direction.



Additional Signage

Signage can be included throughout downtown, to direct visitors and employees to additional parking in DeLo. This signage would be smaller in scale than the vehicular signage and will encourage drivers to park in commercial areas, not in the neighborhood. Potential sign locations are indicated in blue and are subject to change based on needs when implementing. General communication before and during the closure would include information about parking such as maps, directions, rules and parking tips.

Parking

This map is your guide to the restricted and unrestricted parking spaces in the Historic Downtown Louisville commercial district. Visitors can also park in all legal spaces outside of the commercial district. Please be courteous with our neighbors when parking in residential areas.

Please note the DASH bus runs to Lafayette and Boulder with stops on Main Street.

LEGEND

2 Hour Parking

2 Hour Parking – Limited in Summer

Unrestricted Parking

Route DASH | January 7, 2024 - May 25, 2024

Eastbound, Monday - Friday

Downtown Boulder Station - Gate F	Broadway - Canyon	Broadway - Euclid Ave- [University of Colorado]	Broadway & 27th Way	US 36 & Table Mesa Station - Gate D	Manhattan - South Boulder	Via Appia - South Boulder	Pine - Appia	Main - Spruce	South Boulder - Centaur Village	Lafayette Park-n-Ride - Gate A
606A	608A	612A	615A	621A		630A	632A	636A	642A	647A
621A	623A	627A	630A	636A	637A					
636A	638A	642A	645A	651A		701A	704A	708A	714A	719A
651A	653A	657A	700A	706A	708A					
706A	708A	712A	715A	721A		731A	734A	738A	744A	749A
721A	723A	727A	730A	736A	738A					
736A	738A	742A	745A	751A		801A	804A	808A	814A	819A
751A	753A	757A	800A	806A	808A					
807A	809A	813A	816A	822A		832A	835A	839A	845A	850A
821A	823A	827A	830A	836A	838A					
836A	838A	842A	845A	851A		900A	903A	907A	913A	918A
851A	853A	857A	900A	906A	908A					
907A	909A	913A	916A	922A		931A	934A	938A	944A	949A
936A	938A	942A	945A	951A		1000A	1003A	1007A	1013A	1018A

1007A	1009A	1013A	1016A	1022A		1031A	1034A	1038A	1044A	1049A
1037A	1039A	1043A	1046A	1052A		1101A	1104A	1108A	1114A	1119A
1107A	1109A	1113A	1116A	1122A		1131A	1134A	1138A	1144A	1149A
1137A	1139A	1143A	1146A	1152A		1201P	1204P	1208P	1214P	1219P
1207P	1209P	1213P	1216P	1222P		1231P	1234P	1238P	1244P	1249P
1237P	1239P	1243P	1247P	1254P		103P	106P	110P	116P	121P
107P	109P	113P	117P	124P		133P	136P	140P	146P	151P
137P	139P	143P	147P	154P		203P	206P	210P	216P	221P
207P	209P	213P	217P	224P		233P	236P	240P	246P	251P
237P	239P	243P	247P	254P		304P	307P	311P	318P	324P
307P	309P	313P	317P	324P		334P	337P	341P	348P	354P
322P	324P	328P	332P	339P	341P					
337P	339P	343P	347P	354P		404P	407P	411P	418P	424P
352P	354P	358P	402P	409P	411P					
407P	409P	413P	417P	424P		434P	437P	441P	448P	454P
422P	424P	428P	432P	439P	441P					
437P	439P	443P	447P	454P		504P	507P	511P	518P	524P
452P	454P	458P	502P	509P	511P					

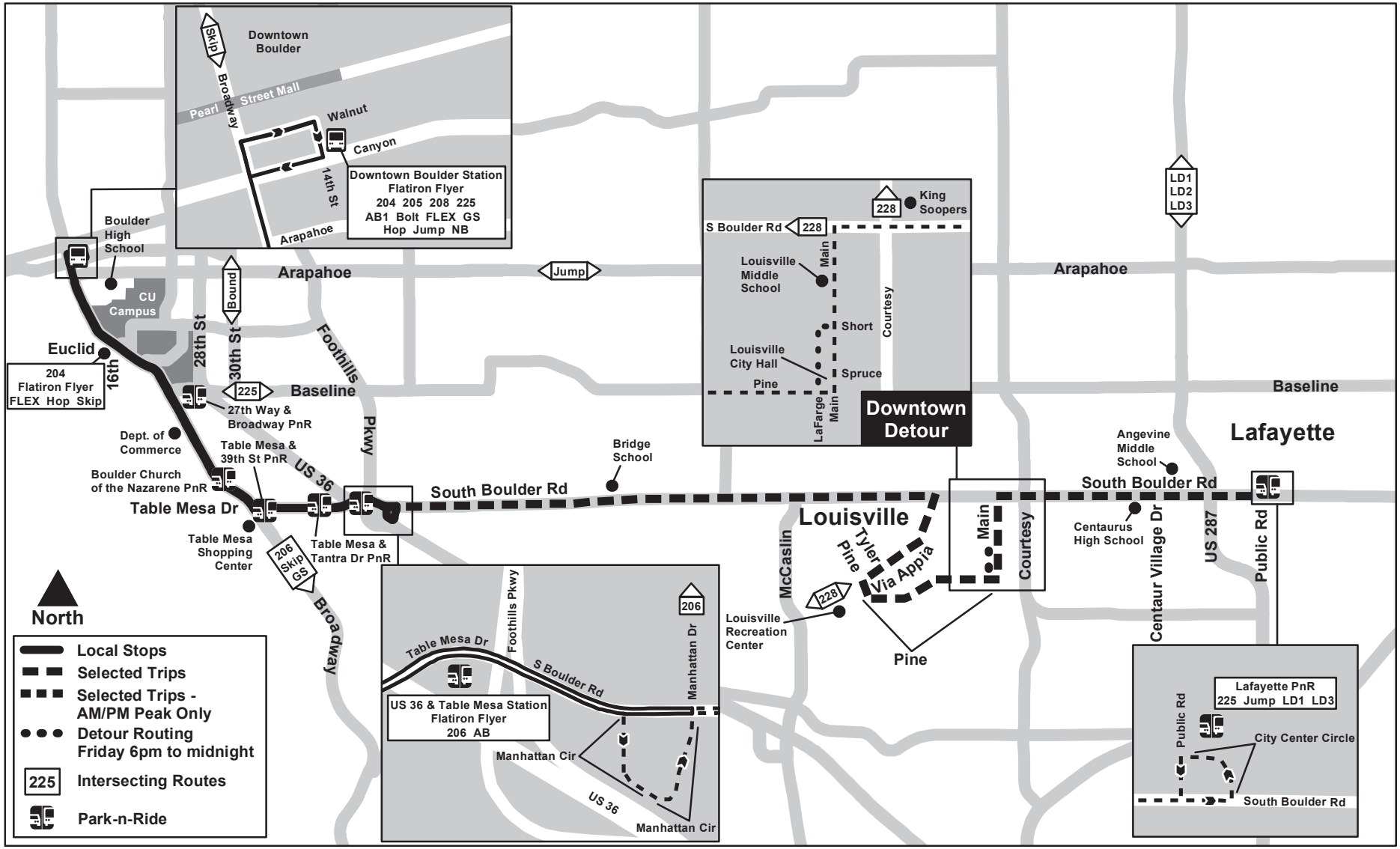
507P	509P	513P	517P	524P		534P	537P	541P	548P	554P
522P	524P	528P	532P	539P	541P					
537P	539P	543P	547P	554P		604P	607P	611P	618P	624P
552P	554P	558P	602P	609P	611P					
607P	609P	612P	615P	621P		630P	632P	636P	642P	647P
637P	639P	642P	645P	651P		700P	702P	706P	712P	717P
707P	709P	712P	715P	721P		730P	732P	736P	742P	747P
807P	809P	812P	814P	819P		828P	830P	833P	838P	842P
907P	909P	912P	914P	919P		928P	930P	933P	938P	942P
1015P	1017P	1020P	1022P	1027P		1036P	1038P	1041P	1046P	1050P
1115P	1117P	1120P	1122P	1127P		1136P	1138P	1141P	1146P	1150P
1215A	1217A	1220A	1222A	1227A	1228A					
115A	117A	120A	122A	127A	128A					

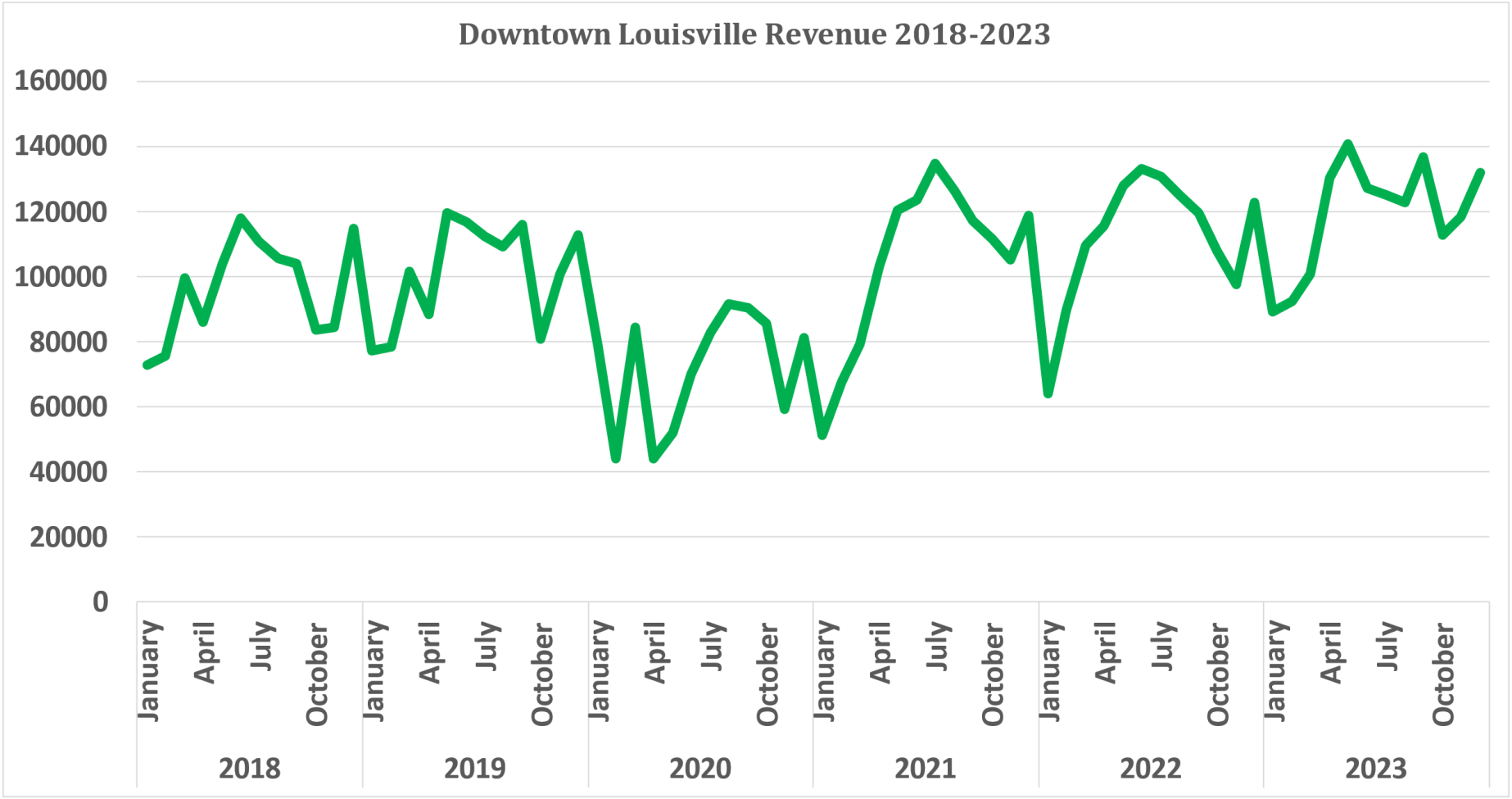
All times are approximate.

Holiday schedule: RTD services follow a Sunday/Holiday schedule on New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day

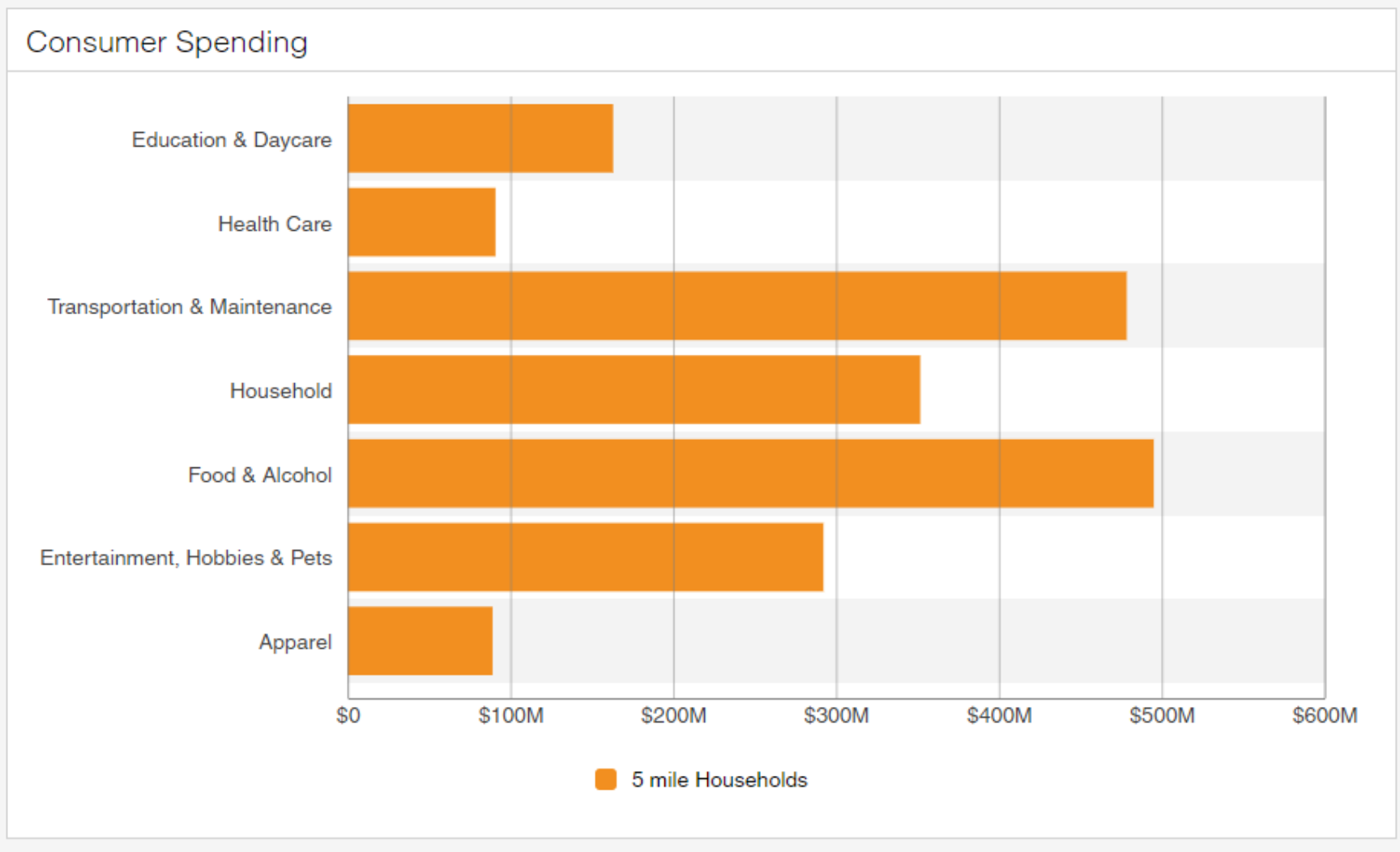
Route DASH Boulder/Lafayette via Louisville

Effective: 3 September 2023
Map Revised: 3 September 2023

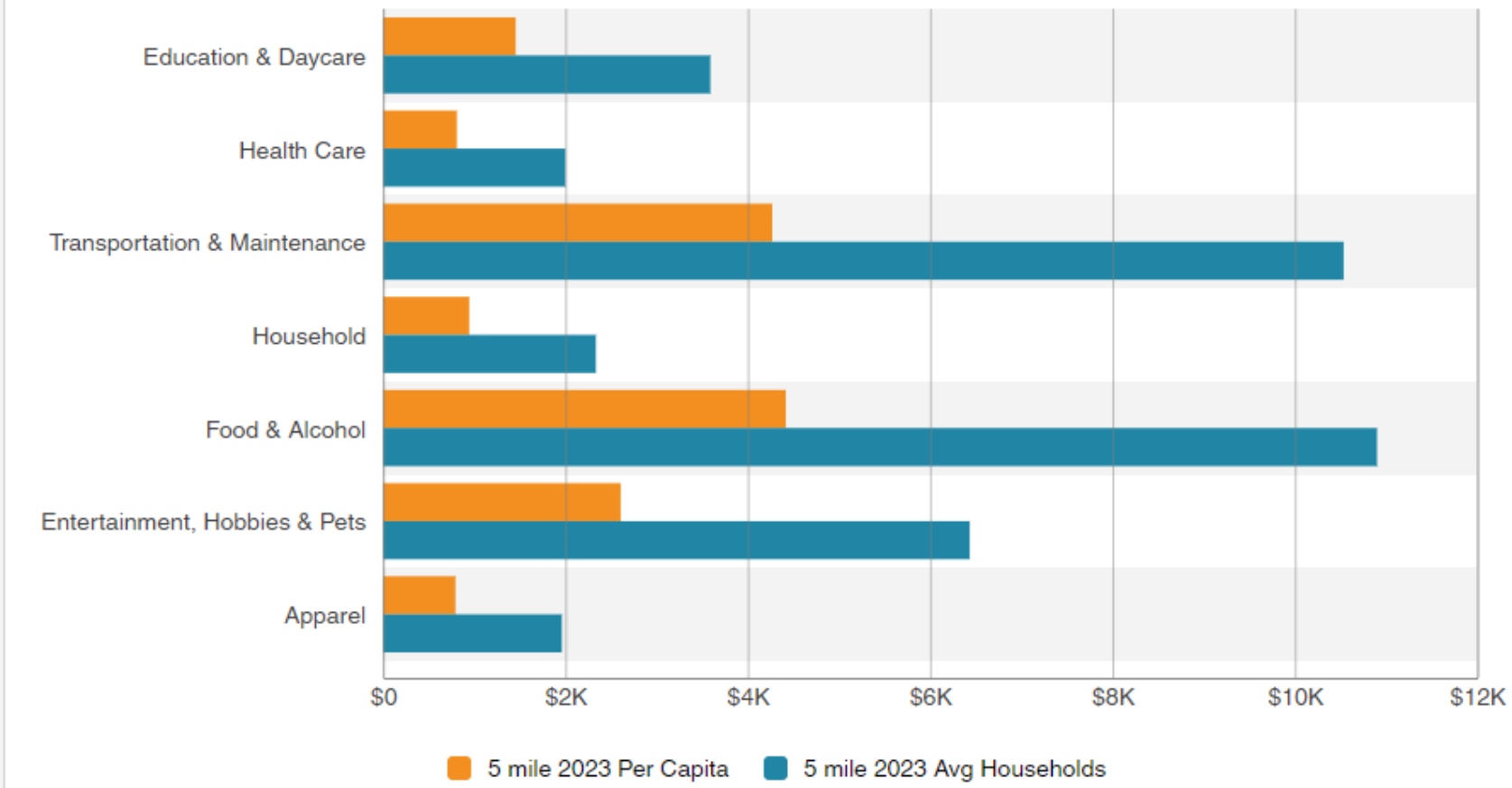



Downtown Louisville Revenue 2018-2023
160000
140000
120000
100000
80000
60000
40000
20000
0
January
April
July
October
2018
2019
2020
2021
2022
2023

Following consumer and background information pulled using 801 Main Street as a reference point.



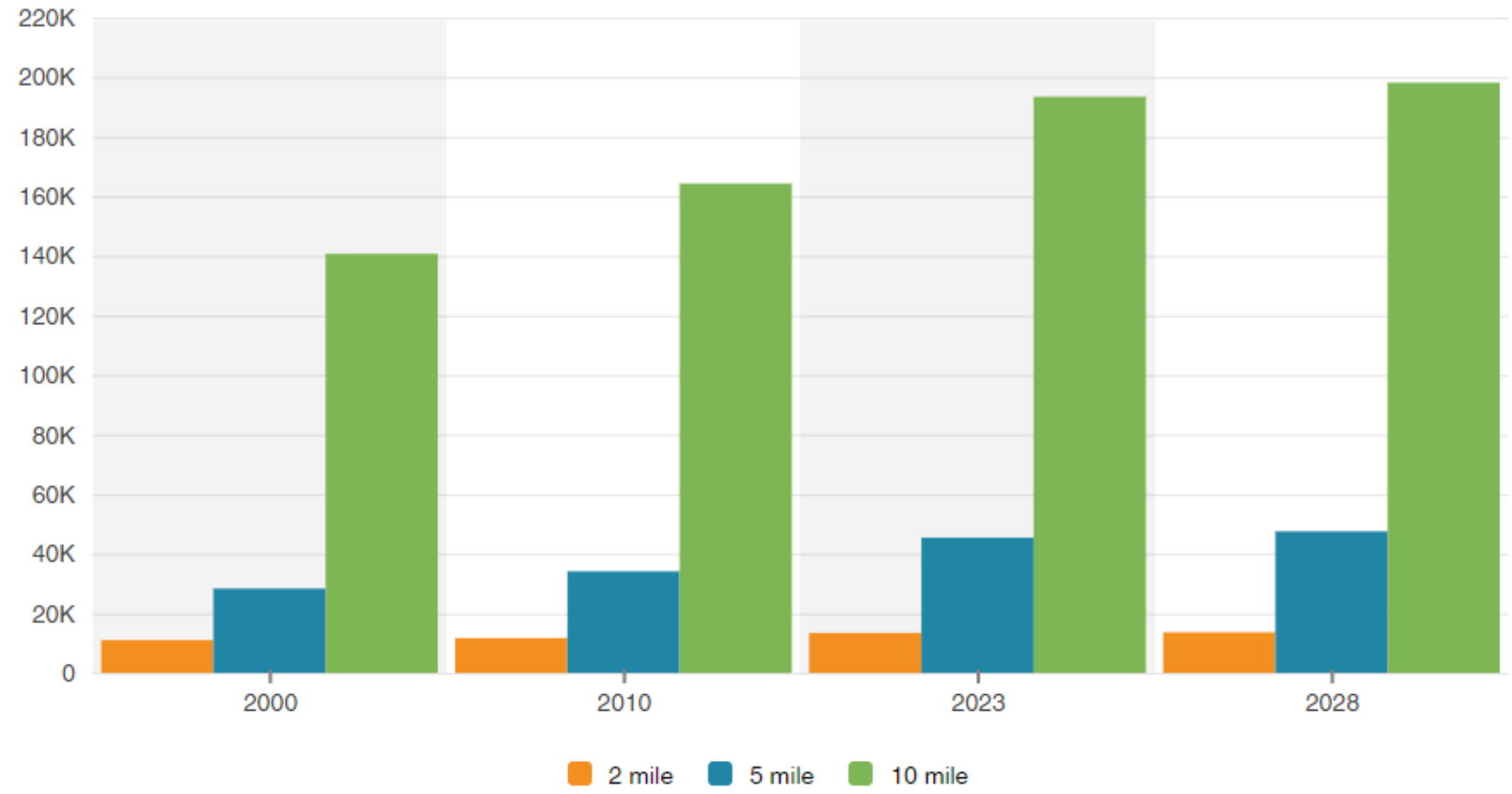
Per Capita & Avg Household Spending



Traffic

Collection Street	Cross Street	Traffic Volume	Count Year	Distance from Property
Main St	Spruce St S	4,775	2022	0.02 mi
MAIN ST	Pine St S	4,369	2022	0.05 mi
Spruce St	Front St E	1,079	2022	0.06 mi
Walnut St	Front St E	1,061	2022	0.08 mi
Pine St	Lafarge Ave W	5,351	2022	0.08 mi
Main St	Walnut St S	5,372	2015	0.08 mi
Main St	E Walnut St S	5,397	2022	0.08 mi
Pine Street	East St E	7,344	2019	0.08 mi
Front St	Spruce St S	1,332	2022	0.08 mi
Pine St	Front St E	7,408	2022	0.09 mi

Households


220K
200K
180K
160K
140K
120K
100K
80K
60K
40K
20K
0
2000
2010
2023
2028
2 mile
5 mile
10 mile

Daytime Employment

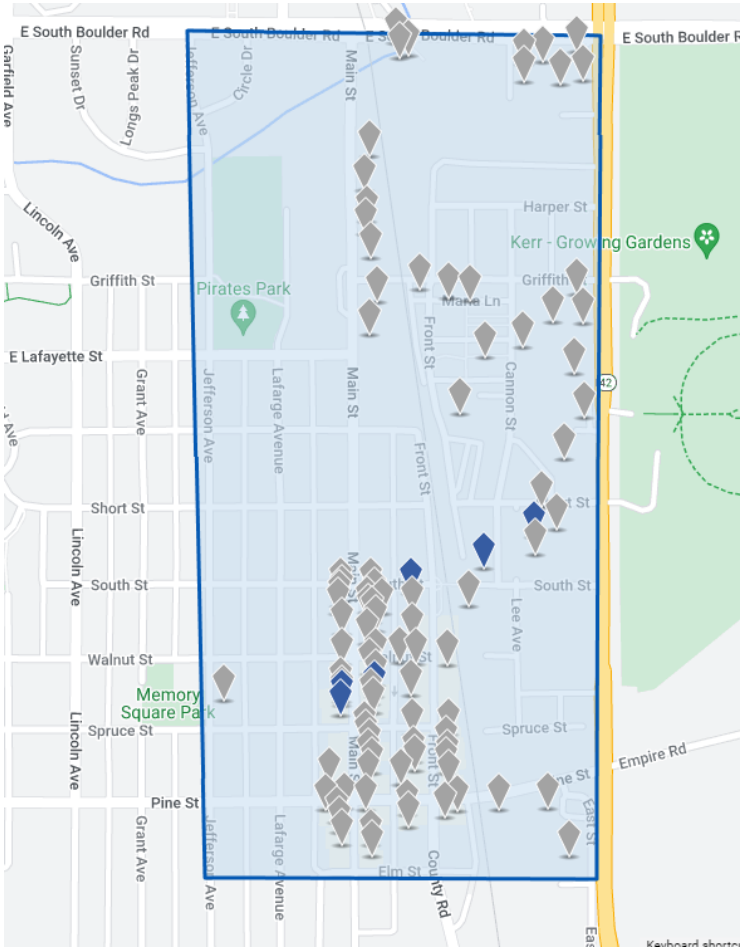
Radius	2 mile			5 mile			10 mile		
	Employees	Businesses	Employees Per Business	Employees	Businesses	Employees Per Business	Employees	Businesses	Employees Per Business
Service-Producing Industries	**9,863**	**1,409**	**7**	**53,741**	**5,977**	**9**	**237,046**	**23,930**	**10**
Trade Transportation & Utilit…	1,949	185	11	10,724	850	13	39,253	3,412	12
Information	474	42	11	8,536	160	53	15,937	671	24
Financial Activities	692	157	4	3,555	645	6	15,831	2,923	5
Professional & Business Se…	1,360	227	6	7,367	915	8	38,583	4,083	9
Education & Health Services	2,979	554	5	12,018	2,402	5	64,982	8,486	8
Leisure & Hospitality	1,521	118	13	7,887	464	17	34,539	1,983	17
Other Services	579	102	6	2,613	465	6	12,183	1,987	6
Public Administration	309	24	13	1,041	76	14	15,738	385	41
Goods-Producing Industries	**1,846**	**120**	**15**	**7,621**	**526**	**14**	**22,681**	**1,999**	**11**
Natural Resources & Mining	13	4	3	74	22	3	311	69	5
Construction	854	60	14	3,082	304	10	9,603	1,268	8
Manufacturing	979	56	17	4,465	200	22	12,767	662	19
Total	**11,709**	**1,529**	**8**	**61,362**	**6,503**	**9**	**259,727**	**25,929**	**10**

Consumer Spending Details

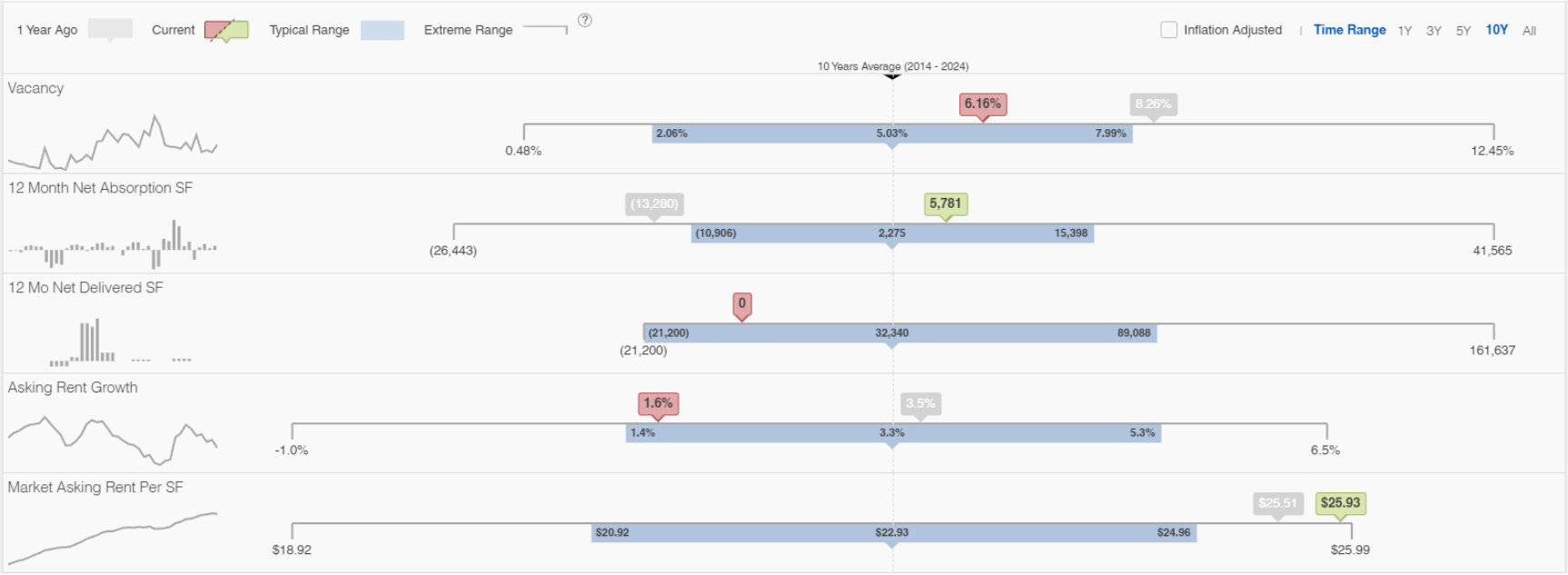
2023 | 2028

Radius	2 mile			5 mile			10 mile		
Expand All	Total Spending	Avg Household	Per Capita	Total Spending	Avg Household	Per Capita	Total Spending	Avg Household	Per Capita
Apparel	**$26,164,563**	**$1,946**	**$800**	**$89,087,690**	**$1,961**	**$795**	**$363,093,449**	**$1,877**	**$743**
Entertainment, Hobbies & P…	**$89,421,217**	**$6,652**	**$2,735**	**$292,281,833**	**$6,434**	**$2,607**	**$1,170,367,386**	**$6,049**	**$2,395**
Food & Alcohol	**$147,250,069**	**$10,954**	**$4,503**	**$495,170,211**	**$10,901**	**$4,417**	**$2,006,023,836**	**$10,369**	**$4,106**
Household	**$108,922,925**	**$8,103**	**$3,331**	**$351,791,011**	**$7,744**	**$3,138**	**$1,362,485,674**	**$7,042**	**$2,789**
Transportation & Maintenance	**$143,659,938**	**$10,687**	**$4,394**	**$478,556,110**	**$10,535**	**$4,269**	**$1,963,991,482**	**$10,151**	**$4,020**
Health Care	**$28,020,294**	**$2,085**	**$857**	**$90,885,390**	**$2,001**	**$811**	**$357,517,323**	**$1,848**	**$732**
Education & Daycare	**$50,857,964**	**$3,784**	**$1,555**	**$163,099,957**	**$3,591**	**$1,455**	**$606,098,041**	**$3,133**	**$1,241**
Total Specified Consumer S…	**$594,296,970**	**$44,212**	**$18,175**	**$1,960,872,202**	**$43,167**	**$17,493**	**$7,829,577,191**	**$40,469**	**$16,025**

Following information was taken with information from the following polygon.

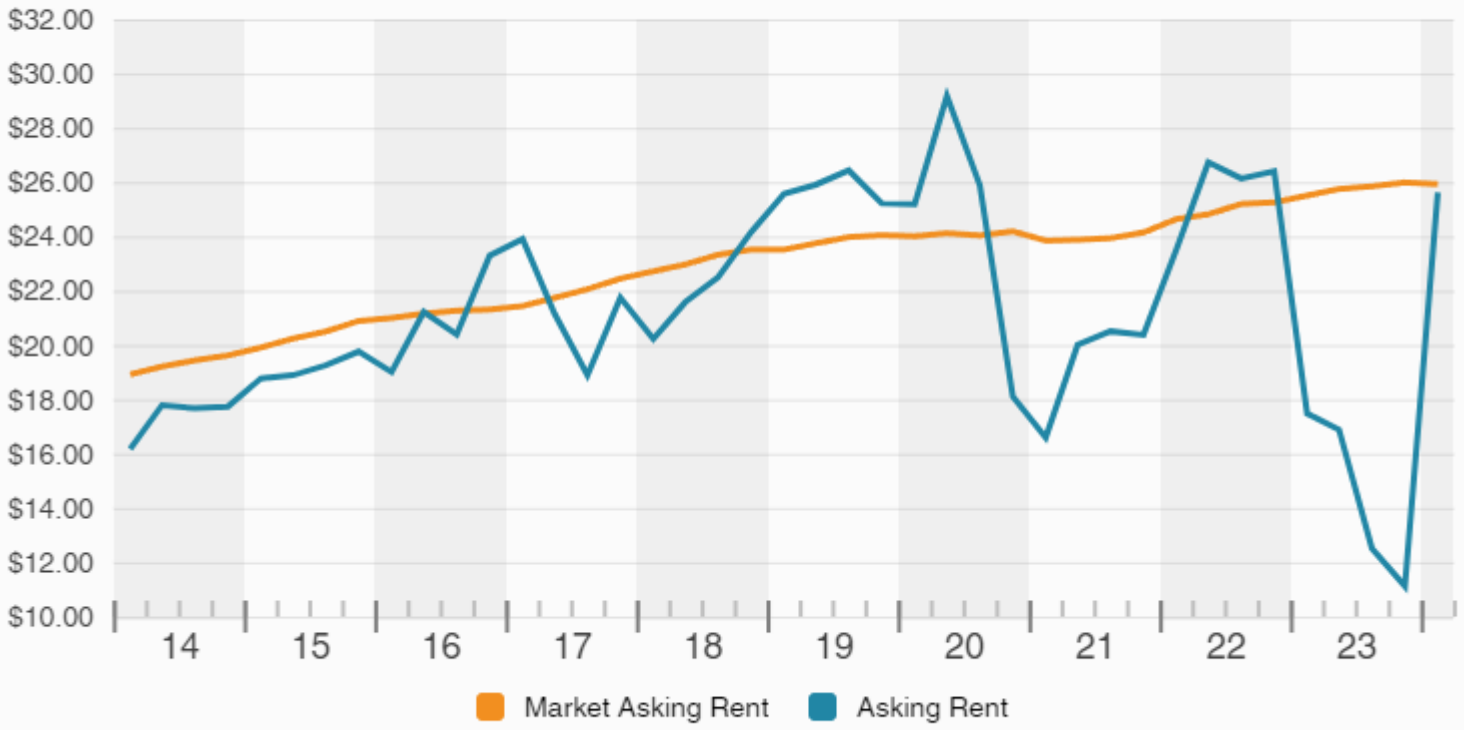


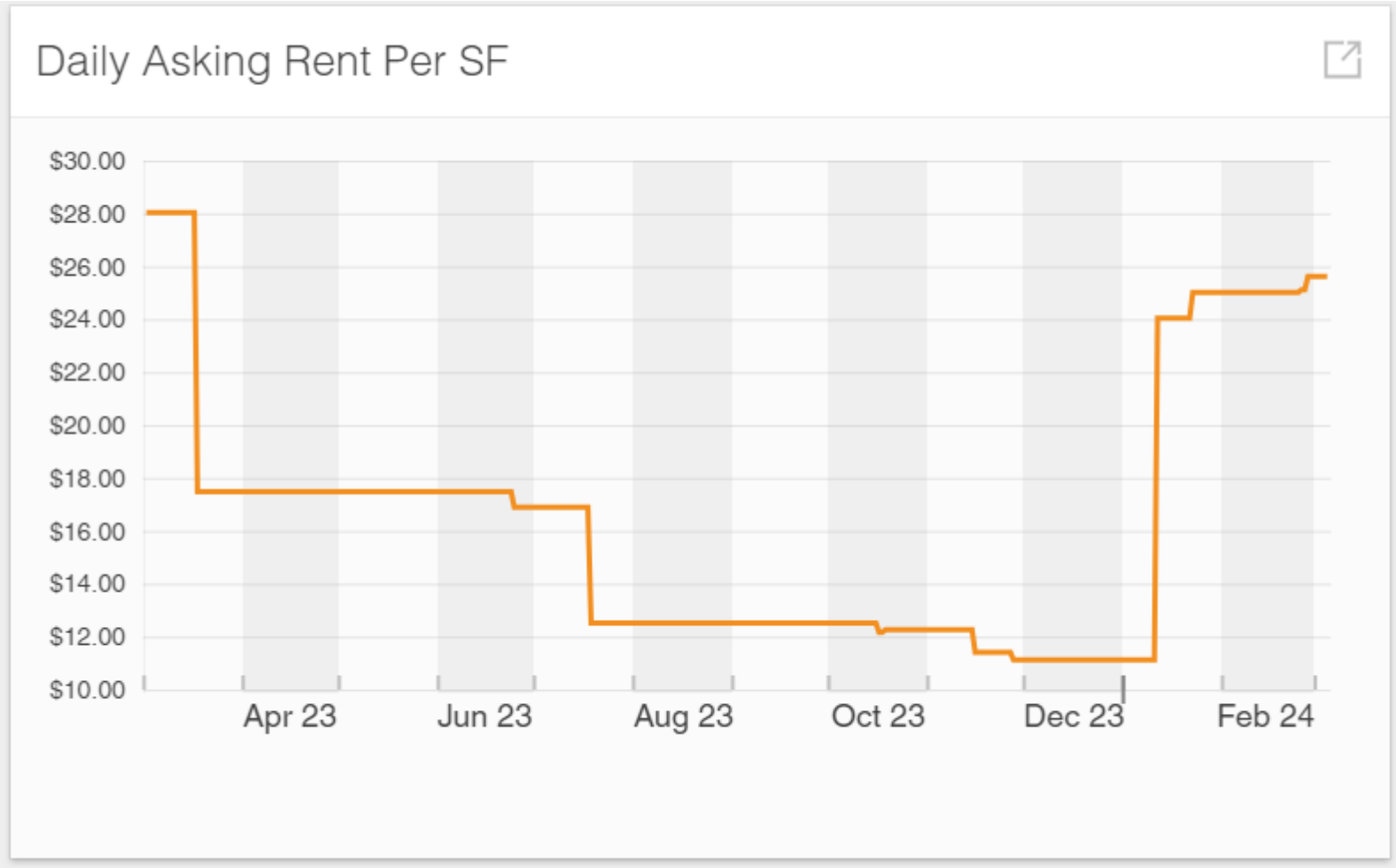
Key Performance Indicators

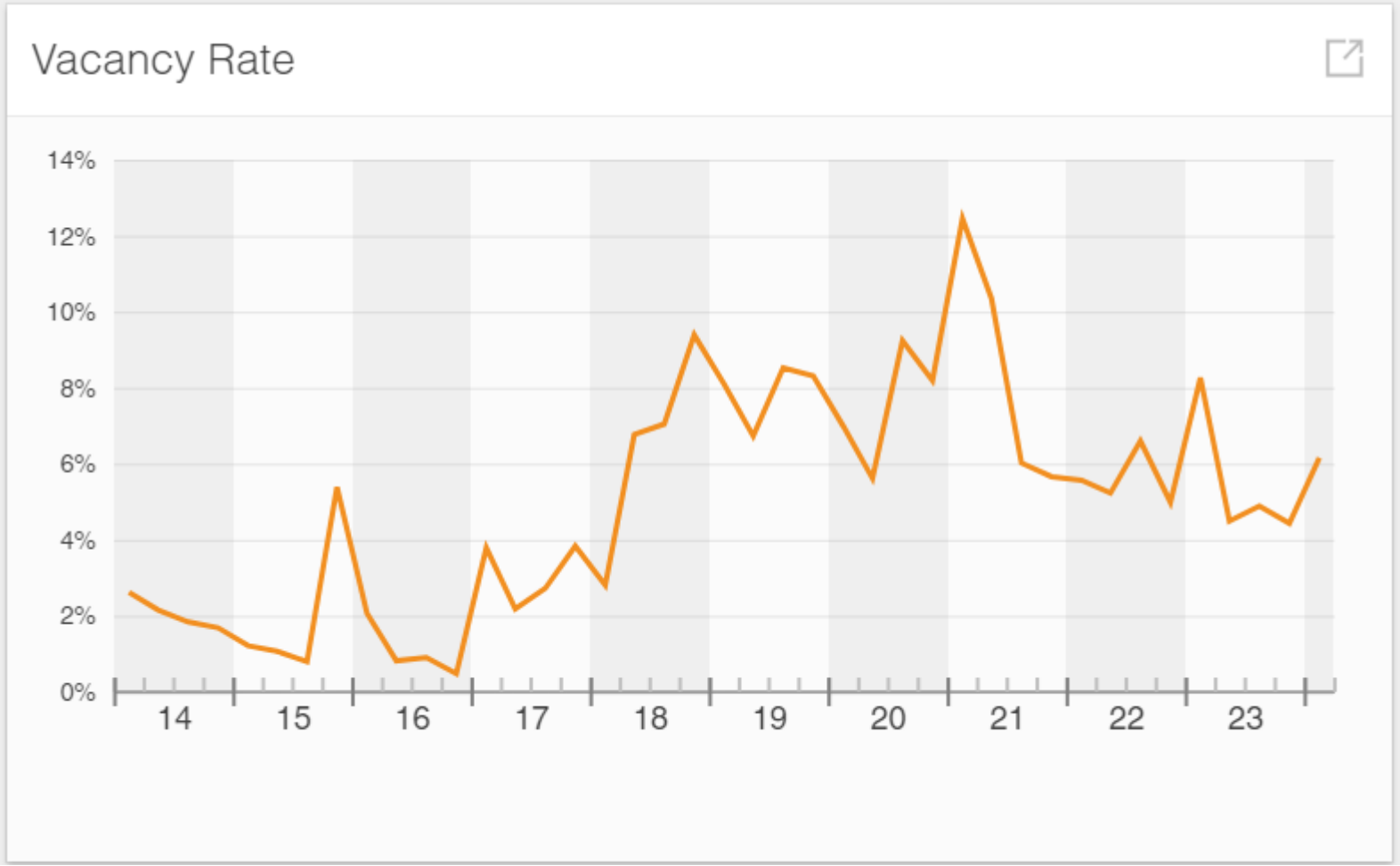


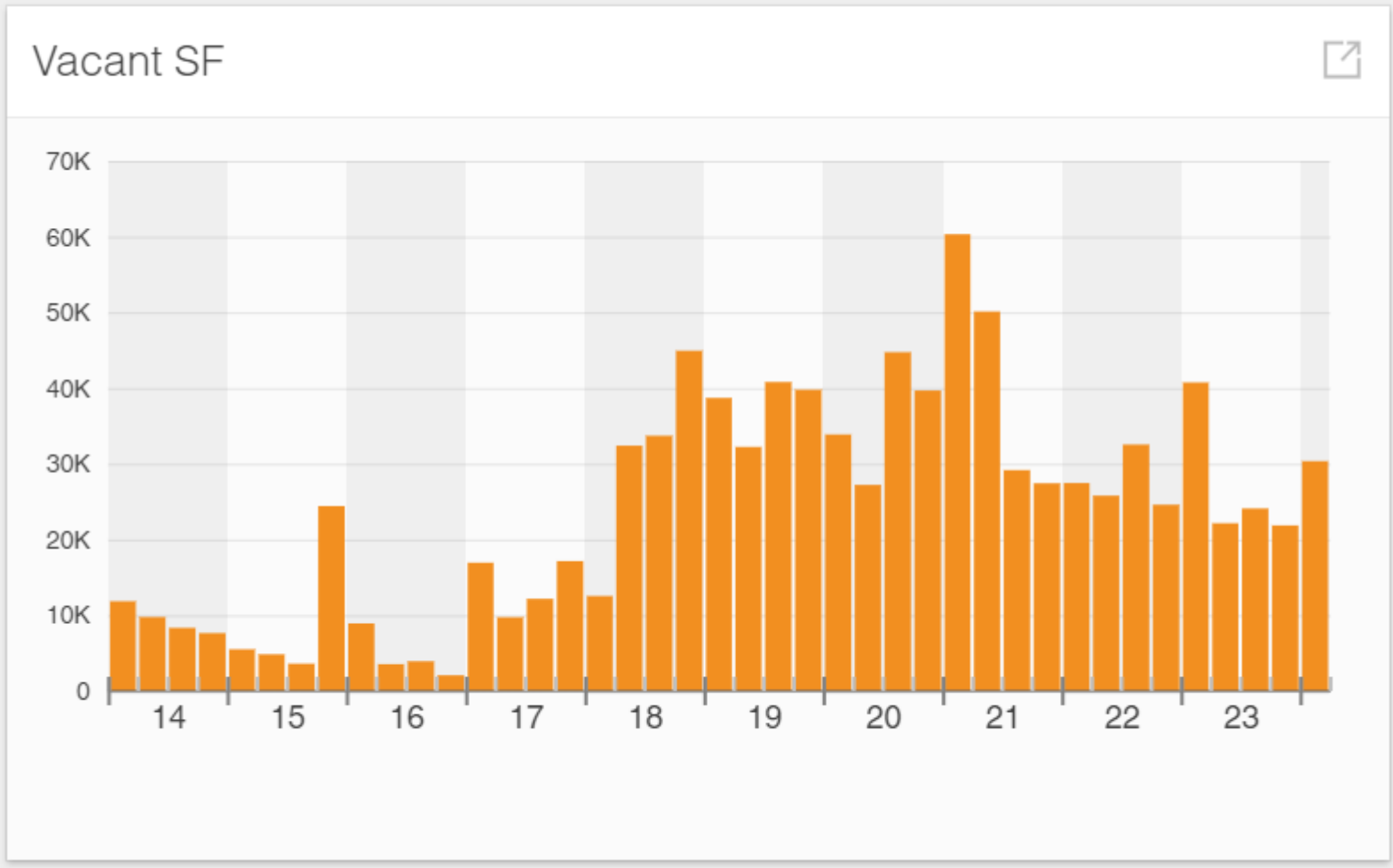
Demand	
12 Mo Net Absorp % of Inventory	1.2% ▲
12 Mo Leased SF	7.8K ▼
Months on Market	13.8 ▲
Months to Lease	18.9 ▲
Months Vacant	19.7 ▲
24 Mo Lease Renewal Rate	51.8%
Population Growth 5 Yrs	1.3%

Market Asking Rent & Asking Rent Per SF

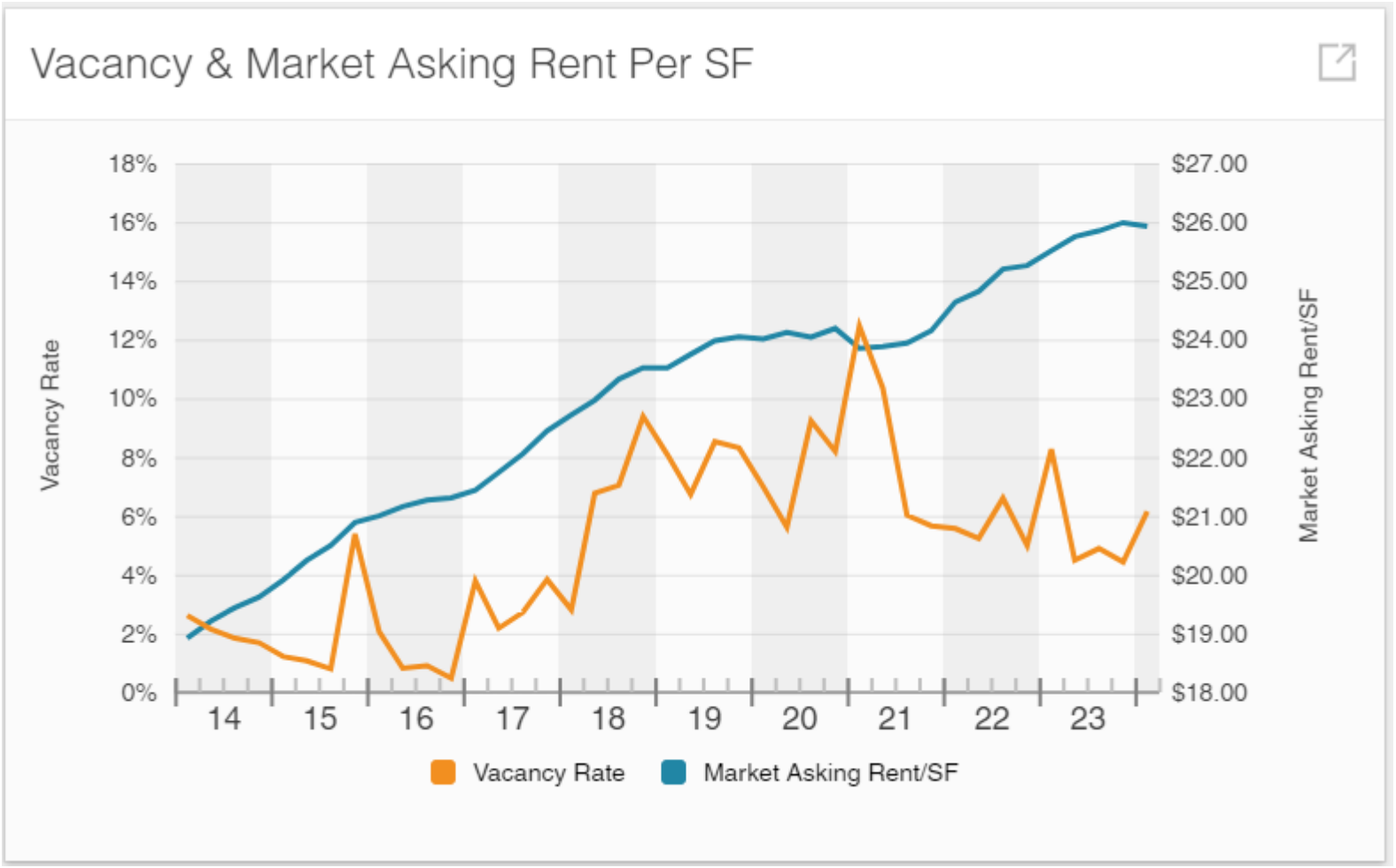


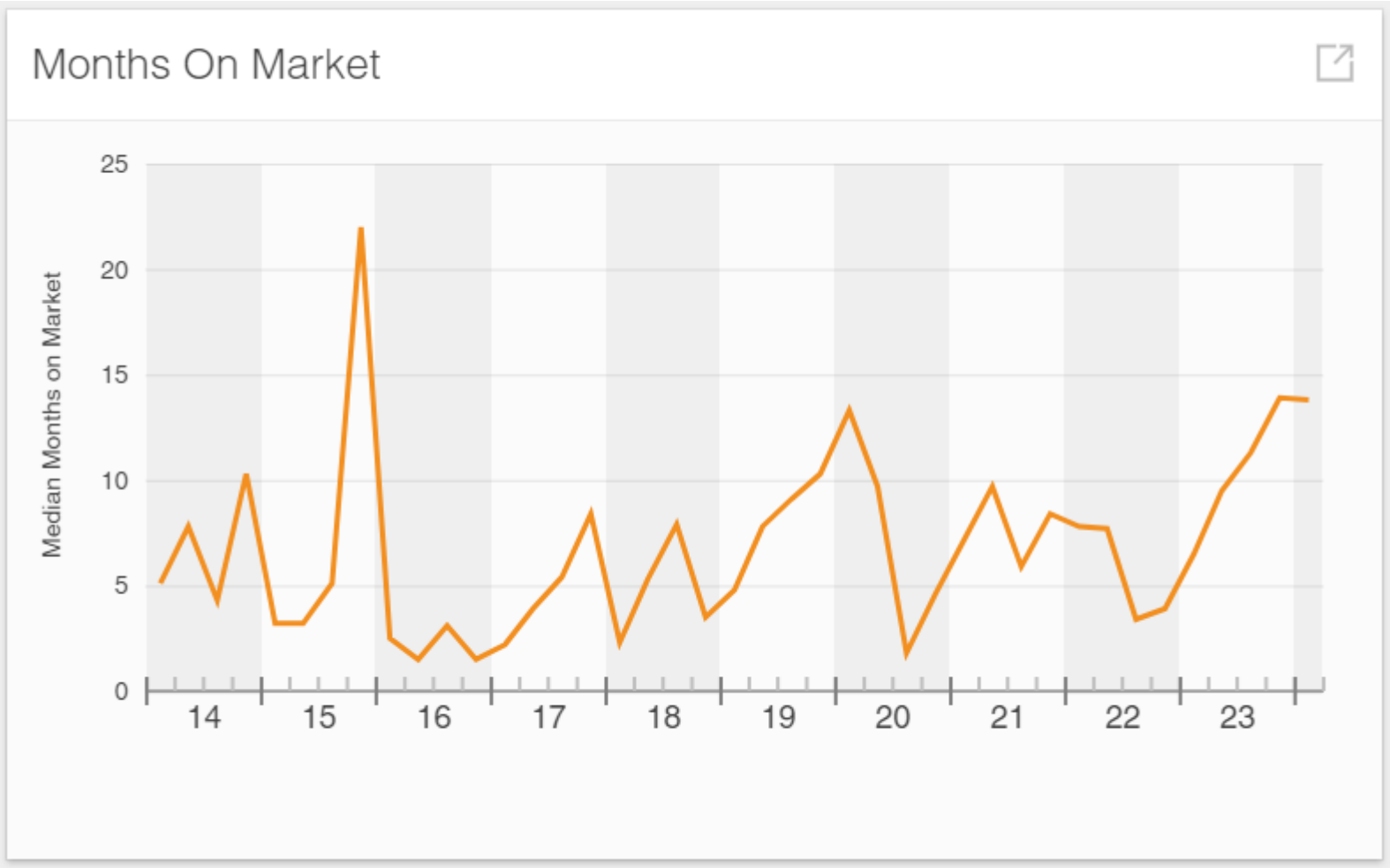

Daily Asking Rent Per SF
$30.00
$28.00
$26.00
$24.00
$22.00
$20.00
$18.00
$16.00
$14.00
$12.00
$10.00
Apr 23
Jun 23
Aug 23
Oct 23
Dec 23
Feb 24

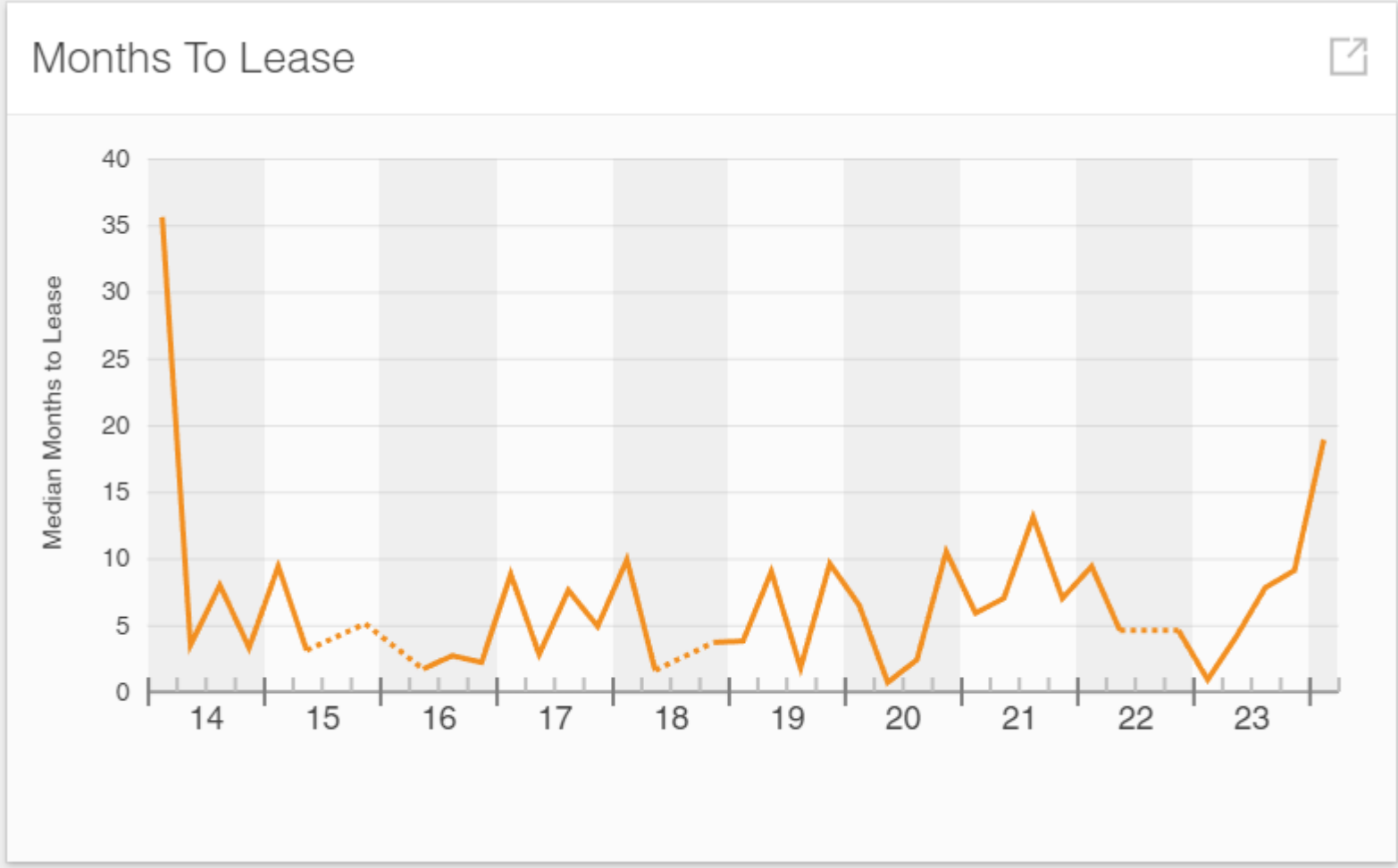

Vacancy Rate
14%
12%
10%
8%
6%
4%
2%
0%
14
15
16
17
18
19
20
21
22
23

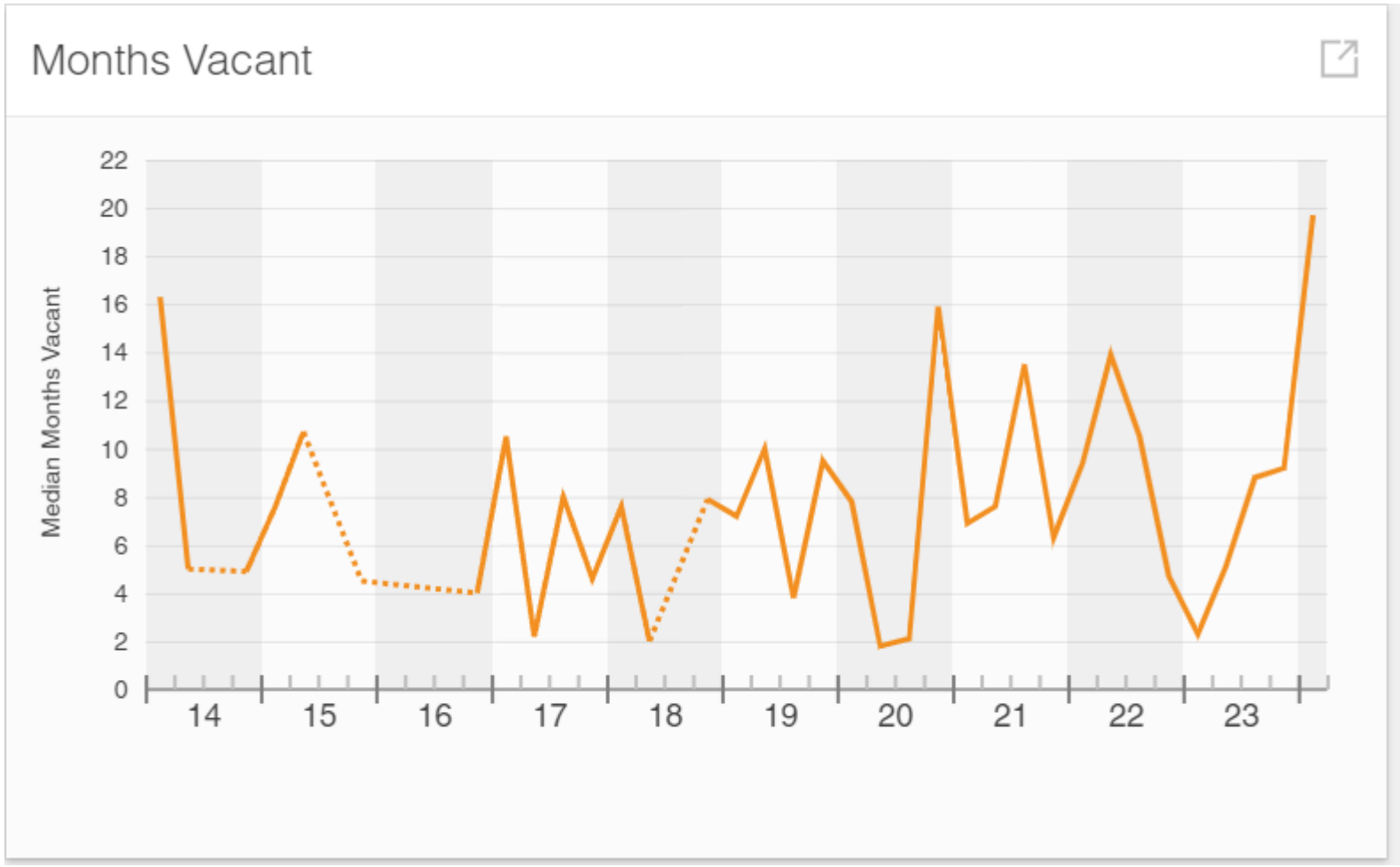

Vacant SF
70K
60K
50K
40K
30K
20K
10K
0
14
15
16
17
18
19
20
21
22
23

Occupancy Rate
100%
98%
96%
94%
92%
90%
88%
86%
84%
14
15
16
17
18
19
20
21
22
23

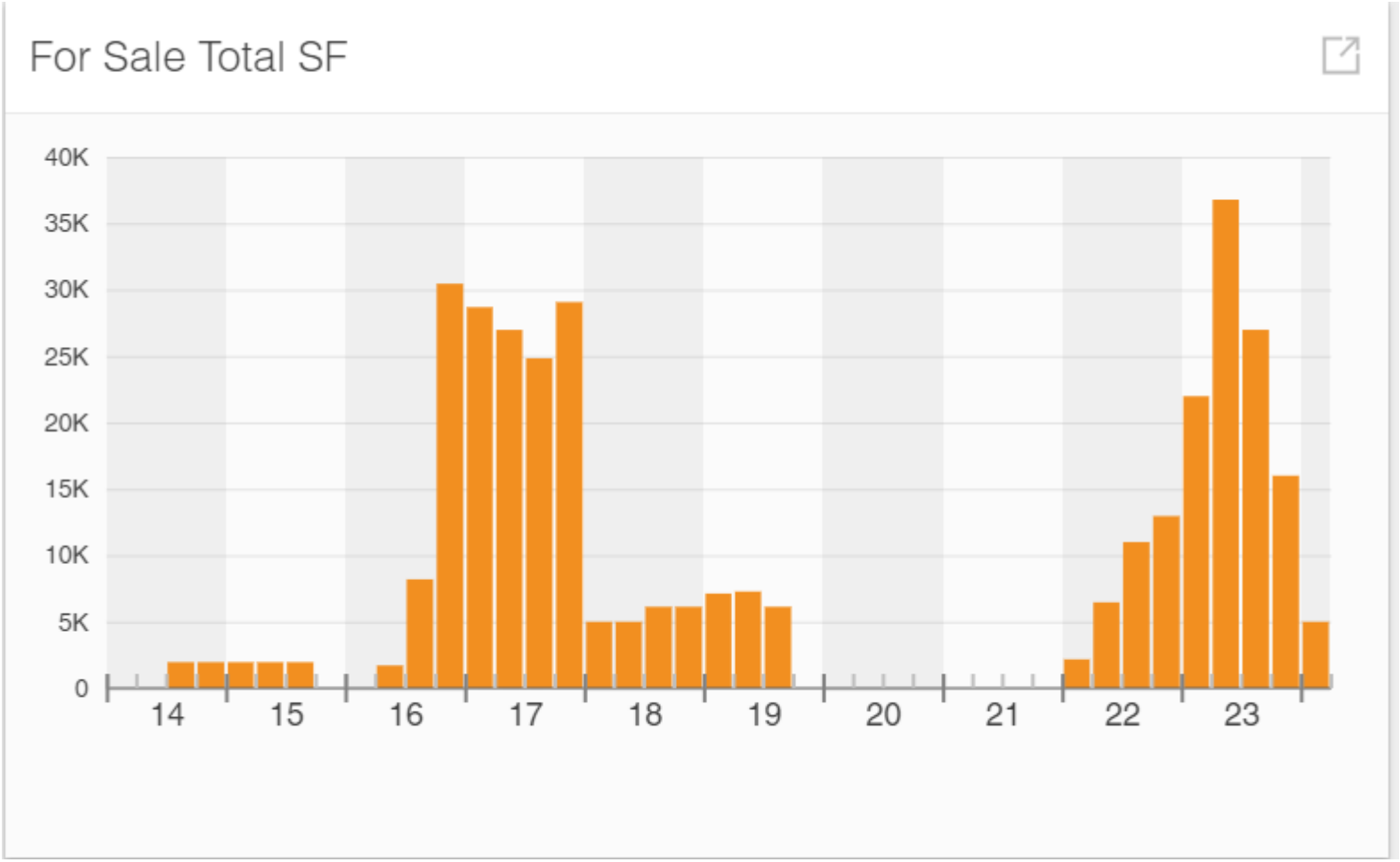

Vacancy & Market Asking Rent Per SF
Vacancy Rate
18%
16%
14%
12%
10%
8%
6%
4%
2%
0%
Market Asking Rent/SF
$27.00
$26.00
$25.00
$24.00
$23.00
$22.00
$21.00
$20.00
$19.00
$18.00
14
15
16
17
18
19
20
21
22
23
Vacancy Rate
Market Asking Rent/SF


Months On Market
Median Months on Market
25
20
15
10
5
0
14
15
16
17
18
19
20
21
22
23


Months To Lease
Median Months to Lease
40
35
30
25
20
15
10
5
0
14
15
16
17
18
19
20
21
22
23


Months Vacant
Median Months Vacant
22
20
18
16
14
12
10
8
6
4
2
0
14
15
16
17
18
19
20
21
22
23

Market Sale Price Per SF
$360
$340
$320
$300
$280
$260
$240
$220
$200
$180
14
15
16
17
18
19
20
21
22
23


For Sale Total SF
40K
35K
30K
25K
20K
15K
10K
5K
0
14
15
16
17
18
19
20
21
22
23

*all information pulled from CoStar

2023 Louisville Downtown Patio Program Guidelines and Application

The purpose of the Downtown Patio Program is to make available outdoor patios within existing on-street parking spaces from approximately late April through October (6 months). The program provides benefits to the community by encouraging an active streetscape, contributing to the City's positive image, and drawing residents and visitors to Downtown. Participating food and drink establishments benefit from added seating to accommodate demand for outdoor dining.

General Guidelines:

Placement: Patios will be placed: 1) within an existing on-street full parking stall AND 2) adjacent to the leased or owned location of the business (i.e. on the street frontage). Patios may not be placed on more than one street. Special situations will be reviewed on a case-by-case basis.

Availability: The City anticipates there may be increased demand for outdoor dining and patios in 2023. Applicants should request the number of patios they are willing to rent and license, but staff will review all complete applications before confirming a final count and invoicing. Completed applications received on-time will be given priority, but staff will attempt to make sure that all food and drink establishments that wish to participate will have availability.

Cost: Annual rental fee for 12 linear feet of patio is $1,000, which defrays the City's operational costs to implement the program. You will receive an invoice after materials are submitted and staff determines availability. Payments must be made in full by March 31, 2023 in order to ensure on-time patio placement.

License Agreement: All participating establishments need to execute the enclosed License Agreement for the use of the Public Right-of-Way.

Liquor License: Please remember to visit the City Clerk's Office to complete a Temporary Modification of Premise form to accommodate the patios. This can now be aligned with your annual renewal. See the Clerk's Office for details.

Important Dates:

March 17, 2023	Complete Patio Application Packet due to Economic Vitality
March 24, 2023	City Completes application review and draft placement plan
March 31, 2023	Rent payment due
April 24, 2023	Patio installation (weather permitting)
November 6, 2023	Patio removal (may be earlier, weather dependent)

Attachments:

1) Application for Patios
2) License Agreement for Use of Public Right-of-Way

City of Louisville

2023 Louisville Downtown Patio Program Guidelines and Application

Establishment:_____

Liquor License Entity (if applicable):_____

Main Contact:_____

Address:_____

Phone:_____ Email:_____

Number of Patios Requested: _____

Rental Cost for Patios: $_____ (Number of Patios x $1,000)

Any special requests?_____

_____

Questions? Please contact:

Austin Brown
Economic Vitality Specialist
749 Main Street, Louisville, CO 80027
Office: 303-335-4529
Email: abrown@louisvilleco.gov

Applications are due no later than March 17, 2023

Checklist:

- ✓ Application
- ✓ License Agreement
- ✓ Temporary Modification of Premise Application with City Clerk (if needed)

March 9, 2024

Old Town Community Meeting

Meeting Structure

Please be seated quickly
No audience comments until QA

Meeting Agenda:

- Petition Status Update
- Business Owners Perspective
- DBA Survey Results
- Louisville Downtown Revenue Report
- Fire Code Access
- Best Practices
- Q/A Session

Petition Status

- Many Citizens concerned about Main Street closure
  - 167 signatures for the online petition
  - 74 signatures collected on paper petition
  - 18 Businesses from within the DBA or surrounding Old Town area
- **259 concerned residents and business owners *and counting***

Main Street Closure

Started Petition to: February 21, 2024 Louisville Colorado City Council

Support our petition urging the council to prioritize further investigation before making a decision on this crucial matter. Advocate for the postponement of the vote until additional studies are finalized, and the concerns of residents are adequately addressed.

Businesses Against Closure

Business Owners Perspective

- Closure creates inequity amongst business owners
  - Providing private commercial use of public right-of-access roadway
  - Reduces traffic to/from non restaurant locations
  - Creates access concerns and loss of revenue
- Fresno State University study showing pedestrian malls have an 89% failure rate

Businesses Speaking Out Against Closure	
Bob's Dinner	Eric Olson Jewelers
Erica DeLacastro Therapy	Touch & Go Skin Care
Union Jack Liquor	Gitkind Law Firm
Heritage Insurance	Louisville Pre School
Old Santa Fe Mexican Grill	Eyeworks
Found Underground	Kaiser Lock and Key
Thunderbird	Dr. Wertz Dentistry
Whalen Chiropractic	Scherer Violin Shop
Deborah Burke Hair Salon	Hearing Solutions

IV. The Main Street Approach: Once cities and downtowns removed their pedestrian mall and restored it to a main street, there is almost always immediate success.

- Cole E. Judge, The Experiment of American Pedestrian Malls.

DBA Main Street Closure

Survey Results

Survey Source: Results provided by CORA request of the City of Louisville.

Survey Methodology

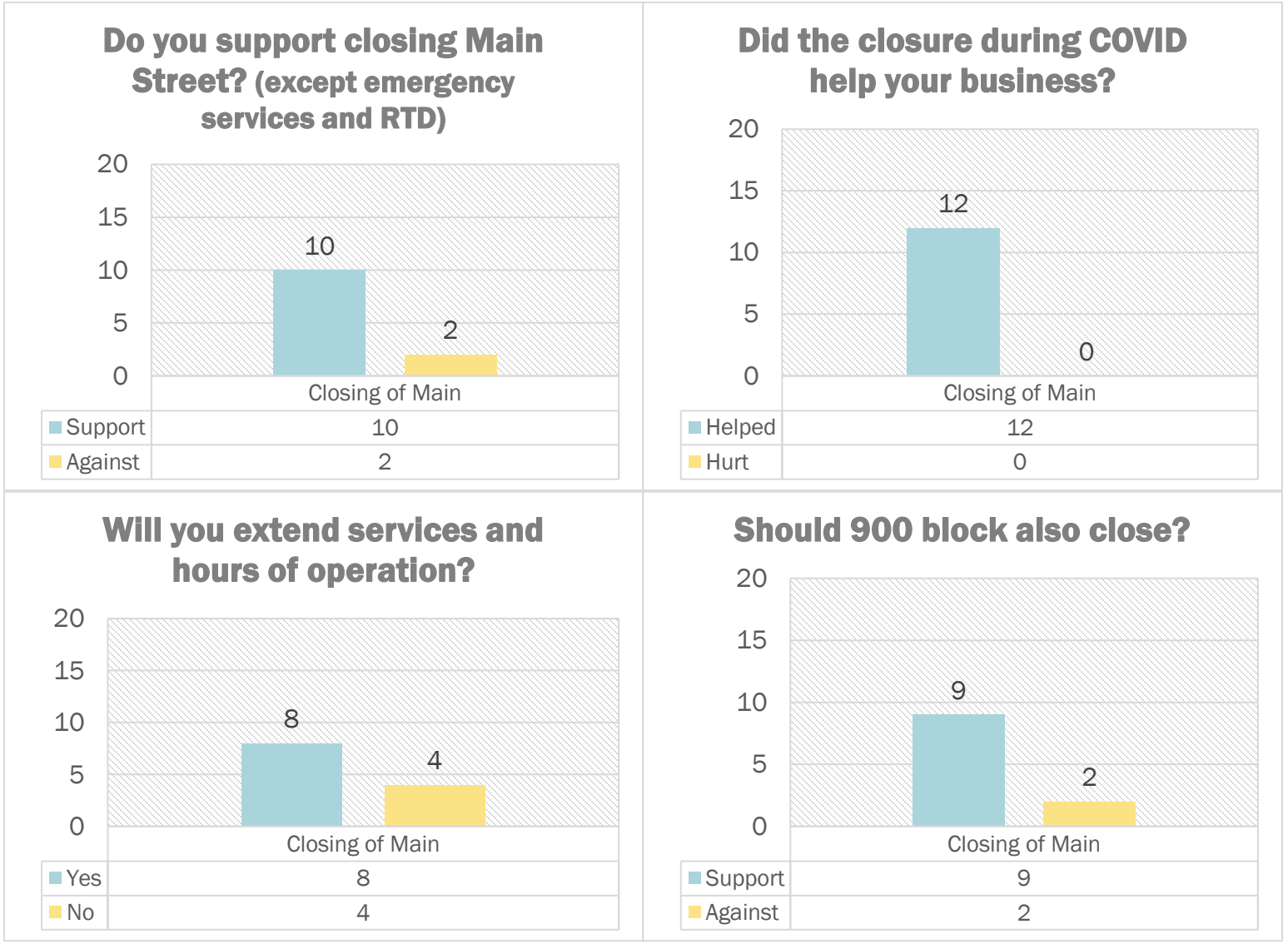
The DBA completed 3 surveys regarding DBA members thoughts on closing Main Street

- Survey 1 was only for restaurants along main street and went to 20 members (sample size). A total of 12 members responded, 61% response rate.
- Survey 2 was an online survey completed by Survey Monkey. It went to all 190 DBA members. Only 42 members responded, a 22% response rate.
- Survey 3 was listed as “in process” and results were not shared.

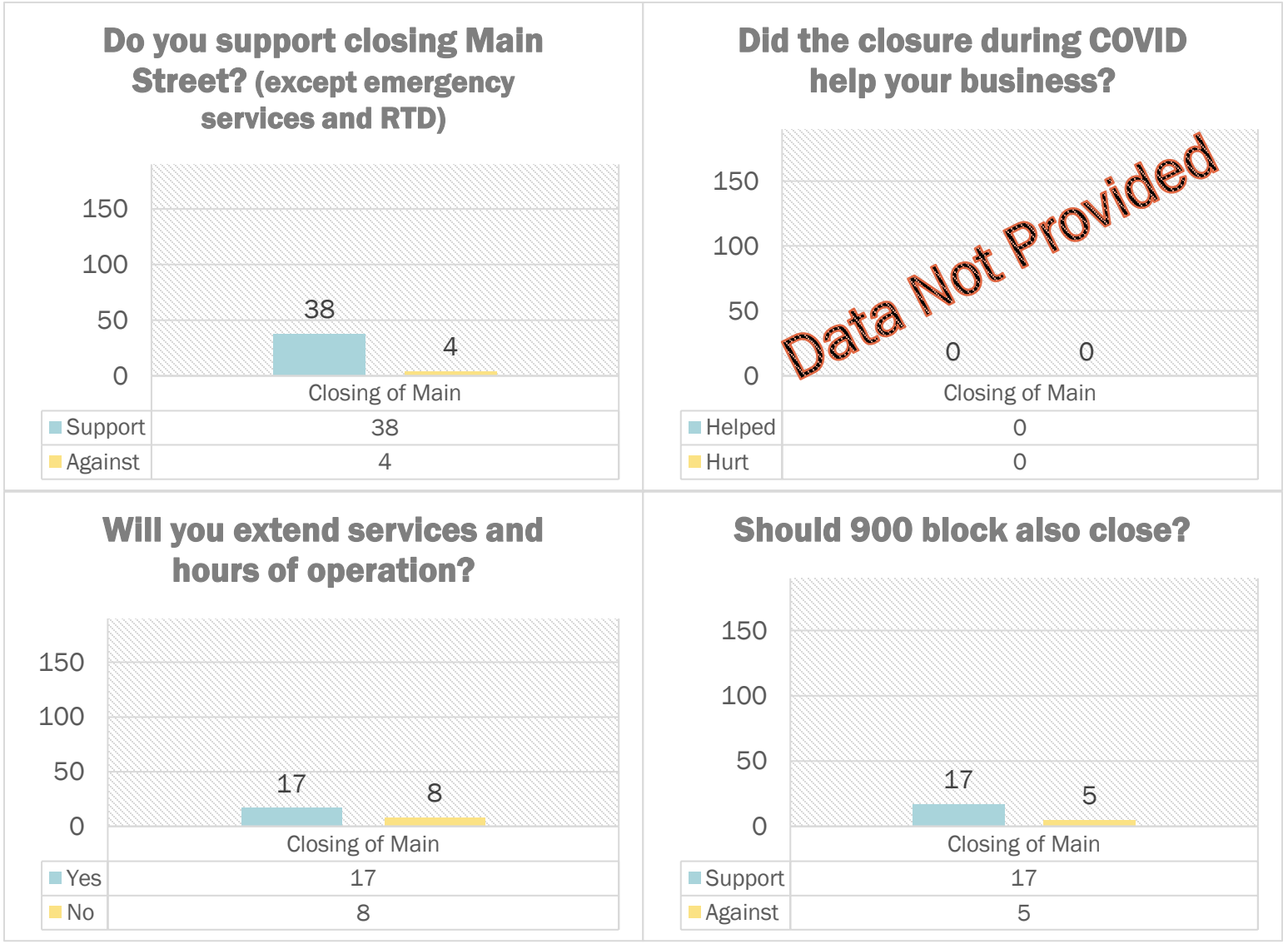
Areas of Note

- The DBA changed the wording of the survey questions from survey 1 to survey 2.
- The primary question regarding the closure of main street asked If business would favor closure of Main Street, with the exception of passage for emergency services and RTD busses.
- DBA made this statement to City Council when sharing results: The City made it clear to the DBA that *the City would work with its residents and with the RTD concerning the temporary closure*. Councilor Dickinson and others present at the February EVC meeting emphasized the City’s prior outreach and RTD work and that the City intends to do more.

Results Survey 1: Restaurants Only (Sample Size: 20)



Results Survey 2: All DBA Members (Sample Size 190)

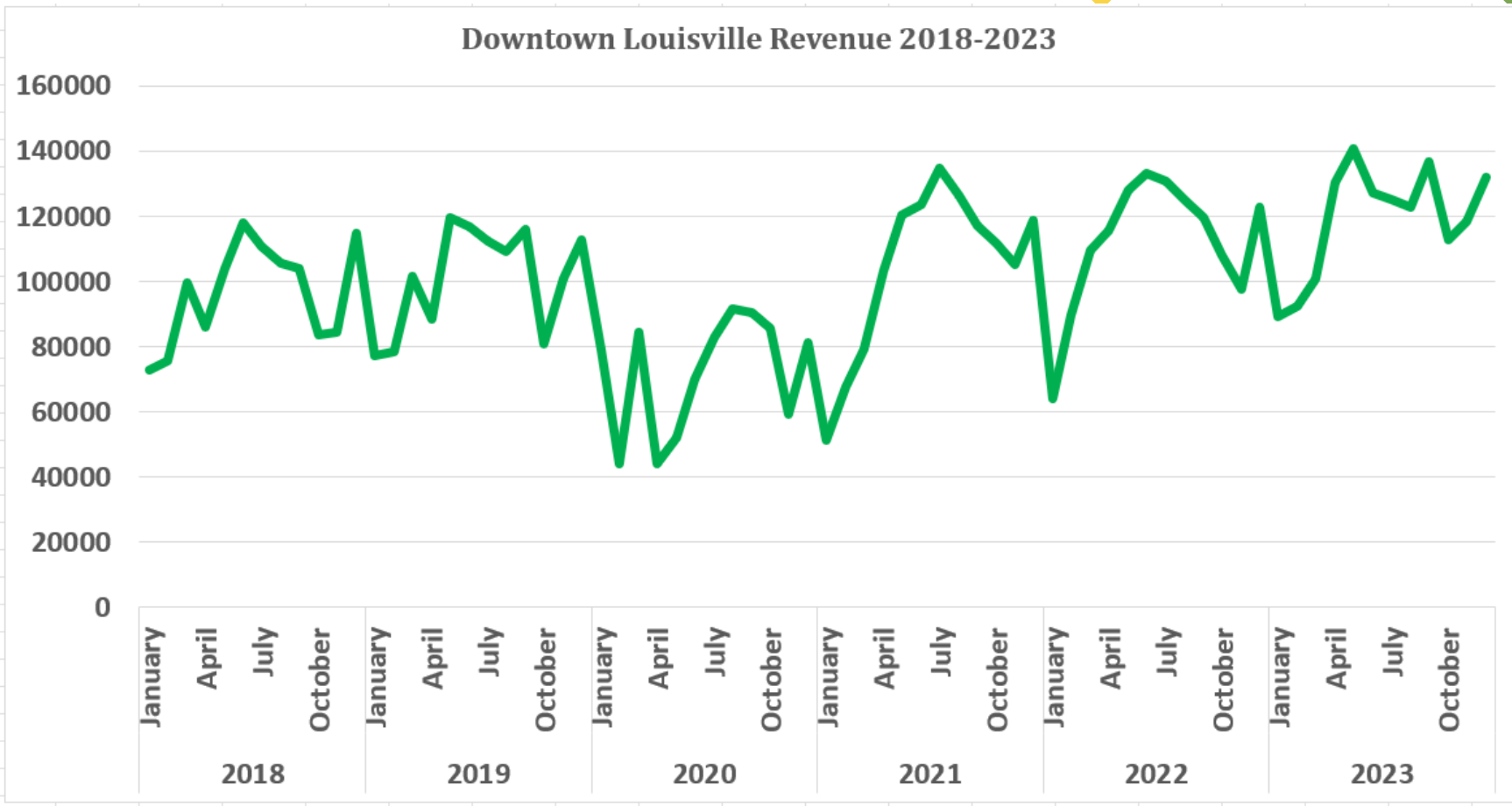


Key Takeaways

- The question determining the closure of Main Street was phrased so that **RTD would continue to traverse Main Street**.
    - As this is no longer the case, the survey responses are questionable. (Do they still apply to the current situation as it has evolved?)
- Survey 1 has discrepancies with sample size.
    - Mr. Kron states the survey went to 20 participants. He also states that they only had 2 non-responders; with 12 responders the **actual nonresponse rate is 8**.
    - He also stated 90% of responders are in favor of the closure. A more correct statement is that 90% of responders are in favor, **however, only 50% of the sample size replied they would be in favor of the closure**.
- Survey 2 sample size was considerable with 190 participants. **The response rate was only 42 (or 22%).**
    - Of those who did respond, several omitted a response on certain questions.
    - Typical omissions imply that the respondent has not made a decision on the topic.
- Survey was very limited in overall scope. **Residents were not surveyed, nor were questions asked regarding impact on neighboring communities.**
- **Of the 190 DBA members surveyed, only 17, or 9% said they would utilize the additional space** the closure would provide or extend business hours to support.
    - Of the restaurants surveyed, only 8, or 57% said they would utilize the space. Given this percentage, **use of space should be studied to determine if the current patio option is sufficient to provide best use of a public right of way.**
- **18 Businesses are now AGAINST the closure from recent petitions**

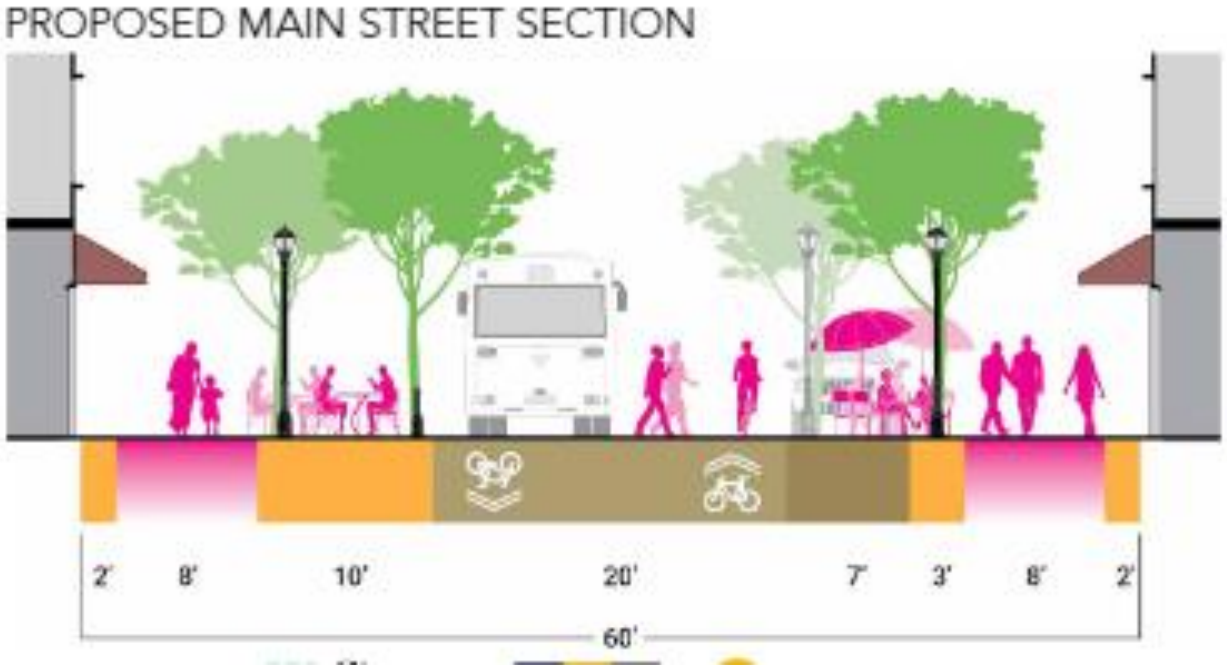
Downtown Revenue Report

- Old Town businesses fully recovered after covid
- 2023 sales best in 5-year history
- 2023 sales exceed pre-pandemic 2019
- Sales increased with OPENING of Main Street after 2020/2021 closure
- LRC Committee member states sales are flat. Actual Revenue shows sales are up 28% during the worst performing month in 2023 compared to the same period of 2022.



Fire Code and Access Parameters

- Reported that fire code access is 20 feet
  - Sidewalk path is 8 feet
  - Existing seasonal patio placement is 10 feet each side
  - This leaves the 20 feet of required access where no tables or seating can be placed
    - What are we gaining by this closure vs the working and popular patio seating program currently offered.
    - Are the negative impacts to neighbors worth the “gain” of the closure?
    - Only 8 Restaurants interested in using additional seating or activating in this space

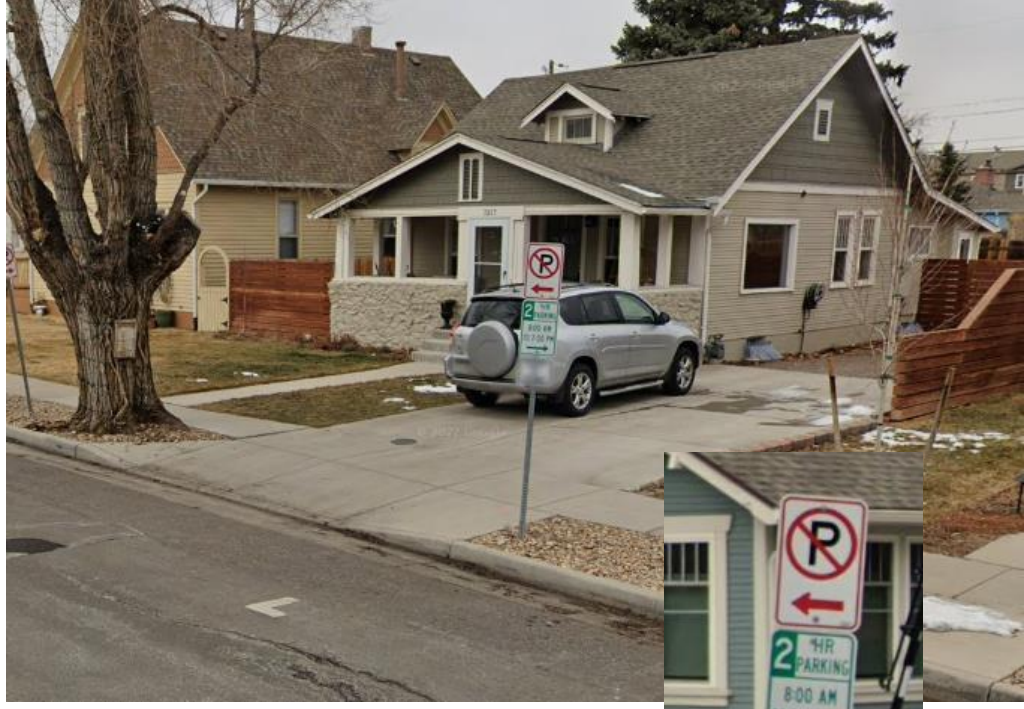


Best Practices

- Arvada Pedestrian mall shown
- Area surrounded by commercial properties
- Alternative traffic pushed to surrounding commercial streets
- Several paid parking lots available surrounding closure area.
- Large Light Rail Park-n-Ride Station with massive parking garage

Best Practices

- Thorough Resident Engagement prior to closure
- Completed Traffic Impact Studies
- Completed Parking needs analysis
- Lafayette downtown beautification while maintaining access
- Resident Parking Permits
- No thru traffic signs



Residential Parking Permits

Residents who live on certain streets within and surrounding Olde Town may apply for a residential parking permit through LAZ Parking.

Question and Answer

The Experiment of American Pedestrian Malls:

Trends Analysis, Necessary Indicators for Success and Recommendations for Fresno's Fulton Mall

FRESNO FUTURE

Cole E. Judge

This research paper is a unique contribution for the Fresno Future Conference put on by Dr. Kharbawy at Fresno State University and has not been published elsewhere.

Strong Cities, Strong Communities
Downtown Fresno Partnership
559-490-9966

10/11/2013

Abstract

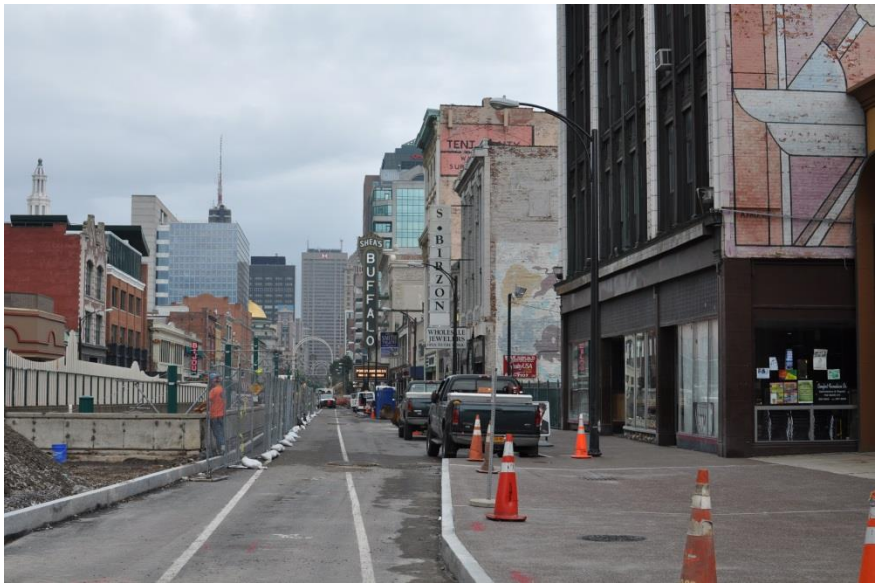
This report is intended for the Downtown Fresno Partnership and its stakeholders to analyze the trends of American pedestrian malls over the last 50+ years to help inform the future of Downtown Fresno's Fulton Mall corridor. The report distinguishes between pedestrian malls and transit/pedestrian malls, taking specific interest in the purely pedestrian malls that were installed in the 1950s and 1960s. Some of the key findings from our research analysis include:

- Pedestrian malls in the United States have an 89% rate of failure. Most have been removed or repurposed. Only 11% have been successful.
- Of the 11% successful pedestrian malls, 80% are in areas with populations under 100,000.
- Certain indicators need to be present for a pedestrian mall to be successful in the United States: near or attached to a major anchor such as a university, situated in close proximity to a beach, designed to be a short length in terms of blocks, in a town/city with a population under 100,000, and/or located in a major tourist location such as Las Vegas or New Orleans.
- Cities that have embraced the Main Street and Complete Streets models have experienced turn-arounds in their downtowns with more investment, higher occupancy rates and more pedestrian traffic.

Recommendations moving forward include adapting a main street approach to revitalization given that Fresno lacks the necessary indicators of success for an American pedestrian mall. The economic importance of the downtown area can greatly be enhanced by incorporating "complete streets" and "main street" design elements. The American pedestrian mall, including Fresno's Fulton Mall, is by most accounts a failed experiment that, left alone, will continue to deteriorate.

Like the approximate 170 other U.S. cities that have changed or removed their pedestrian malls, Downtown Buffalo is currently in the process of removing its failed pedestrian mall.

Photo by Elliott Balch.



I. Introduction and Methodology

This report covers the history of American pedestrian mall, analyzes the research of existing and removed pedestrian malls and posits how the City of Fresno can learn from the experience of other cities and the trends-analysis that emerges from the best practices research.

Urban designer, Jessica Schmidt, defines pedestrian malls as being "characterized as a number of blocks of public downtown streets designated for pedestrian-only use and closed to vehicular traffic." [i] In this report, pedestrian malls are defined as "successful" when they represent a thriving retail corridor with low vacancy rates, high pedestrian traffic levels and a utilized mix of businesses and uses. Successful pedestrian malls are considered to be economically viable. In this report, "struggling" pedestrian malls are defined as pedestrian malls that are in the process of being removed or are being considered to be removed; where there are low vacancy rates, low pedestrian traffic levels and/or a low business mix; and that are not significant economic generators. "Removed" pedestrian malls are the malls that have been taken out and returned to a street and thus were not successful. "Transit Malls" are those corridors that may commonly be referred to as pedestrian malls, but are actually multi-modal, allowing buses, trolleys, or taxis along with pedestrians. Examples of transit malls include Nicollet Mall in Minneapolis, State Street in Madison and 16th Street Mall in Denver. Excluded in this analysis are the few pedestrian malls that are small pedestrian plazas that exist off of a main street, those that are embedded in college campuses, those that are enclosed shopping malls, those that are actually parks and those that are non-retail alleyways.

Data was collected by researching news articles, calling city representatives, conducting in-person interviews, reading literature available on the area and/or pedestrian mall, reading professional studies and even visiting some of the cities. This report is particularly interested in pedestrian malls that were constructed around the 1960s and 1970s on corridors that were formerly streets as those are most applicable to the challenge facing Fresno. The report makes an effort to be objective, even though the definitions of "successful" and "struggling" are confined to the ones laid out in this report. We hope to have explained the reasoning behind the labels and hope that this report can assist the City of Fresno and other cities that have struggling pedestrian malls.

II. History

As a response to the suburban, white flight that occurred in many inner cities in the 1960s and 1970s, cities were open to try various urban renewal strategies to bring economic development back into the core of the city. Suburban shopping malls were becoming popular and drawing shoppers out of the downtown. In an effort to draw them back, planners embarked on the experiment of the American pedestrian mall.

Approximately 200 pedestrian malls were installed during this time period. The first one to go in was in Kalamazoo, Michigan and designed by planner and architect, Victor Gruen. Gruen, hailed as inventor of the modern shopping mall, designed many of the nation's indoor malls and outdoor pedestrian malls.[ii]

The pedestrian mall took several architectural and landscape elements from the suburban shopping center such as fountains, lighting, etc. It also aimed to provide the shopper with an "enclosed" experience, cut off from the area around it with design elements included to provide a pleasant environment where the shopper would want to stay, meander and shop more. Scott Doyon of Placemakers.com describes the problem with providing this type of enclosed in an American downtown that had been designed for automobile traffic:

> "The problem was that we had relinquished our streets to the automobile, relegating all other users to second or third class status. We had taken the complexity of the public realm and dumbed it down into a single-use car sewer. Cars good, walking bad. So how did we try to fix that? By doing the exact same thing, except in reverse. This time it was cars bad, walking good, which presents a similar set of problems because community doesn't thrive in all-or-nothing extremes of complexity reduction." [iii]

Planners tried competing with suburban shopping malls by recreating those suburban elements in urban areas and while the first few years of novelty may have been a success in some areas, the verdict has been overwhelming in terms of how the experiment of the pedestrian mall fared.

A representative of the City of Lake Charles' Downtown Development Authority acknowledges that installing pedestrian malls may have actually had the opposite effect and encouraged the flight to suburbia: "What the pedestrian mall effort did was to speed up the flight as the concept totally disrupted access to and from downtown."[iv]

III. Struggling and Unsuccessful Pedestrian Malls

Installing an isolated suburban shopping center in the middle of an urban area ultimately proved to be unsuccessful in the United States and most of the malls have been removed or repurposed. The Community Land Use and Economics Group, LLC (CLUE Group) a downtown economic development and historic preservation consulting firm, acknowledges that "most communities found, however, that their new pedestrian malls hurt downtown business, rather than boosting it." [v] The CLUE Group reported that by 2005, fewer than two dozen downtown pedestrian malls remained in the United States.[vi] In 2008, the Downtown Memphis Commission reported that 85% of the original 200 U.S. pedestrian malls had been reopened to traffic, including malls in cities such as Baltimore, Chicago, Philadelphia, Pittsburg, Pasadena, Burbank, Kalamazoo, Raleigh, Portland Oregon, Little Rock and Tampa.[vii] By the mid-1980s, most communities that installed pedestrian malls have now removed them completely or partially.[viii]

Our research validates these statistics, finding that of the approximately 200 pedestrian malls to go in, 89% are removed, struggling or combined with transit, giving American pedestrian malls an 11% success rate.

Table 1: Pedestrian Mall Success Rates in the United States

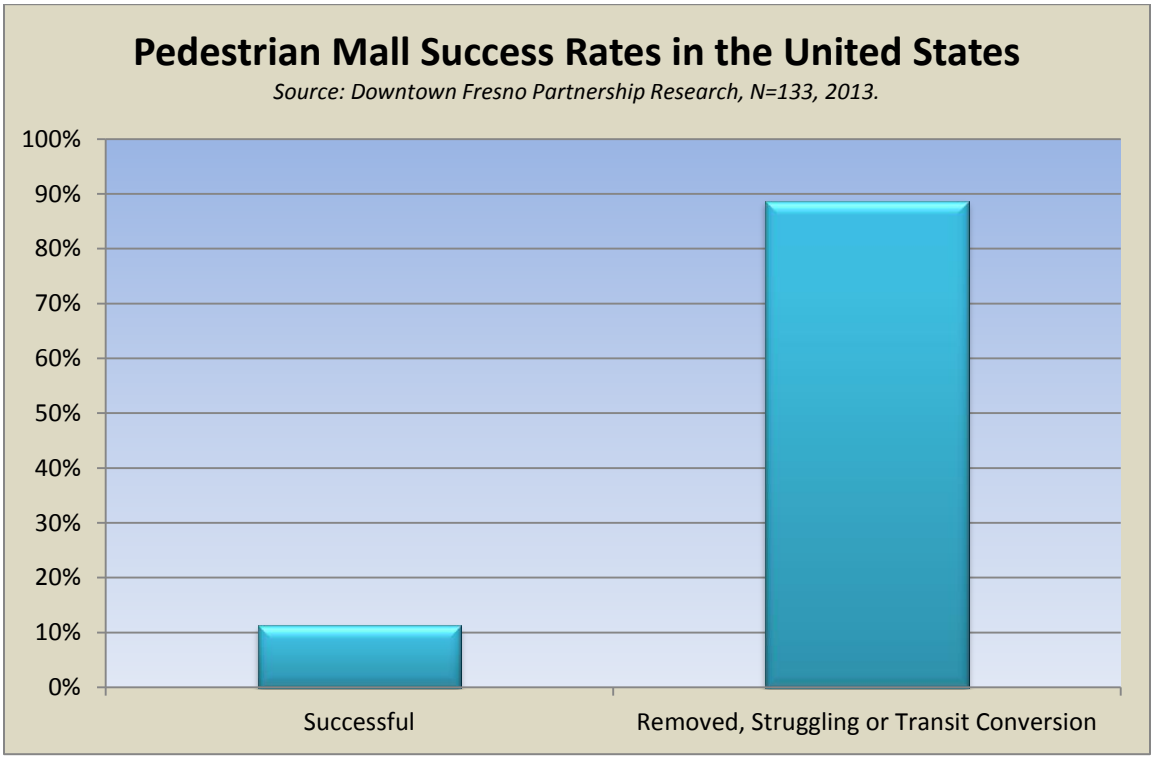
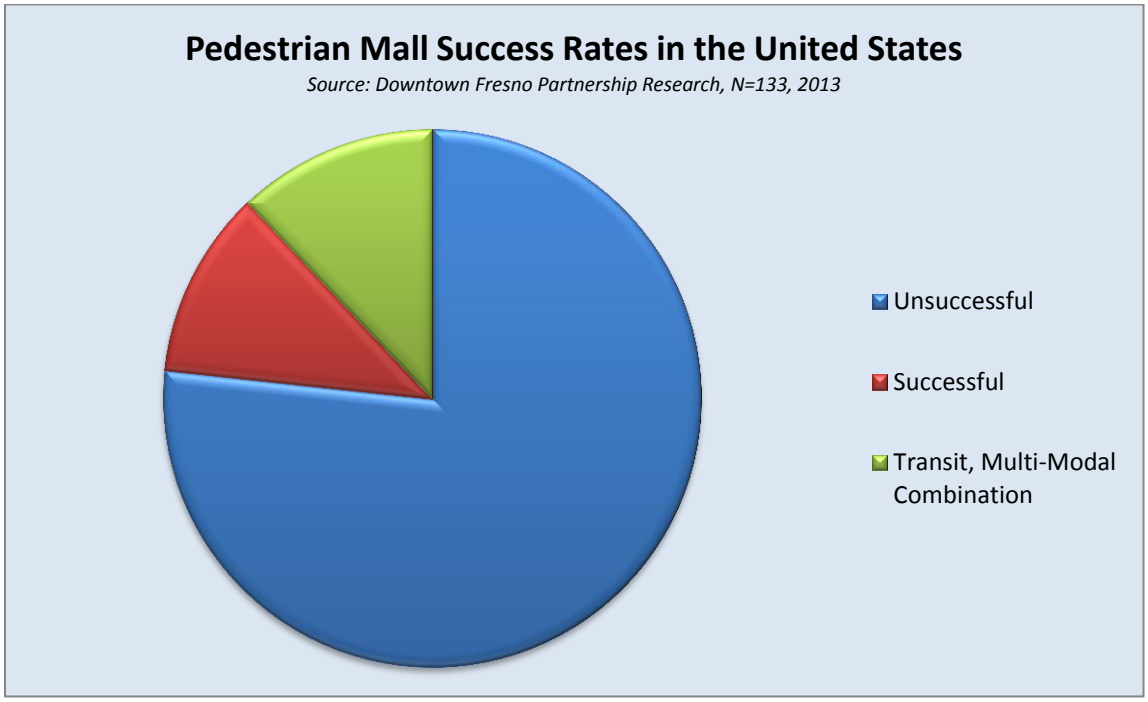


Table 2: Pedestrian Mall Success Rates in the United States, Separating out Transit



In 2008, The Memphis Center City Commission found that when a downtown street gets closed to traffic:

- Vacancy rates along the mall increase and retail mix deteriorates.
- The retail focus shifts from "comparison and destination goods/services," such as department stores and high-end retail, to convenience stores.
- The mall becomes an "uncomfortable and threatening environment" attracting "loiterers and transients." [ix]

The problems of pedestrian malls include a deteriorated retail mix, lack of visibility and access for retail, an uncomfortable and threatening environment, an area that attracts loiterers, disrupted neighborhood traffic flows and a fear of crime.[x] In Kalamazoo, a library researcher wrote of other problems including "the lack of convenient parking, the exposure of shoppers to bad weather, public perceptions on crime and less shopping diversity."[xi] In Governing, senior editor Tod Newcombe wrote, "Many of the pedestrian malls were ill-planned and had little purpose. Because so few people lived downtown, the malls became lifeless after work, attracting crime and loiterers, rather than large crowds."[xii] Pedestrian malls experience a general isolation, including a lack of eyes on the street for perceived safety and comfort, lack of visibility amongst landscaping and difficulties of parking and access. In summation, the Memphis report concluded that "in most cases pedestrian malls in North America have experienced negative economic results from the original conversion."[xiii]

Memphis is a city with a pedestrian-transit mall and has done extensive research on pedestrian malls in other cities. Jeff Sanford of the Memphis Center City Commission stated, "We still have a seven-block-long pedestrian and transportation mall… No question in my mind: if we had it to do over again, we wouldn't have done it… The lesson in my opinion is: don't create pedestrian only streets!"[xiv] Buffalo Mayor Byron Brown concurs with his statement in the Buffalo News in July 2013 that prohibiting cars from the street "essentially killed retail in downtown Buffalo."[xv]

Table 3: Unsuccessful Pedestrian Malls in the United States

Unsuccessful Pedestrian Malls: Struggling or Removed (Reopened to Traffic)			
State	**Mall Name**	**City**	**Type of Mall**
Arkansas	Main Street Mall	Little Rock	Removed
Arizona	Pedestrian Mall	Yuma	Removed
California	Downtown Mall	Riverside	Removed
California	Fulton Mall	Fresno	Struggling
California	Golden Mall	Burbank	Removed
California	Plaza Park Mall	Oxnard	Removed
California	Pomona Mall	Pomona	Partially Removed
California	Redding Mall	Redding	Struggling
California	Redlands Mall	Redlands	Removed
California	Santa Cruz Pacific Garden Mall	Santa Cruz	Partially Removed
Connecticut	Captain's Walk	New London	Removed

Connecticut	Pratt Street	Hartford	Removed
Delaware	Market Street Mall	Wilmington	Removed
District of Columbia	Liberty Place/Gallery Place	Washington	Removed
Florida	Franklin Mall	Tampa	Partially Removed
Florida	Las Olas Boulevard	Fort Lauderdale	Removed
Georgia	Downtown Mall	Toccoa	Removed
Hawaii	Fort Street Mall	Honolulu	Struggling
Illinois	Downtown Mall	Centralia	Removed
Illinois	Downtown Plaza	Freeport	Removed
Illinois	Landmark Mall	Decatur	Removed
Illinois	Neil street	Champaign	Removed
Illinois	Oak Park Village Mall	Oak Park	Partially Removed
Illinois	Old Capitol Plaza	Springfield	Pedestrian
Illinois	State Street Mall	Chicago	Removed
Illinois	State Street Mall	Rockford	Removed
Illinois	Vermilion Park Mall	Danville	Removed
Indiana	Franklin Square Mall	Michigan City	Repurposed
Indiana	Main Street Walkway	Evansville	Removed
Indiana	The Promenade	Richmond	Removed
Indiana	Michigan Street	South Bend	Removed
Indiana	Walnut Plaza	Muncie	Removed
Iowa	Pedestrian Mall	Ottumwa	Removed
Iowa	Jefferson Street Mall	Burlington	Removed
Iowa	Town Clock Plaza	Dubuque	Removed
Kansas	Atchison Mall	Atchison	Struggling
Kansas	Maple Street	Kansas City	Removed
Kansas	Parsons Plaza	Parsons	Removed
Kentucky	River City Mall	Louisville	Removed
Kentucky	St. Clair Mall	Frankfort	Removed
Kentucky	Old Town Plaza	Covington	Removed
Louisiana	Downtown Mall	Lake Charles	Removed
Maryland	Downtown Place	Salisbury	Removed
Maryland	Lexington Mall	Baltimore	Removed
Maryland	Old Town Mall	Baltimore	Removed
Massachusetts	Downtown Crossing	Boston	Struggling
Michigan	Macomb Place	Mount Clemens	Removed
Michigan	Market Street Mall	Kalamazoo	Pedestrian
Michigan	Michigan Mall	Battle Creek	Removed
Michigan	Monroe Mall	Grand Rapids	Removed
Michigan	Pearl Street	Grand Rapids	Unsuccessful
Michigan	Progress Place	Jackson	Unsuccessful
Michigan	Washington Square	Lansing	Removed
Minnesota	Levee Plaza	Winona	Removed

Minnesota	Mall Germain	St. Cloud	Removed
Mississippi	Main Street Mall	Vicksburg	Removed
Missouri	Pedestrian Mall	Springfield	Removed
Missouri	Pedestrian Mall	St. Joseph	Unsuccessful
Missouri	Main Street	Saint Charles	Removed
Missouri	North 14th Street Pedestrian Mall	Saint Louis	Unsuccessful
Montana	Last Chance Mall	Helena	Removed
New Hampshire	Vaughn Street Mall	Portsmith	Unsuccessful
New Jersey	Trenton Commons	Trenton	Removed
New Mexico	4th Street Mall	Albuquerque	Struggling
New Mexico	Downtown Mall	Las Cruces	Removed
New York	Ithaca Commons	Ithaca	Struggling
New York	Pedestrian Mall	Freeport	Removed
New York	Buffalo Place Main Street Mall	Buffalo	Struggling
New York	Main Street Mall	Poughkeepsie	Removed
New York	State Street Mall	Auburn	Removed
North Carolina	Downtown Greenville Mall	Greenville	Unsuccessful
North Carolina	Downtown Walkway	Winston-Salem	Removed
North Carolina	Fayetteville St	Raleigh	Removed
North Carolina	Franklin Commons	Fayetteville	Removed
North Dakota	Pedestrian Mall	Fargo	Removed
Ohio	Pedestrian Mall	Ashtabula	Removed
Ohio	Middletown Mall	Middletown	Unsuccessful
Ohio	Youngstown Federal Plaza	Youngstown	Unsuccessful
Oklahoma	Main Street Mall	Tulsa	Unsuccessful
Oregon	City Center Mall	Coos Bay	Removed
Oregon	Eugene Mall	Eugene	Unsuccessful
Pennsylvania	Center City Mall	Williamsport	Unsuccessful
Pennsylvania	Centre Street Mall	Pottsville	Repurposed
Pennsylvania	Downtown Mall	Erie	Removed
Pennsylvania	Maplewood Mall	Philadelphia	Unsuccessful
Pennsylvania	Penn Square	Reading	Removed
Pennsylvania	Carnegie Ped Mall	Carnegie	Removed
Pennsylvania	West Allegheny Ped Mall	West Allegheny	Removed
Pennsylvania	Wyoming Avenue Mini-Mall	Scranton	Removed
Rhode Island	Westminster Mall	Providence	Removed
South Carolina	Main Street	Rock Hill	Removed
South Carolina	Coffee Street Mall	Greenville	Removed
South Carolina	Main Street Mall	Spartanburg	Removed
South Dakota	Pedestrian Mall	Sioux Falls	Removed
Texas	Akard Street Mall	Dallas	Partially Removed
Texas	Austin Avenue Mall	Waco	Removed
Washington	Broadway Plaza	Tacoma	Removed

Washington	Occidental Mall	Seattle	Removed
West Virginia	Pedestrian Mall	Huntington	Removed
Wisconsin	Forest Home Avenue Mall	Milwaukee	Removed
Wisconsin	Plaza 8/Harbor Center	Sheboygan	Removed

IV. The Main Street Approach

Once cities and downtowns removed their pedestrian mall and restored it to a main street, there is almost always immediate success. Even the very first pedestrian mall to be installed in the United States realized it needed to be removed to restore vibrancy to the community (Kalamazoo in 1998). The City of Buffalo and the Niagara Frontier Transportation Authority report that, "90% of cities see significant improvements in occupancy rates, retail sales, property values, and private sector investment in the downtown area when streets are restored."[xvi]

Photo of Burbank's Successful Main Street after Pedestrian Mall Removal. Photo by Elliott Balch.

Examples of successful mall removals:

- South Bend, Indiana's downtown experienced a 20% increase in retail sales when Michigan Street was reopened to vehicular traffic.[xvii]

- Burlington, Iowa's Jefferson Street's ground-floor vacancies dropped from 80% to 20% once the two blocks were reopened to cars in 1990 and continued to drop to 0% within 2 years of opening.[xviii]

- Louisville, Kentucky's mall reopened and vacancy rates decreased from 80% to 50% and property values increased within one year of reopening.[xix]

- Philadelphia, Pennsylvania's mall reopened in 2000 and rents that were $25 per square foot became $65 per square foot and they experienced higher end national chains moving in such as Sephora, H&M and West Elm.[xx]

- Raleigh, North Carolina reopened Fayetteville Street and experienced $1 billion in public and private investments within the first 6 months of opening the mall to traffic and $3.5 billion in the first three years.[xxi]

- Covington, Kentucky's Old Town Plaza reopened and retailers immediately reported year-over-year sales gains of 30%.[xxii]

- Eugene, Oregon's City Center Mall's vacancy rate went from 25% to 6% in four years.[xxiii]

- Oak Park, Illinois' Lake Street's sales went up 15-20% and vacancy rates dropped from 25% to 5%.[xxiv]

- Pittsburg, Pennsylvania's East Liberty Mall's vacancy rates dropped from 60% to having 200 new businesses on that stretch with $80 million in investment in the first 10 years of opening.[xxv]

- Poughkeepsie, New York's pedestrian mall's vacancy rate decreased from 31% to 10% once the mall was opened.[xxvi]

- Waco, Texas' Austin Avenue's ground floor vacancy dropped from 80% to 40% after reopening to a street.[xxvii]

- Burbank, California's Golden Mall went from having very high vacancies to 0-1% vacancy with a mix of local and national restaurants and shops.[xxviii]

- Oxnard, California's Plaza Park Mall gained 14 new businesses, 6 business expansions and 4 major business renovations within the first year of reopening.[xxix]

- Chicago, Illinois' State Street Mall's retail vacancy rate dropped to 1.8% in the first 8 months of opening, whereas in the 1970s, all but 2 department stores had closed along the Mall. From 1997 to 1998, rents have risen to $32.02 per square foot, an 18% increase over a year, 1,000 apartments were created and traffic has returned to the roadway, knitting State Street back into the thriving downtown loop district, which has an estimated 500,000 daytime workers.[xxx]

- Richmond, Indiana's Promenade has experienced 22 new businesses, 4 business expansions, 71 new downtown jobs, 17 façade rehabs, and 4 downtown second-story rehabs. The vacancy rate dropped from 28% to less than 3% within 18 months of opening.[xxxi]

- Louisville, Kentucky's River City Mall's vacancy rate dropped from 80% to 50% within one year, and experience increased property values.[xxxii]

- Kalamazoo, Michigan's Market Street Mall had three major projects under development within the first 2 years of opening and in 2011 had a 0% vacancy rate.[xxxiii]

- Grand Rapids, Michigan's Monroe Mall had 76 vacant storefronts in 1991 and after the mall reopened in 1997, they were all occupied.[xxxiv]

- Providence, Rhode Island's Westminster Mall experienced over $1.5 billion in public and private funding into downtown after reopening.[xxxv]

Fayetteville Street in Raleigh North Carolina set forth several objectives to restore their main street and make a positive transition from pedestrian mall to a quality, accessible place by:

- Creating a level of beauty, ambiance, and uniqueness appropriate to the importance of the street.
- Establishing a comfortable and safe environment.
- Providing continuous visual interest at street level.
- Blurring the line between public and private realms.
- Making the street feel populated.
- Catalyzing activity for at least 18 hours of every day.
- Allowing for the natural diversity of the private realm.
- Creating an environment in which high quality shops and restaurants can succeed.
- Using the public realm to unify the overall composition of the street.
- Highlighting public/civic buildings to punctuate the street and provide a sense of permanence.
- Accommodating diversity and create a street for all citizens by incorporating universal design.
- Stimulating economic development and revitalization of the parcels fronting Fayetteville Street."[xxxvi]

In somewhat of an ironic role reversal, the Main Street approach has become so successful in terms of placemaking and economic development that even suburban shopping malls are modeling themselves after urban main streets to attract customers. The data show that the main street approach restores vibrancy to an urban area and can be utilized as a successful tool in reshaping struggling or unsuccessful urban pedestrian malls.

V. Transit-Combination Pedestrian Malls

Several pedestrian malls have evolved into or started out as corridors that allow for both pedestrians and some type of transit, such as light rail, bus, trolley, or even taxi. The multi-modal component in these spaces have allowed for greater economic viability of the area, greater access and connections, less confusion and actually, more pedestrian traffic. By combining various modes of transportation, these spaces allow for greater access, connections, eyes on the street, and choice for the user. Some of the popular transit-pedestrian malls include Nicollet Mall in Minneapolis, State Street Mall in Madison and Denver's 16th Street Mall.

This hybrid approach allows for a pedestrian-dominated space, while incorporating the vital elements of access and connectivity with the rest of the urban grid. This approach requires partnership with local transit organizations, taxi companies, downtown organizations, and other stakeholders. Management of the district can often include a budget to cover maintenance, operations and repairs for the transit-pedestrian mall. Often, these are expensive endeavors. For example, the Downtown Denver Partnership estimated that repairing one street of granite pavers would cost about $16 million.[xxxvii]

Nicollet Mall, Minneapolis, Minnesota Transit-Pedestrian Mall
Photo by Elliott Balch

Table 4: Transit-Pedestrian Mall Combinations in the United States

Transit-Pedestrian Mall Combinations			
State	**Mall Name**	**City**	**Combination**
California	Downtown Mall	Sacramento	Light Rail
California	Parkway Mall	Napa	Transit
Colorado	16th Street Mall	Denver	Transit
Iowa	Walnut Street	Des Moines	Transit
Massachusetts	Essex Mall	Salem	Trolley
Minnesota	Nicollet Mall	Minneapolis	Transit, Bicycle
New Jersey	Washington Street Mall	Cape May	Trolley
New York	Fulton Street Mall	New York City (Brooklyn)	Transit
Oregon	Portland Transit Mall	Portland	Transit
Pennsylvania	Chestnut Street Transitway	Philadelphia	Transit
Pennsylvania	Downtown Canopy and Mall	Wilkes-Barre	Transit
Pennsylvania	East Liberty Mall	Pittsburgh	Transit
Pennsylvania	Gay Street Mall	West Chester	Transit
Pennsylvania	Hamilton Mall	Allentown	Transit
Tennessee	Main Street Mall/Mid-America Mall	Memphis	Trolley
Wisconsin	State Street Mall	Madison	Taxi, Transit

VI. Successful Pedestrian-Only Malls

Successful pedestrian malls are not the norm. Doyon states that, "The ones that work are the exception, not the rule, and they require some particular characteristics to flourish: high levels of tourist traffic occurring for reasons other than the mall is one; large populations of pedestrians (such as universities or dense downtown housing) in close, walkable proximity is another." [xxxviii] Dave Feehan of the International Downtown Association continues this point by stating, "Most have failed and been removed. Reasons include lack of maintenance, management, and marketing; fear of crime; the movement of retail to the suburbs; poor design; and Americans' desire to "park in front of the store." However, some well managed and well maintained examples continue to survive and in some cases thrive…. One factor seems to help significantly: the presence of a major university in close proximity." [xxxix]

Successful pedestrian malls appear to have a formula for success. Analysis of the 11% of pedestrian malls that are considered to be successful reveals that certain indicators need to be present for a pedestrian mall to be successful in the United States. These indicators are: located near or attached to a major anchor such as a university, situated in close proximity to a beach, designed to be a short length in terms of blocks, in a town/city with a population under 100,000, and/or located in a major tourist location such as Las Vegas or New Orleans.

- **Universities:** The CLUE Group notes that in almost all instances, these successful malls are in downtowns housing or abutting universities, hospitals or other large institutional

users – places like Boulder, Colorado (University of Colorado) or Burlington, Vermont (University of Vermont) – whose students, employees and visitors provide a significant concentration of daily customers for these districts' businesses.[xl]

- **Beaches**: Miami Beach, Santa Monica, Newport Beach, New Bedford and Newburyport's pedestrian malls are all located directly adjacent to the beach or coast.

- **Short Lengths**: With the exception of Miami Beach's Lincoln Road Mall, most successful pedestrian malls range from 1-4 blocks in length.

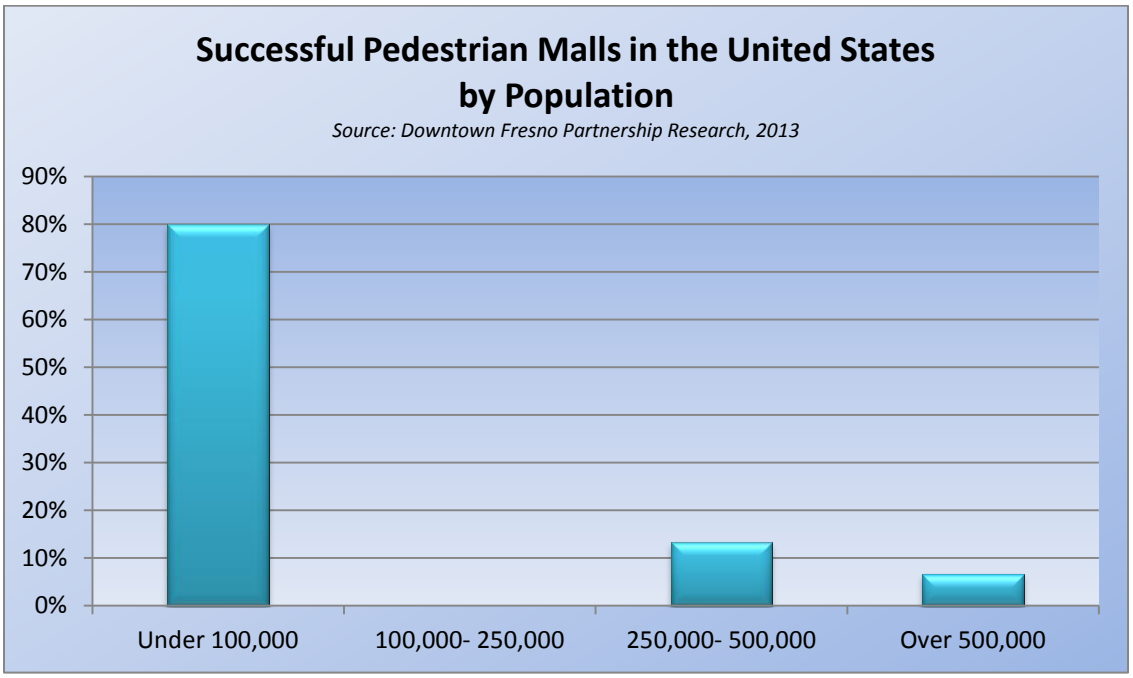
- **High Tourism:** Cities such as New Orleans, Las Vegas and even Cumberland (home to the Western Maryland Scenic Railroad which attracts up to 49,000 passengers a year; and home to the Great Allegheny Passage attracting 100,000 visitors a year) have a dedicated tourist base to frequent their pedestrian malls. It should also be noted that New Orleans' most famous street, Bourbon Street, is not a pedestrian mall.

- **Populations under 100,000:** Only 11% of all American pedestrian malls are considered successful. Of these 11% successful pedestrian malls, 80% are in areas with populations under 100,000. Besides Las Vegas (which we would consider an outlier), there are no successful pedestrian malls in cities over 500,000.

Other research notes that pedestrian malls are successful when it "does not impact high levels of vehicular traffic." [xli]

Miami's Successful Pedestrian Mall by the Beach
Photo by Elliott Balch.

Table 5: Successful Pedestrian Malls in the United States by Population



The Memphis Center City Commission found that successful malls like the Pearl Street Mall in Boulder include:

- Varied mix of active uses and activities
- A large population of "captive" users (downtown residents and workers)
    - The journal, Governing, posited that Cities without downtown residential population can hold pedestrian-only events, but cannot sustain a pedestrian mall.[xlii]
- Efficient public transit
- Heavily programmed activities
- Incorporation of efficient public transit
- Strong anchors that draw pedestrians
- Centralized, coordinated retail management
    - Management of the space is crucial. The Downcity Partnership in Providence, Rhode Island stated that "Pedestrian malls only succeed as part of a comprehensive retail strategy that includes a well-planned parking and mass transit system that reinforces the pedestrian mall. Also, centralized or coordinated retail management (CRM) is essential for most communities to

stabilize downtown shopping. This approach employs development strategies, management strategies, and promotions strategies and must have a sound organization strategy as its underpinning" (IDA, 2002).

- Located in a college town or near a college neighborhood
- Well-planned and extensive parking adjacent to the mall
- Located in an area of high tourism
- Frequent and thorough upgrades of the pedestrian mall.[xliii]

Table 4: Successful Pedestrian Malls in the United States

Successful Pedestrian Malls in the United States					
State	**Pedestrian Mall**	**City**	**Population**	**Mall Length**	**Indicator**
California	Third Street Promenade	Santa Monica	90,377	3 blocks	Beach
Colorado	Pearl Street Mall	Boulder	98,889	4 blocks	University
Florida	Lincoln Road Mall	Miami Beach	90,588	8 blocks	Beach
Iowa	Pedestrian Mall	Iowa City	68,947	4 blocks	University
Louisiana	Exchange Place	New Orleans	360,740	1 block	High Tourism
Louisiana	Fulton Street	New Orleans	360,740	1 block	High Tourism
Maryland	Downtown Cumberland Mall	Cumberland	20,739	3 blocks	High Tourism
Massachusetts	Front Street	New Bedford	95,183	3 blocks	Beach
Massachusetts	Inn Street Mall	Newburyport	17,552	1 block	Beach
Nevada	Fremont Street Experience	Las Vegas	589,317	5 blocks	High Tourism
New Hampshire	Downtown Mall	Lebanon	13,120	1 block	University
New York	Jay Street Pedestrian Walkway	Schenectady	66,273	1 block	University
Rhode Island	Long Wharf Mall	Newport	24,034	1 block	Beach
Vermont	Church Street Marketplace	Burlington	39,522	4 blocks	University
Virginia	Main Street Downtown Mall	Charlottesville	40,482	8 blocks	University

VII. Recommendations

The Fulton Mall is currently operating at 6% of its economic potential, historic buildings are decaying, and it is no longer a space of economic or civic viability.[xliv] The region of Fresno has lost the downtown economic engine. With just an 11% success rate of pedestrian malls that require certain indicators (none of which Fresno has), a pedestrian mall in the middle of a downtown urban area does not meet the criteria to be successful or economically viable.

Based on the findings in this report, we recommend the main street and complete street approaches, reopening the mall to vehicular traffic, restoring a multi-modal space that is welcoming to pedestrians, bicyclists, transit and automobiles. Multi-modal, complete streets organized under a main street model have proven to boost the economic viability of the former pedestrian mall space. Doyon makes the case for complete streets, noting that "when any one class of user dominates the public realm, we all suffer."[xlv] We recommend creating partnerships between stakeholders, engaging downtown property owners and business and communicating with the entire public community of Fresno as downtown's success affects the entire region.

Successful removal of Kalamazoo's Pedestrian Mall into a Main Street
Photo by Elliott Balch

Reference List

Appendix A. Experience of Other Communities with Pedestrian Malls. Retrieved 2 July 2013. Web: http://www.nfta.com/pdfs/Appendix%20A.pdf.

Albuquerque Business First. Downtown revival efforts dogged by high vacancy, crime - Albuquerque Business First. (n.d.). Business News - The Business Journals. Retrieved July 11, 2013, from http://www.bizjournals.com/albuquerque/print-edition/2012/11/09/abqs-downtown-revival-efforts-dogged.html?page=all.

Assessment of Community Planning for Mass Transit: Volume 7—Minneapolis-St. Paul Case Study (PDF). Office of Technology Assessment, U.S. Congress. February 1976. Page 8 ("Metropolitan Setting"). Retrieved on August 29, 2013.

Bacon, Ed. 2011. "Philly Bricks: Chestnut Street Transway." Philly Bricks. N.p., n.d. Web. 25 July 2013. <http://ilovebricks.blogspot.com/2011/01/chestnut-street-transway.html>.

Boucher, Paul. Phone interview. 25 June 2013. (603-448-1203)

Braxton, Greg. "Golden Mall Called Key to Downtown Burbank - Los Angeles Times." Featured Articles From The Los Angeles Times. N.p., n.d. Web. 25 July 2013. <http://articles.latimes.com/1988-05-30/local/me-2345_1_golden-mall>.

Category. "Fulton Street Mall in New Orleans - Fulton Street." New Orleans Travel - Free Advice on Hotels, Restaurants, Live Music, and More!. N.p., n.d. Web. 16 July 2013. http://goneworleans.about.com/od/wareh.

Charlottesville Historic Downtown Mall, Charlottesville, VA Listings. Charlottesville VA Official Travel Website | Hotels, Events, Restaurants, Vacations | Visit Charlottesville, VA. N.p., n.d. Web. 16 July 2013. <http://www.visitcharlottesville.org/listings/?listingID=337>.

Cialone Jr, Donald P. Buffalo Rising. Pedestrian Malls. http://buffalorising.com/2008/07/pedestrian-malls/.

City of Buffalo. Current Trends and Conditions. Web: https://www.ida-downtown.org/eweb/docs/BrainTrust/BT_2007-04-27_Pedestrian%20Malls%20A2%20-%20Impact%20in%20Buffalo%20NY.pdf.

City of Raleigh, N.C. Public Affairs Department (2005). Fayetteville Street – From Mall to Main. City of Raleigh at Your Service, September/October 2005.

City of Tampa. The Mysterious Failure of Tampa's Pedestrian Mall. Power Point Presentation.

Clark, Wes and McDaniel, Mike. The Burbank Golden Mall 1967-1989. http://wesclark.com/burbank/golden_mall.html.

COHEN, J., & GERSHON, E. (n.d.). “Survey Shows That Downtown Hartford Is Still Struggling To Get Tenants.” The Courant. Retrieved July 11, 2013, from www.courant.com/business/hc-hartford-retail.artaug22,0,4116473.story.

Doyon, Scott. Pedestrian Malls are so 20th Century. 9 July 2012. Placemakers.com. Web: http://www.placemakers.com.2012/07/09/pedestrian-malls/.

Flisram, Greg (2000). Post Modern or Post Mortem? The Kalamazoo Mall Revisited. Chicago: American Planning Association. Retrieved June 14, 2006, from http://www.planning.org/viewpoints/kalamazoo.htm.

Douthit, N. (2001). A BRIEF HISTORY OF THE BAY AREA. Cooshistory. Retrieved July 11, 2013, from) http://www.cooshistory.org/coos-historical-maritime-museum-research-aids-brief-history-bay-area.htm.

Downtown Boulder. Retrieved on July 30, 2013 from web: http://www.boulderdowntown.com/visit/maps.

Downtown Boulder Inc. "About Us | Downtown Boulder, CO. “Downtown Boulder Inc | Downtown Boulder Business Improvement District. N.p., n.d. Web. 16 July 2013. <http://www.boulderdowntown.com/about>.

Downtown Iowa City. Retrieved on July 30, 2013 from web: http://downtowniowacity.com/pages/visit/icdd-map.php.

Downtown Iowa City, Iowa. “Downtown Iowa City, Iowa.” N.p., n.d. Web. 16 July 2013. <http://downtowniowacity.com/>.

Downtown Memphis Center City Commission. Pedestrian and Transit Mall Study. June 2008. Definitely Downtown! Web: http://www.indydt.com/Pedestrian_and_Transit_Malls_Study.pdf.

Downtown Oxnard Historic restoration survey final report. (n.d.). The city of Oxnard landmark criteria. Retrieved July 9, 2013, from web: developmentservices.cityofoxnard.org/Uploads/Planning/Historic-Survey_Oxnard-Survey-Final-Report.pdf.

Downtown Raleigh. About: History: Downtown Raleigh. (n.d.). Downtown Raleigh: You R Here Retrieved July 11, 2013, from http://www.godowntownraleigh.com/about/history.

Downtown Reading. About reading. DID. Retrieved August 13, 2013, from http://www.downtownreading.com/pages.aspx?id=1.

Downtown Revitalization | City of Las Cruces. (n.d.). Official Website - City of Las Cruces. Retrieved July 11, 2013, from http://www.las-cruces.org/en/Departments/Community%20Development/Sections/Planning%20and%20Neighborhoods/Downtown.aspx.

Downtown Sacramento. Reports & Publications | Downtown Sacramento Partnership | Venture Out. (n.d.). | Downtown Sacramento Partnership | Venture Out. Retrieved July 11, 2013, from http://downtownsac.org/policy-development/reports-publications/.

Downtown SM. Retrieved on July 30, 2013 from web: http://www.downtownsm.com/.

Ferguson, Gary. Phone interview. 2 July 2013. gary@dtithaca.com. (607-277-8679).

Fourth Street Mall Makeover | ABQ Journal. (n.d.). Albuquerque News, New Mexico News, Sports, Classifieds and Jobs | ABQ Journal. Retrieved July 11, 2013, from http://www.abqjournal.com/main/147832/news/fourth-street-mall-makeover.htm.

"Fremont Street Experience." Fremont Street Experience. N.p., n.d. Web. 16 July 2013. <http://www.vegasexperience.com/>.

FREEPORT ABANDONING FAILED PEDESTRIAN MALL - NYTimes.com. (n.d.). The New York Times - Breaking News, World News & Multimedia. Retrieved July 11, 2013, from http://www.nytimes.com/1986/12/07/nyregion/freeport-abandoning-failed-pedestrian-mall.html?scp=1&sq=freeport+abandoning+failed+pedestrian+mall&st=ny.

Fresno Citizens for a Strong Economy. “I Believe in Downtown Fresno” research. 2013. Web: http://www.ibelievefresno.org.

Gasbay, Andrew. Phone interview. 25 June 2013. (603-448-1203).

Gest, D. (n.d.). Pedestrian Mall Removal Breathes New Life Into Downtown Raleigh | Planetizen: The Urban Planning, Design, and Development Network. Planetizen: The Urban Planning, Design, and Development Network. Retrieved July 11, 2013, from http://www.planetizen.com/node/19112.

Gibbs Planning Group. Fulton Mall Alternative Plans. Economic Impact Analysis. 24 June 2011.

Golden Mall Called Key to Downtown Burbank – Los Angeles Times. (n.d.). Featured Articles From the Los Angeles Times. Retrieved on July 11, 2013, from http://articles.latimes.com/1988-05-30/local/me-2345_1_golden-mall.

Haher, Kate. Downtown Denver Partnership. German Marshall Fund Bootcamp, 2013. Fresno.

Harden, Mark. “Many Cities Have Tried Pedestrian Malls, But Most Have Failed.” The Denver Business Journal. 25 July 2013. Web: http://www.bizjournals.com/denver/news/2013/07/25/16th-street-among-a-rare-breed-most.html.

Helena Montana Big Sky Fishing. "Helena, MT: What Helena, Montana is Like Today." Montana Fly Fishing Information at Big Sky Fishing.Com. N.p., n.d. Web. 29 Aug. 2013. <http://www.bigskyfishing.com/Montana-Info/helena-mt-3.shtm>.

Hendrickson, Dyke. " Inn Street makeover » Local News » NewburyportNews.com, Newburyport, MA." NewburyportNews.com, Newburyport, MA. N.p., n.d. Web. 29 Aug. 2013. <http://www.newburyportnews.com/local/x205476429/Inn-Street-makeover>.

HISTORY | Downtown Pomona. (n.d.). Downtown Pomona. Retrieved July 11, 2013, from http://www.downtownpomona.org/history/.

Holcomb, L. (n.d.). Progress: Downtown has had many different looks. Battle Creek Enquirer. Retrieved 11 July 2013. Web: www.battlecreekenquirer.com/article/20090517/NEWS01/905170303/Progress-Downtown-has-had-many-different-looks.

International Downtown Association. Brain Trust Report: Pedestrian Malls. January 2002. Web: https://www.ida-downtown.org/eweb/docs/braintrust/pedestrian_mall_impact.pdf.

International Downtown Association. Brain Trust Report: Pedestrian Malls. May 2005. Web: http://www.ida-downtown.org.

Klayko, B. (n.d.). Blast from the Past: River City Mall. Broken Sidewalk. Retrieved June 28, 2013, from brokensidewalk.com/2010/05/07/blast-from-the-past-river-city-mall/.

Kohler, Marty. Phone interview. 11 July 2013. Zoning Administration; the City of Middletown. (513) 425-7922.

Lake Street - Great Public Spaces| Project for Public Spaces (PPS). (n.d.). Project for Public Spaces | Placemaking for Communities. Retrieved July 11, 2013, from http://www.pps.org/great_public_spaces/one?public_place_id=108.

Latamour, Charlie. Phone interview. 14 July 2013. Trenton Downtown Association. (609) 393-8998.

Letson, Sherion. Phone interview. 16 July 2013. Downtown Business Alliance of Youngstown. (330-742-4040).

Lincoln Road.Org. "Lincoln Road - South Beach sophistication." Lincoln Road - South Beach sophistication. N.p., n.d. Web. 16 July 2013. <http://www.lincolnroad.org/>.

Lincoln Road Mall. About Lincoln Mall. Retrieved on July 30, 2013 from web: http://lincolnroadmall.com/about-lincoln-road/.

Madison Central BID: Home Page. “Madison Central BID: Home Page. N.p., n.d. Web. 16 July 2013. <http://www.visitdowntownmadison.com/>.

MAIN STREET COMMERCIAL HISTORIC DISTRICT. (n.d.). Arkansas Historic Preservation Program. Retrieved June 29, 2013, from www.arkansaspreservation.com/historic-properties/_search_nomination_popup.aspx?id=2540.

Marshall, Phillip. "Providence Downcity." Philip Cryan Marshall. 2002. Web. 25 July 2013. <http://www.philipmarshall.net/providence/downcity.htm>.

Memphis City Center Commission. Pedestrian Mall Presentation. 2008.

Metro Jacksonville Editor. “Learning from Raleigh, NC: Fayetteville Street Renaissance.” Metro Jacksonville. 2 May 2007. Web: http://www.metrojacksonville.com/article/2007-may-learning-from-raleigh-nc-fayetteville-street-renaissance.

Metzger, P. "Public Hearing Shows Many Still Not Sold on Pedestrian Mall Removal Plans | Buffalo Rising." Buffalo Rising | Your Guide to Buffalo NY News, Arts, Events & Buffalo Restaurants. N.p., n.d. Web. 29 Aug. 2013. <http://buffalorising.com/2009/04/public-hearing-shows-many-still-not-sold-on-pedestrian-mall-removal-plans/>.

National Register of Historic Places. “National Register Information System". National Register of Historic Places. National Park Service. 2008-04-15.

Nebraska State Government. "Nebraska State Capitol - Lincoln, Nebraska - State Government Building." Stats about all US cities - real estate, relocation info, crime, house prices, cost of living, races, home value estimator, recent sales, income, photos, schools, maps, weather, neighborhoods, and more. Web. 29 Aug. 2013. <http://www.city-data.com/articles/Nebraska-State-Capitol-Lincoln-Nebraska.html>.

Neely, Jack, Knoxville's Secret History (Scruffy Books, 1995), p. 130.

Newcombe, Ted. The Trouble with Pedestrian Malls. Governing. December 2011. Web: http://www.governing.com/columns/urban-notebook/trouble-with-pedestrian-malls.html. Downtown Memphis Center City Commission. Pedestrian and Transit Mall Study. June 2008. Definitely Downtown! Web: http://www.indydt.com/Pedestrian_and_Transit_Malls_Study.pdf.

Owens, Bradley (2000). "Downtown Pomona Mall: Lost but not forgotten." Owenswatershedplanning. N.p., n.d. Web. 25 July 2013. <www.owenswatershedplanning.com/PomonaMall_updated.pdf>.

Parks, Bryce. Email interview. 5 July 2013. Publisher, 365ink. Owner, Community, Incorporated, 365. (563-590-3840). bryce@dubuque365.com.

Peterson, Rob. "Kansas Town Retains Pedestrian Mall." Urban Review. N.p., n.d. Web. 29 Aug. 2013. <www.urbanreviewstl.com/2009/07/kansas-town-retains-pedestrian-mall-concrete-awnings/>.

Peterson, Rob. Phone interview. 3 July 2013. Rob Peterson Business Recruitment & Retention Director. Downtown Kalamazoo Incorporated. (269-344-0795).

Pojani, Dorina. "Santa Monica's Third Street Promenade: the failure and resurgence of a downtown pedestrian mall | Dorina Pojani - Academia.edu."Academia.edu - Share research. N.p., n.d. Web. 16 July 2013. <http://www.academia.edu/2098742/Santa_Monica_Third_Street_Promenade_the_failure_and_resurgence_of_a_downtown_pedestrian_mall.

Priest, Sharon. Email. 25 July 2013. Downtown Little Rock Partnership. Executive director. http://www.downtownlr.com/index.php?fuseaction=p0005.&mod=26.

RAY, T., & Press-Enterprise, J. S. (n.d.). Redlands Mall property's fate unknown | San Bernardino County News | PE.com - Press-Enterprise. Breaking News | PE.com - Press-Enterprise. Retrieved July 11, 2013, from http://www.pe.com/local-news/san-bernardino-county/san-bernardino-county-headlines-index/20100909-redlands-mall-propertys-fate-unknown.ece.

Redman, Rod. "PEDSAFE: Church Street Marketplace." walkinginfo.org. N.p., n.d. Web. 16 July 2013. <http://www.walkinginfo.org/pedsafe/casestudy.cfm?CS_NUM=61>.

Riley, Conney. Phone interview. 29 June 2013. Auburn Downtown BID. (315-252-7874)

Rinaldi, T. E., & Yasinsac, R. (2006). Hudson Valley ruins: forgotten landmarks of an American landscape. Hanover: University Press of New England.

Rubenstein, Harvey M. Pedestrian Malls, Streetscapes, and Urban Spaces. John D. Wiley and Sons.1992. Web: http://books.google.com/books?id=9QchSbtSwlUC&pg=PA167&lpg=PA167&dq=pa+hamilton+mall+pedestrian&source=bl&ots=6CGalJsSM9&sig=t-G-mpUaN56VV4G8Mz2FjpfD57s&hl=en&sa=X&ei=P8ZIUr_pFIeuqQHZyIHIBA&ved=0CCwQ6AEwAA#v=onepage&q=pa%20hamilton%20mall%20pedestrian&f=false.

Rubenstein, H. M. (n.d.). Pedestrian Malls, Streetscapes, and Urban Spaces - Harvey M. Rubenstein - Google Books. Google Books. Retrieved July 11, 2013, from http://books.google.com/books?id=9QchSbtSwlUC&pg=PR7&lpg=PR7&dq=Wilmington,+DW+pedestrian+mall&source=bl&ots=6CFdjSyUHa&sig=bj1INDePHJ4eStw_SqDu9gDR3ew&hl=en&sa=X&ei=1mDcUY6KHsaTiQLctIDYCw&ved=0CCwQ6AEwAA#v=onepage&q=Wilmington%2C%20DW%20pedestrian%20mall.

Salem Partnership. "The Salem Partnership - The Essex Street Pedestrian Mall." The Salem Partnership. N.p., n.d. Web. 16 July 2013. Web: <http://www.salempartnership.org/pedestrian-mall.htm>.

Salingo, Jim. Phone interview. 1 July 2013.Executive Director: Downtown Schenectady Improvement District. (518.377.9430).

Salisbury "Crossroad of Delmarva". (n.d.). City of Salisbury Maryland Official Website. Retrieved July 11, 2013, from http://www.ci.salisbury.md.us/cityclerk/Ord1915.

Schmidt, Jessica. "Revisiting Pedestrian Malls." Sam Schwartz Engineering. N.p., n.d. Web. 29 Aug. 2013. <www.ite.org/Membersonly/techconference/2010/CB10C27.

Searching for Vaughn Mall.... (n.d.). Portsmouth, NH Patch - Local news, community, sports, shopping, restaurants, things to do. Retrieved July 11, 2013, from http://portsmouth-nh.patch.com/topics/Vaughn+Mall.

Services, Shopping, Restaurants, & Culture in the New London, CT Historic Waterfront. (n.d.). Services, Shopping, Restaurants, & Culture in the New London, CT Historic Waterfront. Retrieved July 11, 2013, Web http://newlondonmainstreet.org.

Smith, K. (n.d.). Pedestrian Malls. Clubgroup. Retrieved July 1, 2013, from www.cluegroup.com/Downloads/Pedestrian%20Malls%20(Kennedy%20Smith).pdf.

Smith, Kennedy Lawson. The Community Land Use and Economics Group LLC. “Pedestrian Malls.” Excerpted from: Goldfield, David, ed. (2007). Encyclopedia of American Urban History. Thousand Oaks: SAGE Publications. ISBN 0-7619-2884-7 or 988-0-7619-2884-3 (cloth) (2 vols).

Solis, Susy. "Fort Worth Considers Downtown Pedestrian Mall « CBS Dallas / Fort Worth." CBS Dallas / Fort Worth. Web. 29 Aug. 2013. <http://dfw.cbslocal.com/2013/01/07/fort-worth-considers-downtown-pedestrian-mall/>.

Spikol, L. (n.d.). Cornerspotted: The Chestnut Street Transitway - Cornerspotter - Curbed Philly. Curbed Philly: The Philadelphia Neighborhoods and Real Estate Blog. Retrieved July 11, 2013, from http://philly.curbed.com/archives/2012/07/18/cornerspotted-the-chestnut-street-transitway.php.

"The Day - Google News Archive Search. “Google News. N.p., 21 June 1987. Web. 31 July 2013. http://news.google.com/newspapers?nid=1915&dat=19870621&id=Pu0gAAAAIBAJ&pg=3723,5292447.

Trenton Downtown Association. (2013).Trenton Downtown Association. Retrieved August 12, 2013, from http://www.destinationtrenton.com/trenton-downtown-association/.

TriMet: History of the Portland Mall. (n.d.). TriMet: Public Transit in the Portland Area. Retrieved July 11, 2013, from http://trimet.org/about/history/portlandmall.htm.

Urban Review STL. Web: http://www.urbanreviewstl.com/2009/11/north-america-cities-that-have-or-had-a-pedestrian-mall/. North America cities that have (or had) a pedestrian mall. 23 November 2009.

"Washington Street Mall | Cape May Shopping | Cape May NJ Outdoor Mall. “Washington Street Mall | Cape May Shopping | Cape May NJ Outdoor Mall. N.p., n.d. Web. 16 July 2013. <http://www.washingtonstreetmall.com/>.

Westscott, Cal. Business Owner, Freeport, NY. Contact retrieved from the Downtown Freeport Development District. Phone interview on July 30, 2013.

What is Past is Prologue. (n.d.). Phillip C.Marshall. Retrieved July 11, 2013, from philipmarshall.net/providence/downcity.htm/.

Why Was the State Street Pedestrian Mall a “Failure”? | Streetsblog Chicago. (n.d.). Streetsblog Chicago. Retrieved July 11, 2013, from http://chi.streetsblog.org/2013/03/11/why-was-the-state-street-pedestrian-mall-a-failure/.

Wikipedia. “Victor Gruen.” October 2013.

Woo, D. (n.d.). ‘No Way’ to Two-Way?. Good Times. Retrieved July 11, 2013, from www.gtweekly.com/index.php/santa-cruz-news/santa-cruz-local-news/3181-no-way-to-two-way.html.

ENDNOTES

[i] Jessica Schmidt. "Revisiting Pedestrian Malls," Sam Schwartz Engineering. New York, NY.
[ii] Wikipedia. "Victor Gruen." 2013.
[iii] Doyon, Scott. Pedestrian Malls are So 20th Century. 9 July 2012. Placemakers.com. Web: http://www.placemakers.com.2012/07/09/pedestrian-malls/.
[iv] International Downtown Association. Brain Trust Report: Pedestrian Malls. May 2005. Web: http://www.ida-downtown.org.
[v] Smith, K. (n.d.). Pedestrian Malls. Clubgroup. Retrieved July 1, 2013, from www.cluegroup.com/Downloads/Pedestrian%20Malls%20(Kennedy%20Smith).pdf.
[vi] Smith, K. (n.d.). Pedestrian Malls. Clubgroup. Retrieved July 1, 2013, from www.cluegroup.com/Downloads/Pedestrian%20Malls%20(Kennedy%20Smith).pdf.
[vii] Downtown Memphis Center City Commission. Pedestrian and Transit Mall Study. June 2008. Definitely Downtown! Web: http://www.indydt.com/Pedestrian_and_Transit_Malls_Study.pdf.
[viii] Smith, K. (n.d.). Pedestrian Malls. Clubgroup. Retrieved July 1, 2013, from www.cluegroup.com/Downloads/Pedestrian%20Malls%20(Kennedy%20Smith).pdf.
[ix] Downtown Memphis Center City Commission. Pedestrian and Transit Mall Study. June 2008. Definitely Downtown! Web: http://www.indydt.com/Pedestrian_and_Transit_Malls_Study.pdf.
[x] Downtown Memphis Center City Commission. Pedestrian and Transit Mall Study. June 2008. Definitely Downtown! Web: http://www.indydt.com/Pedestrian_and_Transit_Malls_Study.pdf.
[xi] Harden, Mark. "Many Cities Have Tried Pedestrian Malls, But Most Have Failed." The Denver Business Journal. 25 July 2013. Web: http://www.bizjournals.com/denver/news/2013/07/25/16th-street-among-a-rare-breed-most.html.
[xii] Newcombe, Ted. The Trouble with Pedestrian Malls. Governing. December 2011. Web: http://www.governing.com/columns/urban-notebook/trouble-with-pedestrian-malls.html.
Downtown Memphis Center City Commission. Pedestrian and Transit Mall Study. June 2008. Definitely Downtown! Web: http://www.indydt.com/Pedestrian_and_Transit_Malls_Study.pdf.
[xiii] Downtown Memphis Center City Commission. Pedestrian and Transit Mall Study. June 2008. Definitely Downtown! Web: http://www.indydt.com/Pedestrian_and_Transit_Malls_Study.pdf.
[xiv] International Downtown Association. Brain Trust Report: Pedestrian Malls. May 2005. Web: http://www.ida-downtown.org.
[xv] Harden, Mark. "Many Cities Have Tried Pedestrian Malls, But Most Have Failed." The Denver Business Journal. 25 July 2013. Web: http://www.bizjournals.com/denver/news/2013/07/25/16th-street-among-a-rare-breed-most.html.
[xvi] Fresno Citizens for a Strong Economy. "I Believe in Downtown Fresno" research. 2013. Web: http://www.ibelievefresno.org.
[xvii] Smith, K. (n.d.). Pedestrian Malls. Clubgroup. Retrieved July 1, 2013, from www.cluegroup.com/Downloads/Pedestrian%20Malls%20(Kennedy%20Smith).pdf.
[xviii] Smith, K. (n.d.). Pedestrian Malls. Clubgroup. Retrieved July 1, 2013, from www.cluegroup.com/Downloads/Pedestrian%20Malls%20(Kennedy%20Smith).pdf.
[xix] City of Buffalo. Current Trends and Conditions. Web: https://www.ida-downtown.org/eweb/docs/BrainTrust/BT_2007-04-27_Pedestrian%20Malls%20A2%20-%20Impact%20in%20Buffalo%20NY.pdf.
[xx] City of Buffalo. Current Trends and Conditions. Web: https://www.ida-downtown.org/eweb/docs/BrainTrust/BT_2007-04-27_Pedestrian%20Malls%20A2%20-%20Impact%20in%20Buffalo%20NY.pdf.
[xxi] Fresno Citizens for a Strong Economy. "I Believe in Downtown Fresno" research. 2013. Web: http://www.ibelievefresno.org.
[xxii] Fresno Citizens for a Strong Economy. "I Believe in Downtown Fresno" research. 2013. Web: http://www.ibelievefresno.org.
[xxiii] Fresno Citizens for a Strong Economy. "I Believe in Downtown Fresno" research. 2013. Web: http://www.ibelievefresno.org.

[xxiv] Fresno Citizens for a Strong Economy. "I Believe in Downtown Fresno" research. 2013. Web: http://www.ibelievefresno.org.
[xxv] Fresno Citizens for a Strong Economy. "I Believe in Downtown Fresno" research. 2013. Web: http://www.ibelievefresno.org.
[xxvi] Fresno Citizens for a Strong Economy. "I Believe in Downtown Fresno" research. 2013. Web: http://www.ibelievefresno.org.
[xxvii] Fresno Citizens for a Strong Economy. "I Believe in Downtown Fresno" research. 2013. Web: http://www.ibelievefresno.org.
[xxviii] Fresno Citizens for a Strong Economy. "I Believe in Downtown Fresno" research. 2013. Web: http://www.ibelievefresno.org.
[xxix] Downtown Oxnard, California, 2013. Downtown Oxnard Historic restoration survey final report. (n.d.). The city of Oxnard landmark criteria. Retrieved July 9, 2013, from web: developmentservices.cityofoxnard.org/Uploads/Planning/Historic-Survey_Oxnard-Survey-Final-Report.pdf.
[xxx] Why Was the State Street Pedestrian Mall a "Failure"? | Streetsblog Chicago. (n.d.). Streetsblog Chicago. Retrieved July 11, 2013, from http://chi.streetsblog.org/2013/03/11/why-was-the-state-street-pedestrian-mall-a-failure/.
[xxxi] Fresno Citizens for a Strong Economy. "I Believe in Downtown Fresno" research. 2013. Web: http://www.ibelievefresno.org.
[xxxii] Fresno Citizens for a Strong Economy. "I Believe in Downtown Fresno" research. 2013. Web: http://www.ibelievefresno.org.
[xxxiii] Fresno Citizens for a Strong Economy. "I Believe in Downtown Fresno" research. 2013. Web: http://www.ibelievefresno.org.
[xxxiv] Fresno Citizens for a Strong Economy. "I Believe in Downtown Fresno" research. 2013. Web: http://www.ibelievefresno.org.
[xxxv] Fresno Citizens for a Strong Economy. "I Believe in Downtown Fresno" research. 2013. Web: http://www.ibelievefresno.org.
[xxxvi] City of Raleigh, North Carolina.
[xxxvii] Haher, Kate. Downtown Denver Partnership. German Marshall Fund Bootcamp, 2013. Fresno.
[xxxviii] Doyon, Scott. Pedestrian Malls are So 20th Century. 9 July 2012. Placemakers.com. Web: http://www.placemakers.com.2012/07/09/pedestrian-malls/.
[xxxix] International Downtown Association. Brain Trust Report: Pedestrian Malls. May 2005. Web: http://www.ida-downtown.org.
[xl] Smith, K. (n.d.). Pedestrian Malls. Clubgroup. Retrieved July 1, 2013, from www.cluegroup.com/Downloads/Pedestrian%20Malls%20(Kennedy%20Smith).pdf.
[xli] Jessica Schmidt. "Revisiting Pedestrian Malls," Sam Schwartz Engineering. New York, NY.
[xlii] Newcombe, Ted. The Trouble with Pedestrian Malls. Governing. December 2011. Web: http://www.governing.com/columns/urban-notebook/trouble-with-pedestrian-malls.html.
[xliii] Downtown Memphis Center City Commission. Pedestrian and Transit Mall Study. June 2008. Definitely Downtown! Web: http://www.indydt.com/Pedestrian_and_Transit_Malls_Study.pdf.
[xliv] Gibbs Planning Group. Fulton Mall Alternative Plans. Economic Impact Analysis. 24 June 2011.
[xlv] Doyon, Scott. Pedestrian Malls are So 20th Century. 9 July 2012. Placemakers.com. Web: http://www.placemakers.com.2012/07/09/pedestrian-malls/.

Meredyth Muth

From: scott eichorn
Sent: Thursday, January 18, 2024 12:22 PM
To: City Council
Subject: Main St closure

Hi,
The proposal to close Main Street for most of the year, to put it bluntly, is just nuts. I am pro business and happy to put up with all the spill over congestion from the summer concerts, Taste of Louisville, Labor Day parade and the Parade of Lights. But to turn Lafarge, a side street, into a major thoroughfare with regular buses, trucks, and heavy traffic seems poorly thought out. There is a reason Main Street is called Main Street. It is the main street that runs through downtown. You will turn Lafarge into the new Main Street. I hope this idea gets shelved because it is a bad one.
-Scot Eichorn
1109 Lafarge

==CAUTION: EXTERNAL EMAIL==

This email originated from outside the City of Louisville's email environment. Do not click links or open attachments unless you validate the sender and know the content is safe. Please contact IT if you believe this email is suspicious.

From: Marco Toscano
To: City Council
Subject: Main Street Closure Concerns
Date: Wednesday, February 14, 2024 10:18:27 PM

Some people who received this message don't often get email from marcot76@me.com. Learn why this is important

Mr. Mayor, City Council, my name is Marco Toscano and I am writing in regards to news that the city is considering closing Main Street from March through November of this year and possibly permanently moving forward. This initiative has raised the concerns of several Old Town residents and we have been meeting to formally organize an opposition to this plan.

I wanted to start by reaching each of you so that you may begin to consider how this decision will impact the residents of Old Town.

I am a third generation Louisville resident. Also, a third-generation occupant of our long-time family home on Front St. While some of you may not recognize my last name, my family is deeply rooted in Louisville history. I am the great grandson of Maria Colacci (many in town called her Mary). My great grandparents, grandparents, and my very young mother, migrated to Louisville during the Italian immigrant rush. From there my uncles opened Colacci's and Pasquale's and my father (who followed my mother here when he was 19 to marry her), later took over Colacci's from my ailing uncle.

I say all of this because Louisville is my deeply rooted home. It's been home to my family for generations. Many of my family still call Louisville home. My parents still live in town, and my grandparents and great grandparents, uncles, and aunts are all laid to rest at the Louisville cemetery. What originally drew my ancestors here was the small-town character, the promise of a safe, resident and business friendly community where the right thing for the community was always at the center of city leadership. This is the exact reason why I still call Louisville home. Why I still live in a home that was built in the 1890's on Front Street that my grandparents and parents both lived in. You could argue that my family were the founders of the thriving restaurant community on main that is at the heart of this discussion.

When I heard that the DBA and Council are favoring a motion to close Main Street for such a long period of time, or worse, permanently. I was shocked to disbelief. I thoroughly understood and supported the move during the pandemic, as there were literally NO other options for these restaurants to survive. But now, in 2024? There simply is no reason to allow this. Trust me, I fully understand the need for these businesses to thrive, (its in my DNA), that can and should be accomplished by competitive pricing, friendly and attentive service, and great food. This was something my family learned early in the founding of the original restaurants that these current businesses now call home. Louisville already provides outdoor seating, and these are often not filled to capacity as it. The primary reason my neighbors and I are fully against the closure of main, is not to be anti-DBA, it's due to the lack of supporting infrastructure. There is simply no alternative routing for traffic. ALL the surrounding roads are either residential or extremely narrow and can not support the amount of traffic that traverses down Main. Pushing traffic into the residential areas is a huge risk to quality of life and threatens our safety and security. (All areas of why many of us call Louisville home.) We all know that a fire truck cannot fit down Front with the increased parking of the Street Fair. To make this a daily occurrence makes me fearful for my safety and jeopardizes my confidence in emergency services. Think about all the elderly neighbors having to traverse all the way to 42 to take their only means of public transportation. We are already dealing with speeding, careless drivers who would rather speed down our residential streets to avoid the stop signs on Main. To make that an increasing scenario completely breaks my heart. Worse so that my family and I are already talking about abandoning our deeply seeded roots and leaving **OUR** community, driven out by the continuation of un-resident friendly practices in Old Town.

Old Town has a long history of working in harmony with businesses and surrounding neighbors to keep the heart of Louisville, a place that still values small town character and realizes the magic that this brings to its residents and businesses. Please don't destroy that by closing Main Street. That will be the single most un-neighborly thing to do in the history of this town. I urge you to keep Main Street our main street!

Marco Toscano, 1033 Front St.

From: John Leary
To: City Council
Subject: Closing Main St
Date: Monday, January 8, 2024 6:37:24 PM
Attachments: MemoClose Mains St.docx

Members of the City Council

Attached find my comments on the Closing Main Street project in the Council Work Plan up for discussion at you Jan 9th special meeting.

Thanks,

John Leary

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MEMORADUM

Date: January 8, 2024

TO: Louisville City Council

From: John Leary, 1116 LaFarge Ave

Subject: Close Main Street Work Plan Item

I note that the 2024 City Council Work Plan is on your agenda for further discussion at tomorrow night's special meeting. I have the following comments on the Work Plan item "Main Street Closure."

There appears to be an assumption this project, albeit its listing as a "low priority," is something Louisville should be pursuing if there is time and resources to accomplish it. This is a highly controversial concept and has no place in your Work Plan. I will discuss why in the below headings of neighborhood impacts, economic impacts, and competition equities.

<u>Neighborhood Impacts</u>

1. Closing Main Street would have the effect of diverting traffic onto neighborhood streets creating noise, especially from trucks and buses[1], as well as creating safety issues for children in these neighborhoods. The transition of neighborhood streets to collector streets is not at all what people expected when investing in their homes[2].

2. For at least 40 years, Louisville has invested taxpayer money in creating parking spaces to support downtown businesses and to ameliorate parking impacts on neighborhoods adjacent to the business district. There are estimates that each space can cost as much as $20,000, or more, to build and maintain.

3. Removing the parking places on the closed part of Main Street, largely for the purpose of increasing the number of cars coming to downtown, would only exacerbate the parking impacts on residential areas. Most of us Old Town Residents have no problem

[1] RTD has determined moving buses to Front Street is not feasible due to limited turning ratios. This issue came up at a meeting during the Covid crisis. People on LaFarge were concerned about noise and safety issues associated with buses. Participants in the discussion, favoring closing Main Street, appeared to become experts in driving buses and in the purposes of public transportation. I was deeply embarrassed by the discussion. Unconscionable statements showing an ignorance of the social and environmental issues associated with public transportation were frequent. I am not an expert on public transportation, but spent most of my career working on air quality and estimate I have ridden over 200,000 miles on RTD.

[2] Years ago, the issue of closing Main Street came up. City transportation staff did an analysis of expected impacts associated with changing the Old Town traffic configurations. Their conclusion was that the railroad already restricted traffic going east/west and combining this impact with a north/south restriction on Main Street would create significant impacts on neighborhoods.

with the parking impacts associated with special events such as parades and the street faire. These major events make our town special. However, having increased impacts on a regular basis is another thing.

Economic Impacts

1. Taxpayers in Louisville have long supported the preservation and vitality of downtown businesses. As a result, the taxes collected from these businesses may not cover the total costs associated with the services they need. (These services include such things as police, street and alley maintenance, parking lots, and snow removal). This was especially true when the underpass under the railroad track was built. Whenever large capital projects are involved, net downtown revenues are at times marginal at best.

2. Along with providing services and products for residents, revenues produced by commercial areas are needed to fund city wide services. Residential units do not pay their way. Commercial revenues, in excess of the revenues needed for serving these commercial are needed to fill this gap. At the same time, it is important to note that sales tax revenues are paid by customers not retail outlets. Philosophically, sales tax spent by residents is credited to them, and sales tax from nonresidents is credited to the business collecting the tax.

3. The repeal of the Gallagher Amendment is going to reduce, albeit gradually, the property tax contributions we get from commercial properties. This means we may need to be more cautious with investments we make in support of our commercial areas.

Equity for Competing Businesses

1. We do not make the same investments in other retail areas of the city that we make in the downtown area. For example, we require parking lots, but do not foot the bill for building or maintain them; nor do we allow them to expand their business onto public rights-of way. Again, we treat the downtown in a special way because of the character it brings to Louisville. But fairness requires us to put limits on how much we may be creating disadvantages for businesses in the rest of the city.

2. Furthermore, in our fiscal analysis for new businesses, we assume 30% of the revenue they are expected to receive will come from the cannibalization of existing competing businesses. When we help existing businesses expand the same phenomena is in place.

Summary

I fully expect this is in the Work Plan because somebody expects closing Main Street is a good idea. I and many of my neighbors do not share this presumption.

You may be thinking “why is he worried about this since it is a low priority?” I ask you – why are you putting things in your Work Plan that are low priorities? Let me tell you why it is in your Work Plan. There has been a cabal of people who have been pushing for this closure and they have been told “we cannot take it up if it is not in our Work Plan.”

Now it is in your Work Plan, despite your having no idea how much money and staff time it would take to do the analysis needed to make decisions, one way or the other, on the project. This is a complex multifaceted issue that needs much more thought than just tossing into your work plan for purposes of making it possible.

The plan says it would take two or three council meetings. That is purely a guess. Furthermore, leaving the time of the time of the year the project unknow is being deceptive towards the public.

Please take it out.

Thank you for time and service.

From: Jan Prokop
To: City Council; Vanessa Zarate; Jeff Durbin; Austin Brown
Subject: Main Street closure
Date: Friday, February 23, 2024 2:23:07 PM

[Some people who received this message don't often get email from janprokop@comcast.net. Learn why this is important at https://aka.ms/LearnAboutSenderIdentification]

Dear Council members and City staff members,

I am writing to share my perspective on DBA's Main Street closure request for April through October, 2024.

I am a 37 year resident of Louisville and a huge and grateful fan. Thank you for serving our community.

The Main Street closures in 2020 and 2021 represented efforts to support our local restaurants so they could survive the pandemic restrictions. Outdoor seating on Main Street provided 'social distancing' capacity excluded from indoor seating. This was ok, we were happy if it kept downtown alive. The design and implementation of the portable concrete barriers and temporary walls was a quick fix practically speaking but devoid of aesthetic appeal.

The street in front of Double Happy and the Melting Pot was mostly an asphalt wasteland. Depressing, void of charm or a vibrant downtown.

Gratefully the pandemic is behind us. The timing of this 2024 closure request does not allow for a thoughtful appealing design let alone additional funding for such. Where does the funding for implementation come from?

It seems RTD is steadfast in a Main Street reroute limited to LaFarge exclusively.
I am appalled that DBA would ask those residents to endure a 3rd year. They did their civic duty sucking it up so the Main Street community would endure.
6 RTD buses/ hour thundered down their residential blocks spewing fumes from morning until 10 pm along with the all displaced traffic, cars and trucks. Parking in front of their homes was a daily wearisome challenge. It's disrespectful and disgraceful to impose this burden on them.

I would have expected to see an impact study of a closure. What is the anticipated outcome? What amount of revenue/visibility makes it worthwhile? What is the survey among nonrestaurant business owners?

Attendance at the recent EVC committee meeting is an indicator of downtown neighborhood residents' opinions but have all the surrounding homeowning stakeholders been surveyed?

A 7 month closure seems excessive. The curbside patios don't even go up until ? the end of May? Closing for specials events works (Taste of Louisville.)

How about a compromise of 2 weeks or a month with a special promotion of downtown Louisville restaurants during the height of summer or after the end of Street Faire. (I'm always a little deflated when the Street Faire fun comes to an end.) This might allow for some exceptional event planning and publicity beyond normal menus.

During a limited closure could you reduce the density of subsequent neighborhood traffic by limiting the perpendicular sections of Jefferson and Grant to one way travel for the duration.

Thank you for your consideration,

Jan Prokop
637 West Street
Louisville, CO

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From: Scott Adlfinger
To: City Council
Subject: Main Street Closure
Date: Monday, February 26, 2024 8:34:17 PM

[Some people who received this message don't often get email from louisvillecycle@aol.com. Learn why this is important at https://aka.ms/LearnAboutSenderIdentification]

Louisville City Council,

This email is in regard to the proposed Main Street closure from late April through October.

I am a lifelong resident, Old Town resident and property owner, and business owner.

I am ADAMANTLY opposed to this closure as I have found from previous years it seriously affects the quality of life in residential old town. Not only does it make it difficult to find parking throughout Old Town, but the increased bus and auto traffic is a danger to area residents, especially children.

I also feel you should be aware that by doing this you are:
A - favoring a special interest group that does not include other restaurants and businesses that are not on Main Street.
B - leaving yourselves wide open to lawsuits from not only those businesses but residents as well if an accident should occur!

The narrow streets and limited parking available in residential Old Town simply does not lend itself to the increased traffic. Particularly from the public transportation and out of towners not familiar or caring about our quality of life!

Please consider this and other comments as I urge you to do the right thing and above all PROTECT the lives of the citizens who elected you to serve in their best interests!

Thank you,
Scott Adlfinger

Scott Adlfinger
303-570-9152
louisvillecycle@aol.com

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From: Paul Moth
To: City Council
Subject: Seasonal Closure on Main PLEASE!
Date: Thursday, February 29, 2024 3:54:01 PM

Some people who received this message don't often get email from paul.moth@gmail.com. Learn why this is important

Hi City,

I'll keep this very short. PLEASE consider voting for a seasonal closure on Main St. I absolutely loved it last time. My favorite times to go downtown are when Main is closed and First Fridays. Totally fun.

Thanks,
Paul

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From: Alan Muir
To: City Council
Subject: Main Street planned closure.
Date: Wednesday, February 28, 2024 8:28:36 PM

Some people who received this message don't often get email from alan.muir11@gmail.com. Learn why this is important

Dear council members,
I am writing to express my absolute opposition to your plan to close Main Street to cars and presumably RTD buses either temporarily or permanently. While this plan may serve the restaurants by increasing their square footage, it poses a quality of life issue for the downtown residents. I can forsee several specific drawbacks for the neighborhoods.

Some points include:

*Traffic will be diverted to La Farge Ave which is used by students who attend Louisville Middle School. There are a considerable number of walkers and cyclists in the morning and afternoon. This poses a safety issue.

*If RTD is moved, where will the bus stops be? Would you want a bus stop in front of your home?

*Parking will be an issue for residents. Imagine coming home with groceries and not being able to park in front of your house. Will residents get permit parking and if so, who will enforce it?

I ask you to consider whether you would want these things to happen on the street you live on?

Please also consider that this could actually harm the downtown businesses as research shows that the vast majority of conversions to pedestrian malls fail to thrive.
https://www.governing.com/assessments/the-strange-troubled-history-of-pedestrian-malls.html

Finally, I want to point out that one of the things that makes downtown special is the unique and independent nature of the businesses. Let's not wind up with a real estate market that only the big chains can afford to operate in.

This is what happened to Boulder. Let Louisville be Louisville.

Respectfully,
Alan Muir
1158 Lafarge Avenue
Louisville

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From: Stephanie Hempen
To: City Council
Subject: Closing Main street
Date: Monday, March 4, 2024 6:55:08 AM

[Some people who received this message don't often get email from stephaniehempen@icloud.com. Learn why this is important at https://aka.ms/LearnAboutSenderIdentification]

To city council,

I believe that the idea of closing Main Street fro the summer is a benefit to the businesses downtown. It brings a feel of community where we can gather and walk and sit outside to celebrate our beautiful town and weather. I think the environment entices people to come to visit and spend time in our town.

Thank you for your time.

Stephanie Hempen

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From: Robin Enright Salcido
To: City Council
Subject: Citizen in favor of closing Main Street
Date: Monday, March 4, 2024 1:49:15 PM

Some people who received this message don't often get email from robin.enright@gmail.com. Learn why this is important

Hi-
I recently received a flyer from 'concerned citizens of old town' regarding the closing of Main Street from the end of April - November 1 of 2024.

I think the 'concerned citizens' who site no evidence that such closures impact business in a positive way as a reason to NOT close Main Street are short sighted and I do NOT agree with them. There is so much more to be gained by the street closure than income.

Does the closure provide additional income to the restaurants and local business? I am not qualified to say, but I am, as a resident of Louisville and old town in particular, for the closure for the positive community impact.

As restaurants expand their dining areas in the warmer months, there is definitely more foot traffic and even more importantly, in my opinion, a strong sense of community. We might pass a friend or two while walking on the road or eating dinner or just get uplifted by the vibe of community members out and about in our beautiful small town. We need such things more than ever in these times (just consider how last summer's dinner on Main sold out in hours!).

The number of parking spaces lost are of minimal impact.

I would be at the council meeting on March 19 if I could, but will be out of town. Please use this note however you might need and let me know if you have any questions.
Best,
Robin Salcido
908 Garfield Avenue
Louisville

--
Robin Enright Salcido
Writer, Photographer, Podcast Host

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From: traffdr@aol.com
To: City Council
Subject: Our Historic Main Street
Date: Saturday, March 9, 2024 8:01:59 PM

Dear Honorable Mayor and City Councilors:

Thank you Mayor Leh for making time in your busy schedule today to speak with us about Main Street! Afterwards a friend and I got the chance to walk up four blocks of alleys from Elm to South Streets and then back down Main Street to the south near our Community Park....., It was very nice and Sunny.

I believe the weather and sunshine will be good again tomorrow. Please if you have time, take a stroll up and down Main Street tomorrow and see what you think. You may see and probably enjoy a lot of people you know on this street..., a beautiful, unique, charming, and historic American Main Street in action. This includes the bus, the cars the bikes and the strollers coming to and from our Downtown hopefully to stop,but if not, just to catch the vibe and some sun. I hope you have a really good experience.

sincerely,
tom rafferty
rex street Louisville

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From: Sally Blair
To: City Council
Subject: Main Street Closure
Date: Friday, March 8, 2024 8:03:05 AM

[Some people who received this message don't often get email from sally.c.blair@gmail.com. Learn why this is important at https://aka.ms/LearnAboutSenderIdentification]

Hello City Council members,

I wanted to express my support for the seasonal closure of Main Street, as long as it doesn't result in renewed conversations about a parking garage downtown. If seasonally blocking the existing parking on Main will result in discussions about building a $10 million parking garage, residents should understand this implication when considering a Main Street closure.

I would hope if a Main Street closure prompts the usual conversation about lack of parking downtown, the City and EVC would be forthcoming about this connection with residents.

Supporting seasonal closure of Main Street only to hear in the following years about lack of parking and need for the City to build a garage would be inauthentic and very unfortunate.

Thank you for considering my comments.
Sally Blair
Louisville Resident

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From: jenni singingcookstore.com
To: City Council
Subject: Main Street Closure
Date: Monday, March 11, 2024 12:18:27 PM

Some people who received this message don't often get email from jenni@singingcookstore.com. Learn why this is important

To City Council,

As a DBA board member and downtown business owner, I strongly support the temporary closure of Main Street during patio season (April-Oct.). It was extremely popular amongst most of the community and beyond during Covid and I believe it will once again be a positive experience and bring more foot traffic to downtown.

The closure created a more enjoyable space for outdoor diners, a better atmosphere for shopping, and a safer downtown experience for pedestrians and cyclists. People remained downtown longer and it became a fun place for locals to gather more frequently and for visitors to enjoy. In fact, many of my customers were disappointed when the street was once more open to traffic and have inquired as to whether the City will close it again.

As a shop owner, I experienced higher sales, especially the summer of 2021, and more steady foot traffic during the week days (rather than hours of dead time), plus the reduced traffic noise made keeping my door open all the more pleasant. It really encouraged customers to linger longer and explore our historic downtown.

If Council approves this proposal, I know many of us are dedicated to helping program the street space in front of our businesses along with the DBA and Chamber. Possibilities include lawn games, "sidewalk games" such as hop scotch, foursquare, tic-tac-toe, chalk art, communal seating areas, painting the barricades, and any other fun things we can dream up. I also think this could reenergize First Fridays.

I realize that there is some opposition to this proposal, mainly from residents on LaFarge, but I believe we can compromise and resolve any major issues, especially by getting people the correct information. This is not permanent and we can continue to work with RTD on the bus route.

I truly believe downtown is in a fragile state. We have several vacant buildings and foot traffic has been down over the past 18 months. The businesses downtown need support and I believe temporary street closure will be one great step to helping revitalize a Covid and fire battered downtown and Louisville as a whole.

Thank you for your consideration.

Thanks,

Jenni

Jenni Hlawatsch, Owner
DBA Communications and Retail Liaison

The Singing Cook
728 Main St.
Louisville, CO 80027
720-484-6825
jenni@singingcookstore.com
www.singingcookstore.com

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From: t.horst@crystalspringsbrewing.com
To: City Council
Subject: Main Street Closure
Date: Monday, March 11, 2024 9:56:42 AM

Some people who received this message don't often get email from tom@crystalspringsbrewing.com. Learn why this is important

Good Morning,

I am writing this email in support of temporarily closing Main Street, following the dates that have been used for the patios (late April to Late October/early November). As a member of the Downtown Business Association, I would also reiterate that the DBA has not requested a permanent closure. You may have been given information contrary to that - it is not true.

The earlier, temporary closure of Main Street gave Louisville a unique area for people to congregate, to enjoy being together, and to encourage the city's goals for moving to renewable energy sources. It was fun. Recently, one of the "Best of" surveys named Lafayette as having the best East Boulder County Downtown with Erie as runner up. Both cities have made great efforts to revitalize and promote their downtown areas. I was first introduced to Louisville's downtown area almost 30 years ago, when I met my wife. I have many fond memories of joining her family for dinners and get togethers there. When she and I brought our brewery to Louisville and later added our taproom on Main Street, we were immediately drawn to the people of Louisville. While our house is in the mountains, Louisville has become our "home town." Much of those feelings developed because of the people of Louisville - their adventurous character, the love of family and friends and their joy of living. The closures of Main Street only enhanced those characteristics.

Louisville prides itself on having a small town character. I grew up in a very small town of 500 people. It was a vibrant community and growing up there was a great experience. Everyone worked together to make it fun, caring and safe. Business owners participated and supported the community. Sadly, the town fathers discouraged young people from coming and gradually, the number of children dwindled so much the town's school was closed. That small town's population is now 237 and there are only a couple of businesses left in a town that once supported many businesses. It was the attitude that growth was bad, that nothing should ever change, that destroyed the community and joy it once had.

Louisville's Main Street has changed many times over the years, sometimes for good, and sometimes not so good. What is happening now is sad - at least 5 empty buildings, nervous business owners, and a feeling that something is missing. When the Chamber reimagined the Taste of Louisville it was amazing and wonderful. It gave people a chance to come together, to be with each other and have some fun. That's what temporarily closing Main Street will do - give people a place to come together, enjoy being and visiting with each other in the open air, to walk around without worrying about traffic, and a place for adults and children to enjoy each other..

Louisville needs that. I'm hopeful that, rather than dwelling on any negatives there might be, that we focus on all the positivity and joy it can bring and work to lessen or eliminate the negatives. There's already too much negativity in the world.

Cheers,

Tom, Founder/Owner
Crystal Springs Brewing Company
657 S Taylor Ave, Unit E
Louisville, CO 80027

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From: Stephanie Schlageter
To: City Council
Subject: Temporary Main Street Closure - Letter of Support
Date: Monday, March 11, 2024 8:23:41 AM
Attachments:

> Some people who received this message don't often get email from stephanie@radiancemedspa.com. Learn why this is important

Dear Louisville City Council,

Please see attached letter of support for the temporary closure of Main Street this summer.

Thank you,

Stephanie Schlageter

Stephanie Schlageter
Founder and CEO
www.radiancemedspa.com

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Stephanie Schlageter
916 Main Street
Louisville, CO 80027
stephanie@radiancemedspa.com

March 11, 2024

Dear Louisville City Council,

As a business owner and operator on the 900 block of Main Street, I am writing to express my support for the temporary closure of Main Street this Summer. My business is a non-restaurant business and resides in the 900 block, and I understand there may be some concern about whether or not non-restaurant businesses will be able to draw visitors like the restaurants can with their dining areas. If the 900 block were to close along with the rest of Main Street, our business in particular would invest in creating an area for lounging and activities that people of all ages could enjoy throughout the Summer. Ideas we have are to create a shaded seating area with space for interactive activities that could include things like interactive art exhibits, ground mural events, turf with lawn games, and lounge seating for people to use to sit and enjoy the downtown vibe. We could even bring in live music (i.e small solo/duo artists) on certain days as appropriate. We have many, many ideas and are willing to invest in making the 900 block a lively extension of the rest of the Main Street closure that will attract many visitors to downtown throughout the Summer. Closing the 900 Block of Main Street would also be a great way to connect South Street Market, at the corner of South and Main with the rest of the Main Street restaurants and seating in the 900 Block could serve as a place for patrons of South Street Market to sit and enjoy their food and drink and to connect with the rest of the Main Street vibe.

I understand there are concerns about losing the parking spots in the 900 block for the summer but I think there is ample parking in the area to compensate, such as the lot in DeLo just 2 blocks away. I, personally, completed an informal survey of many of the business owners and operators in the 900 Block earlier this year and 100% of those that I was able to connect with were 100% in support of closing the 900 Block along with the rest of the Main Street closure this summer.

As for whether the Main Street closure should be permanent versus temporary, I believe a temporary closure for now would be the best option. A temporary closure will provide the opportunity to test the closure concept and determine if a more permanent closure in the future makes sense.

Overall, I strongly believe that closing Main Street for the summer of 2024 could be a really great way to create an amazing community gathering space that would attract more visitors downtown, which would be amazing for our businesses, our residents, and the City overall.

Sincerely,

Stephanie Schlageter

CEO - Radiance Medspa, 916 Main Street, Louisville, CO 80027

Board Member - Louisville Chamber of Commerce

Board Member - Louisville Downtown Business Association

From: Paula Dallabetta
To: City Council
Subject: closing main street in the summer
Date: Tuesday, March 12, 2024 8:44:40 AM

Some people who received this message don't often get email from pauladallabetta@gmail.com. Learn why this is important

I would like to voice my opinion in SUPPORT of closing the main street to cars in the summer. it makes it much more enjoyable and I will send more time (and money) downtown if this happens.

573 N Manorwood Lane

Paula Dallabetta
303.883.2999

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From:	traffdr@aol.com
To:	Tim Bierman
Cc:	Judi Kern; Barbara Hamlington; City Council
Subject:	Tim, May we please meet with you this Wednesday 3/13 7pm at Rec Ctr for 1 hour max to ask you about Main Street
Date:	Tuesday, March 12, 2024 8:43:38 AM

Dear Tim:

Congrats and Welcome to the Louisville City Council. I am emailing you because I cannot find your tele number on the City's Website where you are listed with your picture. I am sorry that you were unable to meet with us this past Saturday. However, another opportunity is tomorrow night at 7pm at the Rec Center in the Brooks Room. May we please get you to meet with us?

I will call Judy Kern as well and copy her on this email as we understand this invite for Wednesday eve went out to you, her and Barbara Hamlington. And, Barbara cannot meet at that time. I am copying her too. But one or two of you maximum(due to city code) would be great if possible. Will you please let me know that you can meet with us this Wednesday evening? Thank you for your consideration.

We are one of the neighbors to Main Street, as we live on Rex Street. I hate to gross you out this morning, but you hear a lot about the adverse impacts of residents on LaFarge and Front which are VERY REAL However, I have friends that live on your Lincoln Ave and other adjacent neighborhood streets that are likewise affected by any CLOSURE of our perfectly good working American Heritage Main Street. Please let me as discretely as possible, share with you a few bad memories from living on Rex Street for the past 43 years:

1. After a Friday night Street Faire, a woman was found defecating in the back yard of my neighbor's yard. That neighbor lives on our Rex Street too. She had children, and I am not sure if they saw it, but she did.
2. Then, if you contact the Police Department, you will see that I unfortunately am probably the resident with the most calls to the Police to help them get the DOWNTOWN BUSINESS whoever is egregiously spilling their NOISE POLLUTION all the way down onto Rex Street, to turn their music down. If you take this distance and use it as a radius originating from the very inconsiderate Business and swing that around in a circle, you will understand the area of influence that these inconsiderate Downtown Businesses have caused into our quality of life. It is very difficult to sympathize with these businesses, the bad apples that spoil it for the rest of the businesses and neighborhoods.
3. When in the past our Main Street was CLOSED, if we wanted to go to Boulder, we had to redirect over to LaFarge which caused us to have to go to Hutchinson where LES is, where there are children and parents out and about morning and afternoon. This obviously or perhaps not so obvious to someone who hasn't thoroughly though thru it, reduces the safety of our streets which you know is not good. The same reduced safety scenario presents itself north of this proposed CLOSURE on Main Street by LMS. Please think about it.

All of this the DBA knows, and apparently does not care about the very neighborhoods that have supported them over the years. Who is it who is driving this insane proposal, and hijacking you City Council, and threatening us without a fair round table community collaboration?
We are pro business, but not at the expense of other people's property and quality of life. Can you please think this over and ask yourself, is this fair? Is this reasonable? Is it neighborly for one entity to ask you to give me the street for my own purpose?(without even mentioning the adverse impacts onto my neighbors)? Is there a benefit? To Whom, for how long? Will that business survive for the next year? Are they really struggling? If so, why? Are they struggling because they are a property without a street frontage that they could own that they can program anyway that they want? Or, is there some inherent business skill set they are lacking or a market force that closing a street will not solve?

Can you please take one more moment to consider this; say instead of Lincoln Ave., you rather had purchased your recent property just a couple streets over, onto LaFarge where the Bus will now run up and down your street every 30minutes, and the parking will be obviously be more problematic. Would that help you further consider this unwise inconsiderate proposal?

Lastly; recently I ate at Moxie, Bobs and Zuccas. None of them apparently was or are struggling. Why is that? No wait at Moxie cause they just opened up and their product is AWESOME. I had to wait at Bobs, 15 min on a Sunday morning, but it was well worth it with the smiles in there. And, we had to wait 1Hour at Zuccas on a Sat nite at 6pm, but we easily did something while we waited. (Not incidentally, while we waited, the couple from Westminster waiting next to us for their table offered this; "Oh we love your small town feel and Main Street. When I asked her what she thought if we CLOSED Main Street again, she interrupted me politely and said oh don't do that, you should see what they did to Arvada. They ruined it and now " besides the parking, it turned it into a a hangout for young people, who are drinking and partying in the streets. I never go there because this atmosphere is not conducive to bring my grandchildren or even take an early evening stroll. It may be good for the restaurant and bar business, but it drastically changes the intimate feel of a small Colorado town. Request that the Mayor and the Planning Commission Members go to Old Town Arvada on a weekend evening. Then they can see for themselves." Our family expects there are other ways to activate and and revitalize Main Street Business than to steal Main Street from all the Citizens of Louisville. There are many, many examples across America. Please, please consider this very important City matter.

OK, please let us know you can meet us, and thank you for your consideration. You can call me, text me or reply herein. Thank you Tim.

Tom Rafferty
303-704-5207
TRaffDR@aol.com

==CAUTION: EXTERNAL EMAIL==

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From: Dave Bishop
To: City Council
Subject: Main Street
Date: Wednesday, March 13, 2024 7:43:33 AM

Some people who received this message don't often get email from bishop_dave@comcast.net. Learn why this is important

Dear Council Members and Mayor
I have heard recently that there is a meeting
to decide whether or not to shut down Main Street.
You folks launched a survey from Qualtrics, not
sure who they were and why you had a 3rd party,
that I never heard of, launch a city survey.
In this era of cyber crime . . .
really ?
I never opened it. Neither did others
I'm betting.
Shutting down Main Street is a HORRIBLE
IDEA ! There was a fire in a building in downtown
not long ago, Louisville crews did a great job
on jumping on it despite only having a Medic
Crew and a Battalion Chief at Station 1.
Sadly the Ladder Truck had to come from Erie
a 14 minute drive, with lights and siren !
Why, because Mountain View Superior,
Lafayette and Louisvillle had their ladder
trucks in at maintenence at the same time.
One change of the weather, and a closed
Main Street, and there is a very
different outcome !
Do the downtown folks need some help?
YES ! But shutting down the only viable thru
street . . . . .
Question, what is going into Front and Spruce
across from the Library, another restaurant ?
Why are there so many restaurants in downtown ?
So many Restaurants are at best, competition
to see which of the strongest can survive !
One guy owns, six businesses, how does that

work ? Clearly not well !
Why haven't you folks decided to take a spot
in downtown and build a 3 story parking facility,
that dosen't cost an arm and a leg to park in ?
Because you folks cannot collect enough taxes
from it right ? QUIT NICKEL and DIMING the
businesses to death, with all your damn taxes !
Reduce the taxes by 33% for two years, and if a
business dosen't own the building, talk to
whoever their landlord is and tell them to
reduce the rent they are collecting by 33%
for three years, so the restaurants have time
to become viable WITHOUT SHUTTING
DOWN MAIN STREET !
Quit behaving like Democrats, and start thinking
yourselfs as being a survivalist city council !
Bring more businesses into downtown
THAT ARE NOT ONLY RESTAURANTS!
Why ? We rarely eat there because it costs to
damn much money to eat there ! My family,
counting NINE now, with significant others
and grandkids spend an average of
185 to 265 dollars every other Sunday,
in Longmont, and Broomfield,
and Thornton and Westminster.
NOT IN LOUISVILLE . . . . Why ?
You figure it out !
When you do, make changes and decisions
that would bring me and my family back
to downtown !
I live in "far" North Louisville.
Just "food for thought" !

Dave Bishop
Retired Louisville Firefighter
Louisville, CO
Cell # 303-525-8428

==CAUTION: EXTERNAL EMAIL==

From:	Michele
To:	City Council
Cc:	David Pinto
Subject:	Regarding the Main Street Closure
Date:	Thursday, March 14, 2024 10:27:11 AM

Some people who received this message don't often get email from michelelcsb@gmail.com. Learn why this is important

Hello,

My name is Michele Beach and I live at 801 Lafarge Ave. I would like to state my opinion on the proposal for the Main Street Closure. As much as I did find it novel and fun during the pandemic, I have to say that I am opposed to it continuing for a few reasons;

1 - For myself and my family our home became the bus stop and thus basically the new Main Street. We had beer bottles dropped in our front yard and people standing out front all of the time. When we bought the house 12 years ago we certainly didn't intend to sign up to be right on Main street from a traffic and bus-stop perspective. If the traffic and bus stops can't be diverted onto Front street then I feel it's an undue burden on the La Farge homes particularly.

2 - For the town, I think it was a great way to come together as a community during the pandemic, however it certainly didn't seem that more people traversed Main street than before, and because it's only a partial year closure the street can't be made into something like Pearl Street with cool Boulders and flower beds, etc. so the empty streets actually sometimes felt dreary.

3 - Louisville is known for it's awesome street fairs and farmer's Markets along Front Street which really has minimal traffic - what if that street became a permanent walking mall where people can truly enjoy those special attractions that louisville has and it could potentially even grow to something more.

Thank you for your consideration,

Michele Beach

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Subject: **UPDATE – COMMUNITY RESILIENCY AND MARSHALL FIRE RECOVERY**

DATE: **MARCH 19, 2024**

PRESENTED BY: **JEFF DURBIN, CITY MANAGER**
RYDER BAILEY, CPA, DIRECTOR OF FINANCE
ROB ZUCCARO, DIRECTOR OF COMMUNITY DEVELOPMENT
KIANA FREEMAN, RECOVERY & RESILIENCE MANAGER

Executive Summary

This document is an overall update on the recovery from the Marshall Fire as well as an overview regarding mitigation and community preparedness efforts that are being implemented by multiple divisions through the City of Louisville.

As of February 23, 2024, of the 559 homes lost from Marshall Fire, 160 homes have received certificates of occupancy. 75% of the homes destroyed by Marshall Fire (2021) are somewhere in the rebuild process. The City departments are working continuously to support the Marshall Fire recovery. This includes open space and parks projects, recovering community spaces that were impacted, construction management for neighborhoods and residents who are moving back home, public works projects to repair City facilities, and continuing to test water for the safety of the residents. The City recognizes that there is still a long road to recovery from the Fire. Projects that the City is working on include providing resources for mental health support, financial assistance, and being an advocate for the community during this time.

The Recovery and Resilience Division has been working hard over the last 7 months to begin building a disaster management program for the City of Louisville. Key initiatives for 2024 include preparedness, mitigation, response, and recovery planning. The main goal for the Recovery & Resilience Division is not only to support and lead Marshall Fire recovery projects, but to implement a resilience strategy so that the community is building back more resilience.

In addition to the new Recovery & Resilience Division, the City's Police Department and Fire Protection District are continuing to monitor public safety and implement new procedures to increase the safety of the community.

The purpose of this update is to share information while keeping City Council and the community informed on the Marshall Fire recovery progress. It is also provided to discuss next steps for mitigation and preparedness efforts. Staff are not seeking direction from City Council currently. This communication provides information on the following:

- Marshall Fire Recovery
  - Rebuilding Status
  - Public Facilities and Infrastructure Repair
  - Community Engagement
  - City's Financial Condition
  - Insurance Overview
- Preparedness & Resilience
  - Safety and Security Status
  - Louisville Fire Protection District Update
  - Open Space Mitigation
  - Recovery & Resilience Division Overview
- Next Steps

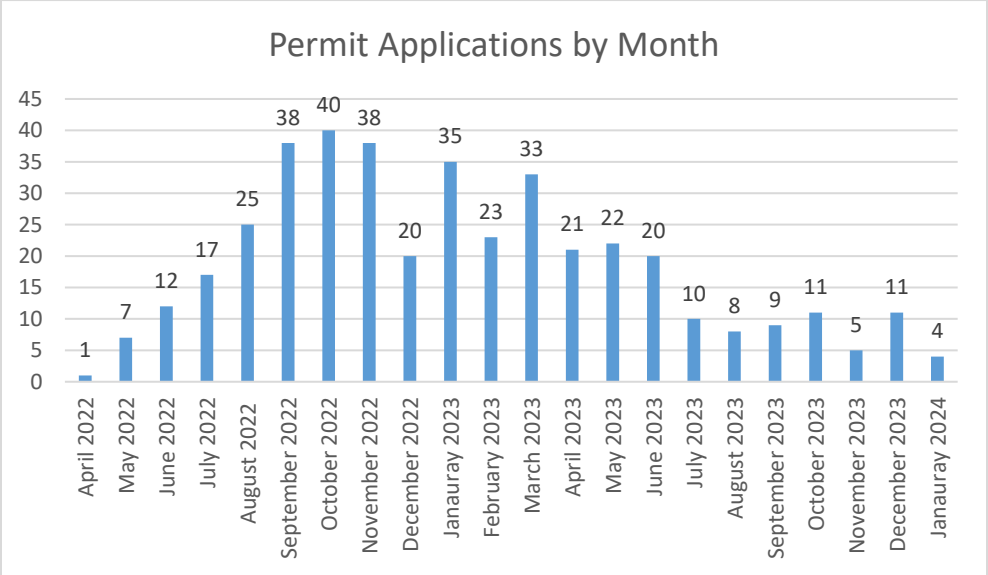
Marshall Fire Recovery

Marshall Fire Rebuilding Status:
Rebuilding Progress
As of February 23, 2024, 29% of homes had received a certificate of occupancy and an additional 46% were under construction or in the permitting process. The number of permit applications for rebuilds peaked in late 2022 and remained high through the middle of 2023. The City is continuing to receive a steady stream of permit applications, but at a much lower rate. The average reported construction cost valuation is $900,771. In addition, through January 2024, of the 549 homes lost, 66 vacant lots have been sold to new owners and two completed homes sold to new owners.

Exhibit 1 - Rebuild Data (as of February 23, 2024):

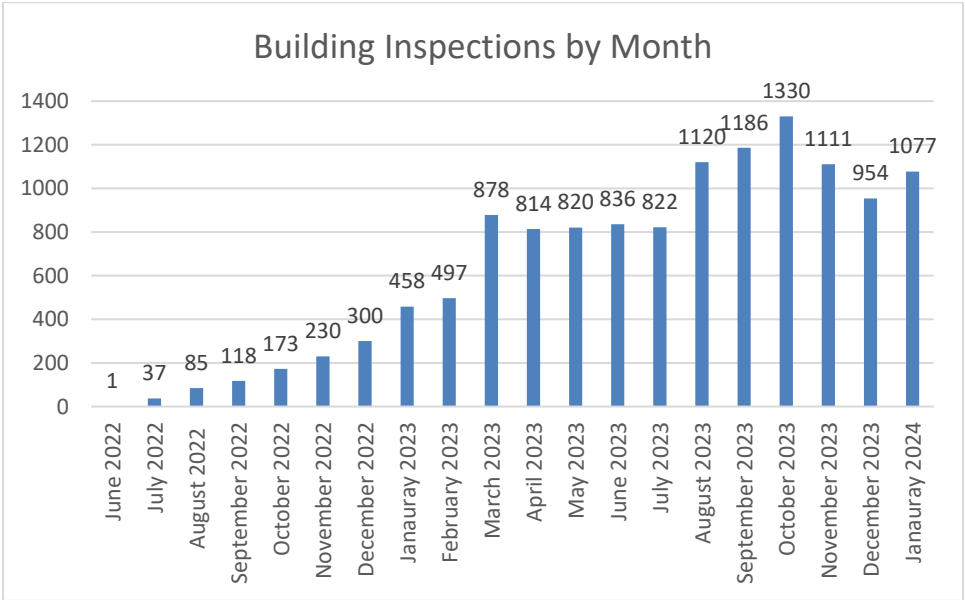
Homes Lost	549
Certificates of Occupancy	160
Under Construction	235
Permits Under Review	19
Remaining Lots Not In Process or Completed	135

Exhibit 2 - Permit Application Volume through January 2024:



The City has conducted 12,847 total building inspections as part of the rebuild effort. Inspection volumes increased significantly in the later part of 2023, peaking in October 2023, as many homeowners were wanting to complete their rebuilds before the holidays and the two-year limitation on many homeowners' Additional Living Expense (ALE) coverage was schedule to run out.

Exhibit 3 - Building Inspection Volume through January 2024:



The City also lost one commercial property in the fire at 1116 Dillon Road. This property included two strip-center commercial buildings with eight tenants. The property owner has submitted a building permit to reconstruct the commercial center.

Permit Fee Revenues
In the June 2023 Council communication, the City made a commitment to the community that City staff would develop an analysis to outline the Marshall Fire revenue v. expenditures. The staff is determined to keep this commitment in which the City's Finance and Community Development divisions are working on building out the analysis and will share more information with the community when the analysis is complete.

The City is collecting 100% of the building permit and plan review fees for all rebuild permits. The following is the total amount of plan review and permit revenues collected by the City (as of February 12, 2024):

Plan Review and Permit Fee Revenues	*$4,045,143*

These funds are used for administration of the permitting and inspection process. The staff has been anticipating the completion of an analysis of fees charged and expenses incurred to administer the rebuild process and intends to complete this review later this year for Council consideration.

City Construction Use Tax Credit Program
The City's Construction Use Tax credit program allows for a credit on the City's portion of construction use tax for those rebuilding, but not for properties that have sold to a new owner. The program was recently expanded to include permits to repair homes damaged by smoke, ash, water, or any other impacts from the fire. A Construction Use Tax covers the sales tax on construction materials used in the rebuild process. Properties that opted into the 2018 International Energy Conservation Code (IECC) rather than the 2021 IECC only receive a rebate proportional to the building area of the original home.

The following summarizes current Construction Use Tax credits issued by the City (as of January 31, 2024):

City Use Tax Credit Requests	*385*
Total Credits Issued	*$5,539,120*
Average City Use Tax Credit	*$14,930*

The total amount of Construction Use Tax collected by the City for homes on lots sold to a new owner or the proportional share of those building to the 2018 IECC (as of February 12, 2024) is listed below:

Use Tax Revenues from Properties Sold or Building to 2018 IECC	*$1,159,970*

County and State Construction Use Tax Credit Program
The County and State also have Construction Use Tax credit programs for homeowners that are rebuilding. The County's Construction Use Tax credit program is fully administered by the County. However, the State's Construction Use Tax program requires that the City process applications and issue a tax form to the homeowner for submittal to the State.

As of December 31, 2023, the City had processed 229 State Construction Use Tax credit forms for homeowners. In addition, the State Construction Use Tax credit program has created demand for homeowners to reconcile and revise their reported valuations submitted with the City-issued building permits, which would potentially allow homeowners to obtain larger State Construction Use Tax Credits. The City is currently in the process of developing a structure for reconciliation of valuation for the rebuilds.

Xcel Energy Efficiency Incentive Program
Xcel Energy is offering a series of rebates for building to minimum energy efficiency standards. As of December 2023, the following were the total registration for Louisville rebuilds in each of the rebate programs, and the rebate offered.

Home Certification Standard	Rebuilding Homeowner Incentive	New Homeowner Incentive	Louisville Participants
2021 International Energy Conservation Code	$7,500	$0	28
Energy Star v3.2	$10,000	$1,200	15
Zero Energy Ready Home v2	$12,500	$2,500	28
Energy Star + NextGen	$17,500	$5,000	42
Passive House (PHI/PHIUS)	$37,500	$15,000	4
TOTAL Participants			*117*

Construction Management
As more and more residents are moving back home, the neighborhoods are transitioning from construction zone into occupied neighborhoods. This can create some tension between ensuring that residents are provided a safe and comfortable neighborhood and facilitating efficient and quick construction. The City has developed new standards for staging on vacant lots and maintenance of vacant lots that are not under construction to help with this transition. The City also continues to have a consultant and Community Resource Officer regularly patrol the rebuild neighborhoods and work with contractors to ensure construction sites are managed appropriately.

Open Space and Parks Marshall Fire Recovery
The City of Louisville Open Space Division has completed repair to all amenities damaged in the Marshall Fire. This work includes repairs to fencing, gates, retaining walls, and trails damaged by wind impacts. The City also received a grant from the Land and Water Conservation Fund for over $250,000 which supported resurfacing the Davidson Mesa Trail (including wind damaged sections caused by the Marshall Fire).

Parks continues working to rebuild Enclave and Sunflower Parks with a goal of beginning construction in late 2024. The project was delayed in 2023 during pursuit of a matching grant from Great Outdoors Colorado. In December 2023, the City received an award of $500,000 which effectively doubles available funding to $1,000,000 total for the two parks. Phase one of the median landscape renovations, which included fire impacted areas, was substantially complete in fall 2023. Final plantings, reseeding and warranty work will be completed in spring 2024 as weather allows. The median landscape contract approved at $805,000 in June of 2023 should see final billings in the amount of approximately $755,000.

Parks has continuously worked on landscape replacements throughout the fire areas. In 2024, Parks will continue replacing trees and landscape plantings throughout the affected area focusing on the community entrances that were affected.

Public Facilities and Infrastructure Repair Status

Public Property Debris Removal (PPDR)
The City's portion of the PPDR ended up being $847,000 of the total $13,800,000 that was spent in Louisville. The City covered 100% of the cost of driveways and FEMA ineligible concrete ($150,000) with approval of the property owners. The only remaining item related to PPDR is the retainage payment to Boulder County of approximately $40,000 for the project closeout.

Water Testing
Staff continues to test the water system as houses are coming back online in accordance with CDPHE approved requirements. 826 water samples have been collected and analyzed. The combined total cost for all water testing is $653,000. The City has approx. $45,000 remaining within the contract. To date, FEMA has agreed to reimburse the City approximately $472,000 for water testing. The impacted water system has been subdivided into 24 neighborhoods with 17 completed and fully released. The seven remaining neighborhoods each have a single home in the early stages of construction and will be tested when available.

City Repairs
Public Works continues to monitor the streets and sidewalks in the burn areas as construction progresses. Emergency patching and pothole repairs are being completed

on an as-needed basis. Most of the streets in the burn areas are scheduled to be rehabilitated in 2025. Staff will monitor the rebuild progress in each subdivision and actual street rehabilitation may vary depending on progress. A few less impacted subdivisions will be completed in 2024 assuming building progresses as anticipated. FEMA has obligated the money for fire damage and PPDR incidental damages. FEMA has denied covering the cost of damages related to rebuilding after PPDR was completed but staff will continue to appeal this decision.

Marshall Fire Community Engagement

The Louisville Historical Museum and Dr. Kate Goldfarb from the CU Boulder Anthropology Department created the Marshall Fire Story Project to allow the community to share and preserve their Marshall Fire stories. These stories allow those affected by the fire to add their voices to the creation of an official historical record of the event, the aftermath, and the ongoing recovery. Story sharing sessions are offered in the hopes that the community will find comfort knowing their voices matter, and the telling of stories is a critical part of processing trauma to find healing. The MFSP team schedules and records oral histories and then processes, transcribes, and edits audio files so that they may be housed at the Louisville Historical Museum and accessed by the community and researchers. Stories are collected online via written submission as well as by conducting in-person interviews.

So far, the project team has collected 31 oral histories and 43 written stories. The Marshall Fire Two-Year Breakfast has allowed the Project to garner additional interest in people sharing their stories, and the museum is grateful for the opportunity to continue helping the community process and heal.

City's Financial Condition:

Insurance Overview

All City facilities have been repaired to date and were fully covered by insurance. The exception is windows at the Police and Court building, which are in progress and materials have been ordered. Compromised window seals were identified in the summer of 2023. All windows in the Police and Court building are being replaced and the expense fully covered by insurance.

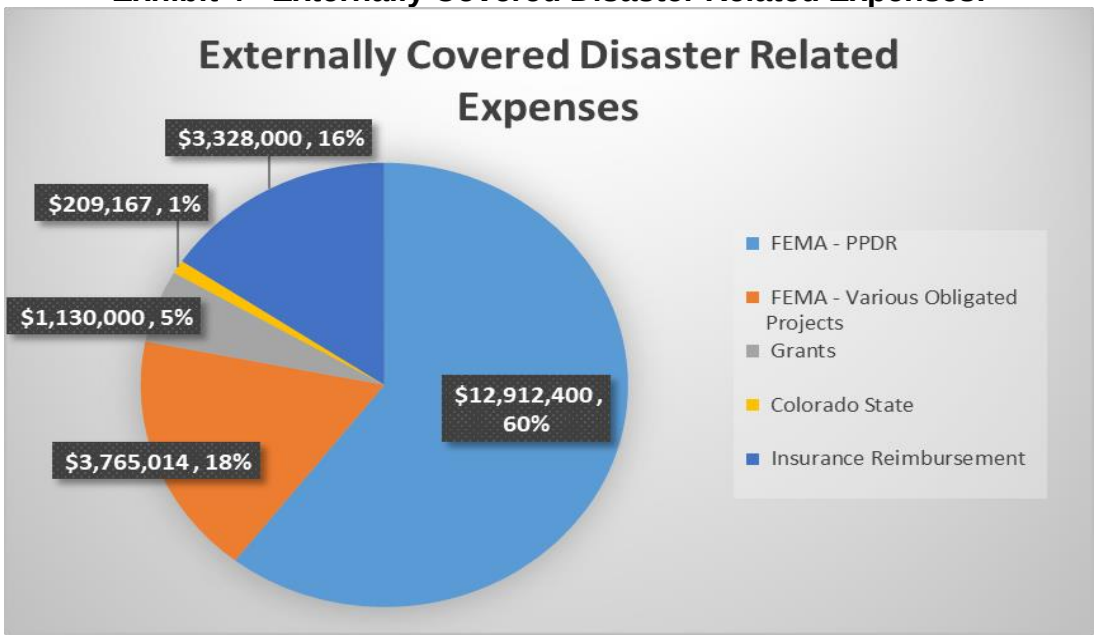
To date, the City has submitted $5,089,215 and has received $3,328,008 in payments. The difference in submitted versus received is that the submittal was deemed ineligible, exceeded coverage limits, or were covered by another source.

The Finance Department, City Manager's Office and City staff continuously monitor and track disaster related expenses to maximize external funding sources and mitigate negative financial impacts to the City. There are several financial impacts related to the

Marshall Fire, including the total impact to the organization from damage to infrastructure and facilities, disaster response, lost revenues, and assistance to homeowners.

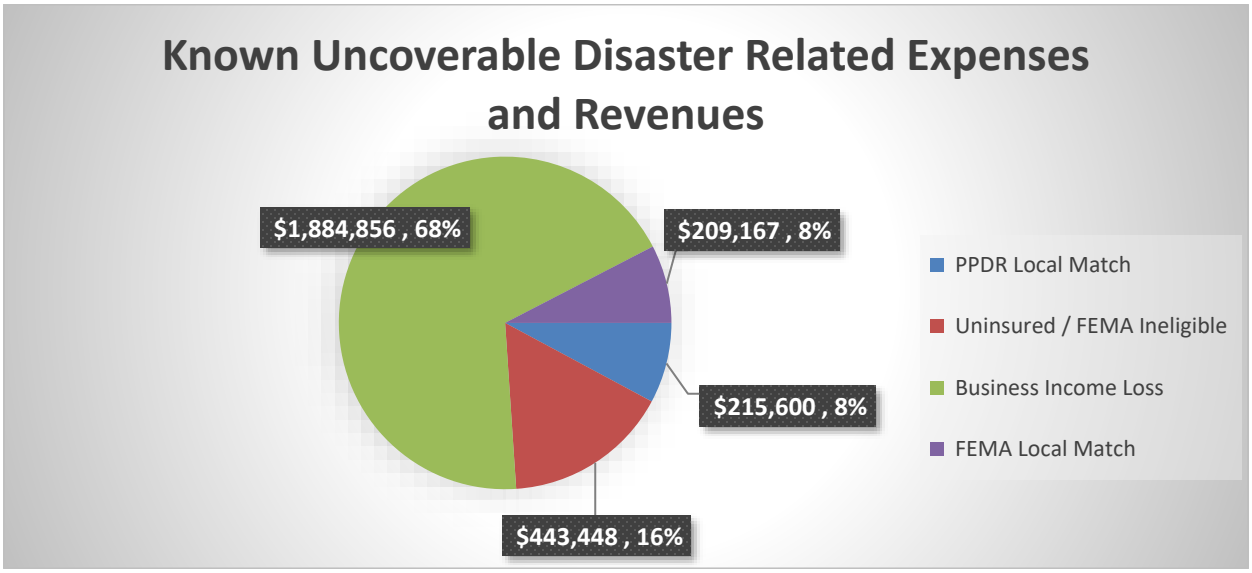
Total estimated disaster related expenses, including the Private Property Debris Removal (PPDR) program, and quantifiable revenue losses are currently estimated at $29.8M. Extensive efforts by staff have resulted in approximately 3/4ths, or $21.3M, of these expenses to be covered by external sources, such as FEMA, the State, Grants, and the City's own insurance policy. Please refer to Exhibit 4 for a breakout of Externally Covered Disaster Related Expenses.

Exhibit 4 - Externally Covered Disaster Related Expenses:



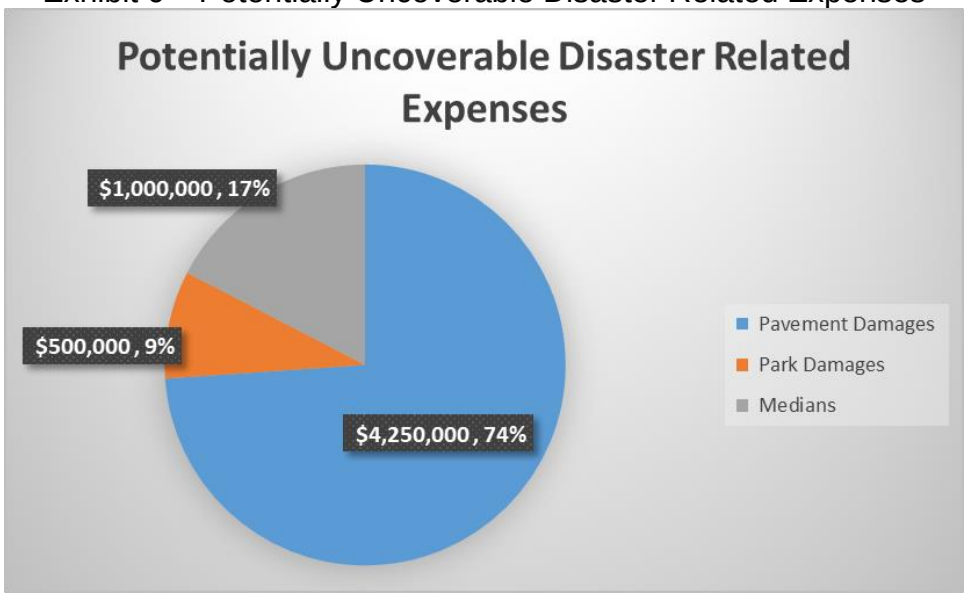
Of the remaining $8.1M in disaster related expenses not covered by external sources, $2.8M is designated as Known Uncoverable (Such as Business Income Loss, City expense for driveways and FEMA ineligible concrete as part of PPDR, FEMA local matches or "cost shares", denied insurance claims or insurance claims in excess of deductibles). Please refer to Exhibit 5 for a breakout of Known Uncoverable Disaster Related Expenses and Lost Revenues.

Exhibit 5 - Known Uncoverable Disaster Related Expenses and Lost Revenues:



Significant disaster related expenses totaling $5.75M remain outstanding and are considered Potentially Uncoverable. These are largely comprised of current and anticipated disaster related expenses deemed ineligible by FEMA, such as median, park, and road infrastructure repairs. Please refer to Exhibit 6 for a breakout of Potentially Uncoverable Disaster Related Expenses.

Exhibit 6 – Potentially Uncoverable Disaster Related Expenses



Staff continue to work diligently with Colorado Department of Public Safety on documentation requests as it relates to FEMA Obligated projects. Additionally, Staff

continues to work with the Insurer on all eligible and potentially eligible covered expenses; however, staff does not anticipate any significant insurance reimbursements in the future.

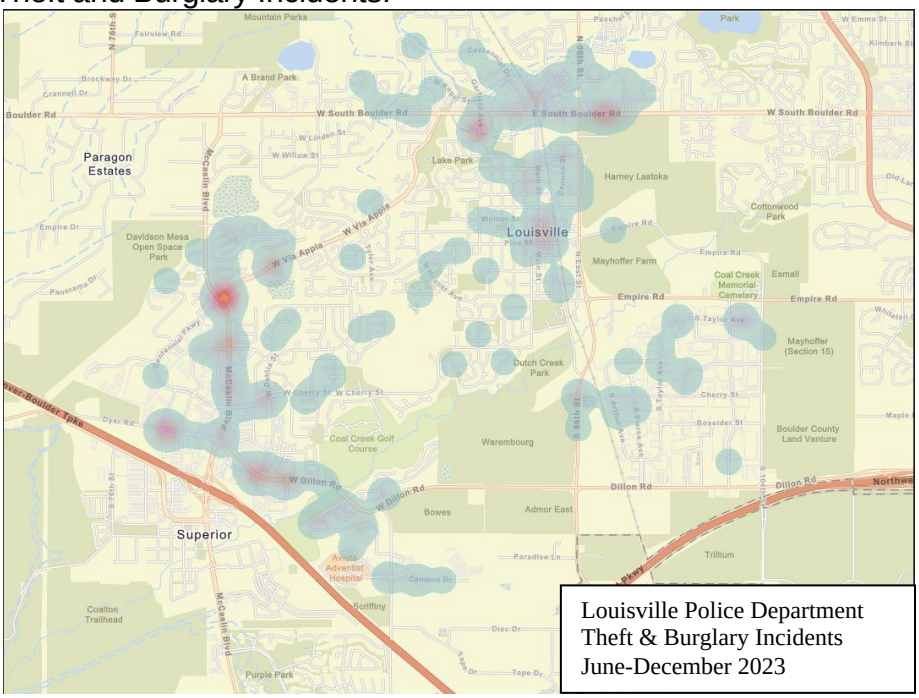
Preparedness and Resilience

Safety and Security Status

The police department continues to monitor the activity occurring within the fire rebuild areas and uses several strategies to support residents and property owners in these areas to address concerns. Focused patrols and visibility will continue in the rebuild areas to try and deter criminal behavior and to help create a feeling of safety as residents return home. The department's Crime Prevention Specialist continues to offer Crime Prevention Through Environmental Design (CPTED) education and conducts site assessments to those currently in the rebuilding process. This service is also extended to those who have moved back into their homes.

Thefts and construction site burglaries in the fire impacted areas decreased by approximately 74% between June 2023 and December 2023 compared to the previous 6 months. From January through May 2023, nineteen incidents were reported in the rebuild areas compared to only five from June to December 2023. The investigations section made significant progress on previously reported construction theft incidents by identifying and charging multiple suspects. These individuals are believed to have been involved in these events within the city and surrounding jurisdictions. The use of Automated License Plate Readers (ALPR) in these areas continues to be a valuable resource that has helped with follow-up investigations and the development of investigative leads. The technology also allows the police department to support regional crime prevention partnerships and was invaluable in identifying and linking the above-mentioned theft suspects to multiple incidents across the Denver Metro and Northern Colorado area. In 2024, the City of Louisville will enter its second year of a two-year contract with the ALPR vendor and hope to continue to utilize the system to enhance community safety.

Exhibit 7– Theft and Burglary Incidents:



As residents move back, there is an increase in natural surveillance, and this is leading to additional calls for service related to code enforcement, parking/access, and other property concerns. Together with other city departments, Police is working to develop solutions to these new challenges. The priority is to find a balance between the goal of getting people home while working to ensure a safe environment for contractors and homeowners.

The police department's command staff received training in July 2023, at the Boulder County's ODM, on the use of a fire alerting and evacuation system, Genasys EVAC (formerly Zonehaven). The police department, together with the City Manager's Office and the City's Recovery and Resiliency Manager, are in the process of coordinating with Boulder County ODM and the Louisville Fire Protection District on the use and management of the system.

Police staff continued to actively participate in the Community Wildfire Protection Plan workshops held throughout the region and attended regular meetings with regional public safety partners to enhance collaboration and strengthen response strategies. The department continues its direct engagement with fire affected groups including the Neighborhood Preparedness Roundtable, Marshall Together, and Marshall Restoring the Community (ROC) to address public safety concerns and foster positive working relationships with its members. These relationships have enhanced communication and provide channels to relay and receive pertinent information more effectively.

Louisville Fire Protection District

The Louisville Fire Protection District has implemented new response protocols for wildfires. This was a joint effort with all Fire Departments/Districts in Boulder County along with the Boulder County Sheriff's Office. The protocols are based on the following critical factors - Hot, Dry, Windy (HDW), Energy Release Component (ER), Burn Index (BI), and 1000-hour fuel moisture/drought level. These factors create a numerical score, and these scores relate to the District's response. There are three levels – Low, Medium, and High. A low response would have a minimal initial response (one brush truck, one engine, and a Fire Duty Officer from the County). The High response would send the most initial units.

Additionally, all the career firefighters had light/wildland gear, but now all staff have the same sets of gear including volunteers. The Louisville Fire Protection District is researching a new type of wildland engine (small brush truck vs medium size truck). The Fire District is also participating in several work groups (City of Louisville, Boulder County, Neighborhood Watch groups, State of Colorado Division of Fire Prevention and Control) focused on recommendations, plans, and responses to urban interface wildfires.

Open Space Mitigation

Open Space

The Open Space Division coordinated efforts to hire the Lynker Corporation and The Ember Alliance to develop a Wildfire Hazard and Risk Assessment Report for public lands in and around the city. The purpose of this project was to develop a comprehensive, science-based wildfire hazard and risk assessment and to provide mitigation options for consideration for the City of Louisville's public lands to be more resilient against future events.

The Open Space Division is carrying out the recommendations of the Wildfire Hazard and Risk Assessment Report by reducing fuels through implementing perimeter mowing in select areas, trail corridor mowing, cattle and goat grazing, noxious weed control, and removal of woody fuels. The City was awarded two grants to support Open Space grazing and mowing mitigation efforts; grants awarded included over $45,000 to support 2023 efforts from the County Wildfire Mitigation Grant Program and a portion of an additional $289,000 from the Colorado State Forest Service Wildfire Mitigation Grant Program to support 2024 Open Space mowing and grazing efforts and additional City efforts.

In 2024, the Open Space Division is also partnering with organizations such as the Natural Resource Conservation Services (NRCS), Bird Conservancy of the Rockies, Longmont and Boulder Valley Conservation District, and other local agencies and experts to ensure mitigation efforts are coupled with sound ecological and science-based management. To learn more about Open Space fire mitigation efforts please go to the Open Space Division City web page or follow this link:

https://storymaps.arcgis.com/stories/47b11c7f1abe45bcba54d6e9abea1d6e

Recovery & Resilience Division Overview

The purpose of the Recovery & Resilience Division is to ensure the City of Louisville's employees and whole community are prepared to respond to and recover from any incident. City of Louisville's goal is to protect the community from the inevitable hazards that the City is faced with. The Recovery & Resilience Division focuses on four main buckets including preparedness, mitigation, response, and recovery.

An important part of the community's recovery is the need to mitigate risk and build resilience for future disasters. Below is a summary of some of the work around mitigation/preparedness that has occurred in the past year.

Preparedness
Preparedness means providing community awareness/education and implementing recovery and disaster response plans.

Training and Exercise
The Recovery and Resilience Division is in the process of creating a staff training plan. Internal training and exercises for City of Louisville staff is important because it provides staff with information about internal operations during a disaster, response, and recovery. It also gives staff the opportunity to test the effectiveness of the Response and Recovery organization chat, identify immediate areas of improvement and action items, and analyze the integration of City of Louisville with partners in the case of a disaster. The Recovery and Resilience Division has developed a New Hire Training course for new City of Louisville employees as well as a training course on Response and Recovery 101.

On November 6th, 2023, the Recovery and Resilience Division put on an internal Disaster Response Tabletop and Functional Exercise. This exercise was run in conjunction with Boulder County's Office of Disaster Management and consisted of a scenario-based event. The City has reviewed the After-Action report that was developed and has begun working on the improvement strategies that resulted from the exercise.

Community Preparedness
In partnership with the Town of Superior, the City launched the 2024 Disaster Preparedness Education Series in January. The purpose of the series is to undertake action and education to mitigate risk and build resilience for future disasters for the community. Session topics include: Disaster Communications, Public Safety Preparedness, Access and Functional Needs, Psychological First Aid, Wildfire Preparedness, Pet Preparedness, Community Mitigation, Disaster Preparedness, and Holiday Safety Awareness & Winter Preparedness.

Plan Development

The Recovery and Resilience Division is responsible for developing internal plans related to emergency management response and recovery. Many of these plans resulted from the Emergency Improvement Plan (EIP) created by All Clear Emergency management group in 2023. This EIP provides a foundation to evaluate and assess the City's roles and responsibilities around disaster preparedness and response and its performance during past incidents, including the Marshall Fire. One internal plan includes the Recovery Plan which outlines the roles and responsibilities held by the City of Louisville as part of the recovery process following any incident impacting the jurisdiction. The Continuity of Operations Plan is used to ensure continuous function and services during response and recovery operations. The Emergency Communications Strategy clearly defines the messages, priorities, strategies, and tools the City of Louisville will use when communicating with the community during an emergency. The Recovery & Resilience Division is also work with Louisville's Sustainability Division to update the 2021 Louisville Annex from the Boulder County Hazard Mitigation Plan with 2023/2024 data and analysis and expand on newly identified vulnerabilities in Louisville.

Emergency Notifications

The City is still ensuring that BOCOAlert and Reachwell alerting tools are a priority for the community and staff. The City has worked with Boulder Office of Disaster Management to ensure that the City follows the County on terminology and language to keep consistency. To continue to push out this resource to increase the City's resilience, the Recovery & Resilience division provided training to the community on the purpose of signing up for alerts and assisted those who struggled to sign up. Additionally, the City is in the process of incorporating signing up for alert as part of the new hire employee onboarding process. To sign up for BOCOAlert visit: BOCOalert.org

Education & Outreach

Neighborhood Liaison:

Early in 2022, the City established a neighborhood liaison program whereby neighborhood leaders meet regularly with City staff. Staff are still meeting once a month with this group to assist with the questions and concerns from neighborhoods during the Marshall Fire rebuild process.

Neighborhood Preparedness Roundtable:

In 2023, the City of Louisville used the Neighborhood Liaison Program model to establish a neighborhood preparedness roundtable. The goal for this group is to open a two-way dialogue between neighborhood leaders and City staff around preparedness matters. As of February 2024, the group is still meeting once a month to discuss disaster preparedness. The group is working to create a workplan for priorities they want to tackle each month to increase community resilience.

Mitigation
Mitigation means developing and implementing strategies to reduce risks from threats while considering community vulnerabilities and values.

Supporting Open Space Mitigation
The Recovery & Resilience Division works closely with Louisville's Parks, Recreation, and Open Space Department to support various projects. One example is supporting implementation of the Wildfire Hazard and Risk Assessment Report and associated mitigation initiatives including fire fuel mitigation such as trail and fence line fuel reduction, cattle grazing, goat grazing, and noxious weed management.

In spring 2023, Boulder County kicked off an update to the Boulder Community Wildfire Protection Plan (CWPP). The purpose of the CWPP is to reduce the greatest risks related to wildfire across Boulder County, unite mountain and plains communities in a collaborative effort to reduce the negative impacts of wildfire, ensure access and input to all communities in program development and implementation options, implement strategic fuels reduction projects to address grassland and forest landscapes with a focus on community protection and implement strategic forest restoration and fuels reduction to protect watersheds for ecosystem services and drinking water. The update process is anticipated to take approx. 12-18 months. The City and LFPD are participating in this effort and advocating for the grassland communities.

Mitigation projects proposed in the Louisville Wildfire Hazard and Risk Assessment Report were outlined in a spreadsheet that will be available in the Boulder County's CWPP Appendices.

Additional Resources/Grants

The Recovery & Resilience Division is collaborating with the State and to continue to apply for FEMA's Hazard Mitigation Grant Program (HMGP) for $4.9 million to install and upgrade three generators at critical City facilities. This includes the Recreation & Senior Center, the Police Building and South Water Treatment Plant. Replacement or the addition generators at these sites will ensure that the City is able to maintain core services like water treatment/delivery, public safety operations and sheltering. Staff should know by Spring of 2024 if the grant is awarded.

The Recovery & Resilience Division is also working on a variety of grants which contribute to the important work the division is set out to complete. The following table outlines a current list of grants that the Division manages and has applied for.

Exhibit 8 – Summary of Grants Managed by Recovery & Resilience Division

Grant/Administered By	Status of Grant	Dollar Amount	Description
Colorado State Forest Service – Wildfire Mitigation	Awarded	$290,000	Fuels reduction on City land and Mitigation Coordinator position
Colorado Department of Local Affairs	Awarded	$90,000	Contributes to the Recovery & Resilience Manager position
FEMA - Hazard Mitigation Grant Program	Applied	$4.9 million	Install and upgrade generators at critical City facilities
Urban Land Institute	Awarded	$10,000	Contributes to capacity building for the R&R division.
Colorado State Forest Service - Wildfire Mitigation Outreach	Applied	$37,400	Education around wildfire mitigation for private property owners

Next Steps

While City of Louisville has accomplished a lot, there is still a lot of work to do. The focal points can be summarized as follows:

- Continuing to provide assistance to Marshall Fire recovery efforts.
  - Managing an orderly and safe neighborhood rebuild process.
  - Monitoring building permit fee revenues versus expenditures.
- Continuing to establish the Recovery & Resilience Division
  - Implement 2024 Roadmap with project initiatives and priorities.
  - Collaborating with local and regional agencies to improve emergency response.
  - Promoting family preparedness planning and private property mitigation.
  - Increase engagement for Disaster Preparedness Education Series.
  - Working community groups to maintain communications, relationships, and effect positive change.
- Working to minimize the fiscal impact to the City
- Evaluating future budgets and emergency reserves

ATTACHMENT(S)

1. Emergency Improvement Plan
2. Recovery & Resilience Division Flyer
3. Terminology & Glossary
4. Presentation

STRATEGIC PLAN IMPACT:

☐	**Financial Stewardship & Asset Management**	☒	**Reliable Core Services**
☒	**Vibrant Economic Climate**	☒	**Quality Programs & Amenities**
☒	**Engaged Community**	☐	**Healthy Workforce**
☒	**Supportive Technology**	☒	**Collaborative Regional Partner**

2023 City of Louisville Workshop & Improvement Plan Summary Report

Project Dates: March 3, 2023 – June 5, 2023
Report Date: June 5, 2023

Completed by:
All Clear Emergency Management Group 3434 Edwards Mill Road, Suite 112-162
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2023 City of Louisville, CO Improvement Plan Summary Report

Project Summary

The City of Louisville, CO contracted with All Clear Emergency Management Group to review existing incident review documents and plans to gather Louisville-specific improvement items and evaluate the City's roles, responsibilities, capabilities and capacities around their emergency preparedness and response. All Clear created and distributed a survey to obtain and prioritize improvements from City staff. An in-person improvement planning workshop was conducted with City employees to help further identify improvements to draft an improvement plan from lessons learned from past incidents, including the Marshall Fire. The scope of this summary report includes the outline and development of the workshops, and the improvement plan.

Project Staff

Will Moorhead Jenny Schmitz Jake Peterson Kate Petroline Alyson Angell

Project Deliverables

The All Clear team worked closely with the City of Louisville to develop and comply with the deliverables.

1. Project Management and Review of City Documentation

- All Clear held a project kickoff call with the City of Louisville on March 3, 2023, to develop a project plan to ensure all deliverables and timelines were met.
- All Clear completed a thorough review of documentation related to the Marshall Fire response and documentation provided by the City of Louisville.

2. Survey Development and Evaluation

- All Clear held a survey review meeting with the City of Louisville's planning team on March 13, 2023 (survey review). In this meeting, All Clear worked with the City of Louisville to create an online survey that would capture details about priorities, identified strengths, areas of improvement, opportunities, and threats related to the City's role during and after the Marshall Fire.
- On April 7, 2023, a workshop preparation meeting was held to further develop the content for in-person improvement planning workshops.

3. Conduct, Facilitation, and Evaluation of the Initial Survey and In-Person Workshop

- On April 13, 2023, and April 14, 2023, All Clear facilitated and evaluated two two- hour in-person workshop sessions utilizing two All Clear facilitators. The workshops included reporting out the findings from the survey previously obtained and

assisting participants in clarifying concepts, building on improvement, and prioritizing mitigation strategies that had been identified. The workshop provided time for small work groups and organizing feedback into improvement categories.

- Using the evaluation information, All Clear has developed an Improvement Plan matrix and recommendations for the City of Louisville, highlighting areas for improvement, corrective actions, and recommendations for future projects.

4. Project Closeout

- As part of the project closeout for this project, the City of Louisville, CO was provided with a final version of the Improvement Plan matrix, a project summary report, and the final project invoice.

Top Priorities Identified and Recommendations for Future Projects

Based on the work during this project, All Clear has developed recommendations for future planning efforts and projects. After collecting the survey data and further discussion identified issues, the below are the top priorities identified. The full detail can be found in the Improvement Plan (attached).

1. Assessments to prioritize and update and/or create plans.

- It is recommended that the City of Louisville conduct a Hazard Vulnerability Assessment (HVA) for the City of Louisville. It allows staff to identify the events or conditions that would interrupt normal operations while weighing the impact from the interruption against the preparedness in place. Additional documentation to consider includes any risk assessments developed by the county (THIRA, Hazard Mitigation Plan) to understand hazards for the county that may impact City operations.
- Continuing development of a City of Louisville Emergency Operations Plan (EOP) would allow City employees and partners a guide for their role and responsibilities in an emergency. The EOP will outline the core group of individuals expected to convene to lead the City during an emergency and be a guide for how those individuals lead City functions toward a return to normal operations.
- An EOP addresses how an organization will respond to an emergency, a Contingency Plan, or a Continuity of Operations/Government (COOP/COG) Plan helps to identify an organization's decision makers, daily essential functions, equipment, etc. that must continue during an emergency. The City of Louisville has a COOP outlined. The plan should be further developed and implemented through education and training.
- A Communications Plan should be created or updated within the EOP and COOP. Phone numbers need to be updated and checked regularly for accuracy. Details should be included to clarify who composes messages, who approves messages, who disseminates messages, and the alternative process implemented when primary systems fail.

2. Hiring a Recovery Manager.

a. Hiring a Recovery Manager was identified as high importance in both the survey and in the workshop. The job description is currently being drafted and the hiring process for the position has been initiated. The Recovery Manager will be advised by an internal Emergency Preparedness Committee to further develop and implement policies, plans, and procedures for emergencies.

3. Accessing needed resources or staff.

a. The Marshall Fire stressed the City of Louisville's capacity for resources and staffing. The City's available resources should be assessed, and a list of needs developed and prioritized. Equipment such as generators, maps, printers, etc. may be identified as necessary for mitigation of emergencies. The processes for resource tracking and budget allocation and procurement should be aligned with the resources. Additional staff during, and post- incident, are needed. Memorandums of Understanding/Agreements (MOUs/As) or Intergovernmental Agreements (IGAs) would provide options for back fill when City staff members are being pulled to other duties or may even supplement the disaster responsibilities of current staff members.

4. Training

a. Training was recommended in multiple areas. Assess the roles of staff during an emergency to determine which employees require basic or advanced ICS training. Cross-train staff members in the various roles they may fill during a disaster. Train all staff on the EOP, COOP, and Communications Plan so all staff are knowledgeable of the City's plans.

5. Exercising

a. Practicing the functions of the Emergency Operations Center (EOC) and the roles of the City staff supporting the EOC would build upon the capabilities of City employees and the City. This can be completed by simply practicing utilization of the ICS forms each role completes during a simulated emergency or running by conducting a tabletop exercise to test new and/or existing plans. Conducting short drills, such as mass notification drills, fire drills, or department drills, is also a great way to enhance preparedness.

The combination of the priorities listed above helps address another issue identified, creating a culture of preparedness without raising anxiety about emergencies. Increasing preparedness of staff members lessens potential for anxiety about emergencies. Preparedness provides some opportunity for an individual to have some level of control when disaster strikes. If staff are educated on the City's plans and if they are trained on and have exercised those plans, they will feel more in control and knowledgeable about addressing emergencies.

Improvement Plan

The Improvement Plan expands on the recommendations of these priorities and provides details about additional issues identified from the survey and the workshop. The Improvement Plan can be found as a separate document outside of this report. The IP serves as a guide for the City by identifying the issue to be addressed, tactics to address the issue, and establishing responsibility, priority, and due dates for the tactical work to be completed.

ssue / Area for Improvement	Recommendation	POETE Element (Planning, Organization, Equipment, Organization, Exercise)	line (Next 60 Days, 6 months or year)	Primary Responsible Department	Status	Start Date	Completion Date
Communications	Update and maintain internal and external contact lists (i.e. regional/state emergency contacts, partner agencies, etc). Ensure to update at least every six months and that these lists are easily accessible to who needs them. Virtual and paper versions are both recommended.	Planning	60 days	HR/CMO	In-progress		
	Formalize process for internal/city communication to all staff (phone tree, group text/mass notification, etc). Identify the department that will maintain the system and recipient contact information. Identify the individuals with permission to send messages through the system. Test the notification system/process on a regular basis. Consider requesting an action by recipients such as contacting their supervisor or completing a brief survey so that receipt of the message can be verified.	Planning, Exercise	60 days	HR/CMO	In-progress		
	Formalize process for external/community-wide communication. Identify the department that will maintain the system and recipient contact information. Identify the individuals with permission to send messages through the system. Assess the needs to use various languages for communication.	Planning, Exercise	6 months	CMO	In-progress		
	Ensure that the Crisis Communications Plan is updated and in a centralized location for anyone who needs it. Annual review and update is recommended.	Planning	60 days	CMO	In-progress		
	Conduct a city-wide communications assessement. Assess cell coverage in city buildings, recording areas with low coverage. Discuss options for addressing low coverage with cellular providers or the IT department.	Planning	6 months	CMO/Facilities	Not-Started		
Finance	Identify and write emergency financial purchasing processes/policies. These should Include: an explanation of who has authority to activate those processes, who has authority to utilize the process once activated, the activation process itself, a detailed process for tracking expenditures during an emergency, and the expectation of all personnel when tracking finances.	Planning	60 days	Finance	In-progress		
	Update City's procurement policy & train staff (supervisors and directors) on how to purchase and submit emergency expenditures.	Training	6 months	Finance/IT	In-progress		

ssue / Area for Improvement	Recommendation	POETE Element (Planning, Organization, Equipment, Organization, Exercise)	line (Next 60 Days, 6 months or year)	Primary Responsible Department	Status	Start Date	Completion Date
and Employee Support	Identify processes and resources to support the physical and mental health of city personnel during an emergency. Determine the department that will be responsible for monitoring personnel well-being during an emergency. Identify resources for support such as a mental health provider who could provide services during an emergency activation.	Planning, Organization	6 months	HR/Police	In-progress		
	Determine the employment benefits available to city personnel during and after an emergency. Summarize those benefits so they can be disseminated as a reminder to staff when an event occurs.	Planning	60 days	HR	Not Started		
governmental Relations	Engage with other cities to determine support/resources that could be provided/received during an emergency. Consider neighboring cities (or those within Boulder County) as well as cities that may be geographically separated from the event impacting Louisville. Include Boulder County Disaster Management in the discussions so that efforts for lending/receiving aid are, when appropriate, coordinated with the County/State. Develop IGAs with these other entities for staff support for critical city services/functions. These IGAs should be expanded to detail what will be paid, when and for what amounts. Identify the department responsible for updating the MOUs. Once IGAs are established, identify the department responsible for ensuring they are updated periodically (i.e. annually or every three years).	Planning	6 months	All departments	In-progress		
	Work with Boulder County EM to define and understand the role of the city in the County EOC and County EOP.	Planning	60 days	CMO/Police	In-progress		
lazard Vulnerability Assessment (HVA)	Conduct a HVA for the city services. Ask staff about the events or conditions that may, in their opinion, interrupt normal operations. Once a list of events/conditions is created, solicit input from staff about strategies to mitigate the impact of those events/conditions. Consider and include vulnerabilities of the community (at risk populations, mobility challenges, etc).	Planning	1 year	CMO	In-progress		
	Update and expand the city-wide EOP to define the City's strategy for emergency response. Share the updated EOP with staff. Train all staff on the basic concepts of the plan. Provide more detailed training for staff who will serve in leadership roles during activation of the EOP (this includes leading functions or teams).	Planning, Training	6 months	CMO/Police	In-progress		

ssue / Area for Improvement	Recommendation	POETE Element (Planning, Organization, Equipment, Organization, Exercise)	line (Next 60 Days, 6 months or year)	Primary Responsible Department	Status	Start Date	Completion Date
ency Operations Plan (EOP)	Assess city staff functions and associated roles during an emergency. Define these by position, not by individual's name so that when people change roles or leave the organization the tasks remain with the role and are assigned to the newly hired individual. Determine what each position is expected to do during an emergency. Some roles may be assigned to a different department/function to maximize personnel and expertise or to ensure the most efficient use of personnel resources during an emergency. Include in City EOP and COOP.	Planning, Organization	6 months	All departments	In-progress		
	Create individual city facility/building/department emergency plans that align with the City's EOP or create annexes of this plan for the facility/building/departments. Ensure they are easy to use, standard but also customizable and accessible. These plans/annexes should define the response activites expected of each facility/building/department when normal operations are impacted. This would supplement the emergency response processes for each facility (bomb threat, active shooter, fire in the building, etc) These plans should include staffing plans/priorities with roles and redundancy plans to support staff impacted by the event or part of the response.	Planning	1 year	CMO/Facilities	In-progress		
	Conduct drills for specific elements of the emergency response and emergency operations plans. These drills/exercises could be conducted on a regular basis (i.e. quarterly) and involve a small or large number of employees. These may test communication processes, information gathering and dissemination, evacuation from an area with relocation supplies (go-kits). These were referred to as "15 min response drills" during the workshop.	Exercise	1 year	CMO/Police	In-progress		
Continuity of Operations Plan (COOP)/Continuity of Government (COG)	Update the COOP/COG for the city. This plan should be specific to the city and define essential functions and services, the role and expectations of the elected officials when the continuity plan is activated, identify a backup for each city department's essential personnel, identification of redundancies for systems, processes, devices, or equipment utilized to accomplish functions of the city, and include a section covering policies and processes for financial tracking for insurance purposes. This plan should be continual reviewed, updated and trained on. Develop plan annex for each department.	Planning	6 months	All departments	Not-Started		
Incident Command System/Structure (ICS)	Further define Public Information Officer (PIO) position, who the primary PIO is and alternates, process/procedures, etc.	Organization	60 days	CMO/Police	Not-Started		

ssue / Area for Improvement	Recommendation	POETE Element (Planning, Organization, Equipment, Organization, Exercise)	line (Next 60 Days, 6 months or year)	Primary Responsible Department	Status	Start Date	Completion Date
	Once Incident Command positions are filled with primary and alternate staff for each position, these individuals who will be managing and supporting each ESF/City function within the EOC and under the EOP or COOP should be trained. Educate individuals about how to conduct their role, communication expectations, documentation, etc.	Training	6 months	All departments	Not-Started		
Hire an Emergency Manager for the City	Re-boot the long term recover team and transition the team to become the emergency management committee.	Organization	90 days	CMO	Completed		August 2023
mote a Culture of Preparedness	In conjunction wth city-wide training programs, promote preparedness among city employees. The intention is to ensure that employees ensure their team/function/department is prepared. Similarly, conducting outreach for residents to become more prepared, which reduces the needs of citizens during an emergency and helps shorten the recovery process. This all can be done in coordination with first responders and community organizations. These organizations may provide subject matter expertise, resources, or instruction.	Organization	1 year	HR/CMO	In-progress		
	Assess gaps in supplies and equipment. Once the prioritized list of supplies and equipment is created, identify the need for a cache of backup supplies, PPE, bottled water, and identify the need for storage space and create a tracking/managing process for the inventory. Any emergency cache of supplies should include a process to rotate stock, monitor expiration dates, and maintain an inventory list. Supplies and equipment purchased or allocated for emergency response and emergency management should have designated locations, only accessible by personnel responsible for managing or deploying the equipment.	Equipment, Planning	6 months	All departments	Not-Started		
	Assess city infrastructure/power/IT/generators/etc. Determine vulnerability of existing equipment/systems and identify that which are missing. Create a list of equipment that would mitigate the vulnerability of each element. Create a priority for purchasing. The location of equipment such as generators may be determined as the EOP and COOP are developed and critical infrastructure and essential services are identified.	Planning, Equipment	6 months	Facilities/IT/CMO	Not Started		

ssue / Area for Improvement	Recommendation	POETE Element (Planning, Organization, Equipment, Organization, Exercise)	line (Next 60 Days, 6 months or year)	Primary Responsible Department	Status	Start Date	Completion Date
Supplies and Equipment	Create a plan to continue operations if the city network is unavailable and include in the COOP. This plan should include ensuring how information will be sent, received, accessed, and stored and the communication elements to ensure users know when and how to transition to the backup and return to normal operations.	Planning	6 months	IT/CMO	Not Started		
	Identify primary and secondary contractors that can provide support to city services. For example, determine the emergency delivery process for fuel from the primary fuel supplier then identify an alternative supplier should the primary be unable to fill a request.	Planning	6 months	All departments	Not Started		
	Ensure that procurement is conducted in compliance with FEMA regulations. Create quick reference guides for key personnel who may have to urgently implement the procedures.	Equipment	60 days	Finance/CMO	Not Started		
	Create "Go Boxes" for departments including critical equipment. Have each department/function create and maintain a "go box". This box would be taken by anyone in the department during any type of evacuation or relocation. The box would facilitate that department's ability to stand up and conduct business from an alternate location.	Equipment	6 months	All departments	Not Started		
	Assess technology/equipment/etc. Determine vulnerability of existing systems/equipment and identify that which are missing. Create a list of equipment or actions that would mitigate the vulnerability of each element. Create a priority for purchasing, resources and/or training.	Equipment, Planning	6 months	All departments	Not Started		
Develop a training program for emergency response	Decide what staff (directors/division managers) needs basic training.	Training	6 months	Police/CMO	Not Started		
	Cross-train staff on what roles they would hold in an emergency.	Training	1 year	All departments	In-Progress		
	Add emergency response training to New Employee Orientation.	Training	6 months	HR	Completed		Jan. 2024
	Partner with federal, state and local resources to provide inter-agency training in all hazards.	Training	1 year	CMO	Completed		October 2023

ssue / Area for Improvement	Recommendation	POETE Element (Planning, Organization, Equipment, Organization, Exercise)	line (Next 60 Days, 6 months or year)	Primary Responsible Department	Department POC	Start Date	Completion Date
Exercise	Use tabletop exercises/scenario-based exercises to test new and existing response plans.	Exercise	1 year	CMO/All departments	Completed		November 2023
Recovery	Recovery planning. Develop plans for managing recovery efforts in a coordinated manner. This includes plans for the city overall as well as developing and educating employees about department-specific plans or processes related to recovery. Train and exercise appropriate staff on the utilization of recovery forms/processess.	Planning, Organization, Training, Exercise	1 year	CMO	In-progress		

City of Louisville
COLORADO • SINCE 1878

Recovery & Resilience Division

Our division is working to increase our community's resilience to all hazards and threats. We lead disaster preparedness and recovery efforts internally and externally.

Our Work

Preparedness

From community awareness and education to implementing recovery & disaster response plans, our R&R division is committed to preparing for all types of hazards. Some of our work includes:

- Continuity of Operations Planning
- Disaster Education Series
- Training and exercise (community & staff)

Mitigation

The R&R division is responsible for developing and implementing strategies to reduce risks from threats while considering community vulnerabilities and values. Some projects include:

- Trail and fence line fuel reduction
- Cattle grazing
- Wildfire Risk Assessment implementation support

Response

When a disaster occurs in the City of Louisville or in another jurisdiction, the Recovery & Resilience division is ready to jump in and support response operations. Response support includes:

- Response communication strategies
- Activation of Department Operations Centers
- Recovery activation

Recovery

The R&R division is responsible for leading equitable response and recovery initiatives in disaster operations. Recovery strategies include:

- Recovery Plan (internal & community)
- Marshall Fire Recovery
- Recovery Assistance Center

Resources

Emergency Alerts

- Visit BOCOAlert.org to sign up to receive emergency messages about imminent threats and hazards by text message, email, and/or on your cell, home or work phone.

Boulder County Office of Disaster Management

- ODM offers a variety of preparedness resources. Visit Boulderodm.gov/preparedness for information, trainings and workshops.

Marshall Fire Recovery

- For more information about Marshall Fire Recovery, please visit: LouisvilleCO.gov/MarshallFire

More Information!

- Resilient Louisville LouisvilleCO.gov/ResilientLouisville

Contact us!

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Division

Recovery and Resilience

Recovery & Resilience Division Glossary

Acronym or Term	Meaning	Type	Definition
AAR	After Action Report	Report / Document	A document intended to capture observations of an exercise and make recommendations for post-exercise improvements.
AFN	Access & Functional Needs	Department	Individuals who may have additional needs before, during and after an incident in functional areas, including but not limited to maintaining independence, communication, transportation, supervision, and maintain health (C-MIST).
CBCP	Certified Business Continuity Professional	Profession / Role	CBCPs are professionals that have demonstrated both knowledge and skill in the business continuity/disaster recovery industry.
CDPHE	CO Department of Public Health & Environment	Department	Principal department of the Colorado state government responsible for public health and environmental regulation.
COB	Close of Business	Administrative Language	The end of the working day or the business day.
COOP	Continuity of Operations Plan	Report / Document	The effort within individual agencies to ensure they can continue to perform their mission essential functions during a wide range of emergencies.
DOC	Department Operations Center	Facility	An operations or coordination center dedicated to a single, specific department or agency. A DOC focuses on internal agency incident management and response.
DOLA	Department of Local Affairs	Department	DOLA serves as the primary interface between the State and local communities. DOLA provides financial support to local communities and professional and technical services to community leaders in the areas of governance, housing, and property tax administration.

EM	Emergency Management	Department	Emergency management is the managerial function charged with creating the framework within which communities reduce vulnerability to threats/hazards and cope with disasters.
EOC	Emergency Operations Center	Facility	An EOC is a physical or virtual location from which leaders of a jurisdiction or organization coordinate information and resources to support incident management activities (on-scene operations).
EOD	End of Day	Administrative Language	A common term typically used in reference to a specific deadline: completing a task by the end of the day.
EOP	Emergency Operations Plan	Report / Document	A document that describes how a facility will respond to and recover from all hazards.
ERP	Emergency Response Plan	Report / Document	A set of written procedures for dealing with emergencies that minimize the impact of the event and facilitate recovery from the event.
ESF	Emergency Support Functions	Disaster Group / Function	Provide the structure for coordinating Federal interagency support for a Federal response to an incident.
ICS	Incident Command System	Disaster Group / Function	A standardized approach to the command, control, and coordination of emergency response providing a common hierarchy within which responders from multiple agencies can be effective.
IGA	Intergovernmental agreement	Document	Any agreement that involves or is made between two or more governments in cooperation to solve problems of mutual concern.
IRT	Incident Response Team	Profession / Role	A group of people who prepare for and respond to an emergency, such as a natural disaster or an interruption of business operations
LTR	Long Term Recovery	Disaster Group / Function	A cooperative body that is made up of representatives from faith-based, non-profit, government, business and other organizations working within a community to assist individuals and families as they recover from disaster
OOO	Out of Office	Administrative Language	Used as a notification to colleagues or clients when an employee is on vacation, out sick, or away from the office for another reason, and cannot be reached

PIO	Public Information Office	Department	Location to coordinate all external communication between the City and citizens. The PIO is responsible for news releases, social media, community outreach, and general information management.
RSF	Recovery Support Function	Disaster Group / Function	The coordinating structure for key areas of recovery assistance. There are sic RSFs including infrastructure systems, economic, natural & cultural resources, health and social services, community assistance, and housing.
VOAD	Volunteer Organizations Active in Disasters	Department	A combination of faith-based, community-based, and other nonprofit, nongovernmental organizations (NGOs) that work to mitigate and alleviate the impact of disasters.
Preparedness		Function	Building and sustaining the capabilities that are necessary to deal with great risks.
Mitigation		Function	The capabilities necessary to reduce loss of life and property by lessening the impact of disasters.
Response		Function	The capabilities necessary to save lives, protect property and the environment, and meet basic human needs after an incident has occurred.
Recovery		Function	The capabilities necessary to assist communities affected by an incident to recover effectively.
Resilience		Goal	The capacity of individuals, communities, businesses, institutions, and governments to adapt to changing conditions and to prepare for, withstand, and rapidly recover from disruptions to everyday life, such as hazard events.
Hazard		Term	A condition with the potential for harm to the community or environment
Threat		Term	Any indication, circumstance, or event with the potential to cause loss of, or damage to an asset
Risk		Term	Risk is defined as a function of the nature and magnitude of a threat, the vulnerabilities to that threat, and the consequences that could result.

Incident		Term	An occurrence, natural or manmade, that necessitates a response to protect life or property.
Disaster		Term	An event in which a community undergoes severe danger and incurs, or is threatened to incur, such losses to persons and/or property that the resources available within the community are severely taxed.
Emergency		Term	An unexpected event which places life and/or property in danger and requires an immediate response through the use of routine community resources and procedures.

City of Louisville

Marshall Fire Update

March 19, 2024

Marshall Fire Recovery

Marshall Fire Rebuilding Status

Community Development/Planning

Homes Lost	549
Certificates of Occupancy	160
Under Construction	235
Permits Under Review	19
Remaining Lots Not In Process or Completed	135

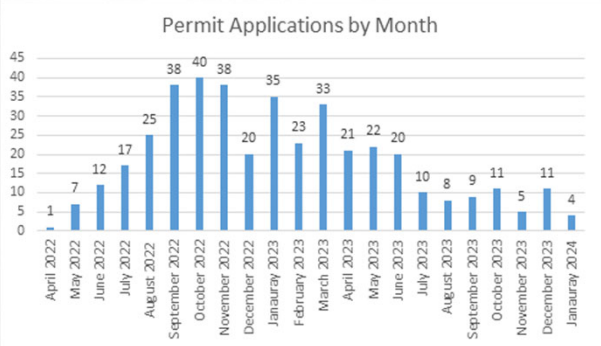
- City Use Tax Credit Requests = 385
- City Use Tax Credits Issued = $5,539,120
- City Use Tax Revenue = $1,159,970
- City Permit Fee Revenue = $4,045,143

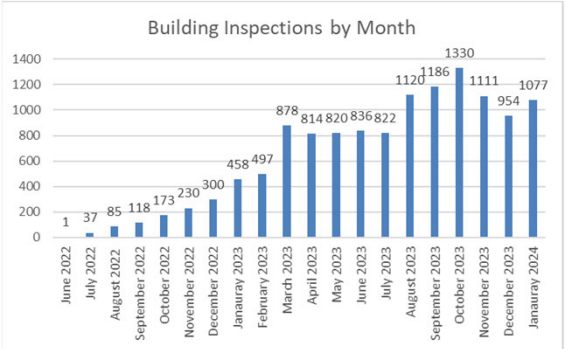
Home Certification Standard	Rebuilding Homeowner Incentive	New Homeowner Incentive	Louisville Participants
2021 International Energy Conservation Code	$7,500	$0	28
Energy Star v3.2	$10,000	$1,200	15
Zero Energy Ready Home v2	$12,500	$2,500	28
Energy Star + NextGen	$17,500	$5,000	42
Passive House (PHI/PHIUS)	$37,500	$15,000	4
TOTAL Participants			*117*

City of Louisville

Marshall Fire Rebuilding Status

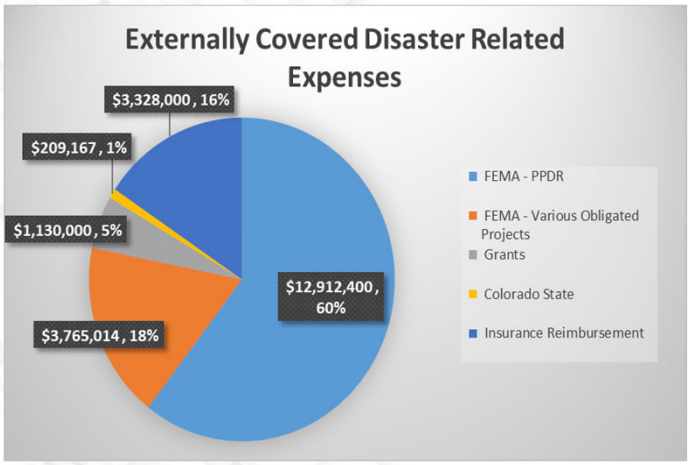
Community Development/Planning

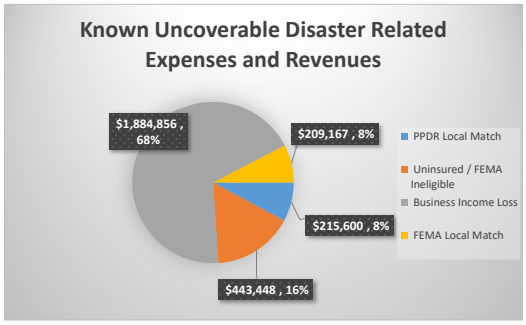


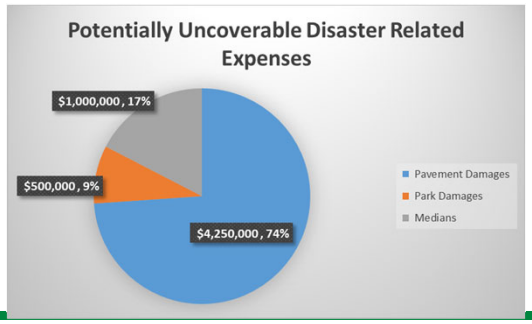


City of Louisville

Financial Condition







City of Louisville

Marshall Fire Recovery Update

Public Works

City Repairs

- Continuing to monitor streets and sidewalks in burn areas as construction progresses
- Emergency patching and pothole repairs
- FEMA obligated money for fire damage and Public Property Debris Removal (PPDR) incidental damages
- FEMA denied covering cost of damages related to rebuilding after PPDR was completed (staff continuing to appeal decision)

Open Space and Parks

Open Space

- Completed repair to all amenities damaged in the Marshall Fire
  - Includes repairs to fencing, gates, retaining walls, and trails damaged by wind impacts

Parks

- Continuously worked on landscape replacements throughout the fire areas
- In 2024 will continue replacing trees and landscape plantings throughout the affected area focusing on the community entrances that were affected

City of Louisville

Community Engagement

Museum

- Louisville Historical Museum and Dr. Kate Goldfarb (CU Boulder Anthropology Department)
- Marshall Fire Story Project (MFSP)
  - Community members can share and preserve Marshall Fire stories
  - Housed at museum and accessed by community and researches
  - Collected 31 oral histories and 43 written stories

City of Louisville

Preparedness & Resilience

City of Louisville

Safety and Security Status

Louisville Police Department

- Continuing to monitor activity in fire rebuild areas
  - Focused patrols and visibility
  - Crime Prevention Through Environmental Design (CPTED) education
- Thefts and construction site burglaries in fire impacted areas decreased by approx. 74% (June 2023-December 2023)

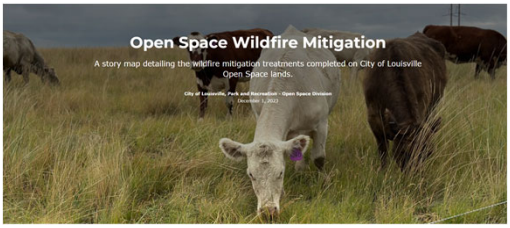
Louisville Fire Protection District

- Implemented new response protocols for wildfires
  - Join effort with all Fire Departments/Districts in Boulder County along with Boulder County Sheriff's Office
- Participating in several work groups focused on recommendations, plans, and responses to urban interface wildfires

City of Louisville

Open Space Mitigation

- Lynker Corporation and The Ember Alliance
  - Wildfire Hazard and Risk Assessment Report (WRA)
- Reducing fuels based on WRA
  - Perimeter mowing, trail corridor mowing, cattle and goat grazing, noxious weed control, removal of woody fuels
- 2024 partnering with organizations, local agencies, and experts
  - Natural Resource Conservation Services (NRCS), Bird Conservancy of the Rockies, Longmont and Boulder Valley Conservation District



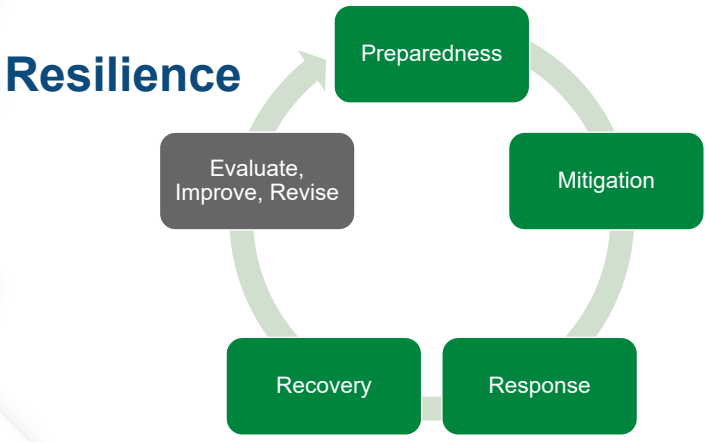
City of Louisville

Recovery & Resilience Overview

City of Louisville

11

Disaster Management is a cycle that builds resilience.



City of Louisville

12

Preparedness & Mitigation

Preparedness

Providing community awareness/education and implementing recovery and disaster response plans.

- Training & Exercise
- Community Preparedness
- Plan Development
- Emergency Notifications
- Education and Outreach

Mitigation

Developing and implementing strategies to reduce risks from threats while considering community vulnerabilities and values.

- Open Space mitigation support
  - Implementation of WRA
- Boulder County Community Wildfire Protection Plan (CWPP)

City of Louisville

Response & Recovery

Response

When a disaster occurs in the City of Louisville or another jurisdiction, supporting response operations.

- Response Communication Support
- Activation of Department Operations Center (DOC)
- Recovery Activation
- Partner Support – Emergency Operations Center (EOC)

Recovery

Aiding the community in equitable response and recovery initiatives in the case of a disaster. We believe recovery begins minute zero of a disaster.

- Marshall Fire Recovery
- Recovery Plan (internal and community)
- Staff & Employee Recovery Support

City of Louisville

Next Steps

City of Louisville

15

Questions?

City of Louisville

16

SUBJECT: **RESOLUTION NO. 17,SERIES 2024 – A RESOLUTION SETTING CERTAIN WATER, WASTEWATER, STORMWATER AND OTHER FEES, RATES, AND CHARGES FOR THE CITY OF LOUISVILLE, COLORADO**

DATE: **MARCH 19, 2024**

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

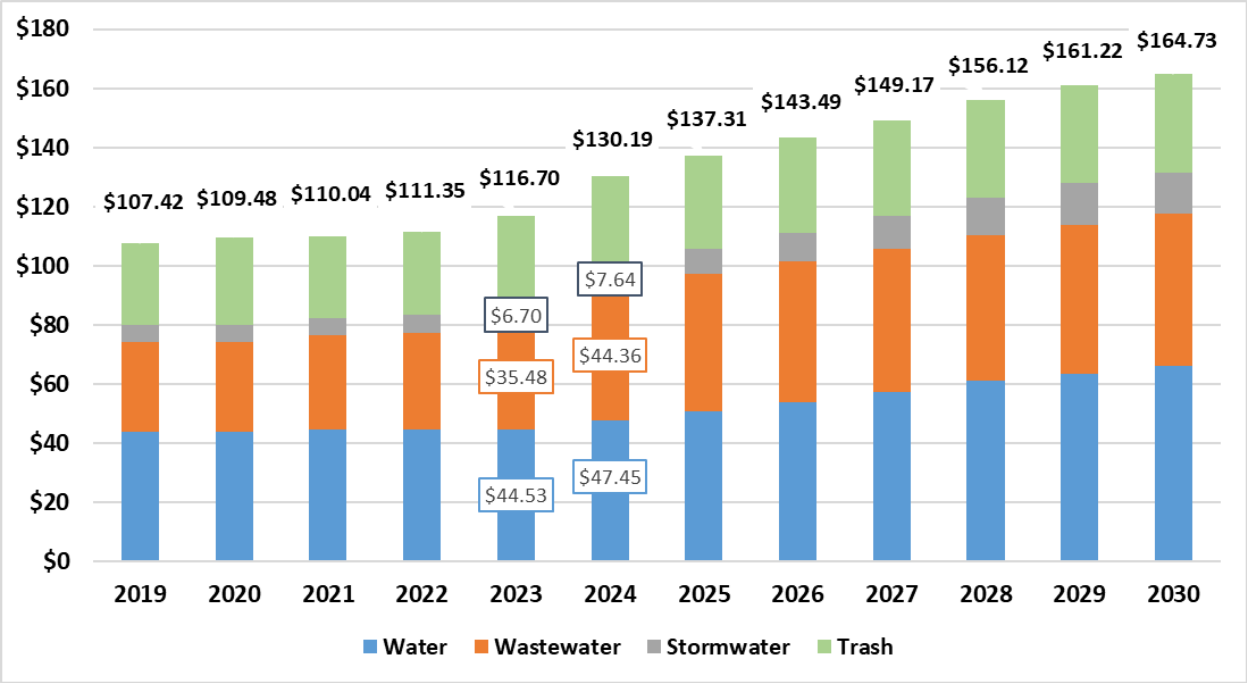
SUMMARY:
Staff recommends increasing utility rates for the 2024 calendar year in the amount of 6.5% for water, 25% for wastewater and 14% for stormwater.

Annually, City staff complete a rate assessment for the water, wastewater, and stormwater funds. This annual process ensures the rates and fees continue to generate sufficient revenue to sustain utility operations and facilitate future planning and budgeting. This process of analysis, findings, and recommendations was discussed at the Finance Committee on June 15 and January 18. Water rates are currently influenced by multiple years of inflation combined with a historically wet 2023. Wastewater rates are driven by planned upgrades to the wastewater plant solids handling process and an unplanned replacement of a key piece of sewer maintenance equipment. Stormwater rates are impacted by future stormwater floodplain improvements.

Two scenarios are reviewed, a "Just-in-Time" scenario where required increases are initiated in the year they are needed regardless of amount, and a "Smoothing" scenario where required increases are averaged out to minimize large jumps in increases which distributes increases over time. The City uses rate smoothing to the extend possible to provide lower and more consistent increases as needed. The table below shows the projected 5 year increases based upon financially modeling with the strike through text representing the proposed increases from last year's February 7, 2023 council meeting.

Table 1
Financial Plan Scenario
Indicated Rate Revenue Increase

Utility	2024	2025	2026	2027	2028	2029
Water	**6.5%** ~~0%~~	**6.5%** ~~0%~~	**6.5%** ~~0%~~	**6.5%** ~~0%~~	**6.5%** ~~0%~~	**4%**
Wastewater	**25%** ~~8%~~	**5%** ~~8%~~	**2%** ~~4%~~	**2%** ~~4%~~	**2%** ~~4%~~	**2%**
Stormwater	**14%** ~~11%~~	**14%** ~~12%~~	**13%** ~~12%~~	**13%** ~~12%~~	**13%** ~~12%~~	**13%**



Staff also reviewed spreading originally proposed 30% wastewater increase out over many years based upon Finance Committee feedback. The presentation illustrates a low, mid, and high risk of over run scenario for stabilizing wastewater fund reserves. Staff is recommending the mid option which slightly lowers the 1st year increase to 25%. Detailed information is provided in the presentation.

FISCAL IMPACT

The recommended increases provide revenue to meet projected expenses for operations and capital improvement needs. The average water, wastewater, stormwater, and trash utility bill will see an anticipated increase from $116.90 per month to $137.56 per month or a difference of $20.66. This includes new contract pricing for the 2024-2029 solid waste contract with electric vehicles and a household that averages around 9,000 per month over the course of the year.

PROGRAM/SUB-PROGRAM IMPACT:

The program goal for Utilities is to ensure safe, reliable, great tasting water; properly treated wastewater; effective stormwater control; successfully managed solid waste; and competitive prices for all services. These annual utility rate evaluations and adjustments are essential in the administration of reasonable and justifiable prices and the responsible management of the utility system.

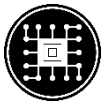
RECOMMENDATION:

Staff recommends approval to increase utility rates for the 2024 calendar year in the amount of 6.5% for water, 25% for wastewater and 14% for stormwater.

ATTACHMENT(S):

1. Resolution & Rate Tables
2. Bill Insert
3. Presentation

STRATEGIC PLAN IMPACT:

☒	**Financial Stewardship & Asset Management**	☒	**Reliable Core Services**
☒	**Vibrant Economic Climate**	☒	**Quality Programs & Amenities**
☐	**Engaged Community**	☐	**Healthy Workforce**
☐	 **Supportive Technology**	☐	**Collaborative Regional Partner**

RESOLUTION NO. 17
SERIES 2024

A RESOLUTION SETTING CERTAIN WATER, WASTEWATER, STORMWATER AND OTHER FEES, RATES, AND CHARGES FOR THE CITY OF LOUISVILLE, COLORADO

WHEREAS, pursuant to the Louisville Municipal Code, the City Council is authorized to establish certain fees, rates, and charges by resolution; and

WHEREAS, the City Council wishes to establish by this resolution the amounts of certain fees, rates, and charges commencing with the effective date of this resolution.

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

1. Pursuant to authorization in the Louisville Municipal Code, the Louisville City Council hereby establishes certain water, wastewater, stormwater and other fees, rates, and charges in accordance with the schedules and tables attached and made a part hereof.

2. The fees, rates, and charges set by this resolution shall be effective on the date of the resolution, except for the water, wastewater and stormwater user charges, which will be effective on May 1, 2024, and may thereafter be amended from time to time by resolution of the City Council.

3. The fees, rates, and charges set by this resolution shall supersede and replace any fees, rates, or charges previously set or adopted by the City Council for the same purpose. However, the same shall not be deemed to release, extinguish, alter, modify, or change in whole or in part any liability which shall have been previously incurred, and the superseded or replaced provision shall be treated and held as still remaining in force for the purpose of sustaining any judgment, decree, or order.

4. If any portion of this resolution is held to be invalid for any reason, such decisions shall not affect the validity of the remaining portions hereof.

PASSED AND ADOPTED this 19th day of March, 2024.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Meredyth Muth, City Clerk

City of Louisville

WATER RATES

Effective May 1, 2024, water rates for all accounts inside city limits are as follows (outside city limits = double these rates):

May 1, 2024 RESIDENTIAL WATER RATES - 3/4"METER

GALLONS	RATE
Zero - 5,000	$20.63 (minimum monthly charge)
5,001 - 20,000	$20.63 for the first 5,000 gallons, plus $5.95 for each additional 1,000 gallons (or fraction thereof)
20,001 - 30,000	$109.88 for the first 20,000 gallons, plus $14.80 for each additional 1,000 gallons (or fraction thereof)
30,001 - 40,000	$257.88 for the first 30,000 gallons, plus $15.98 for each additional 1,000 gallons (or fraction thereof)
40,001 - 50,000	$417.68 for the first 40,000 gallons, plus $17.08 for each additional 1,000 gallons (or fraction thereof)
50,001 and over	$588.48 for the first 50,000 gallons, plus $18.23 for each additional 1,000 gallons (or fraction thereof)

May 1, 2024 RESIDENTIAL WATER RATES - 1"METER

GALLONS	RATE
Zero - 5,000	$20.63 (minimum monthly charge)
5,001 - 20,000	$20.63 for the first 5,000 gallons, plus $5.95 for each additional 1,000 gallons (or fraction thereof)
20,001 - 30,000	$109.88 for the first 20,000 gallons, plus $14.80 for each additional 1,000 gallons (or fraction thereof)
30,001 - 40,000	$257.88 for the first 30,000 gallons, plus $15.98 for each additional 1,000 gallons (or fraction thereof)
40,001 - 50,000	$417.68 for the first 40,000 gallons, plus $17.08 for each additional 1,000 gallons (or fraction thereof)
50,001 and over	$588.48 for the first 50,000 gallons, plus $18.23 for each additional 1,000 gallons (or fraction thereof)

May 1, 2024 COMMERCIAL, IRRIGATION, AND MULTIFAMILY WATER RATES - 3/4" METER

GALLONS	RATE
Zero - 20,000	$11.36 (minimum monthly charge), plus $3.29 for each 1,000 gallons (or fraction thereof)
20,001 - 30,000	$77.16 for the first 20,000 gallons, plus $8.15 for each additional 1,000 gallons (or fraction thereof)
30,001 - 40,000	$158.66 for the first 30,000 gallons, plus $8.80 for each additional 1,000 gallons (or fraction thereof)
40,001 - 50,000	$246.66 for the first 40,000 gallons, plus $9.41 for each additional 1,000 gallons (or fraction thereof)
50,001 and over	$340.76 for the first 50,000 gallons, plus $10.03 for each additional 1,000 gallons (or fraction thereof)

May 1, 2024 COMMERCIAL, IRRIGATION, AND MULTIFAMILY WATER RATES - 1" METER

GALLONS	RATE
Zero - 40,000	$22.71 (minimum monthly charge), plus $3.29 for each 1,000 gallons (or fraction thereof)
40,001 - 60,000	$154.31 for the first 40,000 gallons, plus $8.15 for each additional 1,000 gallons (or fraction thereof)
60,001 - 80,000	$317.31 for the first 60,000 gallons, plus $8.80 for each additional 1,000 gallons (or fraction thereof)
80,001 - 100,000	$493.31 for the first 80,000 gallons, plus $9.41 for each additional 1,000 gallons (or fraction thereof)
100,001 and over	$681.51 for the first 100,000 gallons, plus $10.03 for each additional 1,000 gallons (or fraction thereof)

May 1, 2024 COMMERCIAL, IRRIGATION, AND MULTIFAMILY WATER RATES - 1-1/2" METER

GALLONS	RATE
Zero - 80,000	$34.06 (minimum monthly charge), plus $3.29 for each 1,000 gallons (or fraction thereof)
80,001 - 120,000	$297.26 for the first 80,000 gallons, plus $8.15 for each additional 1,000 gallons (or fraction thereof)
120,001 - 160,000	$623.26 for the first 120,000 gallons, plus $8.80 for each additional 1,000 gallons (or fraction thereof)
160,001 - 200,000	$975.26 for the first 160,000 gallons, plus $9.41 for each additional 1,000 gallons (or fraction thereof)
200,001 and over	$1,351.66 for the first 200,000 gallons, plus $10.03 for each additional 1,000 gallons (or fraction thereof)

May 1, 2024 COMMERCIAL, IRRIGATION, AND MULTIFAMILY WATER RATES - 2" METER

GALLONS	RATE
Zero - 160,000	$45.36 (minimum monthly charge), plus $3.29 for each 1,000 gallons (or fraction thereof)
160,001 - 240,000	$571.76 for the first 160,000 gallons, plus $8.15 for each additional 1,000 gallons (or fraction thereof)
240,001 - 320,000	$1,223.76 for the first 240,000 gallons, plus $8.80 for each additional 1,000 gallons (or fraction thereof)
320,001 - 400,000	$1,927.76 for the first 320,000 gallons, plus $9.41 for each additional 1,000 gallons (or fraction thereof)
400,001 and over	$2,680.56 for the first 400,000 gallons, plus $10.03 for each additional 1,000 gallons (or fraction thereof)

May 1, 2024 COMMERCIAL, IRRIGATION, AND MULTIFAMILY WATER RATES - 3" METER

GALLONS	RATE
Zero - 320,000	$90.85 (minimum monthly charge), plus $3.29 for each 1,000 gallons (or fraction thereof)
320,001 - 480,000	$1,143.65 for the first 320,000 gallons, plus $8.15 for each additional 1,000 gallons (or fraction thereof)
480,001 - 640,000	$2,447.65 for the first 480,000 gallons, plus $8.80 for each additional 1,000 gallons (or fraction thereof)
640,001 - 800,000	$3,855.65 for the first 640,000 gallons, plus $9.41 for each additional 1,000 gallons (or fraction thereof)
800,001 and over	$5,361.25 for the first 800,000 gallons, plus $10.03 for each additional 1,000 gallons (or fraction thereof)

May 1, 2024 COMMERCIAL, IRRIGATION, AND MULTIFAMILY WATER RATES - 4" METER

GALLONS	RATE
Zero - 640,000	$181.67 (minimum monthly charge), plus $3.29 for each 1,000 gallons (or fraction thereof)
640,001 - 960,000	$2,287.27 for the first 640,000 gallons, plus $8.15 for each additional 1,000 gallons (or fraction thereof)
960,001 - 1,280,000	$4,895.27 for the first 960,000 gallons, plus $8.80 for each additional 1,000 gallons (or fraction thereof)
1,280,001 - 1,600,000	$7,711.27 for the first 1,280,000 gallons, plus $9.41 for each additional 1,000 gallons (or fraction thereof)
1,600,001 and over	$10,722.47 for the first 1,600,000 gallons, plus $10.03 for each additional 1,000 gallons (or fraction thereof)

May 1, 2024 COMMERCIAL, IRRIGATION, AND MULTIFAMILY WATER RATES - 6" METER

GALLONS	RATE
Zero - 1,280,000	$363.37 (minimum monthly charge), plus $3.29 for each 1,000 gallons (or fraction thereof)
1,280,001 - 1,920,000	$4,574.57 for the first 1,280,000 gallons, plus $8.15 for each additional 1,000 gallons (or fraction thereof)
1,920,001 - 2,560,000	$9,790.57 for the first 1,920,000 gallons, plus $8.80 for each additional 1,000 gallons (or fraction thereof)
2,560,001 - 3,200,000	$15,422.57 for the first 2,560,000 gallons, plus $9.41 for each additional 1,000 gallons (or fraction thereof)
3,200,001 and over	$21,444.97 for the first 3,200,000 gallons, plus $10.03 for each additional 1,000 gallons (or fraction thereof)

City of Louisville

SEWER RATES

Effective May 1, 2024, sewer rates for all accounts inside city limits are as follows (outside city limits = double these rates):

May 1, 2024 SINGLE FAMILY RESIDENTIAL SEWER RATES

RATE	DESCRIPTION
$7.00	Monthly Volume Charge, $ per 1,000 gallons of Average Winter Consumption (AWC). AWC =
$4.03	Monthly Billing Charge, $ per Bill
$9.53	Monthly Readiness to Serve Charge, $ per Bill

May 1, 2024 MULTI FAMILY RESIDENTIAL SEWER RATES

RATE	DESCRIPTION
$7.00	Monthly Volume Charge, $ per 1,000 gallons of Average Winter Consumption (AWC). AWC =
$4.03	Monthly Billing Charge, $ per Bill
$9.53	Monthly Readiness to Serve Charge, $ per Dwelling Unit

May 1, 2024 COMMERCIAL SEWER RATES

RATE	DESCRIPTION
$7.00	Monthly Volume Charge, $ per 1,000 gallons
$4.03	Monthly Billing Charge, $ per Bill
	Monthly Readiness to Serve Charge, $ per Bill
$9.53	3/4" Meter
$16.62	1" Meter
$36.40	1-1/2" Meter
$64.45	2" Meter
$143.90	3" Meter
$255.03	4" Meter
$373.32	6" Meter

City of Louisville

STORMWATER RATES

Effective May 1, 2024, stormwater rates for all accounts inside city limits are as follows (outside city limits = double these rates):

May 1, 2024 STORMWATER UTILITY RATES

RATE	DESCRIPTION
$7.64	Monthly Billing Charge, $ per Bill

City of Louisville

REUSE RATES

Effective May 1, 2024, reuse water rates for all accounts inside city limits are as follows (outside city limits = double these rates):

May 1, 2024 REUSE WATER UTILITY RATES

RATE	DESCRIPTION
75% of Residential Rate ($4.46)	All Non-City Customer Classes - Monthly Volume Charge, $ per 1,000 gallons
$0.93	City Customer Class - Monthly Volume Charge, $ per 1,000 gallons

City of Louisville

BULK RATES

Effective May 1, 2024, bulk water rates for all permits are as follows:

May 1, 2024 BULK WATER UTILITY RATES

GALLONS	RATE
Zero - 10,000	(inlcuded in rental rate)
10,001 and over	$10.03 for each additional 1,000 gallons (or fraction thereof)

City of Louisville
COLORADO • SINCE 1878

2024 Utility Rate Adjustments

New water, wastewater, and stormwater rates

The City Council recently approved rate adjustments for water, wastewater, and stormwater utility service. The new rates are needed primarily to continue to fund major reconstruction projects, to ensure the City can properly maintain our utility systems, and to meet all State and Federal regulations. If you have questions about these rate changes, please contact Utility Billing at **303.335.4501** or **CustomerService@LouisvilleCO.gov**.

What does this mean for my utility bill?

The new rates will be effective in May, so you'll see the new charges on your June bill. The table below reflects the anticipated monthly impact for an average residential customer. This is just an example based on average water use — the exact impact to your bill will depend on how much water your household uses.

Service	2023	2024	2025	2026	2027	2028
Water	$44.53	$47.45	$50.51	$53.83	$57.29	$61.03
Wastewater	$35.48	$44.36	$46.58	$47.53	$48.47	$49.43
Stormwater	$6.70	$7.64	$8.71	$9.84	$11.12	$12.56
Combined	$86.71	$99.45	$105.80	$111.20	$116.88	$123.02
$ Increase		$12.75	$6.34	$5.40	$6.14	$5.10
% Increase		14.7%	6.4%	5.1%	5.1%	5.3%

This table does not include monthly charges for refuse, recycling and compost, which varies by home based on the sizes of your containers.

How are rate adjustments determined?

We don't take rate adjustments lightly. While City staff is always working to contain and reduce costs, we utilize a Utility Financial Model during the annual budget process to determine the rates necessary to collect enough revenue to meet each of the respective services' operations, maintenance, debt obligations, and improvements expenses.

What is the basis for these rate adjustments?

We've all experienced inflation in the form of increased costs for the goods and services we buy. Similarly, the City of Louisville has also experienced significant increases in our costs to provide and maintain service as well as the cost of constructing capital improvements. In many cases, these increases have outpaced estimates, necessitating a rate adjustment.

Convenient ways to receive and pay your bill

RECEIVE YOUR BILL:

1. **By mail** (default)
2. **By email** — Log into your online account to sign up to receive bills by email. Help the City save paper and reduce postage, printing, and labor costs!

PAY YOUR BILL:

1. **Online** — Log into your online account to pay by credit card
2. **By electronic funds transfer** — Set up automatic, recurring monthly payments directly from your bank account or a credit/debit card
3. **By mail** — send to City of Louisville, PO Box 173883, Denver, CO 80217-3883
4. **By phone** — Call 303.335.4500
5. **Drop off** — City of Louisville, 749 Main Street in Downtown Louisville

Visit **LouisvilleCO.gov/UtilityBilling** for more information or to log into your account.

Do you need help paying your utility bill?

We understand — financial hardships can happen to anyone. If you're having difficulty paying your City of Louisville utility bill, there may be assistance available.

City of Louisville Payment Extension Plans

Customers with a satisfactory payment history who are experiencing a financial hardship may be eligible for a payment extension plan. Contact the City of Louisville Utility Billing at **303.335.4501** to discuss.

Sister Carmen Community Center Financial Assistance

For Louisville residents experiencing financial hardships, Sister Carmen may be able to help with emergency financial assistance for rent or mortgage, utility bills, and other essential expenses. Contact **303.665.4342** for more info.

Ways to save on your water bill

In partnership with Resource Central, the City offers several programs to help you save on your bill by reducing water usage, including the Lawn Replacement Program, Slow the Flow sprinkler assessments, Waterwise Yard Seminars, and more. To learn more about these programs, visit **LouisvilleCO.gov/Sustainability**.

2024 Recommended Utility Rates
City Council

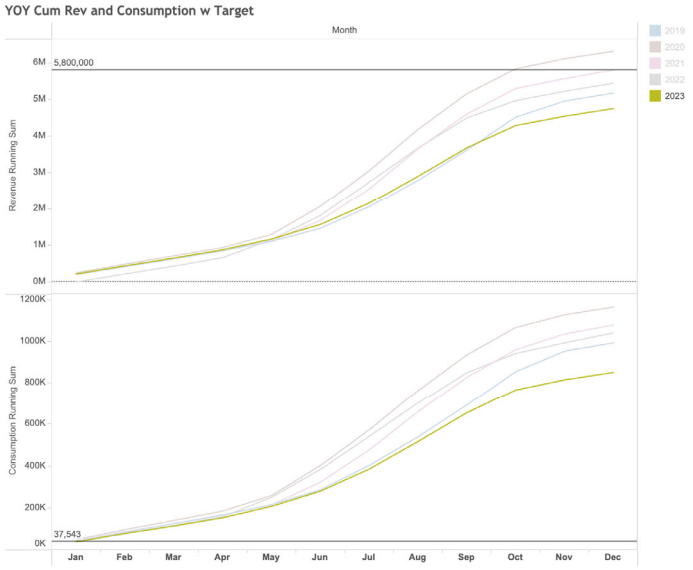
March 19, 2024

2023 Review

- Wet Weather. 2023 Water Revenue down $1 Million (20%)
- Minimal Development 2023 Water Tap Fees down $1 Million (40%)
- Continued Inflationary and Labor Cost Increase Pressure
- Wastewater and Stormwater were less weather dependent, minor shortages experienced. AWC or Flat Fee.

5 Year Usage and Revenue by Month

- Lowest consumption in over 30 years in 2023.
- 27% drop in consumption since 2020.
- Lowest revenue since 2015.
- 27% drop in revenue since 2020.
- Targeting $5,800,000 and brought in closer to $5,000,000.

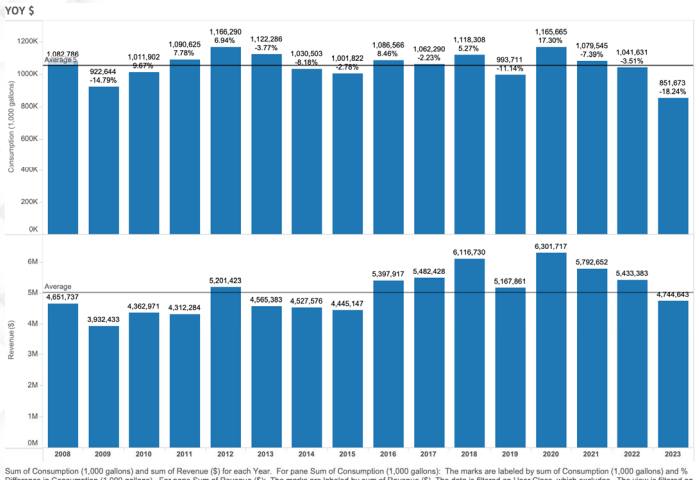


The trends of Revenue Running Sum and Consumption Running Sum for Month. Color shows details about Year. The view is filtered on Year, which keeps 2019, 2020, 2021, 2022 and 2023. The view is highlighted where Year contains "2023".

City of Louisville

3/19/2024

15 Year Usage and Revenue by Year



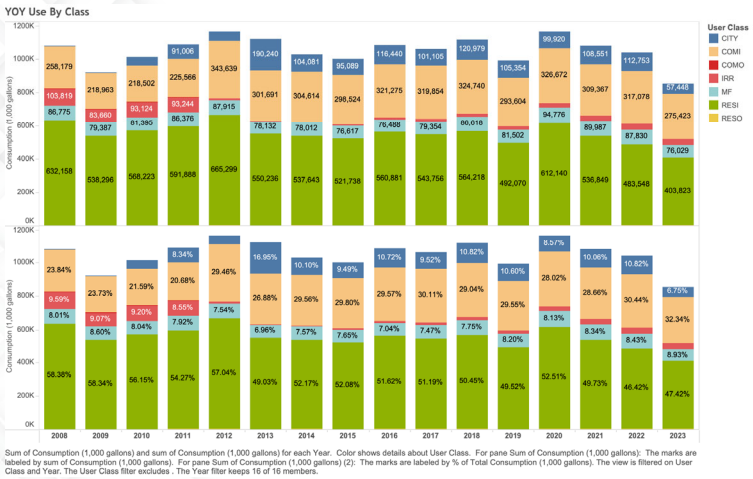
2023 is Lowest Usage Since Late 80's/early 90's

Sum of Consumption (1,000 gallons) and sum of Revenue ($) for each Year. For pane Sum of Consumption (1,000 gallons): The marks are labeled by sum of Consumption (1,000 gallons) and % Difference in Consumption (1,000 gallons). For pane Sum of Revenue ($): The marks are labeled by sum of Revenue ($). The data is filtered on User Class, which excludes . The view is filtered on Year, which keeps 16 of 16 members.

City of Louisville

3/19/2024

15 Year Usage by Class



Sum of Consumption (1,000 gallons) and sum of Consumption (1,000 gallons) for each Year. Color shows details about User Class. For pane Sum of Consumption (1,000 gallons): The marks are labeled by sum of Consumption (1,000 gallons). For pane Sum of Consumption (1,000 gallons) (2): The marks are labeled by % of Total Consumption (1,000 gallons). The view is filtered on User Class and Year. The User Class filter excludes . The Year filter keeps 16 of 16 members.

City of Louisville

3/19/2024

5 Year Cost Pressures vs Rate Increases

Water Fund by Divisions	2019 Actuals	2023 Budget	% Increase
User Revenues			**2%**
Central Fund	$ 490,537	$ 753,380	35%
Utility Billing	$ 133,414	$ 168,474	21%
Water Utility Engineering	$ 75,392	$ 131,987	43%
Water Plant Operations	$ 1,317,251	$ 1,917,076	31%
Raw Water Operations	$ 668,341	$ 1,040,335	36%
Water Distribution	$ 438,944	$ 667,045	34%
Water Treatment Plant Building Maintenance	$ 239,961	$ 266,762	10%
Debt Service	$ 980,550	$ 988,050	1%
Total	**$ 4,344,390**	**$ 5,933,109**	**27%**

Product	5 Year Increase
Milk	35%
Hamburger (1lb)	43%
Bread	44%
Eggs	25%
Coffee (1lb)	28%
CDOT CCI	63%
Denver CCI	23%
Denver BCI	27%
Water Sewer Trash Index	18%
COL Water Rate	**2% ($0.88)**
COL Wastewater Rate	**25% ($4.93)**
COL Stormwater Rate	**43% ($1.12)**
5 Yr COL Combined (2019-2023)	**9% ($6.93)**
6 Yr COL Proposed (2019-2024)	**25% ($19.67)**

City of Louisville

3/19/2024

Utility Rates Past and Proposed Scenario (CIP and Stabilize Cash Reserve, A + B)

Utility	2016	2017	2018	2019	2020	2021	2022	2023
Water	13%	0%	3%	0%	0%	2%	0%	0%
Wastewater	13%	7%	7%	7%	0%	4%	4%	8%
Stormwater	0%	4%	7%	18.5%	0%	5%	5%	9%

Utility	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Water	***6.5%***	*6.5%*	*6.5%*	*6.5%*	*6.5%*	*4%*	*4%*	*2%*	*2%*	*2%*
Wastewater	***25%***	*5%*	*2%*	*2%*	*2%*	*2%*	*2%*	*2%*	*2%*	*2%*
Stormwater	***14%***	*14%*	*13%*	*13%*	*13%*	*13%*	*0%*	*0%*	*0%*	*0%*

City of Louisville

3/19/2024

Average(*) Monthly Residential Bill:

	Current 2023	Proposed 2024	Difference	Percent Increase
Water	$44.53	$47.45	$2.92	6.6%(2)
Wastewater	$35.48	$44.36	$8.88	25%
Stormwater	$6.70	$7.64	$0.94	14%
Total	$86.71	$99.45	$12.74	14.7%

**Based on average usage of approx. 9,220 gallons. Actual bills will be dependent on usage and will vary based on seasonal fluctuation.*
(2) Percentage difference result from rounding error

City of Louisville

3/19/2024

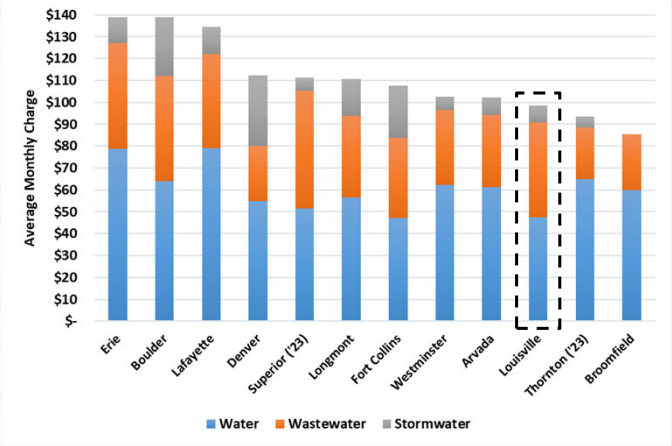
Overview

- Surrounding Community Rate Comparison
- Baseline Financial Equation
- Background
  - Rate Planning
  - Debt Coverage
  - Cash Reserves
  - Turnback
  - Tap Fees
  - Long Term CIP Planning
- Rate Scenarios (Reviewed and Approved Annually)

City of Louisville

3/19/2024

2024 Average Monthly Water, Wastewater & Storm Rates (Louisville Single Family Residential)



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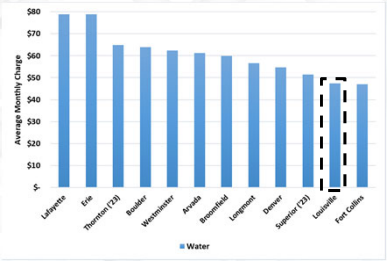
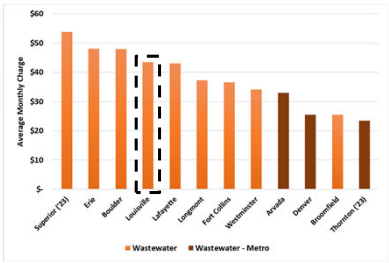
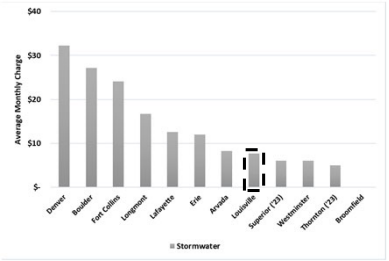
City of Louisville

3/19/2024

2024 Average Monthly Water, Wastewater & Storm Rates (Louisville Single Family Residential)







** Based on average usage of approx. 9,220 gallons. Actual bills will be dependent on usage and will vary based on seasonal fluctuation.*

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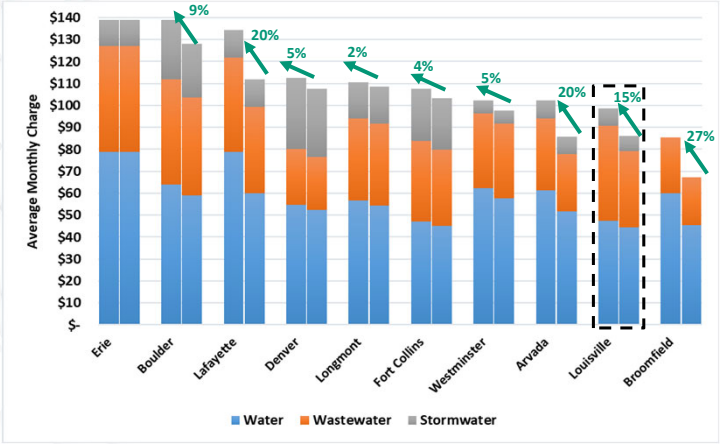
3/19/2024

2023 & 2024 Comparison Average Monthly Water, Wastewater & Storm Rates (Louisville Single Family Residential)



** Based on average usage of approx. 9,220 gallons. Actual bills will be dependent on usage and will vary based on seasonal fluctuation.*

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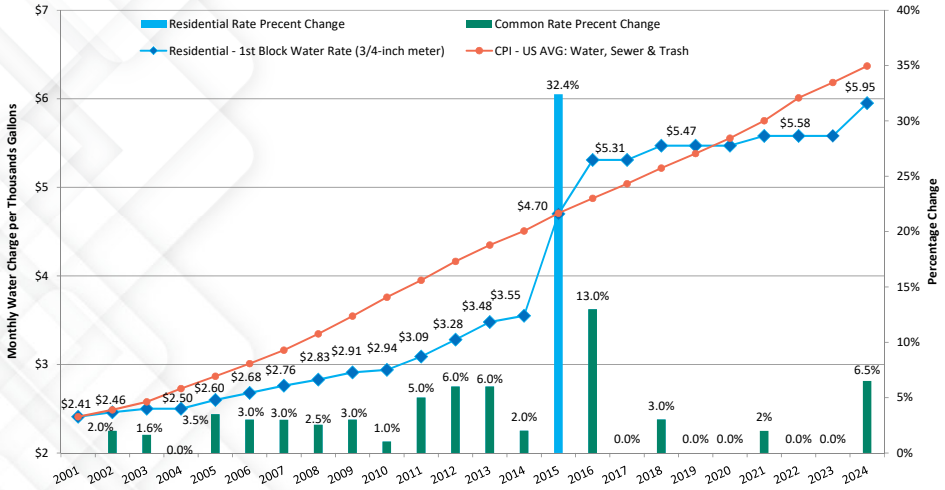
3/19/2024

Water Rate Increases vs WST



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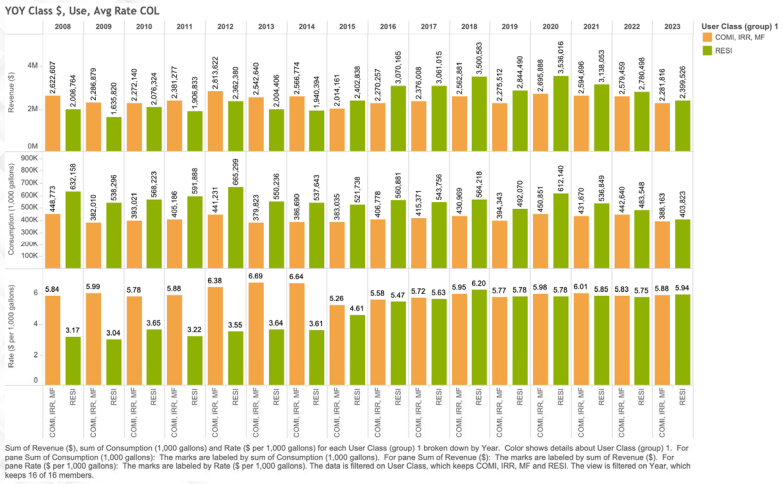
3/19/2024

Cost of Service (Rate Equity)



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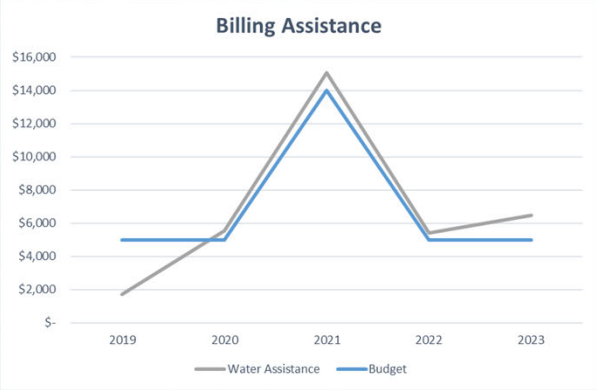
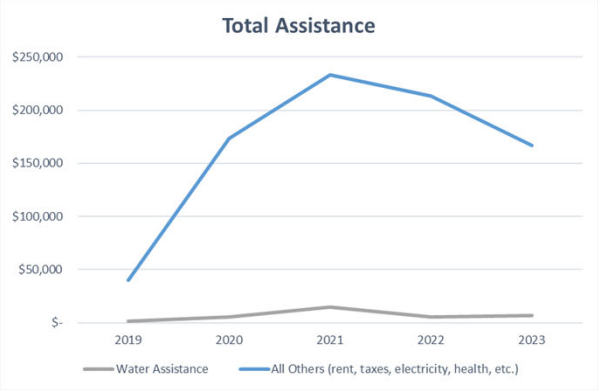
3/19/2024

Sister Carmen Data





City of Louisville

3/19/2024

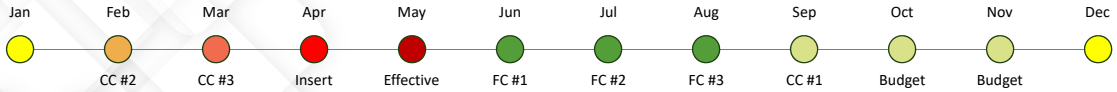
Rate Planning Background

Period	1. Financial Rate Model	2. Rate Planning	3. Debt Service Ratio	4. Cash Reserves	5. O&M Turnback	6. Tap Fees	7. Long Term Planning (CIP's)
Pre 2013	No	Just in Time	Water: 1.2 Sewer: 1.2 Storm: 1.3	N/A	0%	Minimal	Reactive
2013 to 2016	Yes (Consultant)	Smoothing	Water: 1.2 Sewer: 1.2 Storm: 1.3	120 days	0%	Development Projections (1 yr Arrears)	10 yr
2016 to 2020	Yes (Internal)	Smoothing	Water: 1.2 Sewer: 1.2 Storm: 1.3	120 days	0%	Development Projections (1 yr Arrears)	10 yr
2020 to 2023	Yes (Internal)	Smoothing	Water: 1.2 Sewer: 1.2 Storm: 1.3	90 days	0%	Development Projections (Current Year)	10 yr
2024+	Yes (Internal)	Smoothing	Water: N/A Sewer: 1.2 Storm: 1.3	90 days + Capital Reserve	10%	Development Projections (Current Year)	10+ yr Asset Depreciation

City of Louisville

3/19/2024

1. Financial Rate Modeling & Timeline



- Monthly Rates (variable)
- Tap Fees (projections)

- O&M (fixed*)
- CIPs (variable)

- Target/Goal

** Majority of Utility O&M costs (chemicals, electricity, repairs, staffing, etc.) are fixed.*

City of Louisville

3/19/2024

2. Rate Planning Approaches

1. **Just in Time**
   - Revenue increases are aligned for each utility fund to maintain immediate financial self-sufficiency in the year when the expense is budgeted.

2. **Smoothing**
   - Revenue increases are gradually imposed over several years to establish reserves to fund expenses.
   - Used since 2013 and recommended.

City of Louisville

3/19/2024

3A. Debt Service Requirements

1. **Debt Service Coverage (DSC):**
   - Ratio of net revenues (operating revenue less operating expense) to annual debt service payment.

2. **Industry Target DCS Philosophy**
   - Ensure legal DSC minimums are met even if revenue forecasts are not achieved.
   - Maintain credit ratings.

City of Louisville

3/19/2024

3B. Debt Service Coverage

Minimum target represented by the combination of all three Utility Funds

Required DSC Ratio

Colorado Water Resources and Power Development Authority	1.10 (retires 2035)
2013 Water and Wastewater Enterprise Revenue Bonds	1.15 (retires 2024)

Dual Target DSC Ratio

Fund	w/o Tap Fees	with Tap Fees
Water	1.2	1.4
Wastewater	1.2	1.3
Storm	1.3	1.3(1)

(1) A tap fee for the Stormwater utility has not been established, therefore the dual target is not used

City of Louisville

3/19/2024

3C. City Utility Debt

Utility	Debt Service Payment ($million)						
	2024	2025	2026	2027	2028	2029	2030
Water	$0.9M	$0	$0	$0	$0	$0	$0
Wastewater	$1.3M	$2.0M	$2.0M	$2.0M	$2.0M	$2.0M	$2.0M
Stormwater	$0.3M	$0.4M	$0.4M	$0.4M	$0.4M	$0.4M	$0.4M
Total	**$2.5M**	**$2.5M**	**$2.4M**	**$2.4M**	**$2.4M**	**$2.4M**	**$2.4M**

City of Louisville

3/19/2024

4A. Cash Reserves Policy

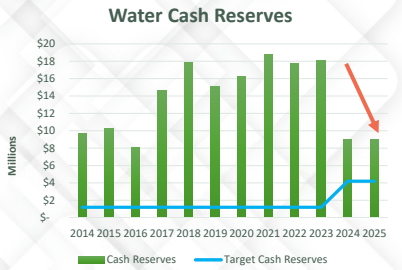
1. **Current Modeled Cash Reserves**
   - 90 Days Cash or 25% of Total O&M

2. **Working Capital Reserves Policy (Section 2.4)**
   - 25% of Current Operating Expenses

City of Louisville

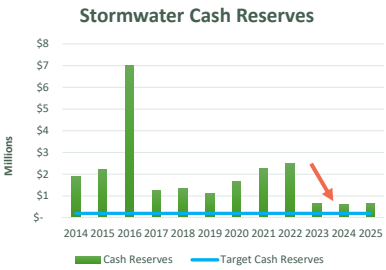
3/19/2024

4B. Utility Cash Reserves History



$18 M to $9M

$7M to $1.9M



$2.5M to $0.6M

City of Louisville

3/19/2024

4C. Cash Reserve Policy

2025 PROJECTIONS	Water	Wastewater	Stormwater	Variability
Avg. Revenue	$6.1M	$4.9M	$1.4M	Med
Debt	N/A	$2.0M	$0.4M	Low
O&M Expenses	$5.0M	$2.8M	$0.5M	Low – Med
Net	**$1.1M**	**$0.1M**	**$0.5M**	
CIP Ranges	$10k - $6M	$10k - $6M	$10k - $6M	Med - High
Rate Sensitivity to Change	Low - Med	High	High	
Tap Fees	$180k - $2M	$10k - $230k	N/A	High
Avg. Monthly Bills	$45 (9k gals)	$41 (4k gals)	$8 (SFEQ)	Low

City of Louisville

3/19/2024

4D. Proposed Cash Reserve Policy

- 90 days cash or 25% of Total O&M
- Additional 2% Fixed Capital Assets (Proposed Change)
  - Water $3M (2% of $150M) effective 2024
  - Wastewater $1M (2% of $50M) effective 2025

City of Louisville

3/19/2024

5. O&M Turnback

Utility Turnback	2016	2017	2018	2019	2020	2021	2022	2023 est.*
Water	16.1%	33.1%	21.4%	20.4%	4.2%	-1.7%	-24.5%	4.2% to 11.7%
Wastewater	10.9%	7.6%	12.6%	15.4%	3.5%	5.3%	-11.1%	-3.4% to 5.5%
Stormwater	11.3%	19.4%	21.4%	7.8%	11%	2%	-9.7%	0.8% to 11.3%

** pending 2023 closeout: low range is best estimate, high range is current actuals*

Utility Rates	Turnback	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Water	10%	6.5%	6.5%	6.5%	6.5%	6.5%	4%	4%	2%	2%	2%
Water	0%	8.6%	8.6%	8.6%	8.6%	8.6%	4%	4%	2%	2%	2%
Wastewater	10%	25%	5%	2%	2%	2%	2%	2%	2%	2%	2%
Wastewater	0%	30%	12%	2%	2%	2%	2%	2%	2%	2%	2%
Stormwater	10%	14%	14%	13%	13%	13%	13%	0%	0%	0%	0%
Stormwater	0%	15%	15%	14%	14%	14%	14%	0%	0%	0%	0%

City of Louisville

3/19/2024

6. Tap Fee Projections

Utility	2023	2024	2025	2026	2027	2028	2029	Total
Water	$1.7M	$2.1M	$2.2M	$1.6M	$1.8M	$1.7M	$0.2M	$11.3M
Wastewater	$284k	$199k	$244k	$148k	$188k	$170k	$9k	$1.2M

** includes tap fee projections for the Redtail Ridge Development in 2024-2026*

City of Louisville

3/19/2024

7. Long Term Planning

- 2023 Rollover (Projects in Progress)
- Current/Future Project Cost Estimate Evaluation and Updating
- New Capital Planning (Maintenance, End of Life, Regulatory, External Factors)
- Total Increase in 2023-2028 CIP Plan
  - Water $4.7 Million
  - Wastewater $725,000
  - Stormwater $1.2 Million

City of Louisville

3/19/2024

Water Rate Scenarios Considered

Scenario	Inflation	CIP Planning	Cash Reserve	Tap Fees	Wildfire Resiliency	Loan	Modeled Turnback
Baseline		2023-24 Biennial	90 days	2023 Projection	$0	$0	10%
A: CIPs		**New CIPs**	90 days	2023 Projection	$0	$0	10%
A + B: New Cash Reserve			**90 days + 2% assets**	2023 Projection	$0	$0	10%
A + B + C: 50% Tap Fee Reduction				**50% Reduction**	$0	$0	10%
A + B + D: Wildfire Meter Resiliency				2023 Projection	**$12M**	$0	10%
A + B + D2: Resiliency w/ CWCB Loan				2023 Projection	**$12M**	**$12M**	10%
A+ B + E: Turnback				2023 Projection	$0	$0	**0%**

City of Louisville

3/19/2024

Rate Impacts Summary (Water)

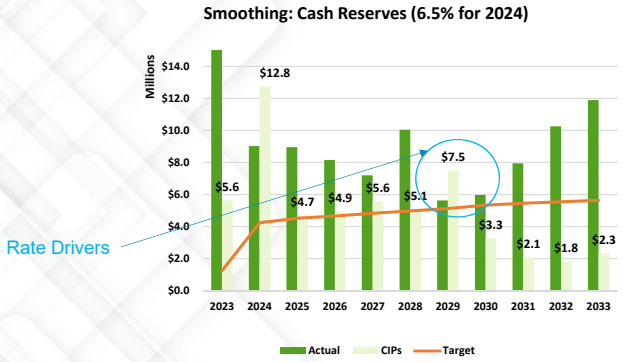
Scenario	Rate Adjustment	Annual Increases	5yr Cumulative Impact
Baseline	N/A	2.7% ('24-'28)	N/A
A: CIPs	↗	4.6% ('24-'28)	+10% to 13%
A + B: New Cash Reserve	↗	**6.5% ('24 -'28)**	**+10% to 13%**
A + B + C: 50% Tap Fee Reduction	↗	11% ('24-'28)	+35% to 45%
A + B + D: Wildfire Meter Resiliency	↗	37% ('24 & '25) and 0% ('26-'28)	+45% to 55%
A + B + D2: Resiliency w/ CWCB Loan	↗	12.5% ('24-'28)	+35% to 45%
A + B + E: Turnback at 0%	↗	8.6% ('24-'28)	+13% to 15%

City of Louisville

3/19/2024

WATER: A + B Recommendation

2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
6.5%	6.5%	6.5%	6.5%	6.5%	4%	4%	2%	2%	2%

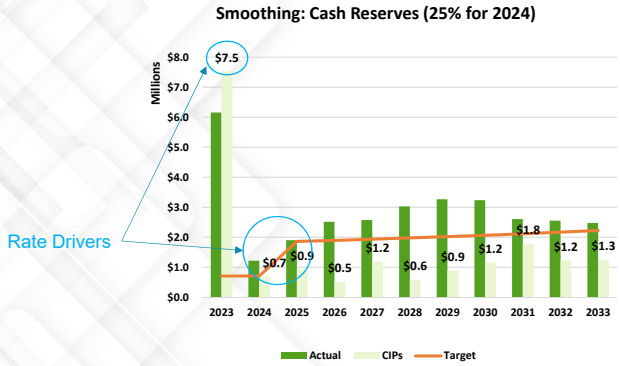


Rate Impacts Summary (Wastewater)

Scenario	Cash Reserve	Reserve	Risk	Annual Increases	3yr Cumulative Impact
Baseline	90 days	2024: $1.1M 2025: $0.9M 2026: $1.0M	N/A	2024: 11.3% 2025: 11.3% 2026: 5.1%	N/A
A: CIPs	90 days	2024: $0.8M 2025: $1.1M 2026: $1.4M	N/A	2024: 11% 2025: 11% 2026: 5%	N/A
A + B: New Cash Reserve	90 days + 2% Capital (2024)	2024: $1.4M 2025: $2.2M 2026: $2.8M	Low	2024: 30% 2025: 2% 2026: 2%	+4% to 6%
A + B: New Cash Reserve	**90 days + 2% Capital (2025)**	2024: $1.2M 2025: $1.9M 2026: $2.5M	**Mid**	**2024: 25% 2025: 5% 2026: 2%**	**+3% to 5%**
A + B: New Cash Reserve	90 days + 2% Capital (2026)	2024: $0.9M 2025: $1.1M 2026: $1.9M	High	2024: 12.1% 2025: 12.1% 2026: 12.1%	+10% to 11%

WASTEWATER: A + B Recommendation

2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
25%	5%	2%	2%	2%	2%	2%	2%	2%	2%

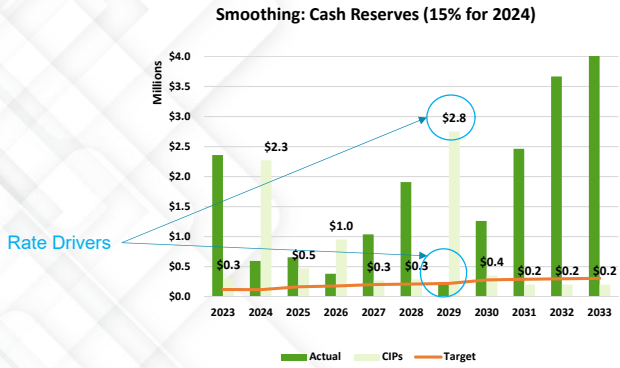


City of Louisville

3/19/2024

STORMWATER: A + B Recommendation

2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
14%	14%	13%	13%	13%	13%	0%	0%	0%	0%



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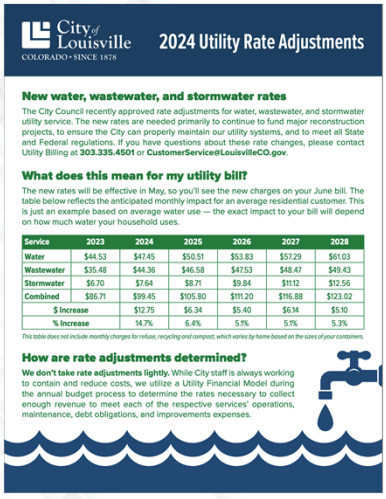
3/19/2024

April Bill Insert



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2024 Utility Rate Adjustments

New water, wastewater, and stormwater rates

The City Council recently approved rate adjustments for water, wastewater, and stormwater utility service. The new rates are needed primarily to continue to fund major reconstruction projects, to ensure the City can properly maintain our utility systems, and to meet all State and Federal regulations. If you have questions about these rate changes, please contact Utility Billing at **303.335.4501** or **CustomerService@LouisvilleCO.gov**.

What does this mean for my utility bill?

The new rates will be effective in May, so you'll see the new charges on your June bill. The table below reflects the anticipated monthly impact for an average residential customer. This is just an example based on average water use — the exact impact to your bill will depend on how much water your household uses.

Service	2023	2024	2025	2026	2027	2028
Water	$44.53	$47.45	$50.51	$53.83	$57.29	$61.03
Wastewater	$35.48	$44.36	$46.58	$47.53	$48.47	$49.43
Stormwater	$6.70	$7.64	$8.71	$9.84	$11.12	$12.56
Combined	$86.71	$99.45	$105.80	$111.20	$116.88	$123.02
$ Increase		$12.75	$6.34	$5.40	$6.14	$5.10
% Increase		14.7%	6.4%	5.1%	5.1%	5.3%

This table does not include monthly charges for refuse, recycling and compost, which varies by home based on the sizes of your containers.

How are rate adjustments determined?

We don't take rate adjustments lightly. While City staff is always working to contain and reduce costs, we utilize a Utility Financial Model during the annual budget process to determine the rates necessary to collect enough revenue to meet each of the respective services' operations, maintenance, debt obligations, and improvements expenses.

What is the basis for these rate adjustments?

We've all experienced inflation in the form of increased costs for the goods and services we buy. Similarly, the City of Louisville has also experienced significant increases in our costs to provide and maintain service as well as the cost of constructing capital improvements. In many cases, these increases have outpaced estimates, necessitating a rate adjustment.

Convenient ways to receive and pay your bill

RECEIVE YOUR BILL:

1. **By mail** (default)
2. **By email** — Log into your online account to sign up to receive bills by email. Help the City save paper and reduce postage, printing, and labor costs!

PAY YOUR BILL:

1. **Online** — Log into your online account to pay by credit card
2. **By electronic funds transfer** — Set up automatic, recurring monthly payments directly from your bank account or a credit/debit card
3. **By mail** — send to City of Louisville, PO Box 173883, Denver, CO 80217-3883
4. **By phone** — Call 303.335.4500
5. **Drop off** — City of Louisville, 749 Main Street in Downtown Louisville

Visit **LouisvilleCO.gov/UtilityBilling** for more information or to log into your account.

Do you need help paying your utility bill?

We understand — financial hardships can happen to anyone. If you're having difficulty paying your City of Louisville utility bill, there may be assistance available.

City of Louisville Payment Extension Plans

Customers with a satisfactory payment history who are experiencing a financial hardship may be eligible for a payment extension plan. Contact the City of Louisville Utility Billing at **303.335.4501** to discuss.

Sister Carmen Community Center Financial Assistance

For Louisville residents experiencing financial hardships, Sister Carmen may be able to help with emergency financial assistance for rent or mortgage, utility bills, and other essential expenses. Contact **303.665.4342** for more info.

Ways to save on your water bill

In partnership with Resource Central, the City offers several programs to help you save on your bill by reducing water usage, including the Lawn Replacement Program, Slow the Flow sprinkler assessments, Waterwise Yard Seminars, and more. To learn more about these programs, visit **LouisvilleCO.gov/Sustainability**.

City of Louisville

3/19/2024

City of Louisville
COLORADO • SINCE 1878

CITY COUNCIL COMMUNICATION
AGENDA ITEM 8D

SUBJECT: **ORDINANCE NO. 1870, SERIES 2024 – AN ORDINANCE RENAMING THE ARTS & CULTURE ADVISORY BOARD AND AMENDING THE LOUISVILLE MUNICIPAL CODE TO REFLECT THE SAME – 2nd READING – PUBLIC HEARING (advertised *Daily Camera* 3/10/24)**

DATE: **MARCH 19, 2024**

PRESENTED BY: **SHARON NEMECHEK, DIRECTOR OF CULTURAL SERVICES**
MEREDYTH MUTH, CITY CLERK

SUMMARY:
The members of the Arts & Culture Advisory Board and staff are requesting the City Council rename the board to the Cultural Advisory Board to better reflect the role of the board. This does not make any changes to make or duties of the board.

FISCAL IMPACT:
None

RECOMMENDATION:
Approve the ordinance.

ATTACHMENT(S):
1. Ordinance

STRATEGIC PLAN IMPACT:

☐	**Financial Stewardship & Asset Management**	☐	**Reliable Core Services**
☐	**Vibrant Economic Climate**	☒	**Quality Programs & Amenities**
☒	**Engaged Community**	☐	**Healthy Workforce**
☐	**Supportive Technology**	☐	**Collaborative Regional Partner**

ORDINANCE NO. 1870
SERIES 2024

AN ORDINANCE RENAMING THE ARTS & CULTURE ADVISORY BOARD AND AMENDING THE LOUISVILLE MUNICIPAL CODE TO REFLECT THE SAME

WHEREAS, by Ordinance No. 1862-2023, City Council changed the name of the Louisville Cultural Council to the Louisville Arts & Culture Advisory Board ("Board"); and

WHEREAS, the Board has requested that City Council change the name of the Board to the Louisville Cultural Advisory Board; and

WHEREAS, City Council by this ordinance desires to change the name of the Board and to amend the Louisville Municipal Code to reflect the name change.

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

Section 1. The Louisville Arts & Culture Advisory Board is hereby renamed the Louisville Cultural Advisory Board.

Section 2. Section 2.20.010.B.3 of the Louisville Municipal Code is hereby amended to read as follows (words to be deleted ~~stricken~~; words to be added underlined):

Sec. 2.20.010 Establishment of boards and commissions.

B. The following boards, commissions, and committees of the City are hereby recognized and confirmed:

3. ~~Arts & Culture~~ Cultural Advisory Board;

Section 3. Section 2.20.070 of the Louisville Municipal Code is hereby amended to read as follows (words to be deleted ~~stricken~~; words to be added underlined):

Sec. 2.20.070 ~~Arts & culture~~ Cultural advisory board.

A. There is created and established the ~~Arts & Culture~~ Cultural Advisory Board for the City.

B. The Board shall consist of members appointed by the City Council in number and for terms as shall be as set by resolution of the City Council.

C. The Board shall serve in an advisory capacity to the City Council in matters related to the arts and culture. The powers, duties, and responsibilities of the Board shall be as set forth by City Council resolution.

Section 4. The following definition in Section 14.20.020 of the Louisville Municipal Code is hereby amended to read as follows (words to be deleted ~~stricken~~; words to be added underlined):

Sec. 14.20.020. - Definitions.

For purposes of this chapter, the following words or phrases shall have the following meanings

Cultural council means the Louisville Cultural Advisory Board ~~Council~~.

Section 5. 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 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 5th day of March, 2024.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Meredyth Muth, City Clerk

APPROVED AS TO FORM:

_____
Kelly PC, City Attorney

PASSED AND ADOPTED ON SECOND AND FINAL READING, this 19th day of March, 2024.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Meredyth Muth, City Clerk

City of Louisville
COLORADO • SINCE 1878

CITY COUNCIL COMMUNICATION
AGENDA ITEM 8E

SUBJECT: **ORDINANCE NO. 1871, SERIES 2024 – AN ORDINANCE AMENDING CHAPTER 15.18.030 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE – 1st READING – SET PUBLIC HEARING 4/16/24**

DATE: **MARCH 19, 2023**

PRESENTED BY: **ROB ZUCCARO, AICP, COMMUNITY DEVELOPMENT DIRECTOR**

SUMMARY:

Attached for consideration on first reading, and to set the public hearing for April 15 2024, is a draft ordinance amending Louisville Municipal Code Section 15.18.030. The proposed ordinance is the result of staff research and public input on how to ensure the feasibility of implementing the City's amendments to the 2021 International Energy Conservation Code (IECC). The proposed code update provides alternative paths to meet the intended code outcomes, clarifies certain aspects of the code, streamlines certain administrative procedures, and aligns the code with equipment and material availability. Specific changes to the code include the following:

- Specifies that the commercial all-electric space and water heating requirement only applies to all new construction and removes any standards for additions and alternations to existing commercial buildings.
- Allows gas backup space heating equipment for the commercial all-electric space heating standards.
- Removes post-construction documentation, one-year compliance check, monitoring and metering requirements for new commercial construction subject to Appendix PT, Energy Use Intensity (EUI) modeling standards.
- Clarifies the EUI standards applicable to small office development between 0-5,000 sq. ft.
- Clarifies that R-1 and R-2 occupancies shall be subject to Appendix PT, the EUI modeling standards, rather than Appendix RC, Zero Energy Residential Building Provisions.
- Amends the commercial door U-value to match market availability of commercial type doors.
- Changes the minimum glazing standards for industrial and warehouse development to be measured by wall area rather than floor area.
- Corrects missing commercial R-values for insulation of metal buildings, and for piping and ducting.
- Adds minimum heat pump standards for both commercial and residential development to ensure that they are climate appropriate.

- Updates furnace efficiency standards to match product availability.
- Allows an exception to meeting Appendix RC, Zero Energy Residential Building Provisions if a home is certified through the Passive House Institute US, Inc. (PHIUS) program.
- Allows a Home Energy Rating System (HERS) in lieu of the Energy Rating Index (ERI) specified in the code.
- Removes the requirement to install electric vehicle charging infrastructure for commercial development when parking spaces are added or reconfigured if not part of a new building or building addition.

BACKGROUND:

On October 29, 2021, the City Council adopted the 2021 IECC with amendments, including the adoption of Appendix RC, which provides net-zero development standards for new residential development. The 2021 IECC provides minimum energy efficiency standards found in the International Residential Code (IRC) and International Building Code (IBC). The ordinance also included minimum electric vehicle (EV) charging standards for all new development. Ordinance No. 1816, Series 2021 and the minutes from the adoption hearing are included as Attachment Nos. 2 and 3.

On December 20, 2022, the City Council adopted further amendments to the 2021 IECC specific to commercial development. This included the adoption of all-electric standards for commercial space and domestic water heating, with exemptions for commercial kitchens and a broad range of commercial, industrial and institutional processes. The ordinance also included a new appendix that requires certain commercial uses, including office, multi-family residential development, and warehouse development, to meet minimum energy use performance targets that is more stringent than the base IECC or IBC codes. As part of the development of this code, the City hired Group 14 Engineering and Lotus Engineering and Sustainability to conduct a study and gather community input on options to strengthen the City's commercial energy code standards. This included an analysis of a net-zero commercial code option vs an energy use standard as an alternative to a full net-zero code. The final report and recommendations from Group 14/Lotus are included as Attachment No. 4 Ordinance 1845, Series 2022 and the minutes from the adoption hearing are included as Attachment Nos. 5 and 6.

Following the adoption of Ordinance No. 1845, Series 2022, City Council asked that staff conduct outreach on the adopted codes after hearing concerns over the feasibility and stringency of some of the code standards. In August of 2023 City staff and a City consultant with Shums Coda Associates held a public open house to gather feedback on the adopted codes. Staff received feedback from residents, business owners, land owners, developers and their design consultants on specific issues of concern. The feedback received at the open house is the basis for several of the proposed updates to the code. City staff has also identified several code provisions as part of implementing

the codes since their adoptions and after conducting further research that are included in proposed updates.

The Building Code Board of Appeals will be reviewing this ordinance at their March 20 meeting. Staff will bring their recommendation to City Council in the packet for second reading.

ANALYSIS:
The purpose of the proposed code updates is to meet the same intent of the original code adoption to have progressive energy standards than the base codes, but also ensuring that the codes are structured so that they are feasible and balanced to support economic vitality in the City. Staff has worked with the community and a consultant with Shums Coda Associates with special expertise in drafting energy codes.

PUBLIC COMMENTS:
No public comments have been received.

FISCAL IMPACT:
No fiscal impact is anticipated from the changes to the code.

STAFF RECOMMENDATION:
Staff recommends approval of Ordinance No. 1871, Series 2024 on first reading and setting the public hearing for April 16, 2024.

ATTACHMENTS:
1. Ordinance No. 1871, Series 2024
2. Ordinance 1816, Series 2021
3. October 19, 2021 City Council Minutes
4. Group 14/Lotus Energy Code Update Recommendation Report
5. Ordinance 1845, Series 2022
6. December 20, 2022 City Council Minutes

STRATEGIC PLAN IMPACT:

☐	**Financial Stewardship & Asset Management**	☐	**Reliable Core Services**
☒	**Vibrant Economic Climate**	☐	**Quality Programs & Amenities**
☒	**Engaged Community**	☐	**Healthy Workforce**

☐	Supportive Technology	☐	Collaborative Regional Partner

ORDINANCE NO. 1871
SERIES 2024

AN ORDINANCE AMENDING CHAPTER 15.18.030 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE

WHEREAS, the City Council has adopted from time-to-time certain building and construction standards; and

WHEREAS, it is deemed to be in the interest of the public health, safety and general welfare to adopt by reference thereto the 2021 edition of the International Energy Conservation Code with amendments and additions to such code; and

WHEREAS, the City Council adopted Ordinance No. 1816, Series 2021 and Ordinance No. 1845, Series 2022, which included the adoption of Appendix RC to the 2021 edition of the International Energy Conservation Code, and provisions for electric space and water heating provisions for commercial development, and a new Appendix PT setting standards for energy ratings for certain commercial development; and

WHEREAS, following additional research and public input on the provisions adopted in Ordinance No. 1816, Series 2021 and Ordinance No. 1845, Series 2022, the City desires to make certain amendments to such codes to ensure the feasibility of implementation of the codes; and

WHEREAS, the City of Louisville remains committed to its adopted goals to reduce energy consumption, increase clean energy sources, and support the transition to a low-carbon community as outlined in the Sustainability Action Plan and Resolution 25, Series 2019, A Resolution Setting Clean Energy and Carbon Reduction Goals; and

WHEREAS, reducing building energy consumption is an effective strategy to reduce community-wide energy consumption and increase long-term cost savings for businesses; and

WHEREAS, the City Council is committed to environmental, economic and social sustainability, ensuring the International Energy Conservation Code is attainable for current and future business owners and tenants, supporting affordable housing and local businesses development.

WHEREAS, the City Council, after proper notice as required by law, has held a public hearing on this ordinance providing for amendments to said codes; and

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

Section 15.18.030 of the Louisville Municipal Code, concerning amendments and deletions to the 2021 International Energy Conservation Code, is hereby amended as follows (deleted text in ~~strikethrough~~ and new text underlined):

1. *Section C101.1 Title*, is amended to insert "the City of Louisville" so the section will read:

   C101.1 Title. These regulations shall be known as the Energy Conservation Code of the City of Louisville, and shall be cited as such. It is referred to herein as "this code."

2. *Section C103.2 Information on construction documents*, is hereby amended to read as follows:

   C103.2 Information on construction documents. Construction documents shall be drawn to scale upon suitable material. Electronic media documented are permitted to be submitted when *approved* by the *code official*. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed, and show in sufficient detail pertinent data and features of the building, systems and equipment herein governed. Details shall include the following as applicable:

   1. Energy compliance path.
   2. Insulation materials and their *R*-values
   3. Fenestration *U*-factor and solar heat gain coefficients (SHGCs).
   4. Area-weighted *U*-factor and solar heat gain coefficient (SHGC) calculations.
   5. Mechanical system design criteria.
   6. Mechanical and service water heating systems and equipment types, sizes, fuel source and efficiencies.
   7. Economizer description.
   8. Equipment and system controls.
   9. Fan motor horsepower (hp) and controls.
   10. Duct sealing, duct and pipe insulation and location.
   11. Lighting fixture schedule with wattage and control narrative.
   12. Location and *daylight* zones on floor plans.
   13. Air barrier and air sealing details, including the location of the air barrier.
   14. Location of pathways for routing of raceways or cable from the solar ready zone to the electrical service panel.

3. *Section C202 General Definitions*, is hereby amended by adding, in alphabetical order, the following definitions:

All-Electric Building: A building that contains no combustion equipment, or piping or plumbing for combustion equipment, installed within the building or building site.

Combustion Equipment: Any equipment or appliance used for space heating, service water heating, cooking, clothes drying and/or lighting that uses fuel gas or fuel oil.

~~*Electric Vehicle (EV):* A vehicle registered for on-road use, primarily powered by an electric motor that draws current from a rechargeable storage source that is charged by being plugged into an electrical current source.~~

~~*Electric Vehicle Supply Equipment (EVSE):* The electrical conductors and associated equipment external to the electric vehicle that provide a connection between the premises wiring and the electric vehicle to provide electric vehicle charging.~~

~~*Electric Vehicle Capable Space:* A designated parking space that is provided with conduit sized and rated for a minimum 40-amp, 208/240-Volt dedicated branch circuit and shall be no less than 1" in size. Conduit must be continuous from the future or existing electrical panelboard or switchboard location(s) and end at a junction box or receptacle located within close proximity of the parking space. The electrical panel serving the parking space shall have sufficient capacity and physical space for a dual-pole, 40-amp breaker. The conduit shall be sealed at the junction or outlet box that is capped off, with the conduit sealed and the cap labeled as "For future electric vehicle charging".~~

~~*Electric Vehicle Ready Space:* A designated parking space that is provided with a dedicated branch circuit with wiring capable of supporting a minimum 40-ampere, 208/240- Volt circuit that terminates at a receptacle, plug, junction box, or an installed electric vehicle supply equipment within close proximity of the parking space. There shall be adequate reserved space in an electrical panelboard or switchboard to meet the electric vehicle requirements.~~

~~*Electric Vehicle Supply Equipment (EVSE) Installed Space:* A designated parking space with dedicated electric vehicle supply equipment capable of supplying a minimum 40-amp, dedicated circuit rated at 208/240 Volt from a building electrical panelboard.~~

Emergency Power System: A source of automatic electric power of a required capacity and duration to operate required life safety, fire alarm, detection, and ventilation systems in the event of a failure of the primary

power. Emergency power systems are those required for electrical loads where interruption of the primary power could result in loss of human life or serious injuries.

Energy Use Intensity (EUI): The annual building site energy use per square foot of gross floor area in units of kBTU/sq ft.

Residential Building: For this code, includes detached one- and two-family dwellings and multiple single-family dwellings (townhouses) R-3 and R-4 buildings three stories or less in height above grade plane.

Standby Power System: A source of automatic electric power of a required capacity and duration to operate required building, hazardous materials or ventilation systems in the event of a failure of the primary power. Standby power systems are those required for electrical loads where interruption of the primary power could create hazards or hamper rescue or fire-fighting operations.

Tenant Finish: The first tenant occupying a space(s) in a core and shell. Multiple tenants may be considered as a tenant finish until the entire space within the core and shell has had a tenant. Once a space within a core and shell has been occupied it becomes an existing building.

4. *C401.2.* Commercial buildings shall comply with ~~Section C401.2.1~~ <u>one of the following, as applicable</u>

   C401.2.1 Performance targets. New commercial building types included in the scope of Appendix PT shall comply with Appendix PT and Sections C403.2.4 and C404.10.

   C401.2.2 Core and shell. Core and shell buildings shall comply with the provisions of Section C402.1.3 through C402.5. When mechanical systems are installed, core and shell buildings shall also meet the provisions in C403.2.4, C404.10, and Section C408.

   C401.2.2.1 Core and shell buildings shall submit a letter of agreement to the City stating the tenant spaces included in the scope of Appendix PT shall meet the EUI target established in Table PT103 and shall include these requirements in their lease or purchase agreements.

   C401.2.3 Tenant finish. Tenant finishes included in the scope of Appendix PT shall comply with Appendix PT and C403.2.4 and C404.10. All other tenant finishes shall comply with the Prescriptive Compliance option, which requires compliance with Sections C401.3, C401.4, C402 through C406, and C408.

C401.2.4 Other commercial building types. Commercial building types not included above, including additions, shall comply with the Prescriptive Compliance option, which requires compliance with Sections C401.3, C401.4, C402 through C406, and C408.

Exception: ~~Additions, alterations,~~ Alterations, repairs, and changes of occupancy to existing buildings complying with Chapter 5.

5. *Section C401.2.1 International Energy Conservation Code*, is hereby deleted and replaced to read as follows:

   C401.2.1 International Energy Conservation Code

   Commercial buildings shall be built all-electric unless the fuel gas options of C403.3.2 and the additional electric infrastructure requirements of C405.14 are met. All buildings must comply with the following:

   City of Louisville's Prescriptive Compliance. The Prescriptive Compliance option requires compliance with Sections C401.3, C401.4, C402 through C406, and Section C408.

   Core and shell buildings shall be required to comply with the provisions of Section C402.1.3 through C402.5 of the 2021 International Energy Conservation Code.

6. *Section C401.2.2 ASHRAE 90.1*, is hereby deleted in its entirety.

7. A new *Section C401.4 Mandatory Requirements for Commercial Buildings*, is hereby added to read as follows:

   C401.4 Mandatory Requirements for Commercial Buildings. Commercial buildings must comply with Table C401.4.

Table C401.4 (Mandatory)
Requirements for Commercial Buildings

Title	IECC Section
Air leakage	C402.5
Calculation of heating and cooling loads	C403.1.1
Data centers	C403.1.2
System Design	C403.2
Heating and cooling equipment efficiency	C403.3

Heating and cooling system controls	C403.4, except C403.4.3, C403.4.4, C403.4.5
Economizer fault detection and diagnostics	C403.5.5
Ventilation and exhaust systems	C403.7, except C403.7.4.1
Fan and fan controls	C403.8, except C403.8.6
Large diameter ceiling fans	C403.9
Refrigeration equipment performance	C403.11, except C403.11.3
Construction of HVAC system elements	C403.12
Mechanical systems located outside of the building thermal envelope	C403.13
Service water heating	C404
Electrical power and lighting systems	C405, except C405.3
Maintenance information and system commissioning	C408

8. *Table C402.1.3 Opaque Thermal Envelope Insulation Component Minimum Requirements, R-Value Method*, is hereby deleted and replaced with the following:

Table C402.1.3 (Mandatory)
Opaque Thermal Envelope Insulation Component of an Average Minimum Requirements, *R*-Value Method in following locations:

Roof C402.2.1	
Insulation entirely above roof deck	R-49
Metal buildings[a]	R-21 + R-11 LS
Attic and other	R-49
Walls. Above grade C402.2.2	
Mass[d]	R-21
Metal buildings	R-21 + R-10ci
Metal framed	R-21+ R-10ci
Wood framed and other	R-21
Walls, Below grade C402.2.5	
Below-grade wall[b]	R-10
Floors C402.2.3	
Mass[c]	R-21
Joist/framing	R-38
Slab-on-grade floors C402.2.4	

Unheated	R-20 for 24" below
Heated[e]	R-15 for 36" below + R-5 full slab

For SI: 1 inch = 25.4 mm, 1 pound per square foot = 4.88 kg/m^2, 1 pound per cubic foot = 16 kg/m^3.
NR = No Requirement, LS = Liner System.

a.Where using *R*-value compliance method, a thermal spacer block shall be provided,
b.Where heated slabs are below grade, below-grade walls shall comply with the exterior insulation requirements for heated slabs.
c."Mass floors" shall be in accordance with Section C402.2.3.
d."Mass walls" shall be in accordance with Section C402.2.2.
e. The first value is for perimeter insulation and the second value is for full, under-slab insulation.

9. *Section C402.1.4 Assembly U-factor, C-factor or F-factor-based method,* is hereby deleted in its entirety.

10. *Section C402.1.5 Component performance alternative,* is hereby deleted in its entirety.

11. *Table C402.4 Building Envelope Fenestration Maximum U-Factor and SHGC Requirements,* is hereby deleted and replaced with the following:

Table C402.4
Building Envelope Fenestration

Vertical Fenestration	
Maximum U-Factor	0.45
Maximum SHGC	0.33
Maximum Air leakage rate for all fenestration except curtain walls and storefront glazing	.20 cfm/ft2
Maximum air leakage rate for curtain walls and storefront glazing	.06 cfm/ft
Skylights	
Maximum U-Factor	0.50
Maximum SHGC	0.40
Maximum Air leakage rate	.20 cfm/ft2

~~12. *Section C402.4.1 Maximum area*, is hereby deleted and replaced with the following:~~

~~C402.4.1 Minimum area of natural lighting. Not less than eight percent of the floor area shall be glazed.~~

12. *Section C402.4.1.2* is deleted and replaced with the following:

    C402.4.1 Minimum area of natural lighting. Not less than 8% of wall area for warehouses, and industrial shall be glazed.

~~13. *Section C402.4.2 Minimum skylight fenestration area*, is hereby deleted and replaced with the following:~~

    ~~**C402.4.2 Minimum area of natural lighting.** A minimum skylight area of three percent of the roof area shall be provided for all roofs.~~

        ~~Exception: Roof areas designated for solar ready zones shall not be included in roof area calculation.~~

13. **C403.2** *System design.* Mechanical systems shall be designed to comply with Sections C403.2.1 through ~~403.2.3~~ C403.2.4. Where elements of a building's mechanical systems are addressed in Sections C403 through C403.14, such elements shall comply with the applicable provisions of those sections.

14. Section C403.2.4 Space heating equipment is added as follows:

    C403.2.4 Space heating equipment. Fossil-fuel warm air furnaces appliances and electric resistance space heating equipment shall not be permitted for space heating in new construction.

    4. Heat pump efficiencies:
        a. Ductless System
            1. 14.3 SEER2;
            2. 7.5 HSPF2; or
            3. EnergyStar Cold Climate certified
        b. Ducted System
            1. 15.2 SEER2;
            2. 9 HSPF2; or
            3. EnergyStar Cold Climate certified

    Exceptions:
    1. *Emergency backup.* Where it is required by an applicable law or regulation to provide space heating with an emergency power system or a standby power system.
    2. *Certain make-up air systems.* Electric resistance in make-up air systems where energy recovery ventilation is prohibited by the International Mechanical Code.
    3. *Supplementary heat.* Electric resistance and natural gas/ propane heat used for supplementary heat in accordance with Section C403.4.1.1

4. *Electric resistance budget.* In addition to any exceptions in this section, Up to 5 W of electric resistance space heating per square foot of conditioned floor area in the building, not including supplementary heat.
5. *Integrated units.* Electric resistance heating elements, natural gas, propane supplemental heating integrated into heat pump equipment.
6. *Heated plenums.* Electric resistance in heated plenums.
7. *Temporary systems.* Temporary electric resistance heating systems are permitted where serving future tenant spaces that are unfinished and unoccupied, provided that the heating equipment is sized and controlled to achieve interior space temperatures no higher than needed to prevent freezing.
8. *Freeze protection.* Electric resistance in heating systems intended for freeze protection.
9. Outdoor systems. Equipment used for outdoor heating.
10. Specific conditions. Portions of buildings that require fossil fuel or electric resistance space heating for specific conditions approved by the Building Official for research, health care, process or other specific needs that cannot practicably be served by heat pump or other space heating systems. This does not constitute a blanket exception for any occupancy type.
11. Replacements. Replacement fuel-fired appliances.
12. Backup heat. For back up heat to operate when the heat pump cannot adequately heat the space/buildings due to extreme cold weather.
13. Where cfm/sq. ft. ventilation requirements result in conditions where the Building Official determines that space heating requirements cannot reasonably be met without combustion space heating systems.

14. *Section C403.3.2 HVAC equipment performance requirements*, is hereby ~~deleted in its entirety and replaced~~ amended by adding the following at the beginning of the section with remainder of section to remain ~~to read as follows~~:

C403.3.2 When HVAC fuel fired equipment is permitted to be installed, equipment shall meet the minimum efficiency requirements of Tables C403.3.2(1) through C403.3.2(16) when tested and rated in accordance with the applicable test procedure. Plate-type liquid-to-liquid heat exchangers shall meet the minimum requirements of AHRI 400. The efficiency shall be verified through certification under an approved certification program or, where a certification program does not exist, the equipment efficiency ratings shall be supported by data furnished by the manufacturer. Where multiple rating conditions or performance requirements are provided, the equipment shall satisfy all stated requirements. Where components, such as indoor or outdoor coils, from different manufacturers are used, calculations and supporting data shall be furnished by the designer that demonstrates that the combined efficiency of the specified components meets the requirements herein.

~~HVAC/fuel fired equipment performance requirements. Unless built all-electric, all new combustion equipment shall comply with the more efficient HVAC equipment performance of Sections C406.2, C406.2.3, and C406.2.4 and the additional~~

~~electric infrastructure requirements in Section C405.14. A mechanical compliance certificate demonstrating compliance with section C406.2.3 and/or C406.2.4 shall be required for all HVAC, fuel fired and Service Water Heating equipment.~~

~~The efficiency shall be verified through certification under an approved certification program or, where a certification program does not exist, the equipment efficiency ratings shall be supported by data furnished by the manufacturer. Where multiple rating conditions or performance requirements are provided, the equipment shall satisfy all stated requirements. Where components, such as indoor or outdoor coils, from different manufacturers are used, calculations and supporting data shall be furnished by the designer that demonstrates that the combined efficiency of the specified components meets the requirements herein. (Tables C403.2.(1) through (16) are expressly retained and remain applicable to HVAC equipment performance.)~~

~~Exceptions:~~

~~1. Factory, laboratory, and high hazard occupancy combustion equipment, except for HVAC and domestic water heating.~~

~~2. Commercial Kitchens.~~

~~3. Other combustion equipment approved by the Building Official based on demonstration by the applicant that compliance with this section is not feasible and the equipment proposed is the most efficient appliance reasonably available.~~

16. *Section C403.4.1 Thermostatic controls*, is hereby deleted and replaced with the following:

C403.4.1 Thermostatic controls. The supply of heating and cooling energy to each *zone* shall be controlled by individual thermostatic controls capable of responding to temperature within the *zone*. Where humidification or dehumidification or both is provided, no fewer than one humidity control device shall be provided for each humidity control system. Occupancy sensors shall be provided on the thermostat to setback in accordance with C403.4.2.1

Exception: Independent perimeter systems that are designed to offset only building envelope heat losses, gains or both serving one or more perimeter *zones* also served by an interior system provided that both of the following conditions are met:

1. The perimeter system includes not fewer than one thermostatic control *zone* for each building exposure having exterior walls facing only one orientation (within ±45 degrees) (0.8 rad) for more than 50 contiguous feet (15 240 mm).
2. The perimeter system heating and cooling supply is controlled by thermostats located within the *zones* served by the system.

17. *Section C403.12.1 Duct and plenum insulation and sealing*, is hereby deleted and replaced with the following:

C403.12.1 Duct and plenum insulation and sealing. All supply and return air ducts and plenums shall be insulated with not less than R-12. Ducts, air handlers and filter boxes shall be sealed. Joints and seams shall comply with Section 603.9 of the International Mechanical Code.

18. *Section C403.12.3 Piping insulation*, is hereby amended to read as follows:

C403.12.3 Piping insulation. Piping serving as part of a heating or cooling system shall be thermally insulated to R-5.

19. *Section C404.4 Insulation of piping*, is hereby amended to read as follows:

C404.4 Insulation of piping. Piping from a water heater to the termination of the heated water fixture supply pipe shall be insulated to R-3. On both the inlet and outlet piping of a storage water heater or heated water storage tank, the piping to a heat trap or the first 8 feet (2438 mm) of piping, whichever is less, shall be insulated. Piping that is heat traced shall be insulated to R-3 or the heat trace manufacturer's instructions.

20. Section C404.10 Water heating equipment is added as follows:

C404.10 Water heating equipment. Fossil fuel and electric resistance instantaneous and storage water heaters shall not be used to provide hot water <u>in new construction.</u>

Exceptions:

1. *Emergency backup.* Where it is required by an applicable law or regulation to provide water heating with an emergency power system or a standby power system.
2. *Integrated units*. Resistance heating elements integrated into heat pump water heating equipment.
3. *Recirculation loops*. Electric resistance elements used for recirculation loop temperature maintenance.
4. *Small systems.* Electric storage water heaters with a rated water storage volume no greater than 20 gallons.
5. *Point-of-use systems.* Instantaneous electric water heaters located within 10 feet of the point of use.
6. *Renewable electricity*. Electric resistance equipment where not less than 100 percent of the annual service water-heating requirement is provided by an *on-site renewable energy system* not used to meet any other provision of this code.
7. *Renewable or waste thermal energy*. Electric resistance storage water heating equipment in *buildings* where not less than 75% of the annual

service water heating requirement is met by a solar thermal system or other renewable thermal system.

8. *High-temperature requirements*. Water heating systems that serve end-uses or have a storage requirement that necessitates a water temperature of 141°F (55°C) or hotter.
9. *Electric resistance budget.* In addition to any exceptions in this section, a budget of 24 kW plus 0.1 watts per square foot of building area of electric resistance service water heating capacity per building.
10. *Commercial kitchens*. Electric booster-heaters serving commercial dishwashers, commercial food service equipment, and other approved process equipment that require supply water temperatures of 120°F (49°C) or higher.
11. *Replacements.* Replacement of gas-fired storage water heaters or instantaneous water heaters.

21. Section C405.2.1 Occupant sensor controls, is hereby amended to read as follows:

C405.2.1 Occupant sensor controls. Occupant *sensor controls* shall be installed to control lighting.

22. *Section C405.2.2 Time-switch controls*, is hereby deleted in its entirety.

23. *Section C405.2.2.1 Time-switch control function*, is hereby deleted in its entirety.

24. *Section C405.2.3 Light-reduction controls*, is renumbered to C405.2.2.

25. *Section C405.2.3.1 Light-reduction function*, is renumbered to C405.2.2.1.

26. *Section C405.2.4 Daylight-responsive controls*, is renumbered to C405.2.3.

27. *Section C405.2.4.1 Daylight-responsive control function*, is renumbered to C405.2.3.1.

28. *Section C405.2.4.2 Sidelit daylight zone*, is renumbered to C405.2.3.2.

29. *Section C405.2.4.3 Toplit daylight zone,* is renumbered to C405.2.3.3.

30. *Section C405.2.4.4 Atriums,* is renumbered to C405.2.3.4.

31. *Section C405.2.5 Specific application controls,* is renumbered to C405.2.4.

32. *Section C405.2.6 Manual controls,* is renumbered to C405.2.5.

33. *Section C405.2.7 Exterior lighting controls,* is renumber to C405.2.6.

34. *Section C405.2.7.1 Daylight shut off,* is renumbered to C405.2.6.1.

35. *Section C405.2.7.2 Building façade and landscape lighting,* is renumbered to C405.2.6.2.

36. *Section C405.2.7.3 Lighting setback,* is renumbered to C405.2.6.3.

37. *Section C405.2.7.4 Exterior time-switch control function,* is renumbered to C405.2.6.4.

38. *Section C405.2.8 Parking garage lighting control*, is renumbered to C405.2.7.

39. *Section C405.4.3 Gas lighting, is hereby amended to read as follows:*

C405.4.3 Gas lighting. Gas-fired lighting appliances shall not be permitted.

40. A new *Section C405.13 Electric vehicle charging infrastructure for new construction and building addition of 25% or more of original square footage*, is hereby added to read as follows:

Section C405.13.1 Electric vehicle charging infrastructure for new construction and building addition of 25% or more of original square footage. Electric vehicle charging shall be provided and installed in accordance with this section, National Electrical Code (NFPA 70), and Section 17.20.170 of the Louisville Municipal Code. ~~When parking spaces are added or modified without an increase in building floor area, only the new parking spaces are subject to this requirement.~~ All *EVSE Installed*, *EV Ready* and *EV Capable* spaces are to be included in the calculation for the number of minimum vehicle spaces required, as provided by the applicable article of the Louisville Zoning Code.

Section C405.13.2 Identification. The circuit breakers or circuit breaker spaces reserved for the *EVSE Installed, EV Ready*, and *EV Capable* spaces shall be clearly identified in the panelboard directory. The conduit for electric vehicle capable spaces shall be clearly identified at both the panelboard and the termination point at the parking space~~.~~

40. A new *Section C405.14 Additional electric infrastructure*, is hereby added to read as follows:

Section C405.14 Additional electric infrastructure. All *combustion equipment* and end-uses shall be installed in accordance with this section.

C405.14.1 Electric infrastructure for dwelling and sleeping units. *Combustion equipment* and end-uses serving individual dwelling units or sleeping units shall comply with Section R404.5.

C405.14.2 Combustion equipment. *Combustion equipment* shall be provided with conduit that is continuous between a junction box located within 3 feet (914 mm) of the appliance or equipment and an electrical panel. The junction box, conduit and bus bar in the electrical panel shall be rated and sized to accommodate a branch circuit with sufficient capacity for an equivalent electric appliance, equipment or end use with an equivalent equipment capacity. The electrical junction box and electrical panel shall have labels stating, “For Future Electric Equipment”.

Exception: Industrial and manufacturing uses are exempt from Section C405.14.

41. *Section C502.1.1 General,* is hereby amended to read as follows:

Additions to an existing building, building system or portion thereof shall conform to the provisions of Section C401.2.4 as those provisions relate to new construction without requiring the unaltered portion of the existing building or building system to comply with this code. Additions shall not create unsafe or hazardous condition or overload existing building systems. An addition shall be deemed to comply with this code if the addition alone complies or if the existing building and addition comply with this code as a single building.

42. *Section C503.1 General* Exception 3 is deleted in its entirety.

43. *Section C503.2 Building Envelope* is amended with exception remaining to read as follows:

New building envelope assemblies that are part of the alteration shall comply with Sections C402.1 through C402.5. Existing ceilings, roofs, all wall types, or floors exposed during construction shall comply with Table C402.1.3.

44. *Section C505.1 General*, is hereby amended to read as follows:

C505.1 General. Where the use in a space changes from one use in Table C405.3.2(1) or C405.3.2(2) to another use in Table C405.3.2(1) or C405.3.2(2), the installed lighting wattage shall comply with Section C405.3. Where the space undergoing a change in occupancy or use is in

a building with a fenestration area that exceeds the limitations of Section C402.4.1, the space is exempt from Section C402.4.1 provided that there is not an increase in fenestration area.

Exception: Egress doors with fenestration are allowed to bring total fenestration percentages over the allowed maximum amount of vertical fenestration.

APPENDIX PT
MODELING TO A PERFORMANCE TARGET

PT101 Scope. This section establishes criteria for demonstrating compliance with a performance target, and is required for new hotels (occupancy R-1), multifamily (occupancy R-2), offices, primary and secondary schools, and warehouses. All end use load components within and associated with the building and their building sites shall be modeled.

PT102 Mandatory requirements. The requirements in this section are mandatory requirements and shall be required in addition to the provisions of ASHRAE 90.1 Appendix G.

PT103 Performance target. Projects of the types listed in Table PT103 shall demonstrate that the proposed design reaches a fixed energy use intensity (EUI) less than or equal to the values in Table PT103, calculated utilizing the energy modeling procedures of Appendix G of ASHRAE 90.1. For *buildings* with multiple occupancy types, the modeled performance target shall be a weighted average of the floor area of each occupancy type.

Exception: Energy used for electric vehicle charging, data centers, and process loads shall be excluded from compliance modeling.

TABLE PT103
PERFORMANCE TARGETS

BUILDING TYPE	PERFORMANCE TARGET (kBTU/ft2)
Hotel (Occupancy R-1)	32
Multifamily (Occupancy R-2)	32
Office, small (≥ 0 - 5,000 ft2)	19

Office, medium (5,000 – 50,000 ft2)	23
Office, large (>50,000 ft2)	28
School, primary	34
School, secondary	31
Warehouse	11

PT104 Renewable Energy. On-site renewable energy generated by a system installed as part of this project that is used by the building shall be subtracted from the proposed design energy consumption prior to calculating the proposed building performance.

PT105 Performance documentation. Documentation to verify compliance with this section shall be provided to the code official.

PT105.1 Projected compliance report. Permit submittals shall include a report documenting the proposed design is projected to meet the EUI target. The compliance report shall include the following specific information beyond the information required in ASHRAE 90.1 Appendix G:

1. Address of the building.
2. An inspection checklist documenting the building component characteristics of the proposed design.
3. Name of individual completing the report.
4. Name and version of compliance software tool.
5. Documentation of the reduction in energy use associated with on-site energy.

PT105.2 Construction plan requirements. Construction plans shall depict all component characteristics of the proposed design utilized for the EUI in accordance with ASHRAE 90.1 Appendix G.

~~**PT105.3 Measured performance report.** Projects shall demonstrate compliance with this code by documenting that the building has achieved the EUI performance calculated based on 12 months of metered energy use after occupancy.~~

~~**PT105.3.1 Demonstration of operating energy use.** Metered energy data demonstrating compliance with the EUI target shall be reported to the building official using Energy Star Portfolio Manager and adjusted for the percentage of floor area occupied. While at least 75 percent~~

~~occupied, the building shall operate at or below its assigned energy use target established in Section PT103 for any recording period of 12 consecutive months that is completed within three years of the date of the Certificate of Occupancy. The owner shall notify the building official when this 12-month period has been successfully completed.~~

~~**PT106 Energy metering and monitoring.** All projects must install submetering or monitoring capabilities to support building energy performance analysis. The project must include capabilities to store and access a 24-month continuous data set on an ongoing basis.~~

~~**PT106.1 End-use monitoring.** Measurement devices shall be installed in new *buildings* to monitor the electric energy use of each of the following separately:~~

~~1. Total electric energy.~~
~~2. HVAC systems energy use.~~
~~3. Interior lighting.~~
~~4. Exterior lighting.~~
~~5. Receptacle circuits.~~
~~6. Data centers representing over 10 percent of total building load or 5 percent of building floor area.~~
~~7. Other process loads that represent 10 percent or more of total building energy use based on building energy use modeling.~~

~~**PT106.2 Independent metering.** The following items shall be independently metered. Individual meters used to comply with this section may not serve multiple *buildings*.~~

~~1. All fuel sources serving the building.~~
~~2. Energy production from on-site renewable energy systems.~~
~~3. Electric vehicle (EV) supply equipment.~~
~~4. Data centers representing over 10 percent of total building load or 5 percent of building floor area.~~
~~5. Other process loads that represent 10 percent or more of total building energy use based on building energy use modeling.~~
~~6. Individual tenant energy loads.~~

45. *Section R101.1 Title,* is amended to insert "the City of Louisville" so the section will read:

R101.1 Title. These regulations shall be known as the Energy Conservation Code of the City of Louisville and shall be cited as such. It is referred to herein as "this code."

46. *Section R103.2 Information on construction documents,* is amended to read as follows:

R103.2 Information on construction documents. Construction documents shall be drawn to scale upon suitable material. Electronic media documented are permitted to be submitted when *approved* by the *code official*. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed, and show in sufficient detail pertinent data and features of the building, systems and equipment herein governed. Details shall include the following as applicable:

1. Energy compliance path.
2. Insulation materials and their *R*-values
3. Fenestration *U*-factor and solar heat gain coefficients (SHGCs).
4. Area-weighted *U*-factor and solar heat gain coefficient (SHGC) calculations.
5. Mechanical system design criteria.
6. Mechanical and service water heating systems and equipment types, sizes, fuel source and efficiencies.
7. Equipment and system controls.
8. Duct sealing, duct and pipe insulation and location.
9. Air sealing detail.
10. Location of pathways for routing of raceways or cable from the solar ready zone to the electrical service panel.

47. *Section R202 General Definitions*, is hereby amended by adding, in alphabetical order, the following definitions:

All-Electric Building: A building that contains no combustion equipment, or plumbing <u>or piping</u> for combustion equipment, installed within the building or building site.

Combustion Equipment: Any equipment or appliance used for space heating, service water heating, cooking, clothes drying and/or lighting that uses fuel gas or fuel oil.

~~*Electric Vehicle (EV):* A vehicle registered for on-road use, primarily powered by an electric motor that draws current from a rechargeable storage source that is charged by being plugged into an electrical current source.~~

~~*Electric Vehicle Supply Equipment (EVSE):* The electrical conductors and associated equipment external to the electric vehicle that provide a connection between the premises wiring and the electric vehicle to provide electric vehicle charging.~~

~~*Electric Vehicle Capable Space:* A designated parking space that is provided with conduit sized and rated for a minimum 40-amp, 208/240-Volt dedicated branch circuit and shall be no less than 1" in size. Conduit must be continuous from the future or existing electrical panel board or switchboard location(s) and end at a junction box or receptacle located within close proximity of the parking space. The electrical panel serving the parking space shall have sufficient capacity and physical space for a dual-pole, 40-amp breaker. The conduit shall be sealed at the junction or outlet box that is capped off, with the conduit sealed and the cap labeled as "For future electric vehicle charging".~~

~~*Electric Vehicle Ready Space:* A designated parking space that is provided with a dedicated branch circuit with wiring capable of supporting a minimum 40-ampere, 208/240- Volt circuit that terminates at a receptacle, plug, junction box, or an installed electric vehicle supply equipment within close proximity of the parking space. There shall be adequate reserved space in an electrical panel board or switchboard to meet the electric vehicle requirements~~.

Residential Building. For this code, includes detached one- and two-family dwellings and multiple single-family dwellings (townhouses) and R-3 and R-4 buildings three stories or less in height above grade plane.

48. *Section R401.2 Application,* is hereby deleted and replaced with the following:

R401.2 Application. New ~~R~~residential buildings shall be built using appendix RB and RC and shall be built all-electric unless the fuel gas options of R403.7 and additional electric infrastructure requirements of R404.5 are met. ~~All residential buildings shall comply with the R401.2.1 City of Louisville's Prescriptive Compliance or R406 Energy Rating Index with a maximum rating index of 50 before the installation of solar panels~~

Exceptions:

1. New residential buildings certified through the Passive House Institute US, Inc. (PHIUS) program
2. Additions shall comply with R401.2.1 and Chapter 5
3. ~~Additions,~~ ~~a~~Alterations, repairs and changes of occupancy to existing buildings complying with Chapter 5.

49. *Section R401.2.1 Prescriptive Compliance Option,* is hereby deleted and replaced with the following:

R401.2.1 City of Louisville's Prescriptive Compliance. The City of Louisville's Prescriptive compliance requires compliance with Sections R401 through R404.

50. *Section R401.2.2 Total Building Performance Option*, is hereby deleted in its entirety.

51. *Section R401.2.4 Tropical Climate Region*, is hereby deleted in its entirety.

52. *Section R401.2.5 Additional Energy Efficiency*, is hereby amended to read as follows:

Section R401.2.5 Additional Energy Efficiency. Building shall comply with one of the additional efficiency options and shall be installed in according to Section R408.2.

53. A new *Section R401.4 Mandatory requirements for residential buildings*, is hereby added to read as follows:

R401.4 Mandatory requirements for residential buildings. Residential building must comply with the following sections from the 2021 International Energy Conservation Code found in Table R401.4 and Section R401.2.

Table R401.~~3~~4
Mandatory requirements for residential buildings

Title	IECC Section
Vapor retarder	R402.1.1
Eave baffle	R402.2.3
Access hatches and doors	R402.2.4.1
Crawl space wall insulation	R402.4.1.2
Maximum fenestration U-factor and SHGC	R402.5
Mechanical Controls	R403.1
Ducts	R403.3 except R403.3.2, R403.3.3, and R403.6
Mechanical system piping insulation	R403.4
Heated water circulation and temperature maintenance systems	R403.5.1
Drain Water heat recovery units	R403.5.3
Mechanical ventilation	R403.6 including E403.6.1
Equipment sizing and efficiency rating	R403.7
Systems serving multiple dwelling units	R403.8
Snow melt and ice systems	R403.9
Energy consumption of pools and spas	R403.10

Portable spas	R403.11
Residential pools and permanent residential spas	R403.12
Lighting equipment	R404.1
Interior lighting controls	R404.2

54. *Section R402.1 General*, is hereby amended to read as follows:

R402.1 General. The building thermal envelope shall comply with the requirements of Section R402.1.1 and R402.1.2.

55. *Section R402.1.2 Insulation ~~and fenestration~~*, is hereby deleted and replaced with the following*:*

R402.1.2 Insulation ~~and fenestration~~. New and replacement ~~A~~assemblies shall have R-value of insulation materials equal to or greater than that specified in Table R402.1.2 ~~unless an alternative path is specified while using HERS energy rating index of 50.~~

Exception: New Construction complying with R401.2 or exception 1

56. *Section R402.1.2.1 Fenestration* is hereby added to read as following*:*

R402.1.2.1 Fenestration. New and replacement assemblies shall not exceed the value specified in Table R402.1.2.

Exception: New Construction complying with R401.2 or exception 1

Table R402.1.2
Average Insulation and Fenestration Requirements by Component

Roof	R-60
Above grade walls	R-21
Below grade walls	R-21
Floors	R-38
Non heated slab on grade	R-10 for 4ft
Heated slab on grade	R-15 for 4 ft + R-5 under full slab
Fenestration U-Factor	.30
Fenestration SHGC	.33
Skylight U-Factor	.50
Skylight SHGC	.40
Hot Water Pipes	R-5

Warm Air Ducts	R-8

55. Section R402.1.5 Total UA alternative, is hereby deleted in its entirety.

56. Section R402.3.3 Glazed fenestration exemption, is hereby amended to read as follows:

R402.3.3 Glazed fenestration exemption. Not greater than 15 square feet (1.4 m^2) of glazed fenestration per dwelling unit shall be exempt from the U-factor and SHGC requirements in Section R402.1.2.

57. *Section R402.4.1.2 Testing*, is hereby deleted and replaced to read as follows:

Section R402.4.1.2 Testing. All new buildings or dwelling units that are heated or cooled, and additions over 500 square feet shall be tested for air leakage.

58. *Section R402.5 Maximum fenestration U-factor and SHGC*, is hereby deleted and replaced with the following*:*

Section R402.5 Maximum fenestration U-factor and SHGC. The maximum U-factor and solar heat gain coefficient (SHGC) for fenestration shall not be required in storm shelters complying with ICC 500.

59. *Section R403.3.1 Ducts located outside conditioned space*, is hereby deleted and replaced with the following*:*

R403.3.1 *Ducts located outside conditioned space*. All supply and return ducts shall be insulated to a minimum R-8 if located outside a conditioned space.

60. *Section R403.5.2 Hot water pipe insulation*, is hereby deleted and replaced with the following*:*

R403.5.2 Hot water pipe insulation. All service hot water piping shall be insulated to a minimum R-5.

61. *Section R403.6.1 Heat and recovery ventilation*, is hereby deleted and replaced in its entirety and the following is hereby added in lieu thereof*:*

R403.5.2 Heat and recovery ventilation. All new buildings and additions over 500 square feet shall be provided with a heat recovery or energy recovery ventilation system. The system shall be balanced with a minimum sensible heat recovery efficiency of 65 percent at 32°F (0°C) at a flow greater than or equal to the design airflow.

62. *Section R403.7 Equipment sizing and efficiency rating*, is hereby deleted and replaced with the following*:*

R403.7 Equipment sizing and efficiency rating. All new buildings and additions greater than 500 square feet with heating and cooling equipment shall be sized in accordance with ACCA Manual S based on building loads calculated in accordance with ACCA Manual J or other approved heating and cooling calculation methodologies. In addition to complying with Sec. R404.6 Additional Electric Infrastructure, new and replacement electrical heating and cooling equipment shall have an efficiency rating equal to or greater than the minimum required by federal law for the geographic location where the equipment is installed. New gas heating equipment shall comply with the following efficiencies:

1. Gas furnaces shall have a minimum of 96% efficiency.
2. Gas boilers shall have a minimum of 90% AFUE.
3. On demand water heaters shall have a greater than .92 uniform energy factor.
4. Heat pump efficiencies:
   a. Ductless System
      1. 14.3 SEER2;
      2. 7.5 HSPF2; or
      3. EnergyStar Cold Climate certified
   b. Ducted System
      1. 15.2 SEER2;
      2. 9 HSPF2; or
      3. EnergyStar Cold Climate certified

Exception: Solid fuel stoves/gas fireplaces, outdoor fire pits, gas stoves and ovens.

63. *Section R404.1.1 Fuel gas lighting equipment, is hereby amended to read as follows:*

R404.1.1 Fuel gas lighting equipment. Fuel gas lighting systems shall not be installed.

64. A new *Section R404.4 Electric vehicle charging infrastructure for new construction and building addition of 50% or more of original square footage*, is hereby added to read as follows:

Section R404.4 Electric vehicle charging infrastructure for new construction and building addition of 50% or more of original square footage. Electric infrastructure for the current and future charging of *electric vehicles* shall be installed in accordance with this section per

Section 17.20.170 of the Louisville Municipal Code*. EV ready spaces and EV capable spaces* are permitted to be counted toward meeting minimum parking requirements.

R404.4.1 One- and two- family dwellings and townhouses. One- and two-family dwellings and townhouses with a dedicated attached or detached garage or on-site parking spaces shall be provided with electric vehicle charging in accordance with Section 17.20.170 of the Louisville Municipal Code.

R404.4.1.1 Minimum EV Ready infrastructure. Minimum EV Ready Space infrastructure shall require the following:

1. Installation of conductors:
    a. Conductors shall be installed of sufficient size to accommodate a minimum 240VAC 40Amp branch circuit to each parking space where required.
    b. Conductors shall terminate in either a receptacle, plug, junction or outlet box, or an *EVSE* installed in the parking space.
2. The electrical panel directory shall designate the branch circuit as “EV Ready” and the junction box or receptacle shall be labelled “EV Ready.”

R404.4.1.2 Construction documents. Construction documents shall graphically indicate and label all EV ready spaces and associated termination locations. For all Townhouses and one- and two-family dwellings with an electrical utility service of 200 Amps or greater, a panelboard schedule shall be provided indicating the EV Ready circuit breaker space(s) and the circuit designation(s).

R404.4.2 Group R occupancies. Group-R occupancies (~~R-2,~~ R-3, and R-4 buildings three stories and less) with three or more dwelling units and/or sleeping units shall be provided with electric vehicle charging in accordance with Section 17.20.170 of the Louisville Municipal Code.

Electric vehicle charging shall be provided and installed in accordance with this section and the National Electrical Code (NFPA 70). When parking spaces are added or modified without an increase in building floor area, only the new parking spaces are subject to this requirement.

65. A new *Section R404.5 Additional electric infrastructure*, is hereby added to read as follows:

R404.5 Additional electric infrastructure. *Combustion equipment* shall be installed in accordance with this section.

R404.5.1 Combustion equipment and end-uses. *Combustion equipment* shall be provided with a dedicated, appropriately phased circuit that shall have a minimum amperage requirement for a comparable electric appliance, equipment or end use, an electrical receptacle or junction box that is connected to the electric panel, and conductors of adequate capacity within 6 feet (1829 mm) of the appliance or equipment.

Each such circuit shall be accessible with no obstructions. A reserved circuit breaker space shall be installed in the electrical panel adjacent to the circuit breaker for the branch circuit and labeled for each circuit. Both ends of the unused conductor or conduit shall be labeled “For Future Electric Equipment” and be electrically isolated.

66. *Section R405 Total building performance*, is deleted in its entirety.

67. *Section R406.3 Building thermal envelope*, is hereby deleted in its entirety and replaced with the following:

R406.3 Building thermal envelope. ~~Building and portions thereof shall comply with Table R406.3.~~ The building thermal envelope shall be greater or equal to the levels of efficiency and SHGC in Table R406.3.

Table R406.3
Average of the Minimum Insulation and Maximum Fenestration Requirements by Component

Roof	R-60
Above grade walls	R-21
Below grade walls	R-21
Floors	R-38
Non heated slab on grade	R-10 for 4ft
Heated slab on grade	R-15 for 4 ft + R-5 under full slab
Fenestration U-Factor	.30
Fenestration SHGC	.33
Skylight U-Factor	.50
Skylight SHGC	.40
Heated Water Pipes	R-5
Heated air Ducts	R-8

68. *Section R406.3.1 On-site renewables are not included,* is deleted in its entirety.

69. *Section R406.3.2 On-site renewables are included,* is deleted in its entirety.

70. *Section ~~406.3.2~~* R407 *Tropical Climate Region Compliance Path,* is deleted in its entirety.

71. *Section R502.1.1 General,* is hereby amended to read as follows:

Additions to an existing building, building system or portion thereof shall conform to the provisions of R401.2.1 as those provisions relate to new construction without requiring the unaltered portion of the existing building or building system to comply with this code. Additions shall not create unsafe or hazardous condition or overload existing building systems. An addition shall be deemed to comply with this code where the addition alone complies, where the existing building and addition comply with this code as a single building, or where the building with the addition does not use more energy than the existing building. Additions shall be in accordance with Section R502.2 or R502.3.

72. *Section R503.1.1 Building Envelope* is amended to read as follows:
Building envelope assemblies that are part of the alteration shall comply with Section R401.2.1

Section R503.1.1 Building envelope Exception 2 is deleted in its entirety and replaced with the following.

2. Section R402.4.1.2 Testing

73. *Section R505.1 General* is hereby amended to remove the exception.

74. *Section R505.1.1 Unconditioned space,* is hereby deleted and replaced with the following:

R505.1.1 Unconditioned space. Any unconditioned or low-energy space that is altered to become a conditioned space shall comply with Section R503.

75. RC102.1 General is amended to read as follows.

RC102.1 General. New residential buildings shall comply with Sections RC102.2 through RC102.9.

76. RC102.2 Energy Rating Index zero energy score is amended to read as follows.

RC102.2 Energy Rating Index zero energy score.
Compliance with this section requires that the rated design be shown to have a Home Energy Rating System (HERS) score of 47 before solar and 0 with solar when compared to the Energy Rating Index (ERI) reference design determined in accordance with RESNET/ICC 301 for both of the following:

1. ERI value not including on-site power production (OPP) calculated in accordance with RESNET/ICC 301.
2. ERI value including on-site power production calculated in accordance with RESNET/ICC 301 with the OPP in Equation 4.1.2 of RESNET/ICC 301 adjusted in accordance with Equation RC-1.

Adjusted OPP = OPP + CREF + REPC (Equation RC-1)

where:
CREF = Community Renewable Energy Facility power production—the yearly energy, in kilowatt hour equivalent (kWheq), contracted from a community renewable energy facility that is qualified under applicable state and local utility statutes and rules, and that allocates bill credits to the rated home.
REPC = Renewable Energy Purchase Contract power production—the yearly energy, in kilowatt hour equivalent (kWheq), contracted from an energy facility that generates energy with photovoltaic, solar thermal, geothermal energy or wind systems, and that is demonstrated by an energy purchase contract or lease with a duration of not less than 15 years.

RC102.2.1 HERS Score. Buildings shall comply with the scores in Table RC102.2.1.

Table RC102.2.1.

HERS SCORE NOT INCLUDING OPP	HERS SCORE INCLUDING OPP
47	0

76. RC102.3 through RC102.9 are added to Appendix RC to read as follows.

RC102.3 Mandatory Sections. All projects shall comply with all sections within Table RC102.3.

Table RC102.3
Mandatory requirements for residential buildings

Title	IECC Section
Vapor retarder	R402.1.1
Eave baffle	R402.2.3

Access hatches and doors	R402.2.4.1
Crawl space wall insulation	R402.4.1.2
Maximum fenestration U-factor and SHGC	R402.5
Mechanical Controls	R403.1
Ducts	R403.3 except R403.3.2, R403.3.3, and R403.6
Mechanical system piping insulation	R403.4
Heated water circulation and temperature maintenance systems	R403.5.1
Drain Water heat recovery units	R403.5.3
Mechanical ventilation	R403.6 including E403.6.1
Equipment sizing and efficiency rating	R403.7
Systems serving multiple dwelling units	R403.8
Snow melt and ice systems	R403.9
Energy consumption of pools and spas	R403.10
Portable spas	R403.11
Residential pools and permanent residential spas	R403.12
Lighting equipment	R404.1
Interior lighting controls	R404.2

RC102.4 Building Envelope. The building thermal envelope shall be greater or equal to the levels of efficiency and SHGC in Table RC102.4.

Table RC102.4
Average of the Minimum Insulation and Maximum Fenestration Requirements by Component

Roof	R-60
Above grade walls	R-21
Below grade walls	R-21
Floors	R-38
Non heated slab on grade	R-10 for 4ft
Heated slab on grade	R-15 for 4 ft + R-5 under full slab

Fenestration U-Factor	.30
Fenestration SHGC	.33
Skylight U-Factor	.50
Skylight SHGC	.40

RC102.5 Verification by approved agency.
Verification of compliance with Section R102.4 as outlined in Sections of this appendix shall be completed by an approved third party. Verification of compliance with Section R102.3 shall be completed by the authority having jurisdiction or an approved third-party inspection agency in accordance with Section R105.4.

RC102.6 Documentation.
Documentation of the software used to determine the ERI and the parameters for the residential building shall be in accordance with Sections RC102.6.1 through RC102.6.4

RC102.6.1 Compliance software tools.
Software tools used for determining HERS shall be Approved Software Rating Tools in accordance with RESNET/ICC 301.

RC102.6.2 Compliance report.
Compliance software tools shall generate a report that documents that the home and the HERS score of the rated design complies with RC102. Compliance documentation shall be created for the proposed design and shall be submitted with the application for the building permit. Confirmed compliance documents of the built dwelling unit shall be created and submitted to the code official for review before a certificate of occupancy is issued. Compliance reports shall include information in accordance with Sections RC102.6.3 and RC102.6.4.

RC102.7 Additional documentation.
The code official shall be permitted to require the following documents:

1. Documentation of the building component characteristics of the ERI reference design.

2. A certification signed by the builder providing the building component characteristics of the rated design.

3. Documentation of the actual values used in the software calculations for the rated design.

RC102.8 Specific approval.

Performance analysis tools meeting the applicable subsections of Section RC102 shall be approved. Documentation demonstrating the approval of performance analysis tools in accordance with Section RC102shall be provided.

RC102.9 Input values.
Where calculations require input values not specified by Sections RC 102, those input values shall be taken from RESNET/ICC 301.

INTRODUCED, READ, PASSED ON FIRST READING, AND ORDERED PUBLISHED this _____ day of _____, 2024.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Meredyth Muth, City Clerk

APPROVED AS TO FORM:

_____
Kelly PC, City Attorney

PASSED AND ADOPTED ON SECOND AND FINAL READING, this _____ day of _____, 2024.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Meredyth Muth, City Clerk

Second Reading Amendments

Ordinance No. 1816, Series 2021 is revised to read as follows (amendments are shown in **bold underline** and ~~**bold strikeout**~~):

ORDINANCE NO. 1816

AN ORDINANCE ADOPTING BY REFERENCE THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE, WITH AMENDMENTS, REPEALING CHAPTER 15.60 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING THE PRESCRIPTIVE ENERGY CODE AND DESIGN CRITERIA, AND AMENDING TITLE 17 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING ELECTRIC VEHICLE CHARGING INFRASTRUCTURE

WHEREAS, the City Council has adopted from time to time certain building and construction standards; and

WHEREAS, it is deemed to be in the interest of the public health, safety and general welfare to adopt by reference thereto the 2021 edition of the International Energy Conservation Code; and

WHEREAS, the City of Louisville remains committed to its adopted goals to reduce energy consumption, increase clean energy sources, and support the transition to a low-carbon community as outlined in the Sustainability Action Plan and Resolution 25, Series 2019, "A Resolution Setting Clean Energy and Carbon Reduction Goals"; and

WHEREAS, reducing building energy consumption is an effective strategy to reduce community-wide energy consumption and increase long-term cost savings for residents and businesses; and

WHEREAS, the City Council desires to add requirements for solar readiness, electric vehicle charging infrastructure, and building electrification to build a more resilient building stock and support future building and transportation electrification efforts pursued by residents and businesses; and

WHEREAS, the City Council, after proper notice as required by law, has held a public hearing on this ordinance providing for the adoption of said codes; and

WHEREAS, the 2021 edition of the International Energy Conservation Code has been submitted to the City Council in writing and the City Council has determined that such codes should be adopted as herein set forth.

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

Section 1. Chapter 15.18 of the Louisville Municipal Code is hereby repealed and reenacted to read as follows:

INTERNATIONAL ENERGY CONSERVATION CODE

Sec. 15.18.010. Adoption.
Sec. 15.18.020. Appendices adopted.
Sec. 15.18.030. Amendments and Deletions to the 2021 International Energy Conservation Code.
Sec. 15.18.040. Design criteria.
Sec. 15.18.050. Applicability.
Sec. 15.18.060. Copies available.
Sec. 15.18.070. Violations and penalties.

Sec. 15.18.010. - Adoption.

The International Energy Conservation Code, 2021 Edition, published by the International Code Council, 4051 West Flossmoor Road, Country Club Hills, Illinois, 60478-5795, is hereby adopted by reference thereto and incorporated into and made a part of the Louisville Municipal Code. The subject matter of the International Energy Conservation Code is to regulate and govern energy efficient building envelopes and the installation of energy efficient mechanical, lighting and power systems in the City of Louisville, and to provide for the issuance of permits and collection of fees therefor. The International Energy Conservation Code, 2021 Edition, is adopted as amended by the City, including the outline table of contents and index, for the minimum requirements for minimum energy efficiency.

Sec. 15.18.20. Appendices adopted.

The following appendices of the 2021 International Energy Conservation Code are hereby specifically adopted; any appendices not listed are not adopted: **Appendix RC, Zero Energy Residential Building Provisions,** Appendix CB, Solar Ready Zone – Commercial and Appendix RB, Solar Ready Provisions – Detached One and Two-Family Dwellings and Townhouses. Group R2, R3, and R4, three stories or less shall comply with Appendix RB.

Sec. 15.18.030. - Amendments and Deletions to the 2021 International Energy Conservation Code

The 2021 International Energy Conservation Code adopted in Section 15.18.010 is hereby amended in the following respects. An ellipsis (…) indicates when the remainder of a section of the 2021 International Energy Conservation Code is to remain unchanged and in full force and effect.

1. ***Section C101.1 Title***, is amended to insert "the City of Louisville" so the section will read:

C101.1 Title. These regulations shall be known as the Energy Conservation Code of the City of Louisville, and shall be cited as such. It is referred to herein as "this code."

2. *Section C103.2 Information on construction documents*, is hereby amended to read as follows:

C103.2 Information on construction documents. Construction documents shall be drawn to scale upon suitable material. Electronic media documented are permitted to be submitted when *approved* by the *code official*. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed, and show in sufficient detail pertinent data and features of the building, systems and equipment herein governed. Details shall include the following as applicable:

1. **Energy compliance path.**
2. **Insulation materials and their *R*-values**
3. **Fenestration *U*-factor and solar heat gain coefficients (SHGCs).**
4. **Area-weighted *U*-factor and solar heat gain coefficient (SHGC) calculations.**
5. **Mechanical system design criteria.**
6. **Mechanical and service water heating systems and equipment types, sizes, fuel source and efficiencies.**
7. **Economizer description.**
8. **Equipment and system controls.**
9. **Fan motor horsepower (hp) and controls.**
10. **Duct sealing, duct and pipe insulation and location.**
11. **Lighting fixture schedule with wattage and control narrative.**
12. **Location and *daylight* zones on floor plans.**
13. **Air barrier and air sealing details, including the location of the air barrier.**
14. **Location of pathways for routing of raceways or cable from the solar ready zone to the electrical service panel.**

~~2.~~ **3.** ***Section C202 General Definitions***, is hereby amended by adding, in alphabetical order, the following definitions:

All-Electric Building: **A building that contains no combustion equipment, or plumbing for combustion equipment, installed within the building or building site.**

Combustion Equipment: Any equipment or appliance used for space heating, service water heating, cooking, clothes drying and/or lighting that uses fuel gas or fuel oil.

Electric Vehicle (EV): A vehicle registered for on-road use, primarily powered by an electric motor that draws current from a rechargeable storage source that is charged by being plugged into an electrical current source.

Electric Vehicle Supply Equipment (EVSE): The electrical conductors and associated equipment external to the electric vehicle that provide a connection between the premises wiring and the electric vehicle to provide electric vehicle charging.

Electric Vehicle Capable Space: A designated parking space that is provided with conduit sized and rated for a minimum 40-amp, 208/240-Volt dedicated branch circuit and shall be no less than 1" in size. Conduit must be continuous from the future or existing electrical panelboard or switchboard location(s) and end at a junction box or receptacle located within close proximity of the parking space. The electrical panel serving the parking space shall have sufficient capacity and physical space for a dual-pole, 40-amp breaker. The conduit shall be sealed at the junction or outlet box that is capped off, with the conduit sealed and the cap labeled as "For future electric vehicle charging".

Electric Vehicle Ready Space: A designated parking space that is provided with a dedicated branch circuit with wiring capable of supporting a minimum 40-ampere, 208/240- Volt circuit that terminates at a receptacle, plug, junction box, or an installed electric vehicle supply equipment within close proximity of the parking space. There shall be adequate reserved space in an electrical panelboard or switchboard to meet the electric vehicle requirements.

Electric Vehicle Supply Equipment (EVSE) Installed Space: A designated parking space with dedicated electric vehicle supply equipment capable of supplying a minimum 40-amp, dedicated circuit rated at 208/240 Volt from a building electrical panelboard.

~~3.~~ **4.** ***Section C401.2 Application*****,** is hereby amended to read as follows:

C401.2 Application
Commercial buildings shall comply with Section C401.2.1

~~4.~~ **5.** ***Section C401.2.1 International Energy Conservation Code*****,** is hereby deleted and replaced to read as follows:

C401.2.1 International Energy Conservation Code

Commercial buildings shall **be built all-electric unless the fuel gas options of C403.3.2 and the additional electric infrastructure requirements of C405.14 are met. All buildings must comply** with the following:

City of Louisville's Prescriptive Compliance. The Prescriptive Compliance option requires compliance with Sections C401.3, C401.4, C402 through C406, and Section C408.

Core and shell buildings shall be required to comply with the provisions of Section C402.1.3 through C402.5 of the 2021 International Energy Conservation Code.

~~5.~~ **6.** ***Section C401.2.2 ASHRAE 90.1***, is hereby deleted in its entirety.

~~6.~~ **7.** A new ***Section C401.4 Mandatory Requirements for Commercial Buildings***, is hereby added to read as follows:

C401.4 Mandatory Requirements for Commercial Buildings. Commercial buildings must comply with Table C401.4.

Table C401.4 (Mandatory)
Requirements for Commercial Buildings

Title	IECC Section
Air leakage	C402.5
Calculation of heating and cooling loads	C403.1.1
Data centers	C403.1.2
System Design	C403.2
Heating and cooling equipment efficiency	C403.3
Heating and cooling system controls	C403.4, except C403.4.3, C403.4.4, C403.4.5
Economizer fault detection and diagnostics	C403.5.5
Ventilation and exhaust systems	C403.7, except C403.7.4.1
Fan and fan controls	C403.8, except C403.8.6
Large diameter ceiling fans	C403.9
Refrigeration equipment performance	C403.11, except C403.11.3
Construction of HVAC system elements	C403.12
Mechanical systems located outside of the building thermal envelope	C403.13
Service water heating	C404
Electrical power and lighting systems	C405, except C405.3

Maintenance information and system commissioning	C408

~~7.~~ **8.** ***Table C402.1.3 Opaque Thermal Envelope Insulation Component Minimum Requirements, R-Value Method,*** is hereby deleted and replaced with the following:

Table C402.1.3 (Mandatory)
Opaque Thermal Envelope Insulation Component of an Average Minimum Requirements, *R*-Value Method in following locations:

Roof C402.2.1	
Insulation entirely above roof deck	R-49
Metal buildings[a]	R-21 + R-11 LS
Attic and other	R-49
Walls. Above grade C402.2.2	
Mass[d]	R-21
Metal buildings	R-21
Metal framed	R-21
Wood framed and other	R-21
Walls, Below grade C402.2.5	
Below-grade wall[b]	R-10
Floors C402.2.3	
Mass[c]	R-21
Joist/framing	R-38
Slab-on-grade floors C402.2.4	
Unheated	R-20 for 24"
Heated[e]	R-15 for 36" below + R-5 full slab

For SI: 1 inch = 25.4 mm, 1 pound per square foot = 4.88 kg/m^2, 1 pound per cubic foot = 16 kg/m^3.
NR = No Requirement, LS = Liner System.

a. Where using *R*-value compliance method, a thermal spacer block shall be provided,
b. Where heated slabs are below grade, below-grade walls shall comply with the exterior insulation requirements for heated slabs.
c. "Mass floors" shall be in accordance with Section C402.2.3.
d. "Mass walls" shall be in accordance with Section C402.2.2.
e. The first value is for perimeter insulation and the second value is for full, under-slab insulation.

~~8.~~ **9.** ***Section C402.1.4 Assembly U-factor, C-factor or F-factor-based method,*** is hereby deleted in its entirety.

~~9.~~ **10.** ***Section C402.1.5 Component performance alternative,*** is hereby deleted in its entirety.

~~10.~~ **11.** ***Table C402.4 Building Envelope Fenestration Maximum U-Factor and SHGC Requirements,*** is hereby deleted and replaced with the following:

Table C402.4
Building Envelope Fenestration

Vertical Fenestration	
Maximum U-Factor	0.30
Maximum SHGC	0.33
Maximum Air leakage rate for all fenestration except curtain walls and storefront glazing	.20 cfm/ft2
Maximum air leakage rate for curtain walls and storefront glazing	.06 cfm/ft
Skylights	
Maximum U-Factor	0.50
Maximum SHGC	0.40
Maximum Air leakage rate	.20 cfm/ft2

~~11.~~ **12.** ***Section C402.4.1 Maximum area***, is hereby deleted and replaced with the following:

C402.4.1 Minimum area of natural lighting. Not less than eight percent of the floor area shall be glazed.

~~12.~~ **13.** ***Section C402.4.2 Minimum skylight fenestration area***, is hereby deleted and replaced with the following:

C402.4.2 Minimum area of natural lighting. A minimum skylight area of three percent of the roof area shall be provided for all roofs.

Exception: Roof areas designated for solar ready zones shall not be included in roof area calculation.

~~13.~~ **14.** ***Section C403.3.2 HVAC equipment performance requirements*****, is hereby deleted in its entirety and replaced to read as follows:**

~~**A. The first paragraph is hereby deleted in its entirety and replaced to read as follows:**~~

C403.3.2 HVAC/fuel fired equipment performance requirements. Unless built all-electric, all new combustion equipment shall comply with the more efficient HVAC equipment performance of Sections C406.2, C406.2.3, and C406.2.4 and the additional electric infrastructure requirements in Section C405.14. A mechanical compliance certificate demonstrating compliance with section C406.2.3 and/or C406.2.4 shall be required for all HVAC, fuel fired and Service Water Heating equipment.

The efficiency shall be verified through certification under an approved certification program or, where a certification program does not exist, the equipment efficiency ratings shall be supported by data furnished by the manufacturer. Where multiple rating conditions or performance requirements are provided, the equipment shall satisfy all stated requirements. Where components, such as indoor or outdoor coils, from different manufacturers are used, calculations and supporting data shall be furnished by the designer that demonstrates that the combined efficiency of the specified components meets the requirements herein. (Tables C403.2.(1) through (16) are expressly retained and remain applicable to HVAC equipment performance.)

Exceptions:

1. Factory, laboratory, and high hazard occupancy combustion equipment, except for HVAC and domestic water heating.

2. Commercial Kitchens.

3. Other combustion equipment approved by the Building Official based on demonstration by the applicant that compliance with this section is not feasible and the equipment proposed is the most efficient appliance reasonably available.

~~13.~~ **15.** ***Section C403.4.1 Thermostatic controls***, is hereby deleted and replaced with the following:

C403.4.1 Thermostatic controls. The supply of heating and cooling energy to each *zone* shall be controlled by individual thermostatic controls capable of responding to temperature within the *zone*. Where humidification or dehumidification or both is provided, no fewer than one humidity control device shall be provided for each humidity control system. Occupancy sensors shall be provided on the thermostat to setback in accordance with C403.4.2.1

Exception: Independent perimeter systems that are designed to offset only building envelope heat losses, gains or both serving one or more perimeter *zones* also served by an interior system provided that both of the following conditions are met:

1. The perimeter system includes not fewer than one thermostatic control *zone* for each building exposure having exterior walls facing only one orientation (within ±45 degrees) (0.8 rad) for more than 50 contiguous feet (15 240 mm).
2. The perimeter system heating and cooling supply is controlled by thermostats located within the *zones* served by the system.

~~14.~~ **16.** ***Section C403.12.1 Duct and plenum insulation and sealing***, is hereby deleted and replaced with the following:

C403.12.1 Duct and plenum insulation and sealing. All supply and return air ducts and plenums shall be insulated with not less than R-12. Ducts, air handlers and filter boxes shall be sealed. Joints and seams shall comply with Section 603.9 of the International Mechanical Code.

~~15.~~ **17.** ***Section C403.12.3 Piping insulation***, is hereby amended to read as follows:

C403.12.3 Piping insulation. Piping serving as part of a heating or cooling system shall be thermally insulated to R-5.

~~16.~~ **18.** ***Section C404.4 Insulation of piping***, is hereby amended to read as follows:

C404.4 Insulation of piping. Piping from a water heater to the termination of the heated water fixture supply pipe shall be insulated to R-3. On both the inlet and outlet piping of a storage water heater or heated water storage tank, the piping to a heat trap or the first 8 feet (2438 mm) of piping, whichever is less, shall be insulated. Piping that is heat traced shall be insulated to R-3 or the heat trace manufacturer's instructions.

~~17.~~ **19.** ***Section C405.2.1 Occupant sensor controls***, is hereby amended to read as follows:

C405.2.1 Occupant sensor controls. Occupant *sensor controls* shall be installed to control lighting.

~~18.~~ **20.** ***Section C405.2.2 Time-switch controls***, is hereby deleted in its entirety.

~~19.~~ **21.** ***Section C405.2.2.1 Time-switch control function***, is hereby deleted in its entirety.

~~20.~~ **22.** ***Section C405.2.3 Light-reduction controls***, is renumbered to C405.2.2.

~~21.~~ **23.** ***Section C405.2.3.1 Light-reduction function***, is renumbered to C405.2.2.1.

~~22.~~ **24.** ***Section C405.2.4 Daylight-responsive controls***, is renumbered to C405.2.3.

~~23.~~ **25.** ***Section C405.2.4.1 Daylight-responsive control function***, is renumbered to C405.2.3.1.

~~24.~~ **26.** ***Section C405.2.4.2 Sidelit daylight zone***, is renumbered to C405.2.3.2.

~~25.~~ **27.** ***Section C405.2.4.3 Toplit daylight zone,*** is renumbered to C405.2.3.3.

~~26.~~ **28.** ***Section C405.2.4.4 Atriums,*** is renumbered to C405.2.3.4.

~~27.~~ **29.** ***Section C405.2.5 Specific application controls,*** is renumbered to C405.2.4.

~~28.~~ **30.** ***Section C405.2.6 Manual controls,*** is renumbered to C405.2.5.

~~29.~~ **31.** ***Section C405.2.7 Exterior lighting controls,*** is renumber to C405.2.6.

~~30.~~ **32.** ***Section C405.2.7.1 Daylight shut off,*** is renumbered to C405.2.6.1.

~~31.~~ **33.** ***Section C405.2.7.2 Building façade and landscape lighting,*** is renumbered to C405.2.6.2.

~~32.~~ **34.** ***Section C405.2.7.3 Lighting setback,*** is renumbered to C405.2.6.3.

~~33.~~ **35.** ***Section C405.2.7.4 Exterior time-switch control function,*** is renumbered to C405.2.6.4.

~~34.~~ **36.** ***Section C405.2.8 Parking garage lighting control***, is renumbered to C405.2.7.

37. ***Section C405.4.3 Gas lighting, is hereby amended to read as follows:***

> **C405.4.3 Gas lighting. Gas-fired lighting appliances shall not be permitted.**

~~35.~~ **38.** A new ***Section C405.13 Electric vehicle charging infrastructure for new construction and building addition of 25% or more of original square footage***, is hereby added to read as follows:

> **Section C405.13.1 Electric vehicle charging infrastructure for new construction and building addition of 25% or more of original square footage.** Electric vehicle charging shall be provided and installed in accordance with this section, National Electrical Code (NFPA 70), and Section 17.20.170 of the Louisville Municipal Code. When parking spaces are added or modified without an increase in building floor area, only the new parking spaces are subject to this requirement. All *EVSE Installed*, *EV Ready* and *EV Capable* spaces are to be included in the calculation for the number of minimum vehicle spaces required, as provided by the applicable article of the Louisville Zoning Code.
>
> **Section C405.13.2 Identification.** The circuit breakers or circuit breaker spaces reserved for the *EVSE Installed, EV Ready*, and *EV Capable* spaces shall be clearly identified in the panelboard directory. The conduit for electric vehicle capable spaces shall be clearly identified at both the panelboard and the termination point at the parking space.

~~36.~~ **39.** A new ***Section C405.14 Additional electric infrastructure***, is hereby added to read as follows:

Section C405.14 Additional electric infrastructure. All *combustion equipment* and end-uses shall be installed in accordance with this section.

C405.14.1 Electric infrastructure for dwelling and sleeping units. *Combustion equipment* and end-uses serving individual dwelling units or sleeping units shall comply with Section R404.5.

C405.14.2 Combustion equipment. *Combustion equipment* shall be provided with conduit that is continuous between a junction box located within 3 feet (914 mm) of the appliance or equipment and an electrical panel. The junction box, conduit and bus bar in the electrical panel shall be rated and sized to accommodate a branch circuit with sufficient capacity for an equivalent electric appliance, equipment or end use with an equivalent equipment capacity. The electrical junction box and electrical panel shall have labels stating, "For Future Electric Equipment".

Exception: Industrial and manufacturing uses are exempt from Section C405.14.

~~37.~~ **40.** ***Section C505.1 General***, is hereby amended to read as follows:

C505.1 General. Where the use in a space changes from one use in Table C405.3.2(1) or C405.3.2(2) to another use in Table C405.3.2(1) or C405.3.2(2), the installed lighting wattage shall comply with Section C405.3. Where the space undergoing a change in occupancy or use is in a building with a fenestration area that exceeds the limitations of Section C402.4.1, the space is exempt from Section C402.4.1 provided that there is not an increase in fenestration area.

Exception: Egress doors with fenestration are allowed to bring total fenestration percentages over the allowed maximum amount of vertical fenestration.

~~38.~~ **41.** ***Section R101.1 Title,*** is amended to insert "the City of Louisville" so the section will read:

R101.1 Title. These regulations shall be known as the Energy Conservation Code of the City of Louisville and shall be cited as such. It is referred to herein as "this code."

42. *Section R103.2 Information on construction documents*, is amended to read as follows:

R103.2 Information on construction documents. Construction documents shall be drawn to scale upon suitable material. Electronic

media documented are permitted to be submitted when *approved* by the *code official*. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed, and show in sufficient detail pertinent data and features of the building, systems and equipment herein governed. Details shall include the following as applicable:

1. **Energy compliance path.**
2. **Insulation materials and their *R*-values**
3. **Fenestration *U*-factor and solar heat gain coefficients (SHGCs).**
4. **Area-weighted *U*-factor and solar heat gain coefficient (SHGC) calculations.**
5. **Mechanical system design criteria.**
6. **Mechanical and service water heating systems and equipment types, sizes, fuel source and efficiencies.**
7. **Equipment and system controls.**
8. **Duct sealing, duct and pipe insulation and location.**
9. **Air sealing detail.**
10. **Location of pathways for routing of raceways or cable from the solar ready zone to the electrical service panel.**

~~39.~~ **43.** ***Section R202 General Definitions***, is hereby amended by adding, in alphabetical order, the following definitions:

All-Electric Building: **A building that contains no combustion equipment, or plumbing for combustion equipment, installed within the building or building site.**

Combustion Equipment: Any equipment or appliance used for space heating, service water heating, cooking, clothes drying and/or lighting that uses fuel gas or fuel oil.

Electric Vehicle (EV): A vehicle registered for on-road use, primarily powered by an electric motor that draws current from a rechargeable storage source that is charged by being plugged into an electrical current source.

Electric Vehicle Supply Equipment (EVSE): The electrical conductors and associated equipment external to the electric vehicle that provide a connection between the premises wiring and the electric vehicle to provide electric vehicle charging.

Electric Vehicle Capable Space: A designated parking space that is provided with conduit sized and rated for a minimum 40-amp, 208/240-Volt dedicated branch circuit and shall be no less than 1" in size. Conduit must be continuous from the future or existing electrical panel board or switchboard

location(s) and end at a junction box or receptacle located within close proximity of the parking space. The electrical panel serving the parking space shall have sufficient capacity and physical space for a dual-pole, 40-amp breaker. The conduit shall be sealed at the junction or outlet box that is capped off, with the conduit sealed and the cap labeled as "For future electric vehicle charging".

Electric Vehicle Ready Space: A designated parking space that is provided with a dedicated branch circuit with wiring capable of supporting a minimum 40-ampere, 208/240- Volt circuit that terminates at a receptacle, plug, junction box, or an installed electric vehicle supply equipment within close proximity of the parking space. There shall be adequate reserved space in an electrical panel board or switchboard to meet the electric vehicle requirements.

~~40.~~ **44.** ***Section R401.2 Application,*** is hereby deleted and replaced with the following:

> **R401.2 Application.** Residential buildings shall be **built ~~100%~~** all-electric unless **the** fuel gas **options of R403.7 and additional electric infrastructure requirements of R404.5** are met. **~~and all~~ All** residential buildings shall comply with the R401.2.1 City of Louisville's Prescriptive Compliance or R406 Energy Rating Index with a maximum rating index of 50 before the installation of solar panels.
>
> **Exception:** Additions, alterations, repairs and changes of occupancy to existing buildings complying with Chapter 5.

~~41.~~ **45.** ***Section R401.2.1 Prescriptive Compliance Option,*** is hereby deleted and replaced with the following:

> **R401.2.1 City of Louisville's Prescriptive Compliance.** The City of Louisville's Prescriptive compliance requires compliance with Sections R401 through R404.

~~42.~~ **46.** ***Section R401.2.2 Total Building Performance Option***, is hereby deleted in its entirety.

~~43.~~ **47.** ***Section R401.2.4 Tropical Climate Region***, is hereby deleted in its entirety.

~~44.~~ **48.** ***Section R401.2.5 Additional Energy Efficiency***, is hereby amended to read as follows:

> **Section R401.2.5 Additional Energy Efficiency.** Building shall comply with one of the additional efficiency options and shall be installed in according to Section R408.2.

~~45.~~ **49.** A new ***Section R401.4 Mandatory requirements for residential buildings***, is hereby added to read as follows:

R401.3 Mandatory requirements for residential buildings. Residential building must comply with the following sections from the 2021 International Energy Conservation Code.

Table R401.3
Mandatory requirements for residential buildings

Title	IECC Section
Vapor retarder	R402.1.1
Eave baffle	R402.2.3
Access hatches and doors	R402.2.4.1
Crawl space wall insulation	R402.4.1.2
Maximum fenestration U-factor and SHGC	R402.5
Mechanical Controls	R403.1
Ducts	R403.3 except R403.3.2, R403.3.3, and R403.6
Mechanical system piping insulation	R403.4
Heated water circulation and temperature maintenance systems	R403.5.1
Drain Water heat recovery units	R403.5.3
Mechanical ventilation	R403.6 including E403.6.1
Equipment sizing and efficiency rating	R403.7
Systems serving multiple dwelling units	R403.8
Snow melt and ice systems	R403.9
Energy consumption of pools and spas	R403.10
Portable spas	R403.11
Residential pools and permanent residential spas	R403.12
Lighting equipment	R404.1
Interior lighting controls	R404.2

~~46.~~ **50.** ***Section R402.1 General***, is hereby amended to read as follows:

R402.1 General. The building thermal envelope shall comply with the requirements of Section R402.1.1 and R402.1.2.

~~47.~~ **51.** ***Section R402.1.2 Insulation and fenestration***, is hereby deleted and replaced with the following*:*

R402.1.2 Insulation and fenestration. Assemblies shall have R-value of insulation materials equal to or greater than that specified in Table R402.1.2 unless an alternative path is specified while using HERS energy rating index of 50.

Table R402.1.2
Average Insulation and Fenestration Requirements by Component

Roof	R-60
Above grade walls	R-21
Below grade walls	R-21
Floors	R-38
Non heated slab on grade	R-10 for 4ft
Heated slab on grade[a]	R-15 for 4 ft + R-5 under full slab
Fenestration U-Factor	.30
Fenestration SHGC	.33
Skylight U-Factor	.50
Skylight SHGC	.40

a. The first value is for perimeter insulation and the second value is for full, under-slab insulation.

~~48.~~ **52.** ***Section R402.1.5 Total UA alternative***, is hereby deleted in its entirety.

~~49.~~ **53.** ***Section R402.3.3 Glazed fenestration exemption***, is hereby amended to read as follows:

> **R402.3.3 Glazed fenestration exemption**. Not greater than 15 square feet (1.4 m^2) of glazed fenestration per dwelling unit shall be exempt from the U-factor and SHGC requirements in Section R402.1.2.

~~50.~~ **54.** ***Section R402.4.1.2 Testing***, is hereby deleted and replaced to read as follows:

> **Section R402.4.1.2 Testing.** All new buildings or dwelling units that are heated or cooled, and additions over 500 square feet shall be tested for air leakage.

~~51.~~ **55.** ***Section R402.5 Maximum fenestration U-factor and SHGC***, is hereby deleted and replaced with the following***:***

> **Section R402.5 Maximum fenestration U-factor and SHGC.** The maximum U-factor and solar heat gain coefficient (SHGC) for fenestration shall not be required in storm shelters complying with ICC 500.

~~52.~~ **56.** ***Section R403.3.1 Ducts located outside conditioned space*****,** is hereby deleted and replaced with the following*:*

R403.3.1 ***Ducts located outside conditioned space.*** All supply and return ducts shall be insulated to a minimum R-8 if located outside a conditioned space.

~~53.~~ **57.** ***Section R403.5.2 Hot water pipe insulation*****,** is hereby deleted and replaced with the following:

R403.5.2 Hot water pipe insulation. All service hot water piping shall be insulated to a minimum R-5.

~~54.~~ **58.** ***Section R403.6.1 Heat and recovery ventilation*****,** is hereby deleted and replaced in its entirety and the following is hereby added in lieu thereof:

R403.5.2 Heat and recovery ventilation. All new buildings and additions over 500 square feet shall be provided with a heat recovery or energy recovery ventilation system. The system shall be balanced with a minimum sensible heat recovery efficiency of 65 percent at 32°F (0°C) at a flow greater than or equal to the design airflow.

~~55.~~ **59.** ***Section R403.7 Equipment sizing and efficiency rating*****,** is hereby deleted and replaced with the following:

R403.7 Equipment sizing and efficiency rating. All new buildings and additions greater than 500 square feet with heating and cooling equipment shall be sized in accordance with ACCA Manual S based on building loads calculated in accordance with ACCA Manual J or other approved heating and cooling calculation methodologies. In addition to complying with Sec. R404.6 Additional Electric Infrastructure, new and replacement **electrical** heating and cooling equipment shall have an efficiency rating equal to or greater than the minimum required by federal law for the geographic location where the equipment is installed. **New gas heating equipment shall comply with the following efficiencies:**

1. **Gas furnaces shall have a minimum of 96% efficiency.**
2. **Gas boilers shall have a minimum of 90% AFUE.**
3. **On demand water heaters shall have greater than .92 uniform energy factor.**

Exception: Solid fuel stoves/gas fireplaces, outdoor fire pits, gas stoves and ovens.

60. Section R404.1.1 Fuel gas lighting equipment, is hereby amended to read as follows:

R404.1.1 Fuel gas lighting equipment. Fuel gas lighting systems shall not be installed.

~~56.~~ **61.** A new ***Section R404.4 Electric vehicle charging infrastructure for new construction and building addition of 50% or more of original square footage,*** is hereby added to read as follows:

Section R404.4 Electric vehicle charging infrastructure for new construction and building addition of 50% or more of original square footage. Electric infrastructure for the current and future charging of *electric vehicles* shall be installed in accordance with this section per Section 17.20.170 of the Louisville Municipal Code. *EV ready spaces and EV capable spaces* are permitted to be counted toward meeting minimum parking requirements.

R404.4.1 One- and two- family dwellings and townhouses. One- and two-family dwellings and townhouses with a dedicated attached or detached garage or on-site parking spaces shall be provided with electric vehicle charging in accordance with Section 17.20.170 of the Louisville Municipal Code.

R404.4.1.1 Minimum EV Ready infrastructure. Minimum EV Ready Space infrastructure shall require the following:

1. Installation of conductors:
    a. Conductors shall be installed of sufficient size to accommodate a minimum 240VAC 40Amp branch circuit to each parking space where required.
    b. Conductors shall terminate in either a receptacle, plug, junction or outlet box, or an *EVSE* installed in the parking space.
2. The electrical panel directory shall designate the branch circuit as "EV Ready" and the junction box or receptacle shall be labelled "EV Ready."

R404.4.1.2 Construction documents. Construction documents shall graphically indicate and label all EV ready spaces and associated termination locations. For all Townhouses and one- and two-family dwellings with an electrical utility service 200 Amps or greater, a panelboard schedule shall be provided indicating the EV Ready circuit breaker space(s) and the circuit designation(s).

R404.4.2 Group R occupancies. Group-R occupancies (R-2, R-3, and R-4 buildings three stories and less) with three or more dwelling units and/or sleeping units shall be provided with electric vehicle

charging in accordance with Section 17.20.170 of the Louisville Municipal Code.

Electric vehicle charging shall be provided and installed in accordance with this section and the National Electrical Code (NFPA 70). When parking spaces are added or modified without an increase in building floor area, only the new parking spaces are subject to this requirement.

~~57.~~ **62.** A new ***Section R404.5 Additional electric infrastructure*****,** is hereby added to read as follows:

R404.5 Additional electric infrastructure. *Combustion equipment* shall be installed in accordance with this section.

R404.5.1 Combustion equipment and end-uses. *Combustion equipment* shall be provided with a dedicated, appropriately phased circuit that shall have a minimum amperage requirement for a comparable electric appliance, equipment or end use, an electrical receptacle or junction box that is connected to the electric panel, and conductors of adequate capacity within 6 feet (1829 mm) of the appliance or equipment.

Each such circuit shall be accessible with no obstructions. A reserved circuit breaker space shall be installed in the electrical panel adjacent to the circuit breaker for the branch circuit and labeled for each circuit. Both ends of the unused conductor or conduit shall be labeled "For Future Electric Equipment" and be electrically isolated.

~~58.~~ **63.** ***Section R405 Total building performance*****,** is deleted in its entirety.

~~59.~~ **64.** ***Section R406.3 Building thermal envelope*****,** is hereby deleted and replaced with the following:

R406.3 Building thermal envelope. Building and portions thereof shall comply with Table R406.3.

Table R406.3
Average of the Insulation and Fenestration Requirements by Component

Roof	R-60
Above grade walls	R-21
Below grade walls	R-21
Floors	R-38
Non heated slab on grade	R-10 for 4ft

Heated slab on grade	R-15 for 4 ft + R-5 under full slab
Fenestration U-Factor	.30
Fenestration SHGC	.33
Skylight U-Factor	.50
Skylight SHGC	.40

~~60.~~ **65.** ***Section R406.3.1 On-site renewables are not included,*** is deleted in its entirety.

~~61.~~ **66.** ***Section R406.3.2 On-site renewables are included,*** is deleted in its entirety.

~~62.~~ **67.** ***Section R406.3.2 Tropical Climate Region Compliance Path,*** is deleted in its entirety.

~~63.~~ **68.** ***Section R505.1 General,*** is hereby amended to remove the exception.

~~64.~~ **69.** ***Section R505.1.1 Unconditioned space,*** is hereby deleted and replaced with the following:

> **R505.1.1** Unconditioned space. Any unconditioned or low-energy space that is altered to become a conditioned space shall comply with Section R503.

Sec.15.18.040. – Design criteria.

All new heated commercial and residential heated structures shall meet the following design criteria:

1. **Non-reducible ~~Snow~~ roof snow load**: 30 pounds per square foot.

2. Wind speed:

   a. 145 miles per hour three second gust ASCE-7-10;

   b. ASTM D3161 test with Class F Application.

3. Wind exposure: "C", unless in the opinion of the Chief Building Official greater restrictions are needed to protect public safety.

4. Seismic zone: B.

5. Frost line depth: 36 inches below finished grade.

6. Weathering: Severe – Climate Zone 5B.

7. Termite: Slight.

8. Decay: Slight.

9. Winter design temperature: one degree.

10. Anticipated snow: six inches.

11. Ice and water shield: required on all shingled roofs – eaves only. Shields must extend from the lowest edges to a point at least 24 inches inside the exterior wall line of the building.

12. Drip edge: required on both eaves and rakes of roof.

13. Air freezing index: less than 1000.

14. Mean annual temperature: 47 degrees.

15. Elevation: 5,337 feet above sea level.

16. Sump pumps:

a. Cannot drain into sanitary or storm sewer;

b. Must daylight into lawn away from foundation;

c. Perimeter foundation systems must day light or drain into sump pit and then sump pump, and sump pump must drain into lawn.

17. Drainage from house: slope at least six inches in the first ten feet.

18. Retaining walls:

a. Less than 48 inches from the bottom of the footing to the top of the retaining wall with no surcharge: no permit required.

b. More than 48 inches from bottom of footing to top of retaining wall, or any wall with surcharge: requires stamped engineering plans.

19. Backflow preventer: required on all residential irrigation systems (see cross connection control regulations).

20. Hot water heaters:

a. Expansion tanks required for all hot water heaters;

b. Drain pan required if placed on wood floor.

Sec.15.18.050. - Applicability.

Notwithstanding anything in the International Energy Conservation Code to the contrary, a developer/owner of a residential or commercial building may elect an inspection in accordance with the policies and procedures of the International Energy Conservation Code, as amended herein.

Sec. 15.18.060. - Copies available.

At least one copy of the International Energy Conservation Code, 2021 Edition, as amended herein, certified to be true and accurate, shall be available for public inspection at the office of the Building Safety Division, during business hours. The city clerk shall at all times maintain a reasonable supply of copies of the code available for purchase by the public at a moderate price. Electronic copies are available, without amendment, at https://codes.iccsafe.org/public/collections/I-Codes.

Sec. 15.18.070. - Violations and penalties.

It shall be unlawful for any person, firm, or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy or maintain any building or structure or cause or permit the work to be done, in violation of the provisions of this chapter or the terms of the code or standards adopted and incorporated in this chapter. Any person convicted of a violation of any provision of this chapter or of the provisions of the code or standards adopted and incorporated in this chapter shall be subject to the penalty provided in section 1.28.010.

Section 2. Chapter 15.60 of the Louisville Municipal Code is hereby repealed.

Section 3. Title 17 the Louisville Municipal Code is hereby amended by the addition of a new Section 17.20.170 to read as follows:

Sec. 17.20.170. – Electric vehicle charging infrastructure. ~~Vehicle Charging Infrastructure.~~

A. Purpose and Intent. The purpose and intent of this section is to facilitate and encourage the use of electric vehicles, to expedite the establishment of convenient and cost-effective electric vehicle infrastructure, and establish the minimum requirements for such infrastructure to serve both short and long-term parking needs.

B. Definitions. The following definitions shall apply to this Section:

Electric vehicle charging stations (EVCS) means a public or private parking space that is served by battery charging station equipment that has as its primary purpose the transfer of electric energy (by conductive or inductive means) to a battery or other energy storage device in an electric vehicle.

Electric vehicle charging station – private restricted use means an electric vehicle charging station that is:

1. Privately owned and restricted access (e.g., single-family dwelling unit, executive parking, designated employee parking, assigned parking at multi-family residential building); or

2. Publicly owned and restricted (e.g., fleet parking with no access to the general public).

Electric vehicle charging station – public use means an electric vehicle charging station that is:

1. Publicly owned and publicly available (e.g., Park-n-ride, public library parking lot, Recreation and Senior Center lot, etc); or

2. Privately owned and available to visitors of the use (e.g., shopping center, hotel, office, etc.)

Electric vehicle parking space means any marked parking space that identifies the use to be exclusively for the parking of an electric vehicle.

C. Number of required electric vehicle charging stations. The following table sets forth the number of required charging stations for all new development or redevelopments as required in Chapter 15.18 of the Louisville Municipal Code. This list is not intended to be exhaustive of each use category, however is intended to establish general categories of use tiers. The Director of Planning and Building Safety shall determine the appropriate tier if the use is not identified in the table below.

1. Requirements will be rounded up to the nearest whole number.

2. Minimum electrical and hardware requirements for EVSE Installed, EV Ready, and EV Capable are set forth in Chapter 15.18 of the Louisville Municipal Code.

	EV Installed	EV- Ready	EV Capable
Residential Uses			
Single-Family unit		1 space	1 space

Multi-Family unit, with dedicated parking spaces or garages		1 space	1 space
Tier 1			
Multi-Family, without dedicated parking spaces or garages	10% of spaces	10% of spaces	50% of spaces
Hotel, Motel, Extended Stay Lodging Facility			
Tier 2 – Employment oriented uses	7% of spaces	10% of spaces	15% of spaces
Business and Professional Offices			
General research facilities, light industrial facilities including manufacturing, assembly, warehouse and fabrication			
Hospital			
Tier 3 – Service and Sales oriented uses	5% of spaces	10% of spaces	10% of spaces
Private and public recreational and social facilities, membership clubs, lodges, and fraternal organizations			
Religious institution			
Commercial amusement, indoor and outdoor			
Schools, including public, private, vocational or business			
Restaurant			
Retail			
Personal service			
Medical and dental clinics			

D. Permitted locations.

1. EVCS are permitted in every zoning district when accessory to a principal permitted use. Such stations located a single-family and designated multi-family units shall be private restricted use only.

2. If the primary use of the parcel is the retail electric charging of vehicles, then the use shall be considered an automotive fueling station for zoning purposes. Installation shall be located in zone districts which permit this use.

E. General requirements.

1. Accessible spaces. A charging station will be considered accessible if it is located adjacent to, and can serve, an accessible parking space as

defined and required by the ADA. It is not necessary to designate the EVSE exclusively for the use of vehicles parked in the accessible space.

2. EVCS – public use shall be subject to the following requirements.

a. The EVCSs shall be located in a manner that will be easily seen by the public for informational and security purposes.

b. The EVCSs shall be located in desirable and convenient parking locations will serve as an incentive for the use of electric vehicles.

c. The EVCSs must be operational during the normal business hours of the use(s) that it serves.

d. The EVSE shall be maintained in all respects, including the functioning of equipment. A phone number or other contact information shall be provided on the equipment for reporting problems with the equipment or access to it.

e. The property owner may collect a service fee for the use of EVSE.

F. The requirements of this section shall be shall be implemented through the building permit process and shall apply to:

1. All new construction, expansion or modification projects for which a building permit has not been issued as of November 24, 2021; and

2. All planned unit developments for which a building permit has not been issued as of November 24, 2021, irrespective of whether such planned unit development was approved or approved and recorded prior to such date, unless a waiver was expressly granted through the planned unit development review process set forth in Chapter 17.28.

Section 4. If any article, section, paragraph, sentence, clause, or phrase of this ordinance is held to be unconstitutional or invalid for any reason, such decision shall not affect the validity or constitutionality of the remaining portions of this ordinance. The City Council hereby declares that it would have passed this ordinance and each part or parts hereof irrespective of the fact that any one part or parts be declared unconstitutional or invalid.

Section 5. The repeal or modification of any provision of any prior ordinance 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 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 21st day of September, 2021.

Ashley Stolzmann, Mayor

ATTEST:

Meredyth Muth, City Clerk

CITY OF LOUISVILLE SEAL COLORADO

APPROVED AS TO FORM:

Kelly PC, City Attorney

PASSED AND ADOPTED ON SECOND AND FINAL READING, this 19th day of October, 2021.

Ashley Stolzmann, Mayor

ATTEST:

Meredyth Muth, City Clerk

CITY OF LOUISVILLE SEAL COLORADO

Kim Bauer, Preservation Planner, reviewed the site and history of the building. It meets the criteria for landmark designation by age, architectural significance, cultural significance, and physical integrity. She reviewed the criteria for a preservation grant noting how this construction fits into the preservation, rehabilitation, and restoration areas.

The Historic Preservation Commission reviewed both requests and recommends approval; staff also recommends approval of both the landmark designation and grant resolution.

Public Comments - None

Mayor Stolzmann thanked the applicant for bringing this forward.

Mayor Pro Tem Maloney stated this is exactly the intention of the program and he supports it. Councilmember Fahey agreed.

Mayor Stolzmann closed the public hearing.

Motion: Mayor Pro Tem Maloney moved to approve Resolution No. 71; seconded by Councilmember Fahey

Vote: Motion passed by unanimous roll call vote.

Motion: Mayor Pro Tem Maloney moved to approved Resolution No. 72; seconded by Councilmember Dickinson

Vote: Motion passed by unanimous roll call vote

ORDINANCE NO. 1816, SERIES 2021 – AN ORDINANCE ADOPTING BY REFERENCE THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE, WITH AMENDMENTS, REPEALING CHAPTER 15.60 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING THE PRESCRIPTIVE ENERGY CODE AND DESIGN CRITERIA, AND AMENDING TITLE 17 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING ELECTRIC VEHICLE CHARGING INFRASTRUCTURE – 2nd READING, PUBLIC HEARING (advertised *Daily Camera* 9/26/21)

Mayor Stolzmann introduced the item and asked for any disclosures; seeing none she opened the public hearing.

Katie Baum, Sustainability Coordinator, presented the IECC updates. The city is currently under the 2018 IECC with prescriptive energy and design criteria and solar readiness for residential and commercial buildings. The IECC is updated every three years, but this year is the first edition with significant efficiency gains since 2012. There are multiple changes from the 2018 IECC regarding residential structures in building insulation values,

HVAC systems and lighting and power. The changes to commercial buildings are in the building envelopes, HVAC, service water heating, lighting and power and renewables.

She advised Council there are some amendments to the ordinance since 1st reading. The ordinance presented tonight was updated to require fuel source and renewable systems pathways in construction documents. All residential and commercial new construction will be all-electric or be built with high efficiency HVAC equipment and with electric-ready infrastructure. EV charging will be enforced at the time of building permit, with a clarification that projects within a PUD approved prior to the ordinance, but which have not obtained a building permit, will be required to comply with the ordinance.

Solar readiness does not require that solar be installed on new construction, but space and capacity for installing such a system is required.

Electrical vehicle readiness requires the infrastructure for an EV ready parking space or EV charging station be included at time of construction for future buildout of EV charging. The ordinance details the requirements for EV readiness for each building type.

Council requested information on building electrification requirements in other Colorado municipalities and zero energy appendices. Those were included in the packet. Staff recommends approval of the ordinance as proposed this evening with the amendment to Table R402.1.2.

Councilmember Lipton asked what types of building permit actions would trigger the need to comply with the upgraded standards. Chad Root, Chief Building Official, responded the trigger would be adding over 50% of square footage to a home would require meeting the new requirements. Commercial permits would be set up in the same fashion.

Councilmember Lipton asked about gas fireplaces. Root stated those will be exempt.

Public Comments

Hazel Van Zale, a student at Louisville Elementary School, spoke in favor of adopting the 2021 IECC and appendix to reduce greenhouse gas emissions.

Weston Gano, a student at Louisville Elementary School, spoke in favor of adopting the 2021 IECC and appendix to reduce our energy footprint.

Baxter Case, a student at Louisville Elementary School, spoke in favor of adopting the IECC and appendix.

Peter Geise, 808 Spyglass Circle, stated he is hesitant on moving forward with some of the requirements of the IECC and appendix. He urged a more cautious approach.

Tess Weltzin, spoke in favor of adopting the IECC and the appendix to reduce greenhouse gas emissions for generations to come.

Sadie Gabriel, a student at Louisville Middle School, spoke in support of adopting the IECC and appendix to reduce greenhouse gas emissions and indoor air quality.

Evan Hiatt, a student at Louisville Elementary School, spoke in support of adopting the IECC and appendix as the building sector is a large polluter.

RJ Harrington, 457 East Raintree Court, spoke in support of approving the IECC and appendix.

Grady Gabriel, a student at Louisville Middle School, spoke in support of approving the IECC and appendix. New buildings need to be run by renewable energy and not fossil fuels.

Amelie Valliere, a student at Louisville Middle School, spoke in support of adopting the IECC and appendix to reduce greenhouse gas emissions.

Isabelle Valliere, a student at Louisville Middle School, spoke in support of adopting the IECC and appendix to reduce greenhouse gas emissions and improve indoor air quality.

Arthur Towber, a student at Louisville Middle School, spoke in support of adopting the IECC and appendix to stop global warming with stricter laws for building homes.

Caleb Forrester, a student at Louisville Middle School, spoke in support of adopting the IECC and appendix to make homes more energy efficient.

Andy Johnson, 920 Lincoln Avenue, spoke in support of adopting the IECC and appendix.

Tiffany Boyd, 550 Grant Avenue, spoke in support of adopting the IECC and appendix.

Tamar Krantz, 691 West Street, spoke in support of adopting the Zero Energy Homes appendix.

Mike Kranzdorf, spoke in support of some of the proposals, but stated he doesn't understand why EV chargers need to be installed in certain areas. He asked that consideration of the appendix be moved to phase 2 of adoption and expressed concern about raising costs for low income home owners.

Councilmember Fahey noted that when people spend more on these upgrades it can be long-term cost savings in other ways such as energy use.

Mayor Pro Tem Maloney stated he supports the ordinance.

Councilmember Dickinson stated he supports the ordinance and asked if any other cities in Colorado have adopted the 2021 IECC yet. Consultant Hope Medina stated many jurisdictions are working on adopting it but Louisville might be the first or one of the first if adopted this evening.

Mayor Stolzmann stated there is consensus on adopting the code this evening. She would like to do more than the proposal by adding Appendix CC. She also proposed striking out the alternatives for fuel gas options thereby requiring all new building be all electric.

Councilmember Brown expressed support for Mayor Stolzmann's proposals.

Councilmember Lipton asked what the practical impacts would be of these additions. He asked how long it would take to do further public engagement. Director Zuccaro stated it would likely take 3-6 months to do a full public process and research on the impacts.

Councilmember Lipton voiced support of the ordinance as presented by staff, but thinks that the appendices needs more research and deliberation.

Mayor Stolzmann stated there is clear support for this from the community and sustainability initiatives are a part of the Council's work plan. The minor proposals are a start but there is a lot more work to do.

Councilmember Leh stated he wants to move quickly but he also wants to avoid unintended consequences. He doesn't know the impact on affordable housing and would like additional public input.

Councilmember Brown stated he does not feel there is the need for additional public input; he feels residents support these moves.

Mayor Stolzmann noted there are unintended consequences of inaction. There is information in the packet about how switching to electric will lower costs in the long run.

Councilmember Brown reemphasized support of the appendices and striking the gas fuel option.

Mayor Pro Tem Maloney stated he doesn't hear disagreement about direction only timing. Staff has proposed a phase II which is part of Council's work plan. All electric is something Council supports, but there needs to be more information and discussion. Phase II might take a few months, but it's not years.

Public Comments

Mark Cathcart, 7017 Sweet Clover Lane, spoke in support of the ordinance and including the appendices.

RJ Harrington, 457 E Raintree Ct, spoke in support of passage of the ordinance and including the appendices.

Maxine Most, suggested Council consider a moratorium on new construction until this can be sorted out.

Tiffany Boyd, 550 Grant Ave, a member of the Louisville Sustainability Advisory Board read sections of the letter from the board included in the packet.

Mike Kranzdorf, noted his concerns that the business community is not being considered as part of the Louisville Community. He stated builders and property owners want to help and do the right thing, but asked Council to accept input and take some additional time.

Andy Johnson, encouraged adopting IECC, and stated the residential appendix is doable. He noted there are ways for residential construction to meet these requirements; commercial is going to be a harder switch to flip and there does need to be more time for the commercial appendices.

Councilmember Lipton stated his support for the ordinance as written and getting more public input on the appendices.

Mayor Stolzmann closed the public hearing.

Motion: Councilmember Lipton moved to approved Ordinance No. 1816 as presented tonight; Mayor Pro Tem Maloney seconded.

Substitute Motion: Mayor Stolzmann moved to approved Ordinance No. 1816 as presented, but also adding the zero energy residential and commercial appendices and striking fuel gas options for new commercial and new residential buildings; Councilmember Brown seconded.

Councilmember Dickinson asked what striking fuel gas option impact would have regarding backup systems. Mayor Stolzmann responded that her intent is that there would be no fossil infrastructure to new buildings.

Vote on the substitute motion failed 4-3 with Mayor Stolzmann and Councilmembers Brown and Fahey voting yes.

Substitute Motion: Councilmember Dickinson made a substitute motion to approve Ordinance No. 1816 but adding the residential appendix. Mayor Stolzmann seconded.

Vote on the substitute motion by Councilmember Dickinson passed 4-3 with Councilmembers Leh and Lipton and Mayor Pro Tem Maloney voting no.

Councilmember Leh expressed his hope that Council will vote on adding the commercial appendices in three months.

Mayor Stolzmann reiterated the items coming forward in coming months, such as construction waste diversion, green roofs, amortization on retro fits, and all electric requirements, as well as EV capable requirements and insulation requirements.

ORDINANCE NO. 1817, SERIES 2021 – AN ORDINANCE APPROVING THE VACATION OF A 125-FOOT BY 30.60-FOOT WIDE RIGHT-OF-WAY LYING SOUTH OF LOT 9, BLOCK 10, LOUISVILLE HEIGHTS SUBDIVISION IN THE CITY OF LOUISVILLE (601 MCKINLEY AVENUE) – 2nd READING, PUBLIC HEARING (advertised *Daily Camera* 10/10/21)

Mayor Stolzmann introduced the item and asked if there are any disclosures; seeing none she opened the public hearing.

Interim Director Ritchie stated this is a request for a right of way vacation for property adjacent to 601 McKinley Avenue. She reviewed the site and history of this piece of property. She noted this piece of land was to be used for an alley that was never developed and in 1984 the previous homeowners had entered into a license agreement with the City to put in a fence. The applicant coordinated with City staff and Xcel and the ordinance establishes a 7.9' wide utility easement on the southern portion of the vacated area to allow access for Xcel to the utility line and to the City to maintain the sanitary line to the south of the property.

Staff finds that retention of the area for right of way is not needed for any current or future City purpose. Approval of the vacation request will also not result in loss of access to any property. Staff recommends approval of the ordinance.

Cody Thompson, applicant, spoke to his request for the additional land to accommodate the home he is proposing for the parcel.

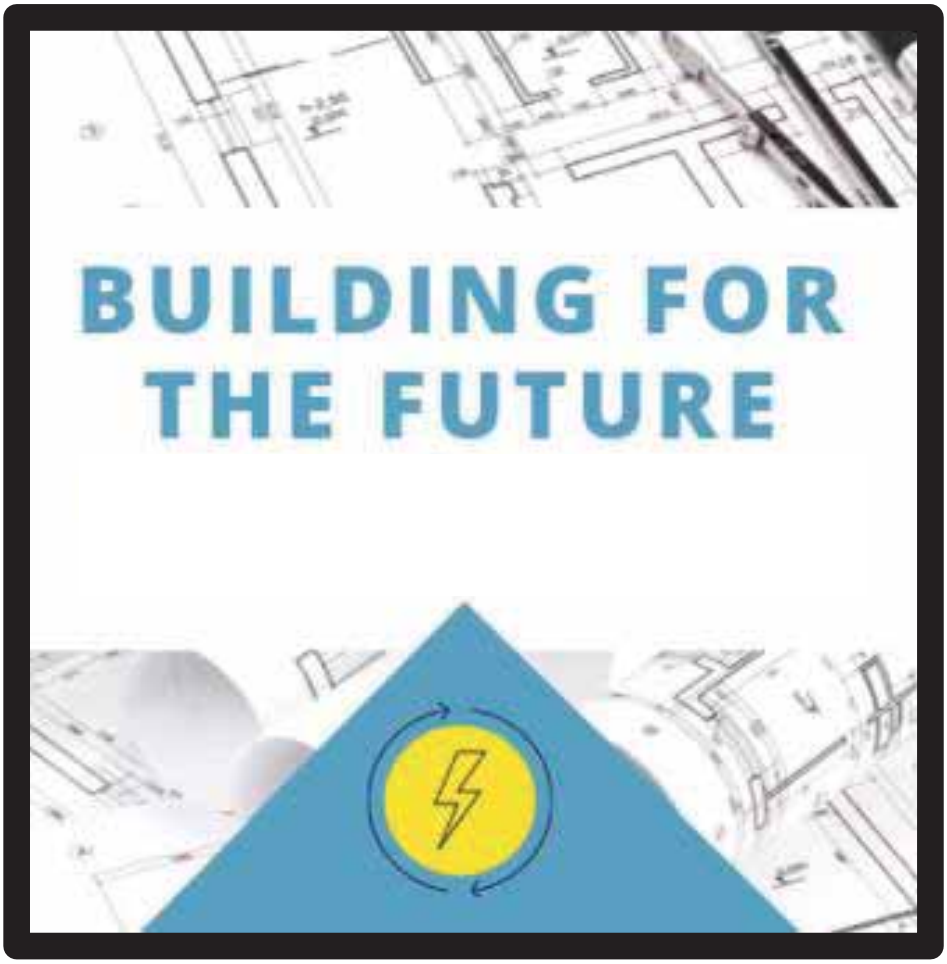
Public Comments – None

Councilmember Brown asked what the value of the property is. City Attorney Kelly stated that State Statute does not allow the City to be compensated for loss of the right of way.

Public Comments

RJ Harrington stated this is another example of a home being scraped and rebuilt.

Mayor Stolzmann stated there is likely no public purpose for the property. Additionally it has been fenced in for private use since 1984, and she feels vacation makes sense in this circumstance.



Energy Code Update Recommandation Report

AUGUST 2022

Table of Contents

Executive Summary 2

1. Introduction 4
1.1 The City of Louisville's Sustainability Goals 4
1.2 Current Commercial and Residential Code Standards for New Construction 4

2. Building for The Future: Energy Code Update 6
2.1 Project Overview 6
2.1.1 Energy Modeling 6
2.1.2 Policy Research 7
2.3 Community Outreach 7

3. Project Results and Discussion 7
3.1 Refining the Project Scope 7
3.2 Final Policy Options 8
3.2.1 Alignment with Regional Cohort 8
3.2.2 Policy Option 1: Energy Performance Standards for Building Types 9
3.2.3 Policy Option 2a and 2B: Appendix CC and/or All-Electric Requirement 13
3.3 Overall Public Feedback Summary 21

4. Conclusion 24
4.1 Final Policy Recommendation 24
4.2 Future Considerations 26

Appendix A: Louisville IECC Energy Modeling and Policy Report, Group14

Appendix B: City of Louisville Energy Code Update Public Engagement Report, Lotus

Appendix C: Regional Code Cohort Amendment Fact Sheets, SWEEP

Executive Summary

The City of Louisville (the City) contracted with Group14 Engineering, PBC (Group14) and Lotus Engineering and Sustainability, LLC (Lotus) to explore updates to the City's current commercial energy code that would help the City reach their energy efficiency and greenhouse gas reduction goals. The City and consultant team examined commercial energy code policy options including higher efficiency requirements, all electric requirements, and net zero requirements. The scope of work included:

- Energy modeling of current code compliant heating, ventilation, and air conditioning systems in commercial and industrial building types to evaluate upfront cost, operational cost, and greenhouse gas (GHG) emissions. The energy modeling also included an analysis on the total solar PV required to make code compliant buildings (both mixed-fuel and all-electric) net zero. Finally, energy modeling was conducted to analyze the upfront cost, operational cost, and GHG emissions savings of buildings built to a higher efficiency performance standard.
- Research on existing commercial energy code policies from around the country.
- A public engagement process that solicited feedback on commercial code policy options via two City board meetings, two open-house style community meetings, and an online public engagement survey.

Three main policy options resulted from the project process:

- **Regional Code Cohort Alignment:** Aligning with a regional cohort of communities in and around Boulder County striving for consistent building code updates. Communities are adopting the 2021 International Energy Conservation Code (IECC) as the base code along with several supporting amendments to promote electrification and efficiency. Even though Louisville has already adopted the 2021 IECC, some of the anticipated cohort amendments would strengthen the Louisville code.
- **Policy Option 1:** Setting a minimum energy performance standard (through Energy Use Intensity (EUI) modeling at time of building permit) for commercial buildings. The energy performance standard would vary based on building type. A building owner could utilize onsite renewable energy to help reach the energy performance standard. This policy could include incentives for all building electrification.

- **Policy Option 2A & 2b:** Requiring net zero new commercial construction by adoption of Appendix CC of the 2021 IECC [2A]. The appendix does not require increased building efficiency above the 2021 IECC base code but does require renewable energy offsets to achieve net zero. Amendments to the appendix related to purchase of off-site renewable offsets would be needed to make implementation feasible. The City could also opt to add an all-electric new construction requirement to Appendix CC [2B].

Based on information and insight gleaned from the energy modeling and community input, the project team recommends the City adopt Policy Option 1, to set energy performance goals for commercial and industrial new construction. This option strikes a balance between Louisville's sustainability goals, economic considerations, and community needs.

1. Introduction

Climate change is impacting Colorado and the City of Louisville (the City / Louisville) today. This is evidenced by extreme weather events such as the Marshall Fire, an unusual and out-of-season wildfire exacerbated by a warming climate, long term drought, and statewide average temperature increases.

A press release published in April of 2022 by the Intergovernmental Panel on Climate Change begins with a sentence written in bold text: **"The evidence is clear: the time for action is now. We can halve emissions by 2030."**[i] It is short and demanding, yet hopeful. The press release emphasizes the weight held by choices made in this decade and the power held by decision makers to "secure a livable future" for their communities.

1.1 The City of Louisville's Sustainability Goals

The City of Louisville has recognized the need for climate action, and has made a strong commitment to public health and safety by way of the City's clean energy and carbon emissions reduction goals which are outlined in Resolution 25, Series 2019,[ii]:

1. Meet all of Louisville's municipal electric needs with 100% carbon-free sources by 2025.
2. Reduce core municipal GHG emissions[iii] annually below the 2016 baseline through 2025.
3. Generate 75% of Louisville's residential and commercial/industrial electric needs from carbon-free sources by 2030.
4. Reduce core community GHG emissions[iv] annually below the 2016 baseline through 2030.

As reported in Louisville's Sustainability Action Plan, electricity and natural gas are the City's largest sources of emissions.[v] Therefore, a crucial path forward for achieving these goals involves transforming energy use in the City's residential and commercial building stock. Reducing the energy consumption of buildings and transitioning away from fossil-fuel combustion equipment are effective strategies to decrease emissions and support meeting electricity needs with carbon-free sources. This report focuses on code options for new buildings, but future efforts should address existing build stock to help meet carbon emission reduction goals.

1.2 Current Commercial and Residential Code Standards for New Construction

The lifetime of buildings constructed today ranges from 30 to 130 years.[vi] If not built to a more stringent energy code, new construction can contribute to carbon pollution from less efficient buildings for generations, creating increasingly difficult conditions for climate change

mitigation. Model building codes for new construction present an opportunity for innovation, employing the built environment as a climate action tool, rather than an obstacle, that can support City goals. Building energy codes are an effective policy mechanism local government can utilize to decarbonize new construction, future-proof their building stock, and accelerate clean energy use.

The City of Louisville has already shown a commitment to climate action by adopting the 2021 International Energy Conservation Code (IECC) with amendments outlined in Table 1.

Commercial Buildings	Residential Buildings*
• Increased insulation levels.	• Increased insulation levels.
• Increased doors and windows efficiency requirements.	• Increased ductwork and piping insulation requirements.
• Increased HVAC efficiency.	• Mandatory heat recovery.
• Electric vehicle charging and infrastructure.**	• Electric vehicle charging and infrastructure.**
• Electric-ready wherever gas appliances are installed.	• Electric-ready wherever gas appliances are installed.
• Solar-ready zone required (Appendix CB).	• Solar-ready provisions required (Appendix RB).
	• Net zero Appendix RC required.

*Marshall Fire rebuilds are exempt.

**Amendment to Municipal Code Chapter 17.20, Off-street Parking and Loading

Table 1: Overview of City of Louisville's current adopted code amendments.

2. Building for The Future: Energy Code Update

2.1 Project Overview

The current adopted code and accompanying amendments encourage energy efficiency and the implementation of future-proofing strategies into new construction. However, these efforts alone will not be enough to fully achieve the City's energy and emissions reduction goals.

In their 2022 Work Plan,[vii] Louisville City Council outlined Phase 2 of the 'Building for the Future' project, directing City Staff to "consider additional measures to code adopted in 2021, which could include the IECC Net Zero Commercial Appendix, other net zero goals and strategic implementation and all-electric construction requirements" specifically for new construction of single-family homes, multifamily buildings, and commercial buildings.

The City contracted with Group14 Engineering, PBC (Group14) and Lotus Engineering and Sustainability, LLC (Lotus) to identify policy options that would encourage higher efficiency, net zero development, and/or all electric development. The scope of work consisted of energy modeling of different building code scenarios, development of policy options based on research and the modeling results, and public engagement on the policy options developed.

A common framework used to create more effective sustainability strategies is consideration of the three pillars of sustainability: economy, environment, and equity. Creating a more sustainable Louisville requires consideration of the whole community, not just environmental impacts of the action being done. Recognizing this, the project team used the three pillars as guiding principles throughout this work.

2.1.1 Energy Modeling

For the first iteration of modeling, Group14 modeled four building types—multifamily, office, retail, and single-family home—with different heating, ventilation, and air conditioning (HVAC) designs that meet current Louisville energy codes. Each building type model consisted of mixed-fuel options that utilize natural gas and electricity, and all-electric options. All other variables such as insulation and lighting were modeled to meet the current code adopted by Louisville and remained constant for each system within each building type. The modeling examined upfront costs and annual costs of each HVAC system per building type, the amount of photovoltaics (PV) required for a building to be net zero with each HVAC system per building type, PV payback periods, and greenhouse gas (GHG) emissions at base code.

Additional modeling was conducted later in the project to investigate the upfront cost, operational cost, and GHG emissions from buildings complying with the finalized policy options.

2.1.2 Policy Research

Group14 examined existing frameworks for all-electric and net zero energy codes from the City of Boulder, several jurisdictions in California, City of Boston, and New York City. This policy landscape review aimed to complement the energy modeling conducted, and the consulting team utilized both resources to best inform the commercial energy code policies recommended to the City of Louisville. For more detail on the on the policy research and initial energy modeling results, see Group14's report in Appendix A.

2.3 Community Outreach

Public input is crucial to building community trust and ensuring feasibility when developing policies. Recognizing this, the consultant teams and City staff presented the project and energy code considerations to the public through multiple engagement opportunities:

1. Two open-house style community meetings.
2. An online survey that was open from June 27, 2022 to August 5, 2022.
3. Presentations to the Louisville Sustainability Advisory Board and the Building Code Board of Appeals.

Feedback from each engagement method was collected, data was cleaned and analyzed, and engagement results were incorporated into the final policy recommendation. For a full description of community outreach conducted and a summary of results, see Appendix B.

3. Project Results and Discussion

3.1 Refining the Project Scope

As the 'Building for the Future' project progressed, the consultant team and City Staff continuously refined the energy modeling and the policy options, carefully considering efficacy and relevance to City Council intent. One result of this iterative process was shifting the focus of the analysis away from single-family home policy, due to the City having already adopted Appendix RC of the 2021 IECC. Consequently, the subsequent sections address policy options for commercial and industrial building types only.

Based on public feedback, improved analyses, and internal conversations, the project team finalized three policy options for the City Council's review, each of which are discussed below.

3.2 Final Policy Options

Note: *All policy options presented are in addition to the current Louisville energy code which includes the following provisions: 2021 IECC base code; Louisville-specific energy efficiency amendments; electric vehicle (EV) ready requirements; the solar-ready Appendix for residential and commercial; and electric-ready requirements for residential and commercial new construction.*

3.2.1 Alignment with Regional Cohort

Policy Description

The City of Louisville could align with an existing regional cohort consisting of communities in and around Boulder County, working in a coordinated effort to adopt a regionally consistent building code (see Box 2). Louisville is a participant in the code cohort, but City Council direction led to an independent pursuit of community-specific options. Based on the City's current code, the primary changes Louisville would need to make are updating the City's current electric preferred standard to align with the cohort, updating the solar-ready appendix language to cover all buildings under the solar-ready requirements, and including additional code language to require cool roofs and high-efficiency horticulture lighting. Group14 did not conduct energy, cost, or greenhouse gas modeling for this code option, but the project team decided to include it due to expressed public interest in regional alignment. Additional detail on the amendments being considered by the Code Cohort are included in Appendix C.

Colorado Department of Local Affairs Code Cohort

Phase 1: Regional adoption of the 2021 IECC and supporting amendments including solar-ready requirements, EV-ready requirements, electric-preferred requirements, and additional efficiency requirements such as cool roofs and horticulture lighting. These amendments are applicable to residential and commercial buildings.

Phase 2: Beginning in August 2022, communities will work together to develop a roadmap to net zero new construction code for the region by 2030.

Participating communities include:

- City of Louisville
- Town of Superior
- Boulder County
- Town of Erie
- City of Lafayette
- City of Northglenn
- City and County of Broomfield
- City of Longmont

The City of Boulder, City of Westminster, and Town of Berthoud did not participate in Phase 1 but will participate in Phase 2.

Box 1: Code cohort overview.

DISCUSSION

Alignment with the regional code cohort's current IECC 2021 supporting amendments, and the future roadmap to net zero new construction would begin a code update process that increases stringency over time, allowing Council to take a stepped approach toward net zero code adoption by 2030. This approach would align Louisville with its neighboring communities and would provide Louisville an opportunity to co-develop a regional plan to get to net zero new construction. It's important to note that while a regional roadmap will be developed with the goal of consistency across the region, compliance, enforcement, and timelines for net zero code adoption may look unique to each community within the Cohort. Alignment with the Phase 1 code recommendations for the Cohort would increase efficiency requirements for mixed-fuel buildings but not all-electric buildings and does not require all-electric or net zero. This option represents the smallest step forward for above code policy options the City could consider and adopt.

3.2.2 POLICY OPTION 1: ENERGY PERFORMANCE STANDARDS FOR BUILDING TYPES

POLICY DESCRIPTION

New construction projects would be required to meet an energy performance standard that would be dictated by building type. The standards would be set using a metric called energy use intensity (EUI), which models the total energy consumption of a building for one year divided by the total square footage of the building. On-site PV could contribute to a building meeting the EUI target. Builders following a performance pathway for code compliance would need to meet their respective EUI targets and provide a modeling report as part of the building permit submittal.

If the builder were to pursue a prescriptive-based code compliance pathway, additional efficiency measures such as increased insulation levels and reduced lighting power densities would be required to deliver an equivalent level of efficiency as the energy performance standard.

PREDICTED ENERGY PERFORMANCE GOALS

The City of Boulder's building code[viii] and the New Buildings Institute (NBI)[ix] each have example energy performance standards, using site EUI as a metric, for various building types that the City of Louisville could look to (See Table 2). The City of Boulder standards were developed in 2018 off the previous code cycle. The City of Boulder is lowering these EUI targets ever few years to eventually achieve net zero. NBI's Zero Energy Performance Standards are based on the energy performance of best-in-class buildings for each building type. The NBI standards for Zero Energy Performance were developed with an 'efficiency only' lens, and do not consider the cost effectiveness of achieving the efficiency levels for all building types.

Building Type	City of Boulder Performance Standard (kBtu / sqft.)	NBI Zero Energy Performance Standard (kBtu / sqft.)
Medium office (5,000 – 50,000 sf)	23	21
Mid-rise apartment (Type R2)	32	23
Primary school	34	25
Small office (<5,000 sf)	19	17
Secondary school	31	29
Warehouse	11	9
Retail	NA	34

Table 2: Example energy performance goals for specific building types.

Group14 modeled predicted site EUI, upfront costs, and annual energy costs for each building type to achieve the NBI EUI targets (see Table 3) under this policy option. The Group14 model investigated the most cost-effective means of achieving the NBI standards using both efficiency and onsite PV to reach each standard. Note, this differs from the NBI methodology, which only incorporated energy efficiency measures to meet each target.

Building Type	HVAC Fuel Type	EUI targets modeled	Estimated Upfront Cost of HVAC without PV	EUI earned without PV	PV size required to reach EUI Target (kW)	Estimated Upfront Costs with PV	Annual Energy Cost Savings after PV
Multifamily	Mixed-Fuel	23	$206,661	36	111kW	$484,161	$12,432
	All-Electric		$182,500	23	4kW	$192,500	$448
Office	Mixed-Fuel	21	$4,180,608	29	185kW	$4,643,108	$20,720
	All-Electric		$4,353,828	29	177kW	$4,796,328	$19,824
Retail	Mixed-Fuel	34	$1,123,500	103	310kW	$1,898,500	$34,720
	All-Electric		$1,232,200	63	223kW	$1,789,700	$24,976

Table 3: EUI target modeling and associated costs for buildings compliant with Policy Option 1: Energy performance standards.

GREENHOUSE GAS EMISSIONS

To assess how this option might contribute to Louisville's emissions reduction goals, Group14 also modeled GHG emissions resulting from a building achieving its energy performance standard, based on the building type. Energy performance standards help to drive up energy efficiency and drive down building emissions, as illustrated in Figures 1 and 2. In each building type, for mixed fuel and all-electric systems, a building that has achieved its energy performance standard creates less GHG emissions than the same building compliant with current code.

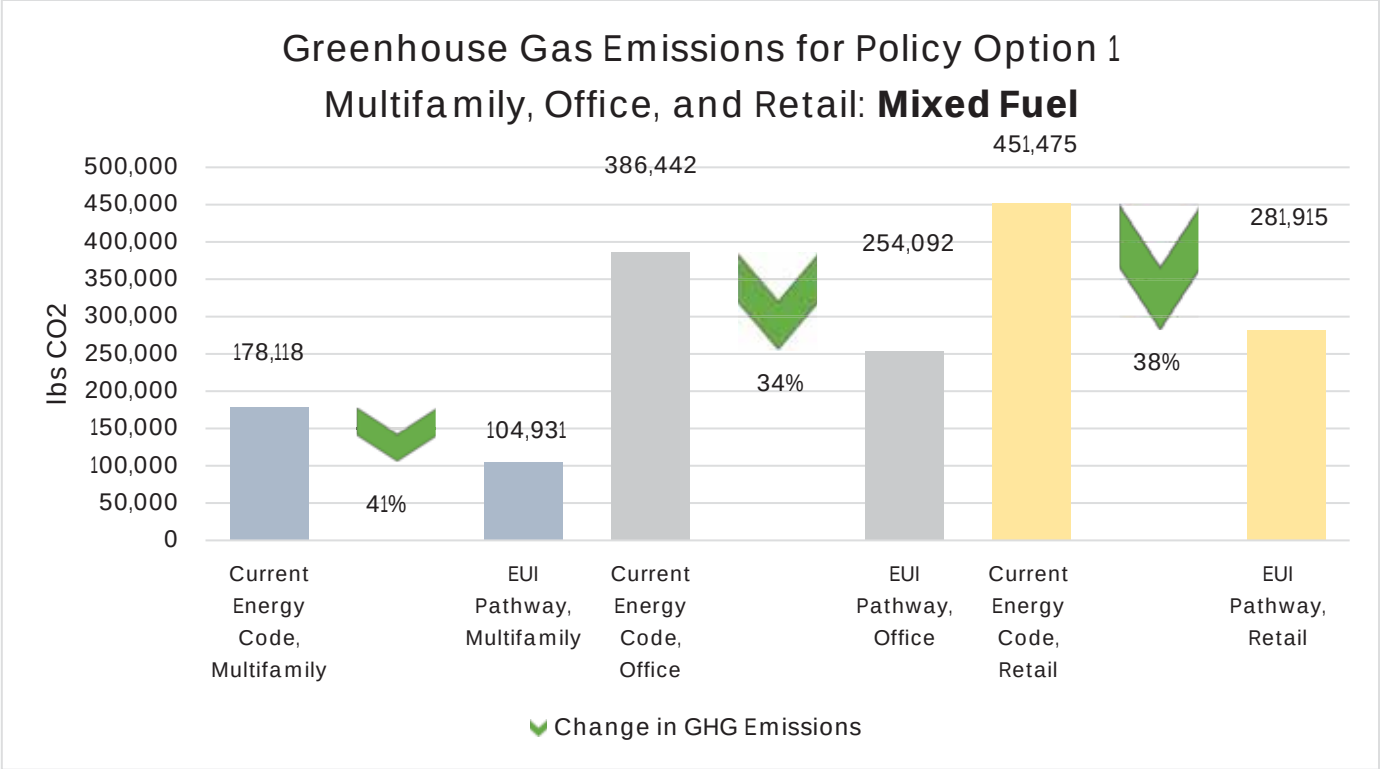


*Figure 1: Annual GHG emissions for **mixed fuel** buildings compliant with current code, compared to GHG emissions for buildings compliant with Policy Option 1: Energy performance standards for building types.*

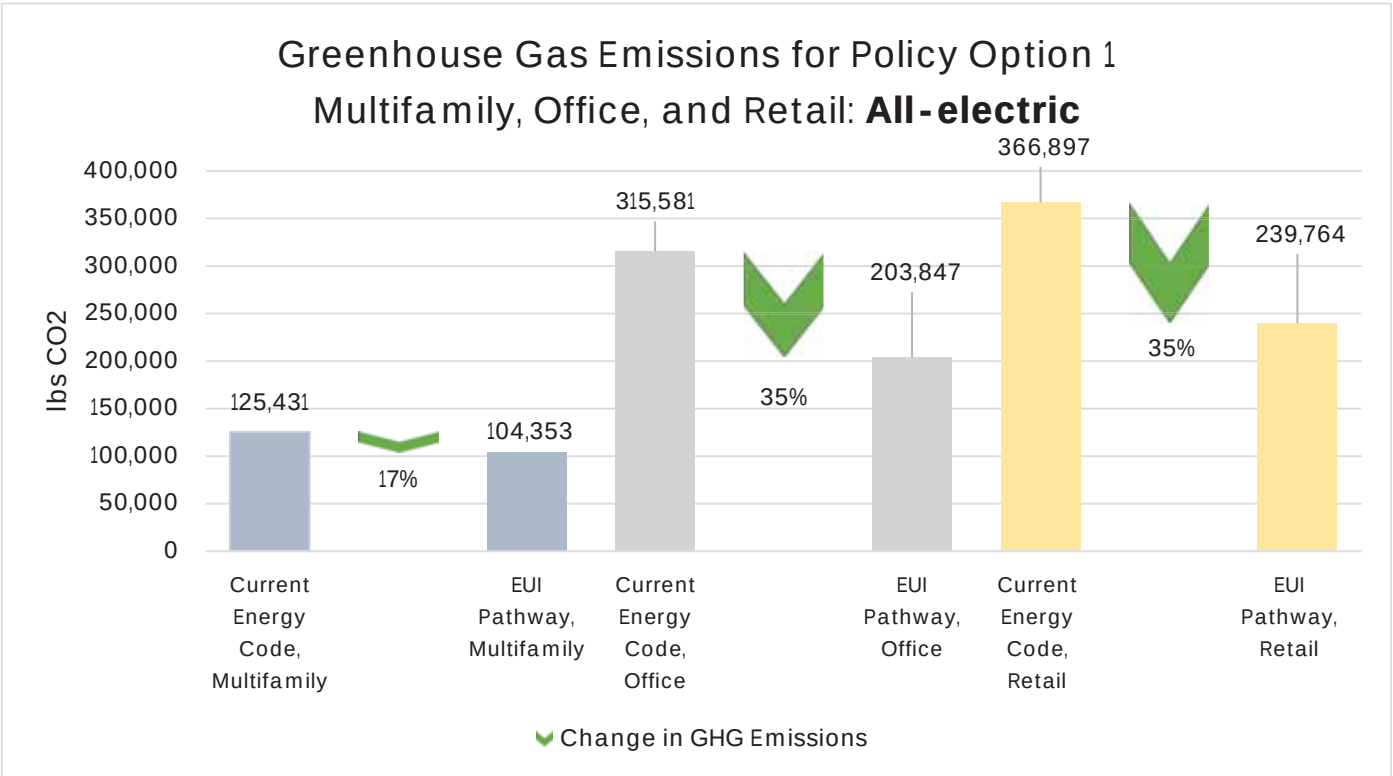


*Figure 2: Annual GHG emissions for **all-electric** buildings compliant with current code, compared to GHG emissions for buildings compliant with Policy Option 1: Energy performance standards for building types.*

DISCUSSION

Policy Option 1 is the most flexible of the code options. Buildings must reach an energy performance standard specific to that property type, but a building owner has options for how they chose to reach their energy performance standard. Onsite renewable energy can also contribute to the building's predicted EUI, adding another option in addition to efficiency to reach the target. This code results in more energy efficient, lower emitting buildings than the code package from the regional cohort and Appendix CC of the 2021 IECC.

All-electric buildings can reach much lower predicted EUIs because electricity has a lower energy density[x] than natural gas. Therefore, lower energy performance goals will naturally lead builders to all-electric options, which will result in lower GHG emissions over time as the electric grid becomes cleaner. This policy option allows the City to limit exemptions from the building code because energy performance standards can be applied to all building types, including those with high energy needs, such as a hospital. Finally, this option does not mandate building owners to invest in on or offsite PV to comply with code but provides building owners the option to use onsite PV to their own financial benefit if they so choose.

The NBI Standards modeled for this project are higher than both the City of Denver and the City of Boulder's standards for building types, making them more aggressive than local large cities surrounding Louisville. If the City chooses to pursue this policy option, additional analysis will be required to determine which targets are the most appropriate for the City of Louisville to adopt. Alignment with the City of Boulder's soon to be updated standards, could be advantageous to Louisville and would promote regional consistency.

Policy option 1 is the consultant and staff recommendation for the City's energy code. See Section 4 for further discussion.

3.2.3 POLICY OPTION 2A AND 2B: APPENDIX CC AND/OR ALL-ELECTRIC REQUIREMENT

POLICY DESCRIPTION

Policy Option 2A mandates compliance with Appendix CC of the 2021 IECC, zero energy commercial building provisions. Policy Option 2B builds upon 2A, adding a requirement that HVAC and plumbing systems must be all-electric. Appendix CC does not require commercial buildings to meet a higher level of efficiency above the base requirements in the IECC 2021. It does, however, require that commercial buildings must, in theory, offset 100% of the energy consumed onsite over a 15-year period using renewable energy. Note, it is likely that every commercial building will require both on and offsite renewable energy to reach the 100% offset requirement of Appendix CC. Procurement of offsite renewable energy to meet the 100% offset requirement is more complicated in practice. Appendix CC penalizes buildings

for procuring offsite renewables as opposed to generating 100% of their energy offset onsite, requiring buildings to procure more offsite renewables than a direct offset would require. These complications are discussed in more detail in the Offsite Procurement Discussion section below.

MODELED COST AND RENEWABLE ENERGY REQUIREMENTS

As noted previously, Group14 examined upfront cost and the annual energy bill costs for HVAC systems in each modeled building type (Office, Retail, Multifamily) that are compliant with current code. Further analysis for this policy option provided the amount of PV a building would be required to invest in, to achieve net zero and earn compliance with Appendix CC, as well as related cost data. It is important to note that in all cases, for commercial buildings that meet 2021 base code efficiency, covering the available roof area with PV did not result in a net zero building. Therefore, it is anticipated that all commercial buildings will need to invest in offsite PV to fulfill the requirements of Appendix CC. The cost of offsite PV procured via 15-year contracts for green retail tariffs and Renewable Energy Certificates (RECs) was also modeled. Results are outlined in Tables 4, 5, and 6. Though results vary by HVAC system, on average, all-electric systems with PV had a quicker payback period due to needing less renewable energy to offset their building energy use than natural gas systems.

Multifamily HVAC System Options	Cost for Code Compliant Building		Costs for Onsite PV					Net Zero Offsite PV – REC Pricing		
	Upfront Cost of HVAC System	Total Annual Energy Bills	PV (kW) required for Net Zero	PV that can fit onsite (kW)	Cost of Onsite PV	Annual Energy Bill with Onsite PV	Total Annual Energy Cost Savings with PV	kW Remaining to Offset	Green Tariff Cost (15 years, purchased in kWhs)[xi]	Unbundled RECs Cost (15 years, purchased in MWhs)[xii]
Mixed Fuel Option 1	$157,321	$40,785	338 kW	98 kW	$245,000	$28,809	$10,976	240 kW	$137,303	$70,482
Mixed Fuel Option 2	$278,321	$25,230	365 kW			$14,254		267 kW	$152,838	$78,457
Mixed Fuel Option 3	$267,321	$38,038	303 kW			$27,062		205 kW	$117,259	$60,193
Mixed Fuel Option 4	$459,821	$27,071	357 kW			$16,095		259 kW	$148,328	$76,142
All-Electric Option 1	$135,000	$40,383	236 kW			$29,407		138 kW	$79,174	$40,643
All-Electric Option 2	$245,000	$40,601	232 kW			$29,625		134 kW	$76,493	$39,266
All-Electric Option 3	$437,500	$28,431	201 kW			$17,455		103 kW	$59,226	$30,402

Table 4: Data detailing costs and PV amounts for a multifamily building under Policy Option 2A and 2B.

Office HVAC System Options	Cost for Code Compliant Building		Net Zero Requirements and Costs for Onsite PV					Net Zero Offsite PV – REC Pricing		
	Upfront Cost of HVAC System	Total Annual Energy Bills	PV (kW) required for Net Zero	PV that can fit onsite (kW)	Cost of Onsite PV	Annual Energy Bill with Onsite PV	Total Annual Energy Cost Savings with PV	kW Remaining to Offset	Green Tariff Cost (15 years, purchased in kWhs)[xi]	Unbundled RECs Cost (15 years, purchased in MWhs)[xii]
Mixed Fuel Option 1	$2,327,633	$104,604	722 kW	250 kW	$625,000	$76,604	$28,000	472 kW	$285,152	$146,378
Mixed Fuel Option 2	$1,786,323	$135,278	777 kW			$107,278		527 kW	$317,602	$163,036
Mixed Fuel Option 3	$4,492,873	$95,077	772 kW			$67,077		522 kW	$315,006	$161,703
All-Electric Option 1	$1,948,716	$131,993	755 kW			$103,393		505 kW	$304,622	$156,373
All-Electric Option 2	$3,789,170	$90,551	544 kW			$62,551		294 kW	$179,548	$92,168
All-Electric Option 3	$3,464,384	$94,324	567 kW			$66,324		317 kW	$192,996	$99,071
All-Electric Option 4	$4,005,694	$103,660	578 kW			$75,660		328 kW	$199,485	$102,403

Table 5: Data detailing costs and PV amounts for an office building under Policy Option 2A and 2B.

Retail HVAC System Options	Cost for Code Compliant Building		Net Zero Requirements and Costs for Onsite PV					Net Zero Offsite PV – REC Pricing		
	Upfront Cost of HVAC System	Total Annual Energy Bills	PV (kW) required for Net Zero	PV that can fit onsite (kW)	Cost of Onsite PV	Total Annual Energy Bill with Onsite PV	Total Annual Energy Cost Savings with PV	kW Remaining to Offset	Green Tariff Cost (15 years, purchased in kWhs)[xi]	Unbundled RECs Cost (15 years, purchased in MWhs)[xii]
Mixed Fuel Option 1	$570,500	$164,492	1741 kW	600 kW	$1,500,000	$97,292	$67,200	1,141 kW	$689,194	$353,786
Mixed Fuel Option 2	$456,000	$182,683	1564 kW			$115,483		964 kW	$584,178	$299,878
Mixed Fuel Option 3	$630,500	$158,096	1566 kW			$90,896		966 kW	$585,261	$300,434
All-Electric Option 1	$660,000	$193,161	1449 kW			$125,961		849 kW	$515,973	$264,866
All-Electric Option 2	$708,000	$185,053	1369 kW			$117,853		769 kW	$468,337	$240,413
All-Electric Option 3	$3,167,500	$156,491	1157 kW			$89,291		557 kW	$342,752	$175,946

Table 6: Data detailing costs and PV amounts for a retail building under Policy Option 2A and 2B.

OFFSITE PROCUREMENT DISCUSSION

To achieve the net zero requirement for both Policy Options 2A and 2B, a typical commercial or industrial building would not be able to fit the necessary PV on the building's available roof space and must supplement by procuring offsite renewable energy. Appendix CC does not require a building to pursue onsite renewable energy before they purchase offsite offsets. To ensure building maximize onsite renewable energy, the City could consider amending Appendix CC to require building to max out their onsite PV potential before pursuing offsite offsets.

Options for offsite procurement include community solar gardens, REC purchases, green retail tariffs, and virtual power purchase agreements (VPPAs). In Appendix CC, offsite renewable energy procurement is penalized based on the type of offsite a building pursues. For any remaining energy that must be offset offsite, a procurement factor must be applied which will increase the offsite renewables a building must procure. The procurement factor is a penalty for opting for offsite purchasing instead of onsite renewable energy generation and is required per the energy offset calculations in Appendix CC.

Appendix CC lists specific offsite offset requirements which mandate that renewable energy must be generated within the utility service territory and the contract must be 15 years in length, among others. As a result, there is a feasibility challenge with this policy option including insufficient onsite roof space to completely offset energy use, limited availability of local offsite renewable resources like community solar gardens, and constraints on open-market REC procurements that meet the requirements of Appendix CC.

Green retail tariffs, which are RECs purchased directly from the electric utility, pose a challenge for Appendix CC compliance. Green retail tariffs cannot be procured on a 15-year contract basis, and they only cover building electricity consumption, not overall building energy consumption.

Community solar gardens are local and can be procured on a 15-year contract basis, however, according to discussions with Xcel Energy, there is limited availability and high demand for these gardens, making it unlikely that a building owner would be able to procure the necessary offsite PV to comply with code.

RECs tend to be low cost and an easy procurement method, making them a popular option for offsetting energy use. However, they likely do not represent local renewable energy generation and there is no 15-year contract option available, thus violating the Appendix CC requirements.

Virtual PPAs can have 15-year contracts, however, like RECs, the renewable energy generation might not be local, making this option potentially invalid according to Appendix CC.

For Policy Options 2A and 2B to be feasible, City staff would need to amend the Appendix CC language to accommodate for the challenges in offsite procurement and to require onsite PV be required ahead of offsite procurement.

Offsite Renewable Energy Procurement

Unbundled Renewable Energy Certificate (REC): a market-based instrument that represents the property rights to the environmental, social, and other non-power attributes of renewable energy generation. A REC is one megawatt-hour of electricity generated and delivered to the grid.

Community solar: an offsite solar installation that a customer can contribute funds to and receive the benefits of via bill credit.

Green retail tariff: a program offered by utilities in which a customer can buy renewable energy credits at an additional charge to cover monthly electric use.

Virtual Power Purchase Agreement (PPA): a method for large commercial entities to purchase offsite renewable energy at a fixed rate for a fixed amount of time.

GREENHOUSE GAS EMISSIONS

The GHG impact of Policy Options 2A and 2B must be viewed through two lenses: GHG reductions from onsite renewable energy and GHG reductions from offsite renewable energy.

If a building utilizes onsite PV to achieve the net zero requirement, that onsite renewable energy generation will create a direct reduction of GHG emissions. This is the same emissions reduction mechanism that occurs from PV installed to comply with the requirements of Policy Option 1.

GHG emission reductions from offsite renewable energy vary due to several factors such as procurement method and location of the renewable energy that was purchased. In addition, Appendix CC penalizes buildings for purchasing offsite energy in the form of RECs, via the procurement factor. For example, purchasing enough RECs in theory could offset all emissions created by the building. However, when a property owner purchases a REC, they are buying the right to a unit of energy from a solar garden or a wind farm that already exists, and would have existed if the building owner did not purchase the REC. Thus, the building owner's purchase is not generating any new renewable energy resources that would offset the emissions produced by the building. This would not be the case for a local community solar garden since the purchase would contribute to the development of new renewable energy resources.

Furthermore, the emissions intensity of the grid (how clean or dirty the power source for the grid is) where the renewable energy is being purchased from impacts GHG reduction. If the grid the building is drawing power from is cleaner than the grid the building owner is buying RECs from, the REC purchase has a larger GHG reduction impact but if the situation were reversed, the REC purchase has a smaller GHG reduction impact.

GHG emission reductions from Policy Options 2A and 2B are outlined below (Figures 3, 4 and 5). Net zero emissions represent a scenario in which the building has installed the maximum amount of PV they can fit on their available roof space. Figure 6 shows the emissions savings resulting from the remaining energy use being offset by RECs, with a procurement factor applied. Code compliant HVAC systems, both mixed fuel and all-electric, were modeled for each building type. Policy Options 2A and 2B have much larger GHG emissions reductions than Policy Option 1, as expected due to the nature of a net zero and/or all-electric building.

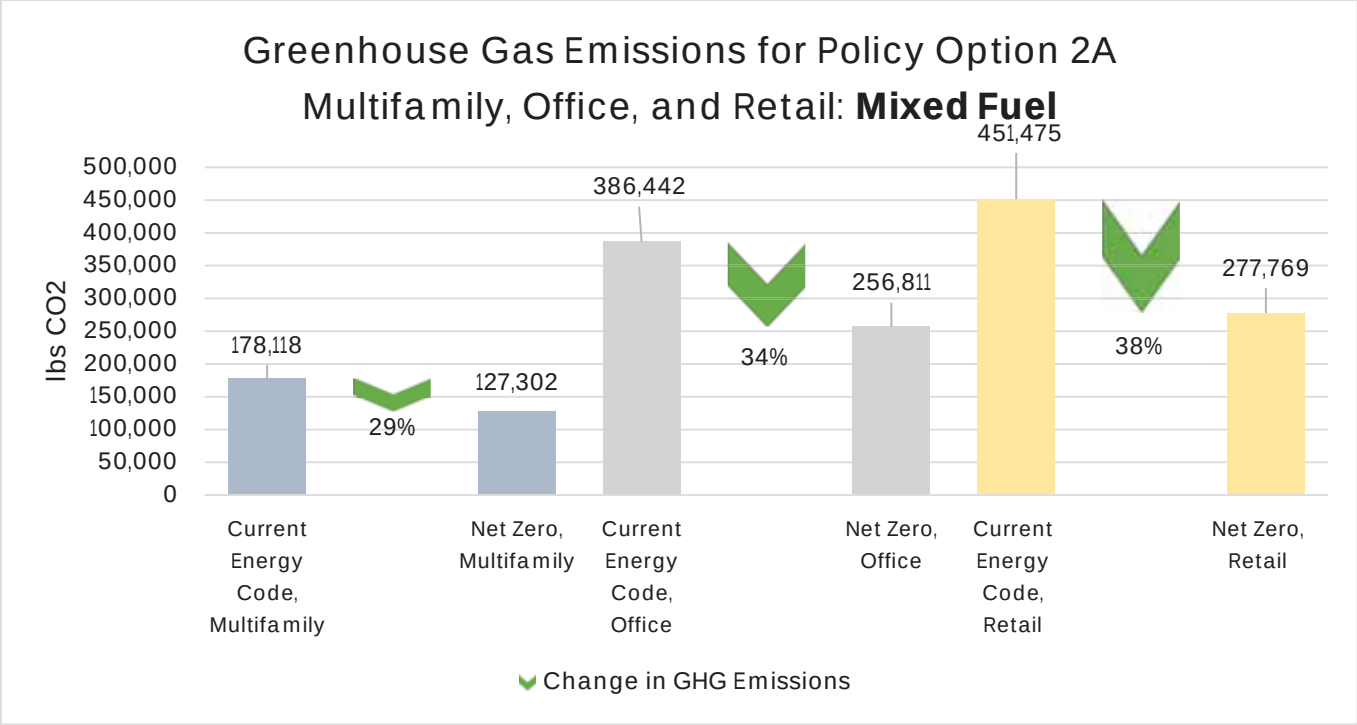


*Figure 3: Annual GHG emissions for **mixed fuel** buildings compliant with current code, compared to GHG emissions for **mixed fuel** buildings compliant with Policy Option 2A: Appendix CC, Net Zero.*

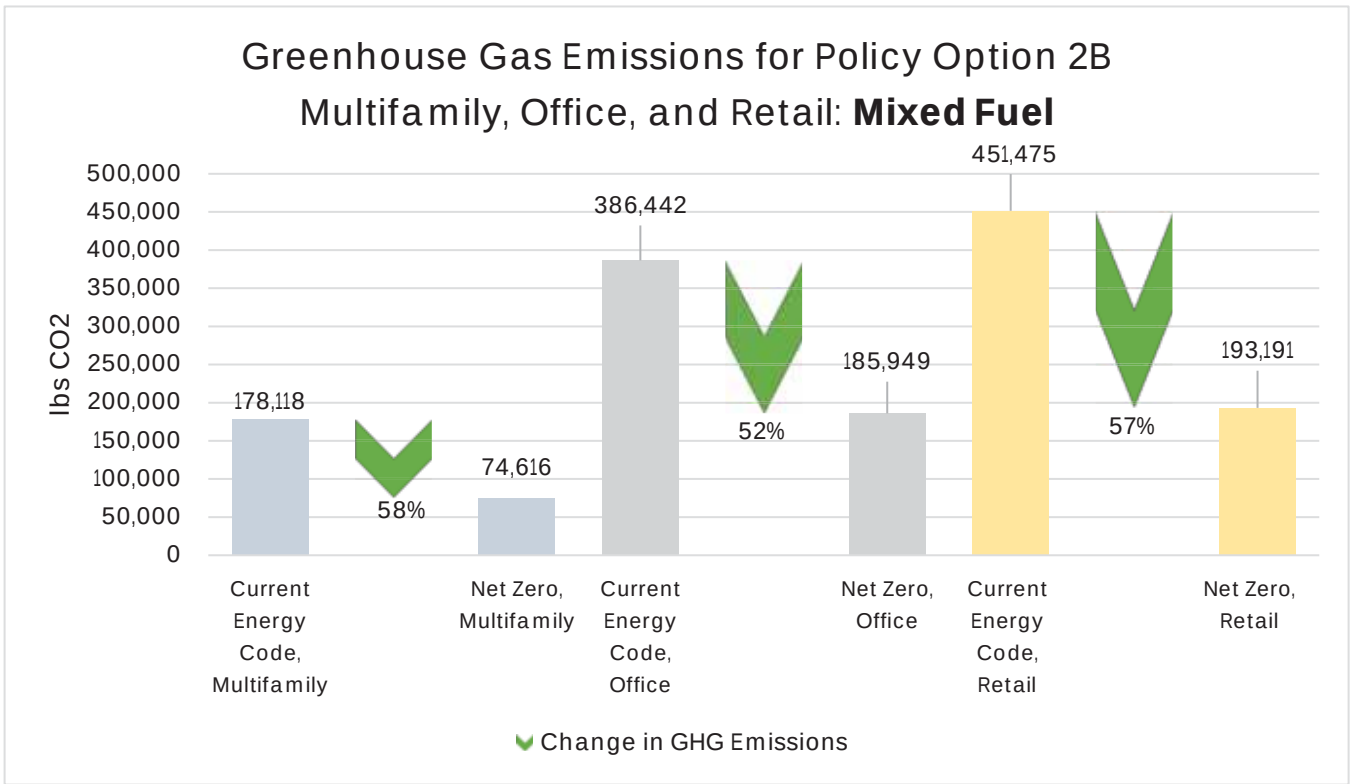


*Figure 4: Annual GHG emissions for **mixed fuel** buildings compliant with current code, compared to GHG emissions for **all-electric** buildings compliant with Policy Option 2B: Appendix CC, Net Zero + all-electric.*

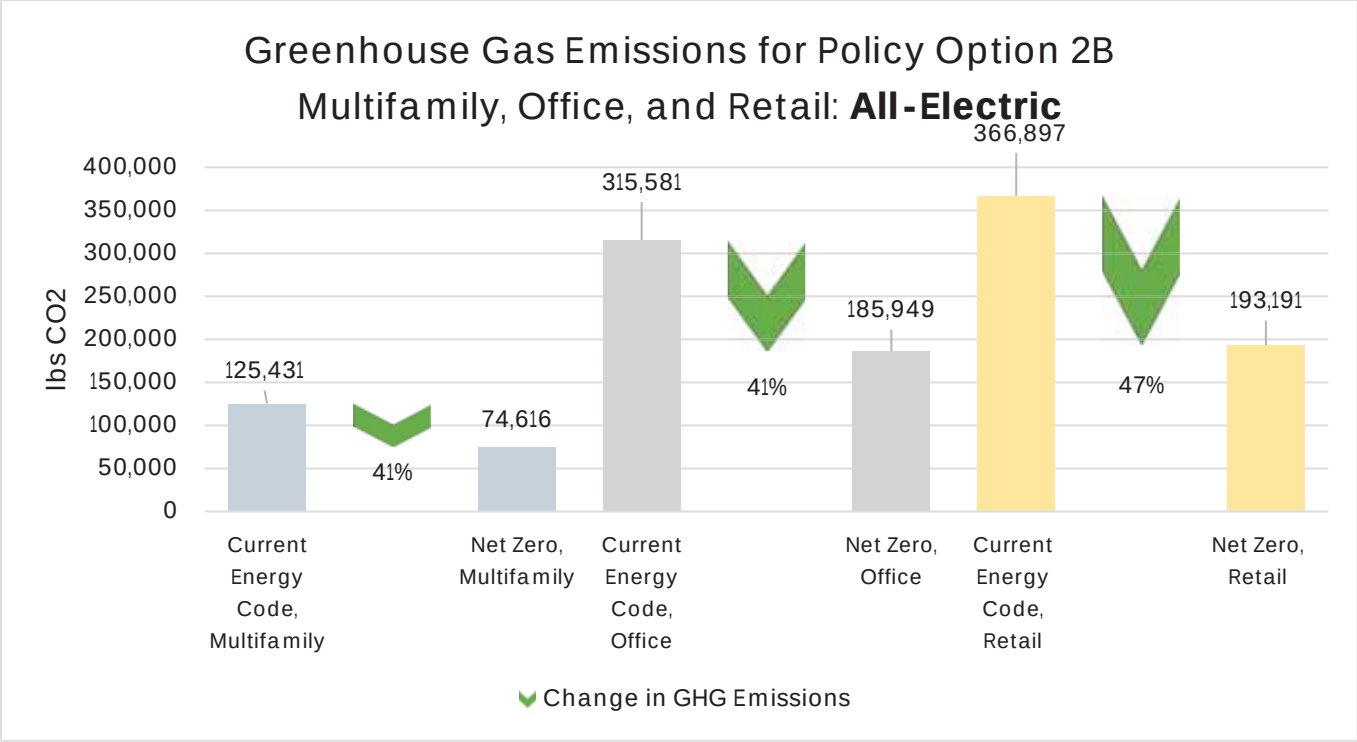


*Figure 4: GHG emissions for **all-electric** buildings compliant with current code, compared to GHG emissions for **all-electric** buildings compliant with Policy Option 2B: Appendix CC, Net Zero + all-electric.*

The GHG emissions modeling for unbundled REC purchasing used the nationwide average electricity emissions intensity, 0.85 lbs/kWh, as reported by the Energy Information Administration. The GHG calculations also included a mandatory application of a procurement factor which requires buildings who offset with RECs to purchase five times the total RECs required for a full offset.

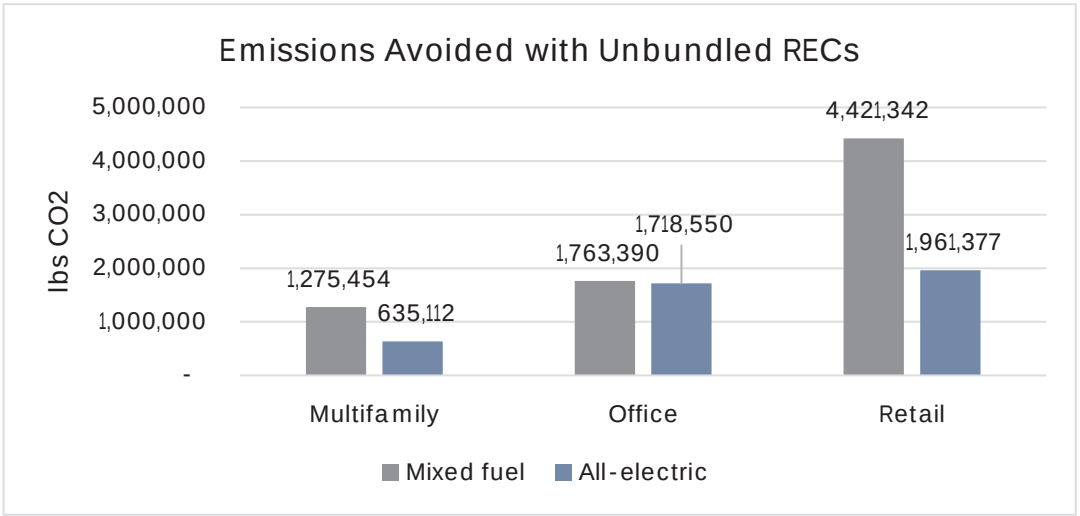


Figure 5: Emissions avoided with unbundled RECs purchased to offset any energy consumption remaining after installing the maximum amount of onsite PV.

DISCUSSION

Policy Options 2A and 2B are most aggressive options in reducing GHG emissions through onsite PV, but do not increase the energy efficiency of the building over base code. Policy Options 2A and 2B require net zero with onsite and offsite PV, and 2B is the only option that also mandates all-electric, disallowing fuel choice. Exemptions for both Policy Options 2A and 2B could be considered for certain building types that contain processes that cannot be net zero or all-electric due to unfeasible cost or lack of technology. These process load exemptions may impact buildings such as laboratories, manufacturing facilities, industrial processing, restaurants, and/or hospitals. If exempted, these process loads, under Policy Options 2A and 2B would be exempt from the net zero or all-electric requirement.

These policy options do come with complications, including the need to amend Appendix CC for offsite procurement and the variability of the potential GHG impacts. Additionally, post hoc modeling revealed that the payback period for PV installation is no less than 22 years for any HVAC system in any of the building types modeled. The upfront investment building owners would need to make in onsite PV will payback overtime, but it's important to note that investments in offsite PV will always be an additional cost and will never represent revenue or financial benefit.

3.3 OVERALL PUBLIC FEEDBACK SUMMARY

The public engagement process was conducted with recognition that an energy code update will impact community members from all sectors. An in-depth review and analysis of the input received can be found in Appendix B.

General feedback from all public outreach methods indicated that the Louisville community does not feel ready for an aggressive approach to energy code updates. This is indicated by levels of support for each of the recommendations (Figures 7, 8, 9, and 10) and by both written and oral comments (Appendix B). While some were supportive of the desire to achieve sustainability goals, many showed concern about the upfront and ongoing costs that the code updates would impose on the community, the capability of the grid to handle electrification pushes, and the very limited access to offsite renewable energy.

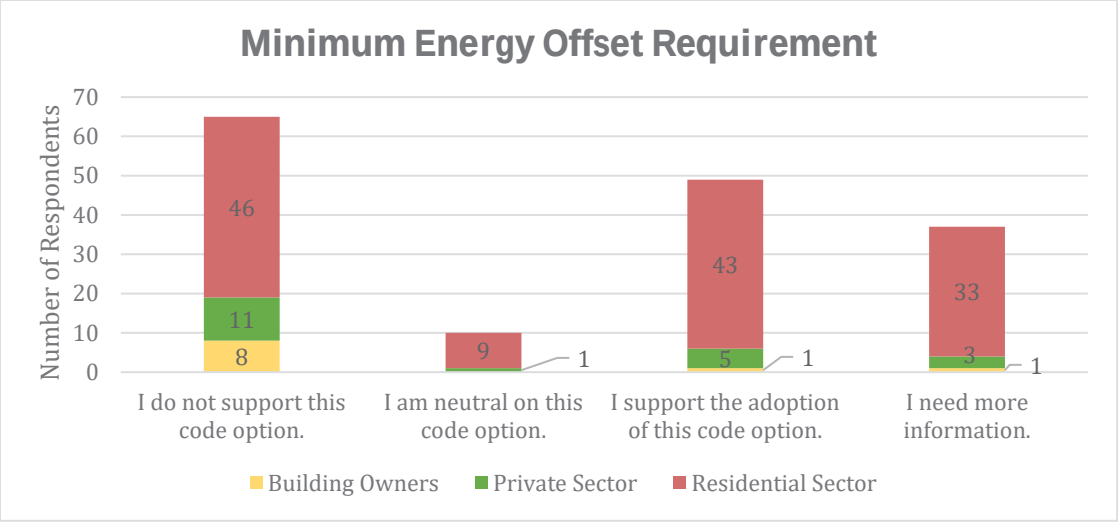


Figure 7: All sector levels of support for Minimum Energy Offset code option. ***How supportive would you be of including a minimum energy offset requirement in addition to the 2021 code, which would require on-site or off-site solar?***

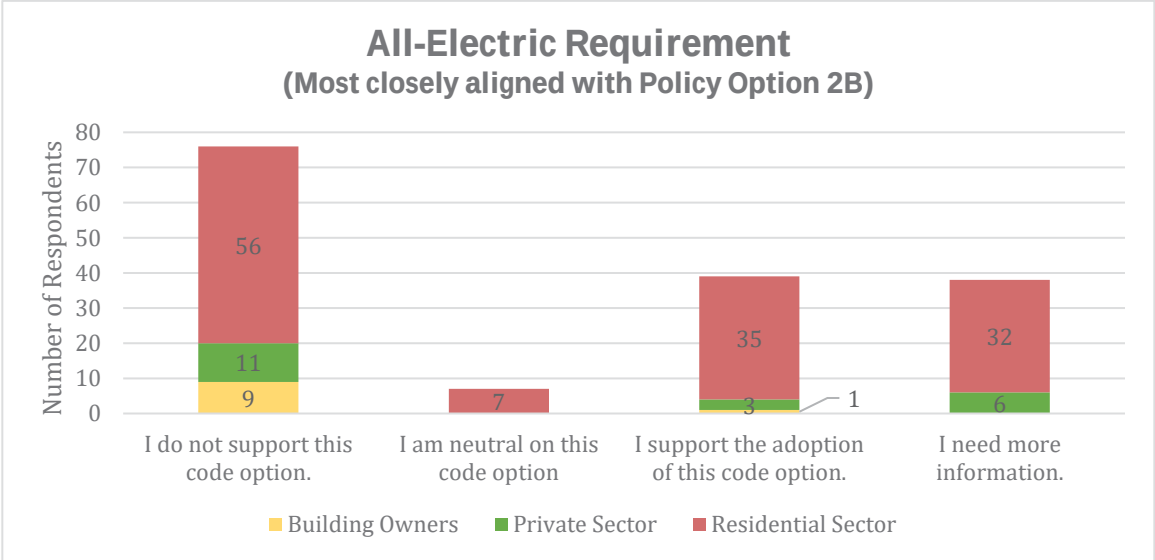


Figure 8: All sector levels of support for All-Electric Requirement code option. ***How supportive would you be if the City were to consider an all-electric requirement for new commercial construction code if industrial processes were exempt?***

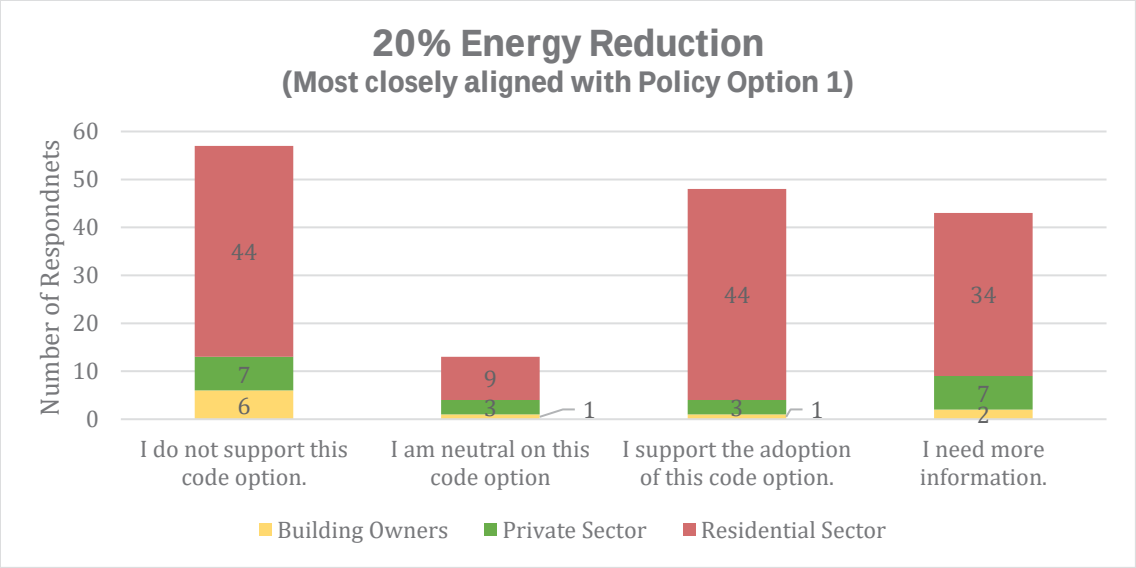


Figure 9: All sector levels of support for 20% Energy Reduction code option. ***How supportive would you be if the City were to consider an energy code that required a 20% reduction in energy use from the 2021 energy code for commercial construction?***

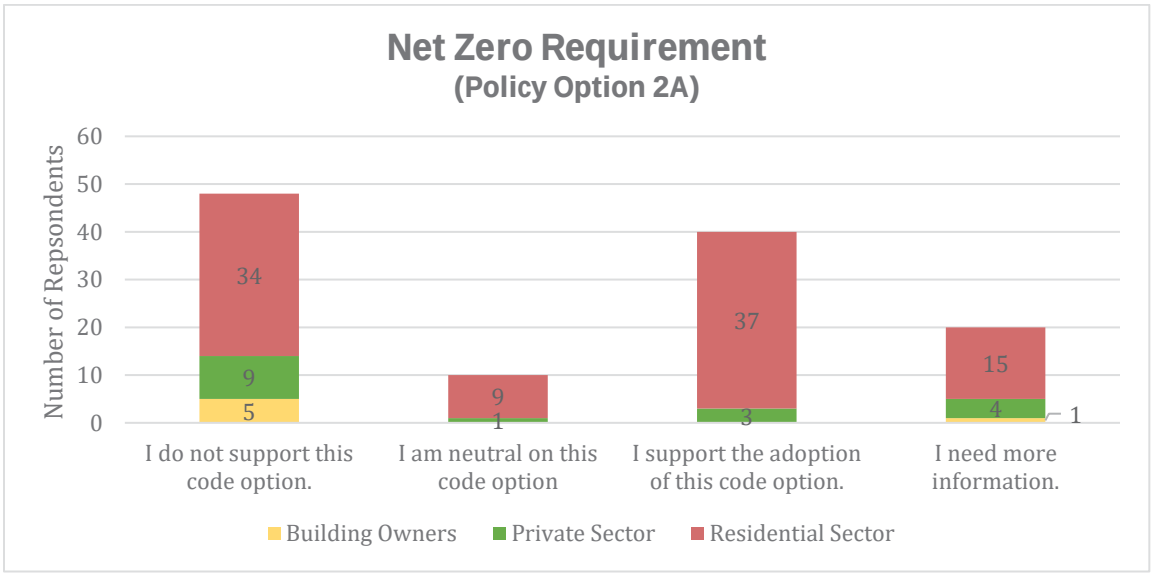


Figure 10: All sector levels of support for Net Zero code option. ***How supportive would you be if the City were to consider a commercial energy code that required net zero energy through efficiency and onsite/off-site renewable energy?***

In the online public engagement survey, the project team asked business and building owners what payback period they would tolerate for the additional upfront costs of installing solar for net zero and all-electric buildings. It is important to note that most respondents indicated that they would not tolerate any increased upfront cost, despite the payback period. Three out of ten building owners selected a payback period of zero-to-5-years, and

only one building owner was comfortable with a 10-20-year timeframe. Six out of 22 business owners would be comfortable with a zero-to-5-year payback timeframe, only two selected payback periods of 10 years or more, and six others were not interested in solar at all. In sum, according to the survey, the tolerance threshold for increasing upfront costs for onsite solar, all-electric construction, and net zero construction is low.

The project team also wanted to use the survey to assess where community values fall as they relate to adopting stricter energy codes. The survey asked, "What's the most important consideration for the City in adopting stricter energy codes for residential and commercial construction?". The results of this question emphasized the need for balance (Figure 11) and reinforced sentiments heard from the other public engagement sessions and shown by the support assessment questions. Overall, the community wants council to carefully consider this ordinance and focus on understanding its potential impacts, rather than rushing to be a leader in the energy code space.

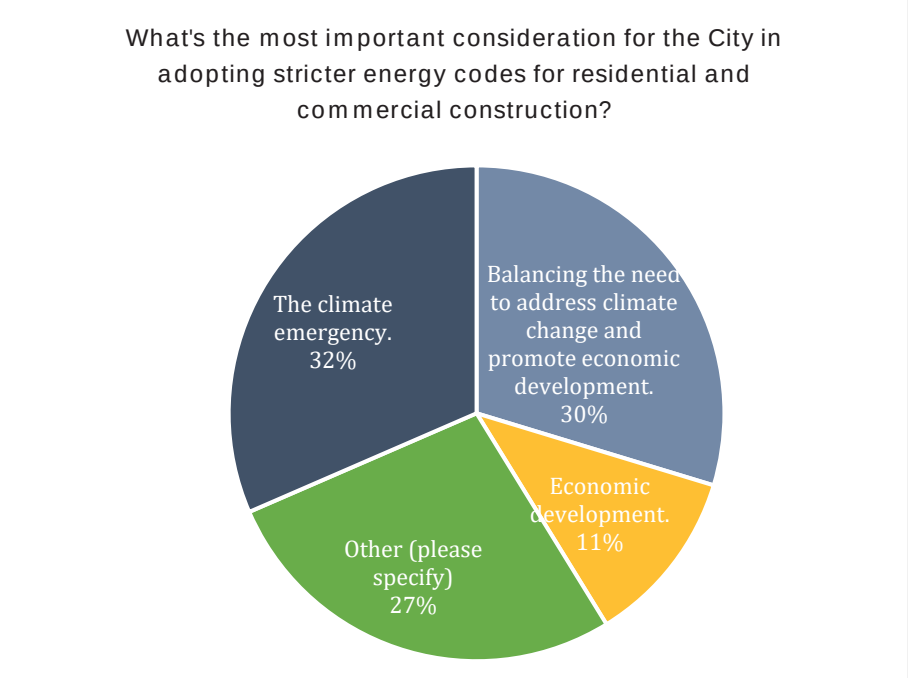


Figure 11: Percentage breakdown of answers for important considerations for stricter energy code.

4. Conclusion

4.1 Final Policy Recommendation

The project team diligently considered the City of Louisville's sustainability goals, the energy modeling and policy research, public feedback, and the estimated GHG impacts of the policies when deliberating a final recommendation for Louisville's energy code. ***Based on a need for balance and feasibility, the project team recommends City Council pursue Policy Option 1: Energy Performance Standards for Building Types.***

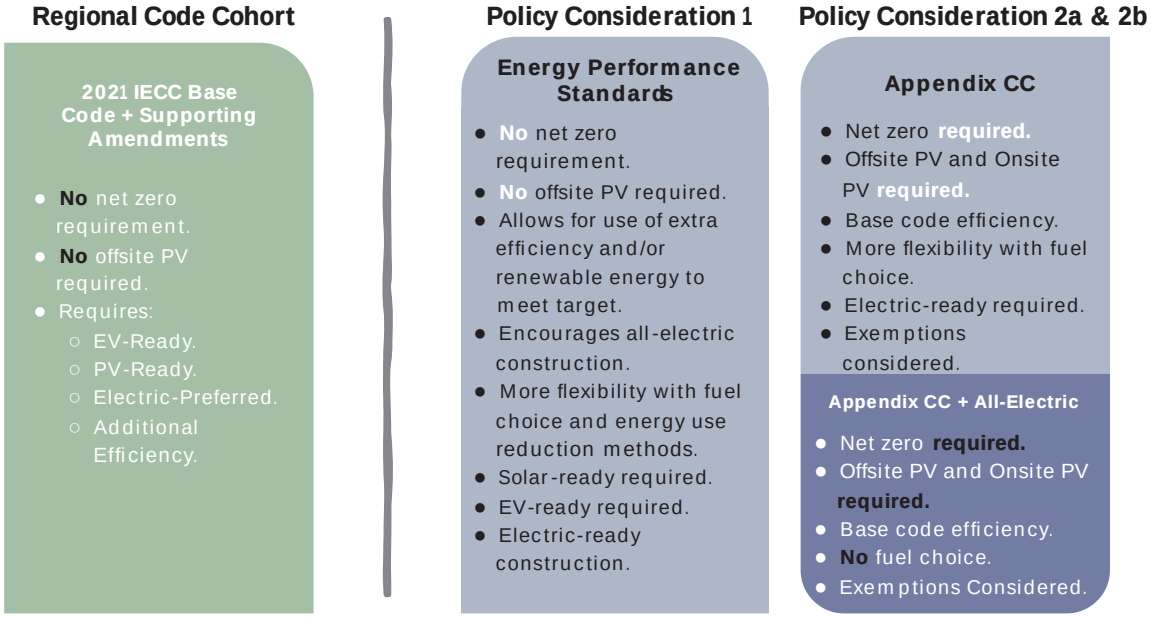


Figure 12: Summary graphic detailing the features of each policy option.

Energy performance standards emphasize energy efficiency and result in lower emitting buildings, thus contributing to Louisville's sustainability goals. There is also no net zero or all-electric requirement, which increases feasibility for building owners, and significantly reduces the upfront cost impacts. While all-electric systems are not mandated in this policy option, energy performance goals, via EUI targets, are more easily achieved with all-electric HVAC and plumbing systems than mixed-fuel systems. Therefore, this code option encourages all-electric new construction while still giving developers and owners choice. Additionally, the code option encourages local renewable energy generation because onsite renewable energy installation can help a building owner achieve the energy performance goal. The last advantage to this code option is that exemptions are not necessary. Buildings with heavy energy loads can still pursue energy use reduction via other efficiency measures.

Policy Option 1 does not create as large of a GHG reduction as Policy Options 2A and 2B, since it is a less aggressive code package. However, the annual energy costs of this policy option were generally lower than those in a building compliant with current code, depending on the building type and system installed. Annual energy costs of Policy Options 2A and 2B are generally lower than both current code compliant buildings and buildings modeled with Policy Option 1 requirements, but PV and offsite renewable energy add significant costs. Under Policy Option 1, a building owner could opt to utilize PV, onsite or offsite, if they would like it to contribute to the building's energy performance standard, but only if they deem it financially beneficial. Thus, Policy Option 1 provides more flexibility with the cost burden a building owner is willing to take on.

4.2 Future Considerations

The project team and the City recognize that stricter building energy codes alone will not achieve the City of Louisville's energy and climate goals. This section captures ideas that were brought forward throughout the project that the City could consider to further support achieving these goals.

First, public engagement brought many questions about how the code updates will impact existing buildings. Current code language says that an addition, alteration, repair, or renovation must be completed to the most up-to-date code for the scope of work intended (if the scope of the project triggers requirements in the code). Any building components not in the intended scope of work do not need to be brought up to code. The project team recommends that council carefully consider how existing buildings will be impacted by the new commercial construction code, including the cost impacts of the code update they choose to enact on these types of existing building projects. Making additions, alterations, repairs and/or renovations too expensive may encourage a property owner to scrape and rebuild rather than renovate. This would create more embodied carbon and obstruct the City's sustainability efforts. Existing buildings can be used as a climate action strategy if additions, alterations, repairs and/or renovations are allowed to pursue a prescriptive pathway to incremental efficiency improvements. The 2021 building code is more efficient than any previous code cycle and consequently, incremental changes to the existing building stock will still be impactful.

Other policy mechanisms also exist to address the existing building stock, that may be more appropriate than new construction code triggers. Benchmarking and building performance standards stand out as the most pursued policy mechanism to address existing building energy use and GHG emissions. The City of Louisville can look to City of Denver[xiii] or City of Boulder's[xiv] benchmarking programs for examples.

For a more holistic approach to increasing the positive environmental impact of new construction, the City can also look into green building codes and certifications. The International Green Construction Code (IgCC)[xv] and LEED[xvi] certifications are two examples of options that address building sustainability more comprehensively, including requirements topic areas like waste, materials management, water use, land use, and connectivity.

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[i] https://www.ipcc.ch/report/ar6/wg3/resources/press/press-release/

[ii] https://www.louisvilleco.gov/home/showpublisheddocument/25430/637114996226870000

[iii] "Core Municipal GHG Emissions" refers to the total GHG emissions from all municipal activity.

[iv] "Core Community GHG Emissions" refers to the total GHG emissions from the entire City of Louisville including all residential, commercial, and industrial energy consumption.

[v] https://www.louisvilleco.gov/home/showpublisheddocument/28886/637376646025230000

[vi]https://www.mckinsey.com/industries/engineering-construction-and-building-materials/our-insights/call-for-action-seizing-the-decarbonization-opportunity-in-construction

[vii]https://www.google.com/url?q=https://www.louisvilleco.gov/home/showpublisheddocument?id%3D22360&sa=D&source=docs&ust=1660286628507708&usg=AOvVaw1EUGqL2jm5HmMJ3ZUliJzc

[viii] https://bouldercolorado.gov/services/building-performance-ordinance

[ix] https://newbuildings.org/wp-content/uploads/2019/09/ZeroEnergyCommercialBuildingTargets.pdf

[x] https://energyeducation.ca/encyclopedia/Energy_density

[xi] Note, 15-year contracts are not available for Green Retail Tariffs. Green Retail Tariffs can also only be purchased to offset electricity use. Pricing shown here is meant for informative purposes only.

[xii] Note, 15-year contracts are not available for unbundled RECs. Pricing in table reflects REC pricing today.

[xiii]https://www.denvergov.org/Government/Agencies-Departments-Offices/Agencies-Departments-Offices-Directory/Climate-Action-Sustainability-Resiliency/Goals-and-Policies/Energize-Denver-Benchmarking

[xiv] https://bouldercolorado.gov/services/building-performance-ordinance

[xv]https://codes.iccsafe.org/content/IGCC2021P1/preface#:~:text=The%20IgCC%20is%20a%20model,on%20the%20natural%20environment%20and

[xvi] https://www.usgbc.org/leed

Appendix A

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ENERGY CODE ANALYSIS – ENERGY MODELING AND POLICY CONSIDERATIONS

6/24/2022

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TABLE OF CONTENTS

LIST OF ABBREVIATIONS 3
1 INTRODUCTION 4
1.1 Executive Summary 4
2 ENERGY MODELING RESULTS 5
2.1 Multifamily Building 5
2.2 Office Building 7
2.3 Commercial Development 10
2.4 Single-Family Home 13
3 POLICY CONSIDERATIONS 16
4 CONCLUSION 20

LIST OF ABBREVIATIONS

Abbreviation	Definition
ACH	Air Changes per Hour
BTU	British Thermal Unit
CO2	Carbon Dioxide
CSG	Community Solar Garden
DHW	Domestic Hot Water
DOAS	Dedicated Outdoor Air System
ECO	Energy Conservation Opportunity
ECM	Energy Conservation Measure (synonymous to ECO)
EUI	Energy Utilization Index
ERI	Energy Rating Index
ERV	Energy Recovery Ventilator
EV	Electric Vehicle
F	Fahrenheit
FCU	Fan Coil Unit
FY	Fiscal Year
HERS	Home Energy Rating System
HSPF	Heating Seasonal Performance Factor
HVAC	Heating, Ventilation, and Air-Conditioning
HW	Hot Water
IECC	International Energy Conservation Code
IWG	Inches of Water Gauge
kBtu	Thousand British Thermal Units
kW	Kilowatt/Thousand Watts
kWh	Kilowatt Hour
PNNL	Pacific Northwest National Laboratory
PV	Photovoltaic
SEER	Seasonal Energy Efficiency Ratio
SCC	Social Cost of Carbon
Sq. Ft., SF	Square Foot
TBD	To Be Determined
UEF	Uniform Energy Factor

1 INTRODUCTION

1.1 Executive Summary

Group14's scope for this report is to evaluate the current energy codes established in the City of Louisville and to provide recommendations for future all-electric and net zero codes to meet the City's carbon reduction goals. To produce this report, Group14 has modeled four different building types:

1. Multifamily building – 42,000 SF
2. Office building – 110,000 SF
3. Commercial development – 90,000 SF
4. Single family home – 2,820 SF

These energy models were created with feedback from the City's planning department as well as average CBECS data for the mountain west region. Each building type is modeled with different HVAC designs which meet the current Louisville energy codes (both Mixed-Fuel and all-electric). Greenhouse gas emissions and net present value analysis is also provided.

In the policy section of this report, all-electric and net zero energy codes from around the country are analyzed. Recommendations are made to push Louisville's energy codes towards all-electric, net zero new construction, while also considering the upcoming IECC code cycles and codes in surrounding counties.

Out energy modeling results show that the all-electric buildings have much lower carbon emissions than mixed fuel buildings but typically have slightly higher annual energy costs. First costs between both the mixed fuel and all-electric designs are similar, due to the current Louisville requirement for all-electric ready new construction. The cost to install the electric infrastructure drives up the cost of the mixed fuel buildings.

2 ENERGY MODELING RESULTS

2.1 Multifamily Building

The multifamily building modeled is typical of multifamily new construction in the City of Louisville. This design is three stories tall, 42,000 SF, with wood framed walls. The different HVAC system options modeled are:

- Mixed-Fuel options:
  - 1: Packaged terminal heat pumps (9.5 EER and 2.9 COP)
    - Ventilation provided through the unit
    - 95% efficient natural gas water heaters
    - C406 pathway: Efficient fossil fuel water heater, Reduced lighting power
  - 2: Split DX fan coil units (SEER 14) with combined heating and domestic water heating
    - Ventilation provided by exhaust fans running continuously
    - 95% efficient natural gas water heaters
    - C406 pathway: Efficient fossil fuel water heater, Reduced lighting power
  - 3: Split heat pumps (SEER 14, 9.2 HSPF)
    - Ventilation provided by exhaust fans running continuously
    - 95% efficient natural gas water heaters
    - C406 pathway: Efficient fossil fuel water heater, Reduced lighting power
  - 4: Water source heat pumps (13 EER, 4.3 COP)
    - Supplemental 80% efficient boiler
    - Variable speed cooling tower
    - Ventilation provided by exhaust fans running continuously
    - 95% efficient natural gas water heaters
    - C406 pathway: Efficient fossil fuel water heater, Reduced lighting power
- All-Electric Options:
  - 1: Packaged terminal heat pumps (10.0 EER, 3.2 COP)
    - Ventilation provided by exhaust fans running continuously
    - Heat pump domestic water heater with supplementary electric heat (3.0 UEF)
    - C406 pathway: 5% cooling improvement, 10% heating improvement, reduced lighting power, heat pump water heater
  - 2: Split heat pumps (SEER 14.7, 9.0 HSPF)
    - Ventilation provided by exhaust fans running continuously
    - Heat pump domestic water heater with supplementary electric heat (3.0 UEF)
    - C406 pathway: 5% cooling improvement, 10% heating improvement, reduced lighting power, heat pump water heater
  - 3: Water source heat pumps (13.6 EER, 4.3 COP)
    - Supplemental electric boiler
    - Ventilation provided by exhaust fans running continuously
    - Heat pump domestic water heater with supplementary electric heat (3.0 UEF) with condenser water heat recovery
    - C406 pathway: 5% cooling improvement, 10% heating improvement, reduced lighting power, heat pump water heater

All other inputs to the energy models meet the existing Louisville energy code (2021 IECC with amendments), including insulation and glazing values. The options comply with the code via the prescriptive path, which includes compliance with Section C406. Each design reflects the most cost-effective compliance pathway. All energy

modeling for the multifamily building assumer commercial utility rates – the building is on a master electrical utility meter with submeters serving each unit.

Multifamily - System Type	*Annual Energy Cost*	*First Cost*	*Annual Energy Cost with PV Required for Net Zero Energy*	*First Cost with PV Required for Net Zero Energy*
Mixed Fuel Option1	$40,785	$157,321	$4,329	$1,001,660
Mixed Fuel Option 2	$25,230	$278,321	$8,461	$1,190,470
Mixed Fuel Option 3	$38,038	$267,321	$4,131	$1,024,164
Mixed Fuel Option 4	$27,071	$459,821	$7,578	$1,352,283
All-Electric Option1	$40,383	$135,000	$13,924	$725,600
All-Electric Option 2	$40,601	$245,000	$14,667	$823,897
All-Electric Option 3	$28,431	$437,500	$5,873	$941,024

The first cost analysis for the multifamily building show that the mixed fuel options are similar first costs to the all-electric option due to the electric-ready infrastructure required under the current Louisville energy code.

Our energy modeling results show that the multifamily buildings with gas heating have lower annual energy costs than those that are all-electric. When photovoltaics are considered to make the buildings net zero, however, we found that the all-electric options require less PV and have a positive net present value. This positive net present value is calculated over a period of 20 years, with a 3% energy escalation rate. Each net present value option is evaluated against Mixed Fuel Option 1. A positive net present value means that the investment in the estimated initial construction investment is paid off before the end of the 20-year period.

Multifamily	*PV Size Required for Net Zero Energy (kW)*
Mixed Fuel Option1	338
Mixed Fuel Option 2	365
Mixed Fuel Option 3	303
Mixed Fuel Option 4	357
All-Electric Option1	236
All-Electric Option 2	232

All-Electric Option 3	201

Multifamily	Payback, No PV Included (years)	Payback, Net Zero (years)
Mixed Fuel Option1		
Mixed Fuel Option 2	9	>50
Mixed Fuel Option 3	>50	>50
Mixed Fuel Option 4	37	>50
All-Electric Option1	1	1
All-Electric Option 2	>50	1
All-Electric Option 3	39	1

Another important note is the greenhouse gas emissions created by each system type. Using NREL's Cambium tool, Group14 calculated the hourly greenhouse gas emissions throughout the year based on the average emissions expected in the entire State of Colorado. With Xcel Energy's goal to be 79% carbon neutral by 2035, we expect that the greenhouse gas emissions of these design options will be much lower in 2035, rather than the values shown in our analysis.

Without PV, the mixed fuel options have average emissions of 170,000 lbs CO2 in 2022 as compared to 110,000 lbs CO2 for the all-electric options. In 2035, the average carbon emissions drop to 95,000 lbs CO2 for the mixed fuel options and 67,000 lbs CO2 for the all-electric options.

2.2 Office Building

The office building is a 110,000 SF, 3-story building with metal-framed walls and is 40% glazed. To select the size of this building, we used information from the 2018 CBECS data for the average size of an office building in the mountain west region. The different HVAC options modeled are as follows:

- Mixed-Fuel options:
    - 1: Packaged VAV with hot water reheat (10.3 EER)
        - Condensing boilers (94% efficient)
        - 80% efficient natural gas water heaters
        - C406 pathway: 5% cooling efficiency improvement, reduced lighting power
    - 2: Packaged VAV with gas heat and electric reheat (10.3 EER)
        - 80% efficient natural gas water heater
        - C406 pathway: 5% cooling efficiency improvement, reduced lighting power

    - 3: Four pipe fan coil units
        - Ventilation is provided by a DOAS with gas heat and DX cooling (80% efficient and 9.8 EER, 3.3 COP)
        - Chilled water is provided by air cooled chiller (9.7 FL | 16.1 IPLV)
        - Heating water is provided by 94% efficient central boilers
        - 80% efficient natural gas water heater
        - C406 pathway: Dedicated outdoor air system, reduced lighting power

- All Electric Options:

    - 1: Packaged VAV with heat pump and electric reheat (10.3 EER)
        - Energy recovery ventilation (0.5 effectiveness)
        - Electric water heating
        - C406 pathway: 5% cooling efficiency improvement, reduced lighting power

    - 2: Water source heat pumps (13 EER, 4.3 COP)
        - Condenser water loop is served by variable speed cooling tower and electric boiler
        - Ventilation is provided by a heat pump DOAS (9.8 EER, 3.3 COP)
        - Energy recovery ventilation (0.5 effectiveness)
        - Electric water heating
        - C406 pathway: Dedicated outdoor air system, reduced lighting power

    - 3: Variable refrigerant flow (SEER 13, 7.7 HSPF)
        - Ventilation is provided by a heat pump DOAS (9.8 EER, 3.3 COP)
        - Energy recovery ventilation (0.5 effectiveness)
        - Electric water heating
        - C406 pathway: Dedicated outdoor air system, reduced lighting power

    - 4: Two pipe fan coil units with chilled water cooling and electric heating coils
        - Ventilation is provided by a DOAS with gas heat and DX cooling (80% efficient and 9.8 EER, 3.3 COP) with energy recovery ventilation (0.5 effectiveness)
        - Chilled water is provided by air cooled chiller (9.7 FL | 16.1 IPLV)
        - Electric water heating
        - C406 pathway: Dedicated outdoor air system, reduced lighting power

Our analysis of the different office buildings shows that the annual energy costs of an all-electric office building are comparative to that of a Mixed-Fuel building. Heating energy use in offices is relatively small and is primarily for heating outdoor air for ventilation.

Office - System Type	*Annual Energy Cost*	*First Cost*	*Annual Energy Cost with PV Required for Net Zero Energy*	*First Cost with PV Required for Net Zero Energy*
Mixed Fuel Option 1	$104,604	$2,327,633	$23,730	$4,132,873
Mixed Fuel Option 2	$135,278	$1,786,323	$48,276	$3,728,323
Mixed Fuel Option 3	$95,077	$4,492,873	$8,835	$6,423,932
All-Electric Option 1	$131,993	$1,948,716	$47,442	$3,836,012
All-Electric Option 2	$90,551	$3,789,170	$29,616	$5,149,336
All-Electric Option 3	$94,324	$3,464,384	$30,850	$4,881,224
All-Electric Option 4	$103,660	$4,005,694	$38,960	$5,449,886

The predicted energy use of the modeled office buildings is lower than actual building performance due to how office buildings are operated. Often, building owners will increase the operational hours of their building for cleaning crews or early/late workers, and even operate them 24/7 to maintain a single zone at a prescribed temperature. The analysis assumes a standard 7 AM – 6 PM, Monday through Friday, occupancy schedule. In addition, control settings are often overridden to limit economizer operation and hold the supply air temperature at 50-55 F rather than allowing the supply temperature to reset upwards when the outside air is cooler.

To meet net zero, the photovoltaic systems sizes predicted are too large to fit on the roof of the example building. The buildings would be required to purchase off-site PV to fully offset the building's energy use.

Office	*PV Size Required for Net Zero Energy (kW)*	*Estimated PV Area (SF)*
Mixed Fuel Option 1	722	103,157
Mixed Fuel Option 2	777	110,971
Mixed Fuel Option 3	772	110,346
All-Electric Option 1	755	107,845
All-Electric Option 2	544	77,724
All-Electric Option 3	567	80,962
All-Electric Option 4	578	82,525

The net present value analysis for the office buildings shows that the buildings will not pay back within the expected life of the equipment for most of the options. Each net present value option is evaluated against Mixed Fuel Option 1. The two most cost-effective options, Mixed-Fuel options 1 and 2 without PV, are the cheapest first cost options that were analyzed, as expected. With PV, Mixed Fuel Option 2 and All-Electric Option 1 are more cost-effective than Mixed Fuel Option 1.

Office	Payback, No PV Included (years)	Payback, Net Zero (years)
Mixed Fuel Option 1		
Mixed Fuel Option 2	1	1
Mixed Fuel Option 3	>50	>50
All-Electric Option 1	1	1
All-Electric Option 2	>50	>50
All-Electric Option 3	>50	>50
All-Electric Option 4	>50	>50

The carbon emissions analysis shows that the all-electric designs show much lower emissions than the Mixed-Fuel options. In 2022, the mixed-fuel buildings have an average carbon emissions of 380,000 lbs CO2. In 2035, they have a predicted emissions of 215,000 lbs CO2. The all-electric buildings have an average carbon emissions of 315,000 lbs CO2 in 2022 and 170,000 lbs CO2 in 2035.

2.3 Commercial Development

The commercial development is assumed to be a strip mall with two food service anchors – a café and a quick-service restaurant. The building is 90.000 SF with concrete block walls and is one story. The building size was determined via the 2018 CBECS data for the mountain west region. The different HVAC options modeled are as follows:

- Mixed-Fuel options:
    - 1: Packaged single-zone rooftop units with DX cooling (SEER 14) and gas heat (80% efficient)
        - Café and food service: 80% efficient natural gas water heaters
        - Retail: electric water heating
        - C406 pathway: Reduced lighting power
    - 2: Packaged single-zone rooftop units with heat pump and back-up electric heat (SEER 14, 8.0 HSPF)
        - Café and food service: 80% efficient natural gas water heaters
        - Retail: electric water heating
        - C406 pathway: Reduced lighting power

  - 3: Packaged variable volume single-zone rooftop units with DX cooling (SEER 14) and gas heat (80% efficient)
    - Café and food service: 80% efficient natural gas water heaters
    - Retail: electric water heating
    - C406 pathway: Reduced lighting power

- All-Electric Options:
  - 1: Packaged single-zone rooftop units with heat pump and back-up electric heat (SEER 14, 8.0 HSPF)
    - Energy recovery ventilation (0.5 effectiveness)
    - Electric water heating
    - C406 pathway: Reduced lighting power
  - 2: Packaged single zone rooftop units with heat pump and back-up electric heat (SEER 14, 8.0 HSPF)
    - Energy recovery ventilation (0.5 effectiveness)
    - Electric water heating
    - C406 pathway: Reduced lighting power
  - 3: Water source heat pumps (13 EER, 4.3 COP)
    - Loop is served by electric boiler and variable speed cooling tower
    - Ventilation is provided by a heat pump DOAS (9.8 EER, 3.3 COP) with energy recovery ventilation (0.5 effectiveness)
    - Café and food service: Electric water heating
    - Retail: electric water heating
    - C406 pathway: Reduced lighting power

In the commercial development models, due to the high service water heating and plug load requirements, the annual energy costs of the mixed fuel buildings are, on average, slightly lower than the all-electric energy costs.

Commercial Development - System Type	*Annual Energy Cost*	*First Cost*	*Annual Energy Cost with PV Required for Net Zero Energy*	*First Cost with PV Required for Net Zero Energy*
Mixed Fuel Option 1	$164,492	$570,500	$23,730	$4,923,423
Mixed Fuel Option 2	$182,683	$456,000	$48,276	$4,366,330
Mixed Fuel Option 3	$158,096	$630,500	$8,835	$4,545,393
All-Electric Option 1	$193,161	$660,000	$47,442	$4,282,873
All-Electric Option 2	$185,053	$708,000	$29,616	$4,130,109
All-Electric Option 3	$156,491	$3,167,500	$30,850	$6,060,323

The high internal loads drive up the amount of PV energy required to make the building net zero energy. The predicted size of the PV systems will not fit on the roof of the building off-site PV would need to be purchased to achieve net zero energy.

Commercial Development	*PV Size Required for Net Zero Energy (kW)*	*Estimated PV Area (SF)*
Mixed Fuel Option 1	1741	248,738
Mixed Fuel Option 2	1564	223,447
Mixed Fuel Option 3	1566	223,708
All-Electric Option 1	1449	207,021
All-Electric Option 2	1369	195,549
All-Electric Option 3	1157	165,304

While the net present value of the options without renewables is mostly negative, the net present value of the designs including renewables is mostly positive. Each net present value option is evaluated against Mixed Fuel Option 1. This assumes that the building will be paid for all of the electricity generated by the PV. However, as noted, the buildings do not have space for all of the onsite solar. Systems of this size are not often available in community solar gardens. With Xcel Energy's goal of net zero energy production by 2035, the requirement for photovoltaics to offset energy use would be greatly reduced in the coming years, as the electricity provided to these buildings moves closer to meeting the net zero carbon emissions goal.

Commercial Development	Payback, No PV Included (years)	Payback, Net Zero (years)
Mixed Fuel Option 1		
Mixed Fuel Option 2	1	1
Mixed Fuel Option 3	12	1
All-Electric Option 1	>50	1
All-Electric Option 2	>50	1
All-Electric Option 3	>50	>50

The carbon emissions analysis, like those above, show that carbon emissions for the all-electric buildings are much lower than those of the mixed fuel buildings. This is due to the high amount of service water required by the food service tenants. The average emissions for a mixed-fuel retail building in 2022 is 850,000 lbs C02. In 2035,

the mixed-fuel buildings are expected to have an average emissions of 470,000 lbs CO2. The all-electric design options have an expected average emissions of 680,000 lbs CO2 in 2022 and 380,000 lbs C02 in 2035.

2.4 Single-Family Home

The single-family home is a 2,820 SF 2-story home with a finished basement. The different HVAC options modeled are as follows:

- Mixed-Fuel options:
  - 1: 96% efficient gas furnace with SEER 16 split DX cooling
    - 0.92 UEF water heater
  - 2: Split heat pump with back-up gas heat (SEER 16, HSPF 10, 96% efficient gas back-up)
    - 0.92 UEF water heater
- All Electric Options:
  - 1: Split heat pump with back-up gas heat (SEER 16, HSPF 10, 96% efficient gas back-up)
    - 3.0 UEF heat pump water heater with supplementary electric resistance heat
  - 2: Ground source heat pump (18 EER, 3.7 COP)
    - 3.0 UEF heat pump water heater with supplementary electric resistance heat
- Appendix RC Options
  - Mixed Fuel Option: 96% efficient furnace with SEER 21 cooling
    - 0.94 UEF water heater
  - All-Electric Option: Cold climate heat pump
    - 3.48 UEF heat pump water heater

In our analysis of the single-family home options, we found that the annual energy costs of the all-electric homes are only slightly higher than the lowest cost option. This is due to the highly efficient and cost-effective all-electric design options available to residential consumers. The design options compliant with Appendix RC have the lowest annual energy costs.

Single-Family Home - System Type	*Annual Energy Cost*	*First Cost*	*Annual Energy Cost with PV Required for Net Zero Energy*	*First Cost with PV Required for Net Zero Energy*
Mixed Fuel Option 1	$2,375	$4,040	$386	$51,775
Mixed Fuel Option 2	$2,388	$4,540	$371	$51,135
All-Electric Option 1	$2,511	$3,255	$966	$37,738
All-Electric Option 2	$2,026	$22,405	$807	$49,621

Mixed Fuel Option - Appendix RC	$1,946	19805	$302	$61,128
All-Electric Option - Appendix RC	$1,795	21750	$519	$50,249

The PV system sizes required for each option are shown below. The all-electric options require the smallest PV sizes to reach net zero energy. The mixed-fuel system options and the Appendix RC compliant mixed-fuel system option require a much larger PV size when compared to the all-electric system options.

Single-Family Home	*PV Size Required for Net Zero Energy (kW)*
Mixed Fuel Option 1	19
Mixed Fuel Option 2	19
All-Electric Option 1	14
All-Electric Option 2	11
Mixed Fuel Option - Appendix RC	17
All-Electric Option - Appendix RC	11

To achieve net zero energy, the PV will only fit on a home that has optimal sun exposure and a large enough roof to fit the PV. This will not be feasible on most homes, which will require enrollment in a community solar program to meet the net zero requirement. COSSA has stated that there will be enough community solar available for homeowners in the City of Louisville. The cost of community solar will not increase utility bills or have an enrollment cost.

Single-Family Home	Payback, No PV Included (years)	Payback, Net Zero (years)
Mixed Fuel Option 1		
Mixed Fuel Option 2	>50	1
All-Electric Option 1	1	1
All-Electric Option 2	>50	1
Mixed Fuel Option - Appendix RC	>50	>50

All-Electric Option - Appendix RC	>50	1

The net present value analysis shows that most of the options have a negative net present value without on-site PV. Each net present value option is evaluated against Mixed Fuel Option 1. This means that the systems will not pay back within the system life span, mainly due to the high cost of electricity in comparison to the mixed fuel baseline. When on-site PV is added, however, the net present values become positive, meaning they will pay back before the end of the 20-year analysis period.

Consistent with the analysis above, the carbon emissions of the all-electric options have much lower greenhouse gas emissions than the Mixed-Fuel options. The design option compliant with Appendix RC that has natural gas use has more carbon emissions than the all-electric new construction options that do not comply with Appendix RC. The average carbon emissions of the mixed-fuel options is 9,000 lbs CO2 in 2022 and 5,000 lbs CO2 in 2035. The all-electric options have an estimated average carbon emissions of 6,000 lbs CO2 in 2022 and 3,500 lbs in 2035.

3 POLICY CONSIDERATIONS

Across the country, from Seattle to Boston, cities are establishing building energy codes to reduce carbon emissions for new construction. The City of Louisville has a goal to create a new construction energy code that will set them on a path towards net zero energy buildings. Louisville's current amendments to the 2021 IECC require some additional energy savings and all-electric ready construction items:

Commercial New Construction

- Increased insulation levels
- Increased fenestration efficiency requirements
- Increased HVAC efficiency
- Electric vehicle charging and infrastructure
- Electric-ready wherever gas appliances are installed
- Solar-ready zone required

Residential New Construction

- Increased insulation levels
- Increased ductwork and piping insulation requirements
- Mandatory heat recovery
- Electric vehicle charging and infrastructure
- Electric-ready wherever gas appliances are installed
- Net zero Appendix RC required

To further increase the energy savings and carbon reduction potential of Louisville's energy code, this report discusses different advanced energy codes across the country and makes recommendations on the future cycles of Louisville's energy code development.

Background

Throughout California, multiple cities require all-electric new construction. In colder climate zones, such as Boston and New York City, jurisdictions have adopted their states' optional stretch codes. These codes require additional energy savings such as mandatory energy recovery, electric vehicle charging, or in some cases a net zero new construction provision that requires electric-ready new construction.

In Colorado, a new bill (HB 22-1362) recently passed that requires jurisdictions to update their energy code to the 2021 version of the IECC when one or more of their building codes are updated. Beginning in July 2023, jurisdictions will also be required to adopt electric and solar-ready requirements and begin enforcing a low energy and carbon code when one or more of their building codes are updated. This sets a great precedent for increasing the energy efficiency requirements of Louisville's energy code.

In the 2021 IECC, there are two appendices, Appendix CC and RC which require net zero commercial and residential new construction, respectively. Appendix CC gives two options for net zero new construction: 1- for buildings complying with the prescriptive pathway energy use intensities are established for each building type and must be offset by either on-site or off-site renewables, or 2- for buildings complying with the performance pathway, they must offset their predicted energy use shown by an energy model with on-site or off-site renewables. Appendix RC, which is currently adopted by the City of Louisville, requires that new construction homes have an ERI rating of 47 or less and the predicted energy use must be offset by on-site or off-site renewables.

Another code to consider in this discussion is Boulder's energy code. In this code, buildings with an estimated construction cost of $500,000 or greater are required to comply with the performance path. This path prescribes maximum Energy Use Intensities (EUIs) that the building design must meet, shown through an energy model. After construction, building owners must reserve funds in escrow to cover the cost to reduce the building's energy use if the building does not meet the maximum allowed EUI.

In addition to these existing codes, there are amendments to the 2024 IECC that have passed preliminary committee approval which will further increase the energy savings of the base code. The all-electric-ready new construction amendment requires that anytime a natural gas appliance will be installed that appropriately sized electric infrastructure will be installed to accommodate a future electrical appliance. The on-site renewable energy amendment will require 0.75 W/sf gross floor area, not to exceed the combined gross conditioned floor area of the three largest floors on all new-construction commercial buildings. These addendums to the 2024 IECC will reduce the carbon emissions of new construction buildings and will encourage all-electric new construction. The IECC will continue to push towards net zero new construction with each code cycle, which will provide a framework for jurisdictions also hoping to require net zero new construction.

There are hurdles to providing all-electric new construction for commercial buildings. In comparison to all-electric space heating and domestic water heating, annual heating costs with natural gas are lower. In Louisville's climate specifically, we find that heat pump systems will have to utilize electric resistance heating during very cold times, further driving up annual energy costs. Additionally, demand response controls for reducing peak energy use and costs are not yet widely supported by Xcel Energy in large commercial buildings. We expect that this hurdle will be overcome in the coming years.

In addition to these climate and utility hurdles, we have found that industrial, laboratory, and manufacturing buildings all have systems that currently cannot be electrified. In Louisville there are major food, machinery, and plastics manufacturers, with specialized processes that use natural gas and cannot currently be replicated with electricity. In the energy codes discussed above, these processes are exempt from the electrification requirement, including the all-electric ready new construction requirement.

Resiliency is another factor to consider in this decision-making process. The Marshall Fire has highlighted concerns on how to make sure Louisville is a safe, resilient place to live and work. Through the energy codes, resiliency can be increased by requiring on-site solar and peak shifting controls to reduce demand and therefore peak loads on the grid.

Considerations

For the City of Louisville, we are recommending three different pathways for commercial energy code adoption:

- Option 1: Require all-electric-ready new construction as an addendum to the 2021 IECC, with on-site or off-site PV required to match the 2024 IECC on-site renewable amendment.
- Option 2: Require projects above a certain construction cost (or size) to meet a maximum-allowed EUI that is low enough that an all-electric design will comply more easily than a Mixed-Fuel building. Provide a prescriptive pathway that requires an equivalent amount of energy efficiency as the performance pathway. All new construction will be required to be electric-ready.
- Option 3: Require all-electric ready, net-zero new construction for all buildings and utilize Appendix CC from the 2021 IECC for buildings that do not pursue the performance path for compliance.
- Option 3B: Require all-electric net zero new construction for all buildings and utilize Appendix CC from the 2021 IECC for buildings that do not pursue the performance path for compliance.

For residential energy code adoption, Louisville has already adopted Appendix RC as a mandatory measure for all new construction buildings. Our recommendation is to amend Appendix RC to allow HERS ratings in lieu of ERI scores. This appendix maintains that buildings can comply with the code with or without natural gas; however, the appendix greatly incentivizes all-electric new construction to meet the energy scores calculated during design. Appendix RC also requires homes to offset their energy use with on-site or off-site renewables.

Discussion

Option 1

This option, seen as the least stringent of the three policies listed above, also requires the least number of amendments for the City of Louisville. This simple code can easily be automatically updated as each new version of the IECC is released.

This code would have the following main items:

- 2021 IECC adopted as the base code (currently adopted in Louisville)
- Electric vehicle charging and electric vehicle ready spaces amended (currently adopted in Louisville)
- All-electric or all-electric ready construction required (currently adopted in Louisville)
- On-site or off-site PV required to match the amendment to the 2024 IECC, alternatively, PV could be provided as required to offset any carbon emissions by natural gas systems used on site.
- Automatic update to the newest version of the IECC upon release

There are many benefits to this code pathway – primarily that the energy code for Louisville will continue to be updated as the code is updated. This also allows for engineers, architects, and building owners to navigate code updates and expectations.

Option 2

In this option, Louisville would use the City of Boulder's Energy Code as a framework for their efficiency code. Boulder's code has additional energy efficiency requirements above the 2018 IECC base code and is estimated to provide 20% additional energy efficiency. The additional energy savings are through mandatory and prescriptive compliance items such as:

- Air barrier testing
- Additional insulation levels
- Additional HVAC controls
- Reduced lighting power densities and additional lighting controls
- Electric vehicle charging
- Solar-ready zone
- Site energy Use Intensity (EUI) targets for the performance pathway

There are many benefits to aligning Louisville's energy code with the City of Boulder. Firstly, creating a unified energy code throughout the area would be beneficial for potential building owners and developers. A consistent energy code will set expectations and establish cost estimates and investments for new construction in the region. In addition, the EUI approach simplifies performance modeling by eliminating a baseline model to compare to.

If Louisville wishes to create a similar code based on the 2021 IECC, analysis could be performed to customize a set of EUIs for performance compliance. City of Boulder mandatory measures could be adopted along with additional mandatory measures, including:

Electric vehicle charging and electric vehicle ready spaces amended (currently adopted in Louisville)

All-electric or all-electric ready construction required (currently adopted in Louisville)

Along with this approach, all-electric buildings could be provided with a simpler path to code compliance and mixed-fuel buildings could require additional energy savings to above the base code to show compliance. For example, an all-electric building would solely have to meet the mandatory requirements in the base code,

however a mixed-fuel building would have to show 10% additional energy savings above the base code. This encourages designers and owners to build all-electric buildings without requiring all-electric new construction for all buildings.

The code maximum EUIs would be difficult to achieve via a Mixed-Fuel building and easier to meet for an all-electric building. As seen in our energy modeling results, the all-electric buildings that comply with Louisville's current energy code have lower energy use intensities than their mixed-use equivalents.

In this pathway, industrial and laboratory occupancies would use a traditional performance modeling compliance pathway and show energy savings. This allows industrial and laboratory occupancies to exclude process energy use from the energy savings calculation, including those processes that utilize natural gas. This results in energy-efficient envelope, lighting and HVAC systems having to offset increased heating and cooling loads from the process equipment.

In addition to this pathway, we recommend that on-site PV is incentivized by Louisville for buildings where PV is best suited, for example buildings with large, open roof spaces and sites that are optimized for solar production. Xcel Energy is targeting 2035 for zero carbon electricity production. There are benefits to buildings with on-site photovoltaics; however, utility-scale photovoltaics are generally better maintained than smaller systems.

Option 3

Under this option, Appendix CC of the 2021 IECC would be made mandatory for new construction commercial buildings. This appendix requires that buildings complying prescriptively provide a set amount of photovoltaics to offset their building's energy use based on their occupancy type. Performance compliance pathways are required to offset their building's estimated energy use shown through an energy model. This net zero requirement can be met through on-site or off-site photovoltaics.

The benefit to this pathway is that the Appendix will continue to be updated to be more effective at each iteration of code amendments at the national level until, hopefully, it is codified in the energy code. While this pathway is the most energy efficient and effective at reducing operational carbon, net zero construction has the highest first cost of all three pathways. The pathway also needs a post-construction performance assessment, such as benchmarking, to confirm net-zero achievement.

Option 3B

Under this option, Appendix CC of the 2021 IECC would be mandatory, with an additional requirement for all-electric new construction. No combustion systems would be allowed, except for the following occupancy types:

- Industrial
- Laboratories
- Manufacturing

In these building types, HVAC and plumbing systems would be required to be all-electric, however processes requiring natural gas would not be. For example, a steam industrial process that requires a large amount of steam would not be required to be electrified.

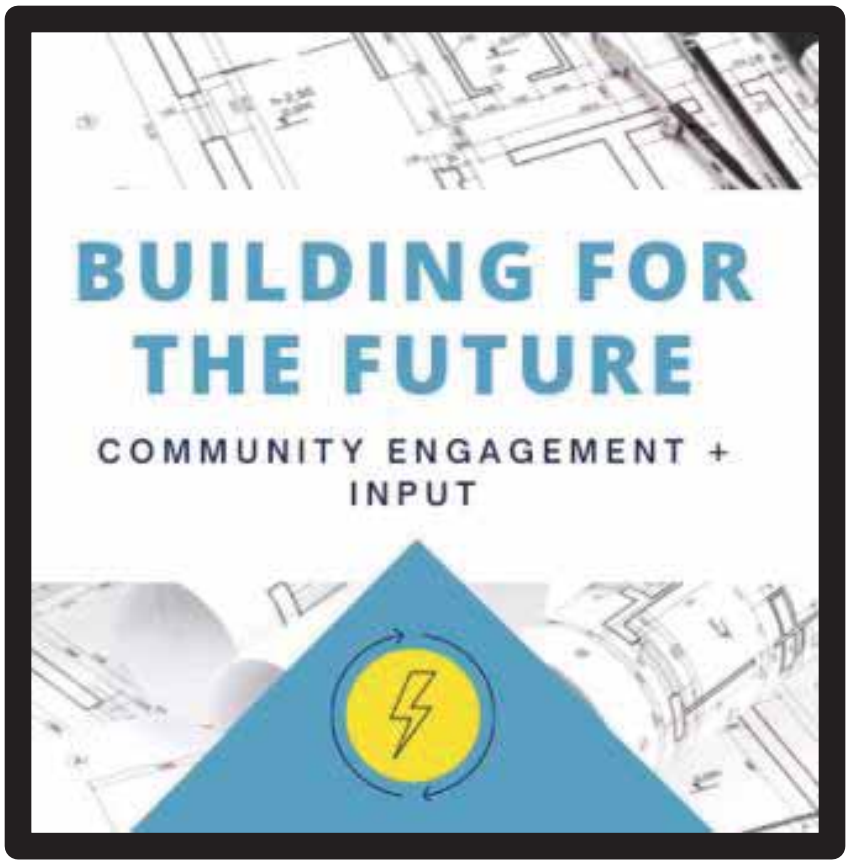
Future Work

Based on the desired pathway that City Council selects for their energy code, future work will include development of a set of mandatory, prescriptive, and performance measures to ensure that each pathway provides equivalent levels of energy efficiency requirements. Additional work is needed to ensure that resiliency considerations are made for renewable energy systems required, including battery back-up for both peak shifting and emergency power when possible. Any prescriptive pathway set by the city should encourage all-electric new construction and reduce use of natural gas.

4 CONCLUSION

The City of Louisville goals to reduce energy use and greenhouse gas emissions are important steps in addressing our climate crisis. Louisville relies on Xcel Energy for their electricity. Xcel Energy's goal to deliver carbon-free electricity by 2035 is realistic and results in Louisville having access to much cleaner power than the power provided to the rest of the state. Our recommendation is to leverage Xcel Energy's goal to deliver carbon-free electricity by 2035, and focus the energy code on energy efficiency, all-electric buildings, and renewables to offset gas use.

Louisville is surrounded by other counties that also have goals to reduce emissions and increase the efficiency required by the energy code. Creating an energy code that is similar and consistent across the region lets business developers and homeowners know what to expect when looking for a place to build, and helps contractors and engineers find the most cost-effective and energy efficient ways to meet the code. This will improve the efficiency of commercial and residential buildings across the region and encourage designers to find the most cost-effective solutions to the code.



City of Louisville Energy Code Update

Public Engagement Summary

August 2022

LOTUS Engineering & Sustainability

City of Louisville

Background

In 2021, the City of Louisville adopted the 2021 International Energy Conservation Code (IECC) with specific amendments that included more stringent efficiency requirements, and a requirement for electric-readiness and EV-readiness for all new construction. The City also adopted the Zero Energy Appendix (Appendix RC) that requires net zero energy construction for all new single-family homes in the City.

Now, the City is considering additional code options that would encourage higher efficiency, net zero, and/or all electric for multi-family and commercial new construction. Energy modeling was conducted to evaluate the City's current energy codes and other code development options. The modeling also investigated the up-front cost, annual cost, and lifetime cost of building to the new potential standards.

Public input is critical to the investigation and development of these new multi-family and commercial code options. Code changes impact multiple sectors of the community, from building developers to businesses to tenants and homeowners. City staff engaged the broader public through an online survey and two community meetings. In addition, the City staff engaged with two of the City's boards, the Louisville Sustainability Advisory Board, and the Building Code Board of Appeals, to present code options for feedback. The feedback received from this outreach will support City staff in identifying unforeseen barriers or challenges with new building code policy and will help inform where the opportunity is to drive more efficiency and climate protection in the building code.

City of Louisville Energy Code Update Public Engagement Survey

Survey Methodology

The survey questions were designed with the goal of capturing feedback and assessing support levels for potential code options for the Louisville community, as well as to gain an understanding of the perceived impacts of the code update. This was gathered through a combination of multiple choice and open-ended response questions. The open-ended questions were included to give respondents sufficient opportunity to provide comments. Demographics information was collected to understand what sectors and communities responded to the survey, and which might require additional outreach. Choice logic was used to tailor questions to three main groups: Group 1, Building Owners/Developers, Group 2, Business and Tradespersons, and Group 3, Residential. The survey was designed using SurveyMonkey software and was distributed via publication on the EngageLouisville

website, email listservs, and advertised during the two community meetings. The survey was open from June 27, 2022 to August 5, 2022.

Results of the survey were analyzed to find and remove duplicate responses and to determine whether incomplete responses should be included. Multiple choice question results were summarized and converted into sector-specific charts. Open-ended responses were categorized and summarized.

SURVEY RESULTS

Key Takeaways	
The survey had a total of 206 responses. *Note: the total number of answers per question may vary from the total number of respondents due to incomplete surveys.*	
Nearly ¾ of survey takers were homeowners, with the remaining ¼ representing building owners and industry professionals.	
Generally, survey takers tended to lean toward opposing each of the code policy considerations. However, the number of survey takers who supported each of the code policy considerations was still significant.	
Survey takers perceived the largest barriers to energy code updates to be additional cost burdens and creating a hostile environment for businesses.	
Survey takers saw the largest benefits to energy code updates to be greenhouse gas reductions and public health improvements (i.e., air quality).	
Survey takers expressed themselves in a wide variety of open responses. Some expressed staunch support for code updates, others expressed staunch opposition. A few of these comments are highlighted below.	
Example responses from those opposing the energy code updates:	Example responses from those supporting the energy code updates:
"Louisville is already not attracting new businesses like surrounding communities are. I want a vibrant economy here and I want to help businesses, not create barriers."	"If we work together (industry and government) to GREATLY reduce the GHG emissions of homes and buildings in the Denver metropolitan area, then we have addressed one of the largest sectors of emissions in CO. This would give upcoming generations a foothold to fight the omnipresent climate crisis. We must invest NOW to help future generations, it's not about us."

"Cost. I am supportive of #'s 21-24, but I think the considerations need a very careful approach with financial implications well laid out in either case studies or similar programs in the U.S. Its tough to for a smaller town, like Louisville, to be on the bleeding edge of the change without a City like Denver helping to lead the way."	"Commercial buildings consume large quantities of power - often 24/7. Since they consume large amounts of power, addressing their electricity consumption should have a real benefit from a climate change perspective."
"1) Addressing climate change while promoting economic development is a prime concern. 2) However, many people will not be able to afford the upgrades!"	"While the impacts to the environment are obvious, I think what these codes can represent is the start of a workforce that is trained in building to higher standards. Codes like these are the future of buildings and it has to start somewhere, so let's start that here!"

DEMOGRAPHICS

The survey asked for race/ethnicity, sector represented, and whether the respondent lives and/or works in the City of Louisville.

RACE/ETHNICITY

- White (83%)
- Hispanic or Latino (3%)
- Multiracial or Biracial (2%)
- Native American or Alaskan Native (1%)
- Asian or Pacific Islander (1%).
- The remaining were write-in responses with many failing to specify.

90% of survey respondents live in Louisville and 42% of respondents work in Louisville.

Most survey respondents were homeowners (74%). The breakdown of the remaining sectors is illustrated in Figure 1. Sector selection determined which questions the respondent would receive. Building Owner and Building Developer selectors were placed in the Building Owner/Developer Group. Business Owner / Manager, Energy Efficiency Expert, Engineer, Architect, or Designer, General Contractor, and Other business were placed in the Business and Tradespersons Group. Those who selected Home Owner,

Affordable Housing Representative, or Residential Tenant or Occupant were placed in the Residential Group.

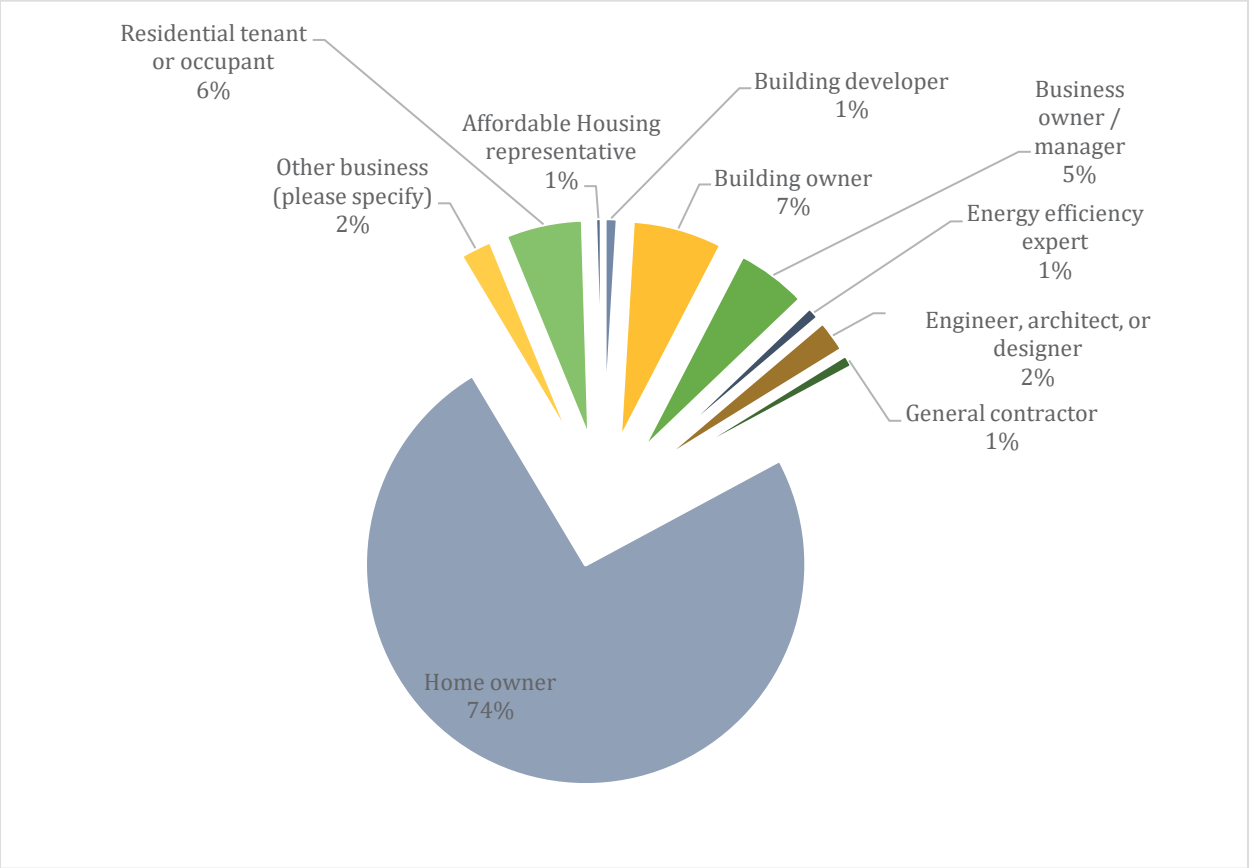


Figure 1: Breakdown of sectors represented in online survey.

Summary of Survey Results from All Groups

Important Considerations for Adopting Code Updates

What's the most important consideration for the City in adopting stricter energy codes for residential and commercial construction?

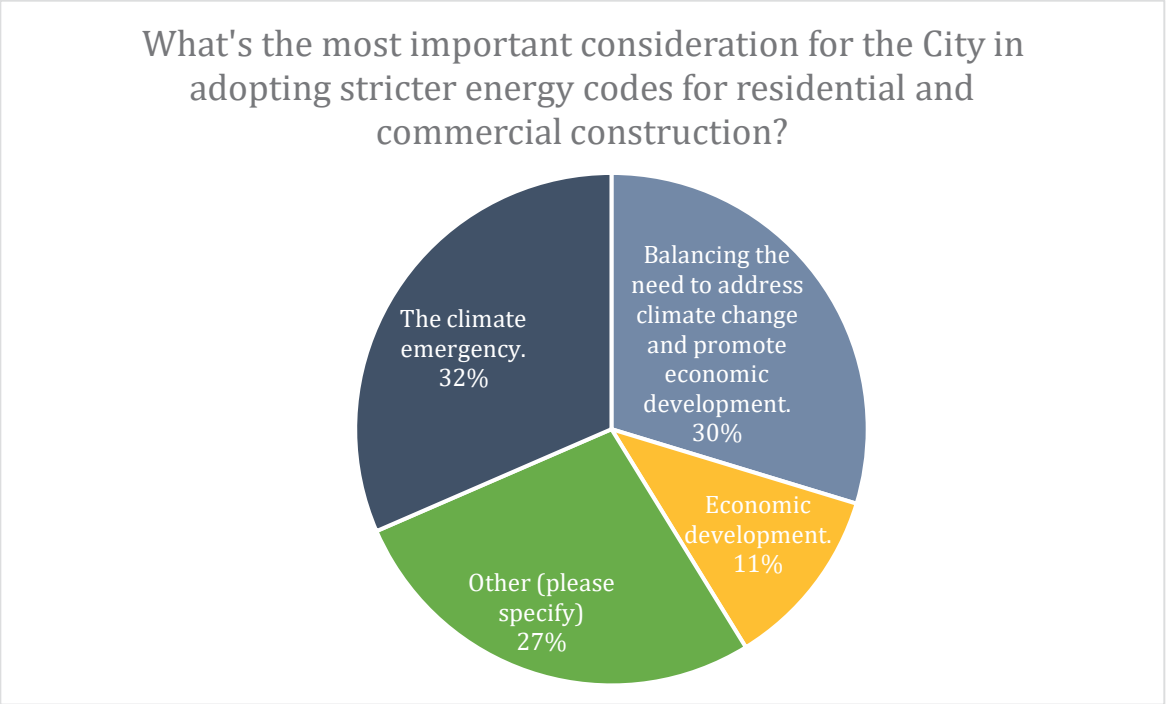


Figure 2: Percentage breakdown of answers for important considerations for stricter energy code.

To evaluate how survey respondents' values may influence their support of code updates or other sustainability measures, the survey asked respondents "What's the most important consideration for the City in adopting stricter energy codes for residential and commercial construction?" See Figure 2 for a breakdown of the results.

'Other' answers included responses expressing the need for cost/benefit analyses, desires for less government interference, and cost concerns. (See Appendix A for open-ended responses.)

Support for Code Considerations

Survey takers were given questions describing potential City code considerations and asked to indicate their level of support via a 3-point Likert scale ranging from opposition to full support, with a fourth answer choice allowing respondents to indicate if they need more information to decide. Results are illustrated in Figures 3-6.

HOW SUPPORTIVE WOULD YOU BE OF INCLUDING A MINIMUM ENERGY OFFSET REQUIREMENT IN ADDITION TO THE 2021 CODE, WHICH WOULD REQUIRE ON-SITE OR OFF-SITE SOLAR?

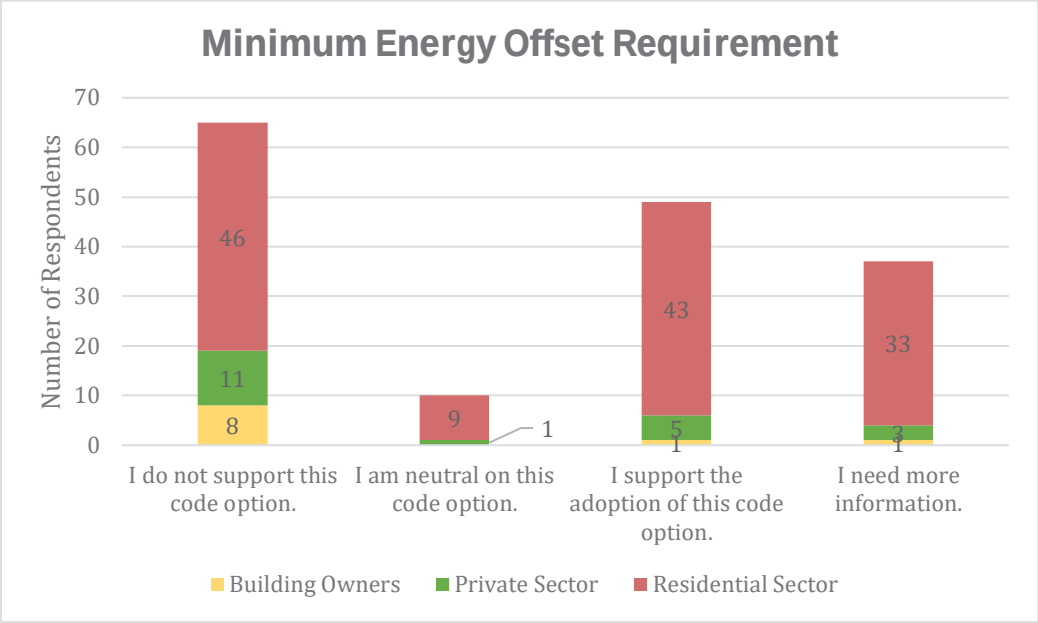


Figure 3: All sector levels of support for Minimum Energy Offset code option.

HOW SUPPORTIVE WOULD YOU BE IF THE CITY WERE TO CONSIDER AN ALL-ELECTRIC REQUIREMENT FOR NEW COMMERCIAL CONSTRUCTION CODE IF INDUSTRIAL PROCESSES WERE EXEMPT?

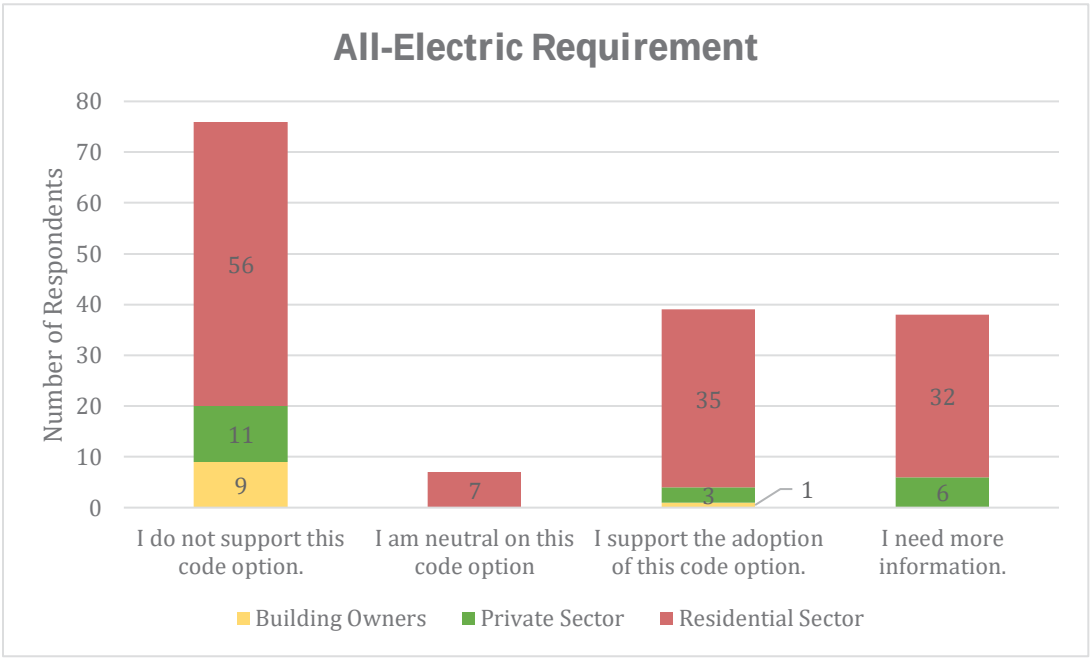


Figure 4: All sector levels of support for All-Electric Requirement code option.

HOW SUPPORTIVE WOULD YOU BE IF THE CITY WERE TO CONSIDER AN ENERGY CODE THAT REQUIRED A 20% REDUCTION IN ENERGY USE FROM THE 2021 ENERGY CODE FOR COMMERCIAL CONSTRUCTION?

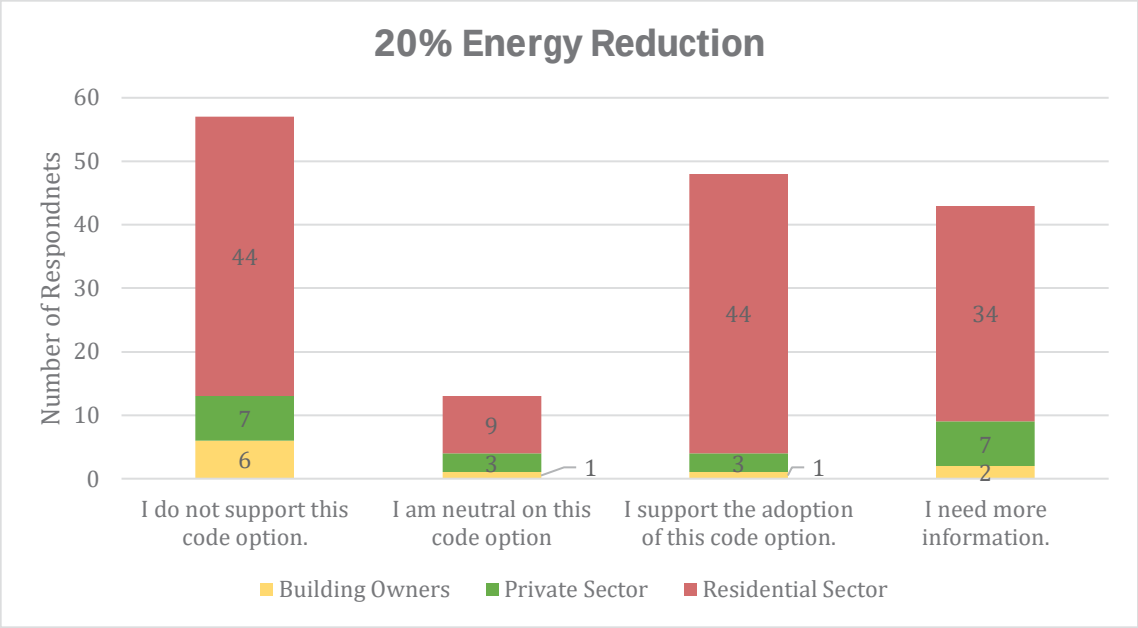


Figure 5: All sector levels of support for 20% Energy Reduction code option.

HOW SUPPORTIVE WOULD YOU BE IF THE CITY WERE TO CONSIDER A COMMERCIAL ENERGY CODE THAT REQUIRED NET ZERO ENERGY THROUGH EFFICIENCY AND ONSITE/OFF-SITE RENEWABLE ENERGY?

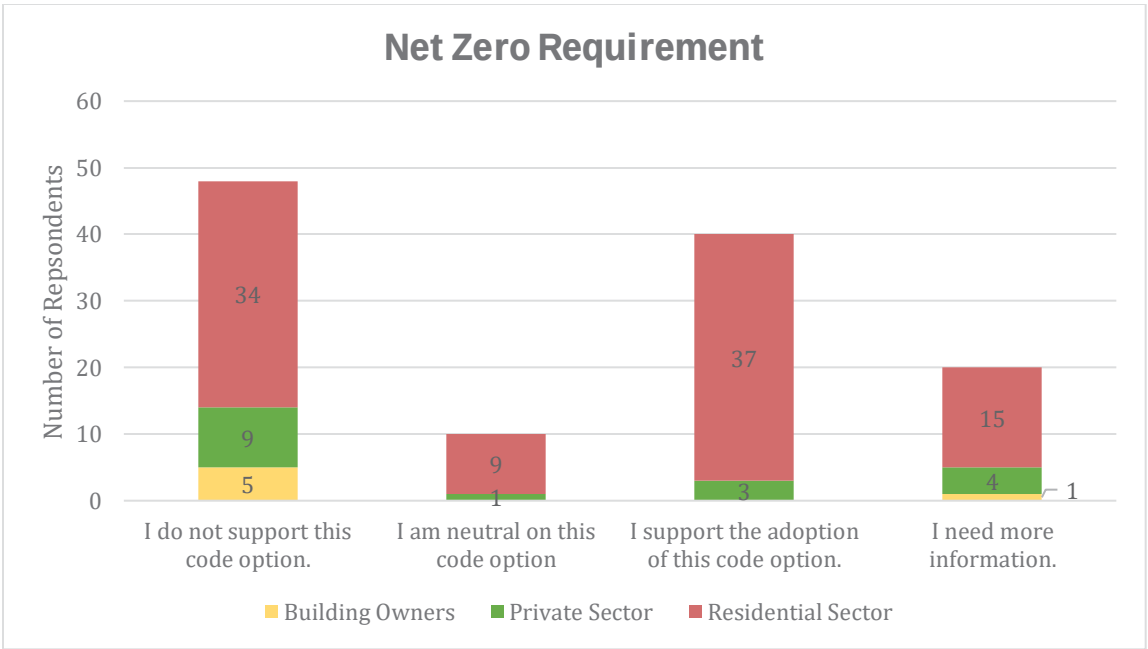


Figure 6: All sector levels of support for Net Zero code option.

Barriers and Benefits

The survey asked open-ended questions to assess what respondents' perceived barriers and benefits were to the code considerations presented to them. The following provides a summary of the open-response comments received in the survey.

Summarized Barriers:

- Cost burdens for builders and tenants alike.
- The code considerations will make the City of Louisville a hostile environment for businesses.
- Residents and builders have a lack of knowledge and education regarding the benefits of code upgrades.

Summarized Benefits:

- Cleaner air.
- Clean energy use and greenhouse gas reductions.
- Increased energy efficiency in buildings.

See Appendix A for a complete list of responses.

Equity Considerations

All participants were asked the open-ended question: "Are there any considerations to address equity for low-income residents or disproportionately impacted communities that the City of Louisville should consider for any of the three commercial code scenarios considered above?"

Common themes resulting from survey responses included:

- Ensuring affordable/inclusionary housing is not unduly burdened by cost because of implementing these energy codes.
- Suggestions that the City provide grants and financial mechanisms for those who qualify.

See Appendix A for a complete list of responses.

BUILDING OWNERS & DEVELOPER GROUP RESPONSES

The Building Owner / Developer Group had 16 total responses, however, not everyone answered each question.

One survey taker expressed great enthusiasm and support for energy code upgrades. The rest were at the opposite end of the spectrum, showing opposition to all code considerations.

DOES YOUR COMPANY HAVE SUSTAINABILITY OR CLIMATE RELATED GOALS?

5 respondents have started or are fully implementing sustainability/climate goals at their company, while 6 do not have any goals.

WOULD YOU PREFER ENERGY CODE REQUIREMENTS THAT:

- (Performance approach). Set an energy consumption performance target and allow for flexibility in how a building meets that requirement which can include onsite PV if needed to meet the performance target.
- (Performance + prescriptive approach). Set an energy consumption performance target that specifies an efficiency standards for equipment that must be met and requires mandatory PV on all new buildings.

7 building owners selected the performance approach and 3 selected the performance + prescriptive approach.

SUPPORT FOR CODE CONSIDERATIONS

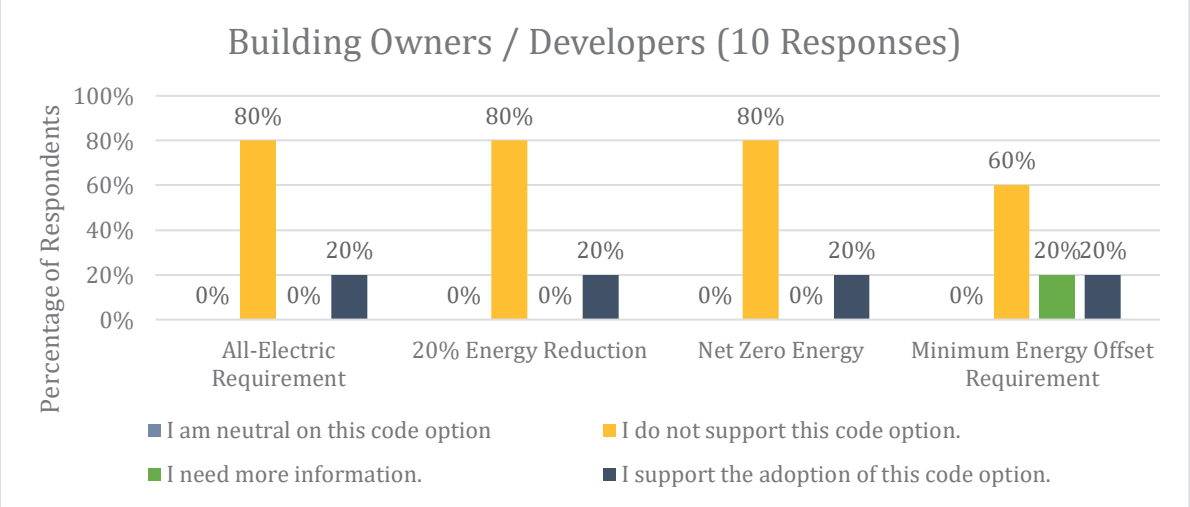


Figure 7: Building Owners / Developers sector levels of support for code options.

Business + Tradespersons Group Responses

The Business + Tradespersons Group had 25 total responses, however, not everyone answered each question.

The survey asked about location of their workspaces.

- 5 own their office/workspace in the City of Louisville.
- 7 rent their office/workspace in the City of Louisville.
- 10 do not have an office/workspace in the City of Louisville.

Does your company have sustainability or climate related goals?

9 respondents do not have sustainability goals, plans, or programs in place. 13 have either begun efforts or have established sustainability plans and/or programs and goals at their company.

Support for Code Considerations

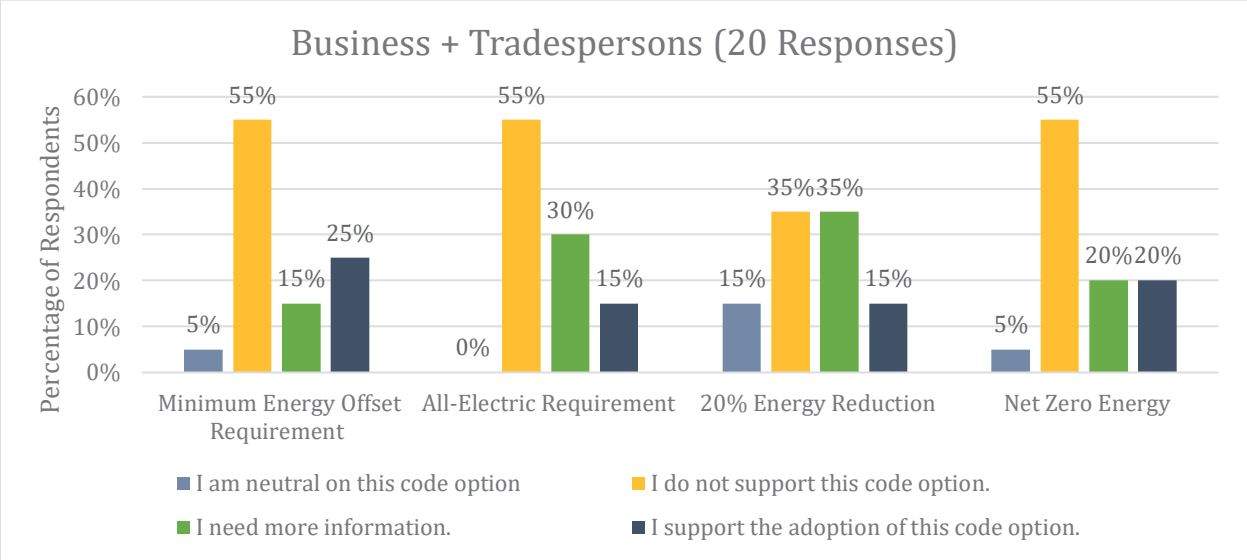


Figure 8: Business + Tradespersons sector levels of support for code options.

Residential Group Responses

The Residential Group had 169 total responses, however, not everyone answered each question.

Outside of the Marshall Fire rebuild efforts, do you plan to build a new home or undergo a major retrofit on your home in the next 1-3 years?

- 31 respondents' homes are part of the Marshall Fire rebuild effort.

- 19 are planning a major retrofit in the next 1-3 years.
- 81 are not planning any major retrofits.

DO YOU CURRENTLY LIVE IN AN ALL-ELECTRIC AND/OR NET ZERO HOME OR HAVE YOU TAKEN STEPS TO START TO ELECTRIFY YOUR HOME?

- 22 respondents are working on electrifying their home.
- 21 are working on making their home net zero.
- 88 are not doing either.

SUPPORT FOR CODE CONSIDERATIONS

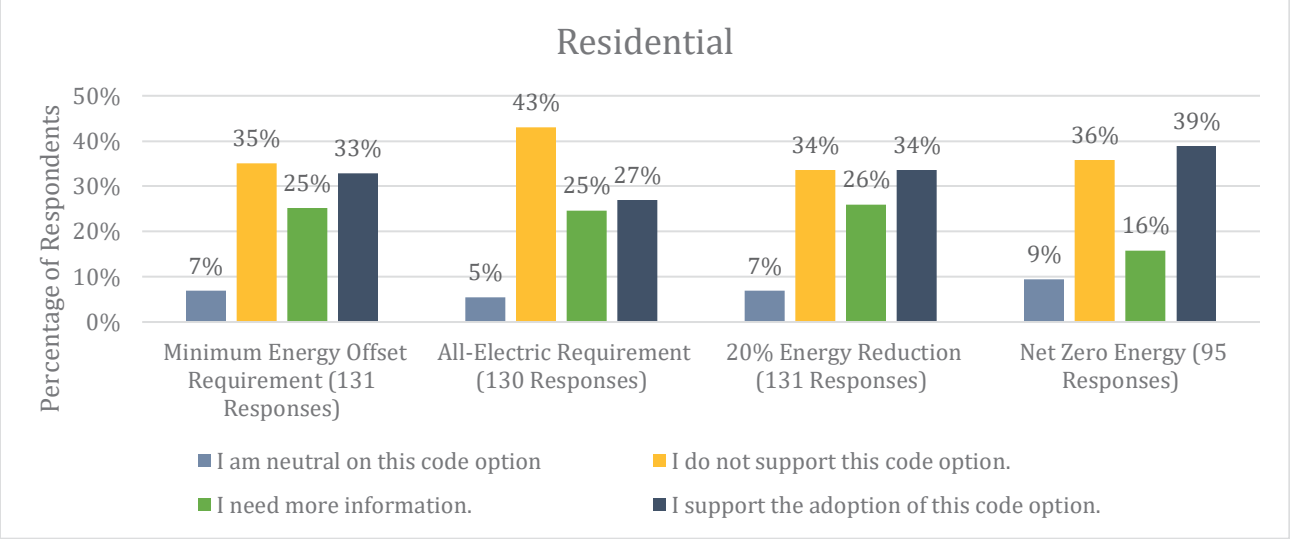


Figure 9: Residential sector levels of support for code options.

Community Meetings

The City of Louisville held two community meetings. The first was June 29th, 2022 from 6:00pm to 8:00pm. The second was July 28th, 2022 from 11:30am to 1:30pm. The meetings were held in open-house format, with a presentation outlining the code modeling and policy considerations, followed by time for participants to ask questions and make comments.

In both meetings, similar concerns to those brought up in the online survey were expressed. Questions and comments included (summarized, not direct quotes):

- Concern that businesses are leaving Louisville.
- Concern about costs imposed by these policy considerations.
- Concern of the electric grid not being able to handle energy code update impacts and Xcel not delivering on their stated renewable energy goals.
- Emphasis on building types that would qualify for exemptions.

- Curiosity and questions about alignment with regional code update efforts.
- A desire for the City to look closely at code for existing buildings.
- Emphasis on pushing energy efficiency before pushing electrification of building systems.
- The City should take its time developing the ordinance, rather than rushing to be a leader in this space. Careful consideration of impacts needs to be made.

Board Meetings

Louisville Sustainability Advisory Board

The energy code update modeling, policy considerations, and preliminary survey results were presented to the Louisville Sustainability Advisory Board (LSAB) Meeting on July 20th, 2022. This was an information session. Throughout the presentation, opportunity was given for board members to comment, as well as the public to give comment during designated public comment periods. Summarized comments and questions included:

- There is a need to push Xcel to implement resiliency measures and redundancy if we are going to electrify our systems.
- How does this project relate to existing buildings?
- Expressed need to emphasize greenhouse gas emissions benefits of the code updates.
- Concern about procuring offsite solar: lack of information available, lack of available offsite solar, and lack of funding to create more offsite solar.
- Exemptions for certain building types from code updates could create a loophole and could hinder Louisville's progress toward sustainability goals.
- How will small businesses be impacted by the code updates?
- There needs to be a scale of options ranging from a code update that is easy, a code update that is balanced, and a code update that is high impact but difficult to implement.

Building Code Board of Appeals

A similar presentation to the one given to LSAB was given to the Louisville Building Code Board of Appeals on July 21st, 2022, also as an information and feedback collection session. Summarized comments and questions included:

- Louisville has limited access to offsite renewable energy.
- Several questions related to the feasibility of limiting commercial energy consumption via Site Energy Use Intensity targets, and how successful City of Boulder's efforts were with energy performance targets.

- Board members sought confirmation that the modeling would apply to building types that exist in the City of Louisville.
- Concern regarding the capability of the electric grid to handle buildings built to stricter commercial energy codes and/or built to be all-electric, and the reliability of Xcel's renewable energy goals.
- Curiosity about other regional code efforts and whether the 2021 IECC has been implemented elsewhere.

Appendix A: Open-ended Responses from Online Survey

**Click the page number in the Table of Contents above to navigate to the open-ended responses for the following questions.*

What is your biggest concern or perceived barrier to the commercial code considerations presented? 15In your opinion, what is the biggest benefit to the commercial code considerations presented? 23Are there any considerations to address equity for low-income residents or disproportionately impacted communities that the City of Louisville should consider for any of the three commercial code scenarios considered above? 33What's the most important consideration for the City in adopting stricter energy codes for residential and commercial construction? 39

WHAT IS YOUR BIGGEST CONCERN OR PERCEIVED BARRIER TO THE COMMERCIAL CODE CONSIDERATIONS PRESENTED?

The impact to current businesses in the market and attracting new businesses as costs to implement such an aggressive code would unfairly impact business - need to be implemented slowly over a long time.
Perception that we cannot afford efficiency improvements and businesses will locate elsewhere.
There needs to be a clear presentation of the cost to builders and potential tenants. Each measure needs a cost and how long it will take to see a return on their investment. In addition what are the incentives for their participation in the plan.
Cost. You put the burden on these companies and they won't build here. That impacts locals who then don't have opportunity to work there. Let the free market do its thing. Companies have to have a good reason to take all the economic risks they do to build. Putting restrictions just makes them go elsewhere.
I think there is a very big loophole for industrial buildings. We need to look more closely at what we could require of industrial builds. I would support natural gas for emergency backup but not for processes.
Cost. We also have quite a few unoccupied buildings
Violation of owners rights to their own property.
The market needs time to process this type of change
Unreasonable cost with no clear benefit Business owners will gk elsewhere
Economic hardships for new businesses
Discouraging busisness development in Louisville.

It may be difficult to guarantee clean-energy sources when weather reduces solar and when commercial operations continue after dark. (Battery storage systems may not be ready to scale up, or may cost too mucy.)
COST vs payback / benefit
I would like to first read comments from the existing commercial business and building owners. We don't want to drive away business. We want to retain and attract business.
We need more businesses in the area. The city will be relying only on homeowners taxes for funding at the rate we are losing businesses.
We need to make the City attractive to potential investors and not become too expensive. That said, Redtail Ridge, because it's an entirely new development at this point, should be held to the highest standards. In addition, I would like to see large parking lots replaced by garages to reduce the amount of pavement and increase natural landscape. Commercial properties need to include charging stations for EVs
Cost and the effect of not considering any balance toward economic development of our city - it's lifeblood.
I am all for lowering emissions and energy efficiency but I believe the cities "net zero" approach is ill advised, expensive and another elitist move that will increase the cost of housing for a minimal real world benefit.
Businesses and developers will fight this tooth and nail
Pushing cost to business owners
Will it keep business away being cost prohibitive?
Cost, added lead time on construction.
Cost
Business leaving and not choosing Louisville to build
Some commercial occupants might have specialized needs that could necessitate gas/ fossil fuels. We will need fossil fuels for decades.
This will increase cost for businesses in Louisville. We have already lost most of our cornerstone businesses to neighboring communities l. This will continue to occur until there are no businesses left if we continue to make it more expensive for them to operate here.
Overreach by the city Government and costs. There is already a huge vacancy of commercial space in Louisville and this would prohibit businesses from moving to Louisville.
Companies will not consider Louisville as viable option for building their business.
Not enough valid, non political info

You are very focused on the wrong thing. There are so many empty buildings in the city... all this will do is raise the construction cost which will raise the rent which means that that we have more buildings to this new code with no value other than sitting empty. There should not be a mandate that should be an option if a developer wants to do it.
Louisville is already driving businesses out.
Fear of costs, fear of regualtions
Ability of small local businesses to absorb costs
Ignorant people
The City already is perceived as business unfriendly.
That it will turn away business from louisville. But we already have so much vacant buildings I am not concerned. They can use those first
Causing businesses to move. Money is the driver for all businesses. Tax incentives, subsidies, or loans may reduce this risk.
Louisville is already not attracting new businesses like surrounding communities are. I want a vibrant economy here and I want to help businesses, not create barriers.
It will make Louisville even less desirable as a place for new commercial buildings.
Inability to recoup costs.
I would be forced out of business
Louisville has already driven large businesses from here, I can't imagine that they will like the new requirement. Why do you think businesses (especially in the building industry) do not want to be in Boulder County and specifically Boulder.
Developers might be entrenched in traditional construction designs and methods
costs, impractical, no impact on climate change
You drive business out of Louisville when you create building requirements that drive the cost of commercial build out so much higher than surrounding cities. We are loosing commerical along the McCaslin corridor left and right. We should be focusing on how to bring companies here rather than giving them another reason to go to Lafayette or Superior.
Think the city needs to focus on sustaining homes and businesses. Not sustainability.
silly government hand outs to companies to reduce their risk to almost negligible for the promise that they'll follow the rules
We believe that it will hurt the economy of Louisville. Costs in construction are at an all time high with the limited supply chain. Adding code that will increase cost will only deter business and residents from moving into Louisville. I also fear that if

businesses need to expand they will look to our neighboring cities that offer lower rent, tax breaks, and less restrictions (lower cost) in construction.
Loss of potential and existing businesses
Potential upfront costs and how that might affect tenants
Increased costs will drive away business
The elimination of businesses using natural gas. This would severely impact many small businesses in Louisville - restaurants, for example.
The city already has an anti-business climate. By issuing more mandates that raise costs it will just drive potential businesses to neighboring communities.
question whether what is considered sustainable today will be supported by facts in the future
Louisville is already seen as being anti-business. Why would we make it harder to attract new businesses?
Cost
A lack of real financial analysis of current cost of future certainty of costs.
Lead times for equipment
Unjustified and will not bring interest to Louisville. These actions will chase more business out.
That the costs will drive businesses away from the city and prevent new businesses from opening.
Driving businesses away. Need to balance the energy requirements with other incentives
Companies wanting to maximize profit.
They are greedy and wanted to do their own way. They will try to bypass this code by saying oh we cannot do this due to lack of technology higher cost or infeasible with current energy needs. Do not give them any incentives because if you do, we the city of Louisville will be on the hook.
Efficiency is great. Will this draw or discourage small businesses? We already have lost many businesses to neighboring communities. Where will the off-sight collectors be placed? What will that do to Open Space? Have long-term health effects been studied? Will more staff need to be hired to regulate and oversee this change? Has research been done to see the actual energy savings?
Business choosing to locate elsewhere
Cost. I am supportive of #'s 21-24, but I think the considerations need a very careful approach with financial implications well laid out in either case studies or similar programs in the U.S. Its tough to for a smaller town, like Louisville, to be on the bleeding edge of the change without a City like Denver helping to lead the way.
Lack of understanding is probably the biggest barrier.

I'd want to know more about upfront costs and whether this was being done in concert with nearby municipalities. I like the requirement to reduce energy use/become more efficient better than any specific code requirement.
N/A, I am unfamiliar with commercial building codes.
I am ignorant of the processes used in commercial buildings that are sufficiently energy intensive to require using gas. That said, I think ASHP or GSHP is the only way to go for both commercial and residential, going forward. If we cannot eliminate gas entirely, we should strive to significantly reduce it where ever possible. Heat Pump technology is sufficiently advanced that heating and cooling can use it effectively. Same for Water heating. In Commercial environments, the time horizons are longer (then some residential), so ROI should be easily achievable.
The fact that there is a lot of commercial tenants moving out of Louisville recently - Kohls, Lowes, Sams Club, etc
If the building envelope is not enhanced even beyond what is proposed. The biggest energy losses in buildings is through a lack of air tightness, then lack of glazing performance and then thermal performance. All three of these areas should be addressed before electrification. By reducing energy loads HVAC and ventilation equipment can be properly sized to meet the lower energy demand and offset costs would be much smaller and easier to manage financially.
Louisville is already business hostile. Look at all the stores leaving town of all sizes. The last thing we need is another barrier.
Just electric requirements aren't enough, we need to be sure that all energy in from renewable sources
Same as residential - lack of contractors with experience
Until the industry knows how to do this, it would likely leave us stuck with old, inefficient buildings for a long time.
Louisville continues do drive businesses out of town. This will accelerate the trend.
Reduction in number of companies wanting to build in Louisville, which means higher costs for new home owners.N/
General opinion: Corporations will always resist increased financial of their operations, regardless of the impact on the environment.
cost
Reduces business opportunities in the city. Drives businesses to surrounding cities.
Top down approach is not good.
I wonder what the specific downsides to this would be.
Too restrictive

Big concern is if higher construction costs will make Louisville less desirable for future commercial growth.
Cost, heavy-handed mandate
Disproportionate impact on small local businesses, who already have a hard time getting off the ground relative to national chains.
businesses moving out elsewhere…
Expense and reduced demand for businesses to locate in Louisville due to cost (energy and rent)
Cost to businesses that could deter them from investment in Louisville.
I need to understand the cost impacts and the impact on businesses deciding to reside in Louisville. What is the balance 'goal' to increase businesses in Louisville especially since our town hasn't had any noticeable growth in years. Especially in the McCaslin corridor. We are falling behind our neighboring towns. If it is now or in the future a result of too many regulations or cost similar to Boulder then it is an economic issue for the town and its tax paying residents that have to pick up the revenue shortage.
Massive extra cost, making the business uncompetitive. Better to operate outside Louisville
I worry that the same thing that happened with the residential code will happen with the commercial code: builders convincing people/companies that it can't be done, or can't be done affordably. Perhaps incentives for builders to get training for building to new standards could help with that (I believe EMU Systems is doing something like this).
Cost
It is none of government's business. You have enough trouble doing what you ARE supposed to do.
State wide adoption and regional cooperation.
People don't want to have to pay more, despite the climate crisis.
Incentivizing companies to go down this path
Added cost for no benefit.
Cost and efficiency for the company
Need more info
Companies will relocate to a cheaper city.
If it's too expensive to operate a business here they will go elsewhere.
It might deter new businesses coming into the city.
Cost
Businesses in Louisville cannot afford to convert to electric. It's best for restaurants to remain on gas. That's how good is made.

Ability for our tenants to operate their businesses.
They would hamstring an already suffering business community and will drive potential new businesses to surrounding communities.
Louisville has already become a more business-hostile environment, and we have a lot of empty commercial space that needs to be addressed. I'd hope the city would pay more attention to fixing this issue instead of possibly making it even more difficult to do business in Louisville.
Businesses will look elsewhere to build. City Council of Louisville would appear to be anti-business.
This will backfire by encouraging businesses to claim false exemptions and go outside the permitting process in order to get their projects completed and online. This will result in a less efficient product then leaving the current code as-is. (Again I'm not even going into the bigger economic risks of being so far ahead of the pack, energy wise)
companies would elect not to be in Louisville
Upfront costs, willingness of commercial businesses to adopt
cost
Cost
Cost of doing business becomes too high; the code is implemented without staging and/or enough advance warning.
No!
Lots of technical details in these code questions. Is the technology realistically available to be aggressive in the commercial code? Much of the commercial buildings are already built. How will these buildings be included in the commercial code? This needs to be considered now. If the new code requirements only apply to new commercial construction, it will be a "feel good" action that doesn't accomplish much except make new commercial impractical.
I think there are others with legitimate needs for gas during the transition to 100% electric . For example, a hospital needs a way to generate power for patients hooked up to oxygen and other life saving equipment. Similarly, people with certain medical conditions may have the legitimate needs. I don't know.
No flexiblity.
Louisville has a lot of empty commercial buildings today. Why would a company whose goal is to make money and stay in business want to pay extra to build or pay extra for monthly bills. Maybe put more effort into water conservation and bringing businesses back to our community

That commercial interests will find a way to get less stringent codes than the residents are required to meet, resulting in the smallest burden being placed on those with the most amount of money.
The cost that will be past down to the buy of goods. There is no free, taxes and fees must be passed on. Everyone is living pay check to pay check, City needs to figure out how to reduce fees and taxes so business come in and pay property tax.
cost to the business; property taxes are already too high
I'm sure they are also concerned about the upfront costs and payback period
May drive business away
Businesses not wanting to do business in Louisville
I have lived in Louisville for 37 years. I have watched Superior, Broomfield, Lafayette and even Erie grow their commercial presence while Louisville continues to lose both retail and non-retail (with the exception fo the Colorado Tech Center). Adding cost burdens that make building -- and operating a business, since those costs have to be passed on to the tenants -- in Louisville even less competitive does not seem like a smart thing to do right now.
Cost, short term
It may drive some wharehouse and pot greenghouse operations outside of the code affected areas (boo-hoo to that) and it may require increases in electrical generation capabilities that would require additional peaker natural gas turbines until alternative electric supplie comes online. In other words it could be short term disruptive to lectrical energy capacity if a large amount of natural gas heating capacity were suddenly required to be all electric resitive heaters. Best to pay outside consultants to model these complex issues before adopting potentially disruptive new codes.
The significant increase in cost to businesses who would move to a more energy friendly city. Louisville could lose a lot of business by these plans.
That the wrong actions are being mandated to really improve our community environment. We have bad air all too often. Minimize commuting. Maximize use of public transportation to enter and leave our business community corridors. Not allowing large commuting populations nor businesses utilizing such into our community. Not allowing any more green spaces to be covered with concrete and asphalt. Having rigidly strict emission standards and elimination of diesel vehicles in our community. Having a zero tolerance and high penalties and fines for idling diesel trucks and vehicles unnecessarily in our community. Encouraging all existing businesses to develop solar panels on their large roof expenses as well as encouraging the same for residents. Creating for provisions that replace solar panels after hail events without having the residents have to pay out of pocket

removal and reinstallation fees. Do not let Xcel energy limit the amount of solar production per resident or per business we should be able to produce all that we want and contribute it to the grid without penalties from Excel energy.
Uncertain; need more information
net zero energy should be mandatory
It could discourage commercial development
None because I believe it will help keep out some of the worst area developers
Additional cost and pollution required by current means of production, which means dirty fuels to produce the amount of electricity you propose.
Driving business away from Louisville
availability of contractors with sufficient expertise
commercial buildings have too many complications. unlike residential, the users are often not the owners. sometimes there are multiple users within on energy meter.

IN YOUR OPINION, WHAT IS THE BIGGEST BENEFIT TO THE COMMERCIAL CODE CONSIDERATIONS PRESENTED?

none, based on the current requirement - it is not feasible with today's technology and can't be afforded.
Climate change action.
If done with attention to detail, it will reduce green house gas emissions. But we need to pay attention to the bottom line. We need to find ways to attract and promote those businesses that are climate change conscious. Offer them ongoing incentives and showcase them as leaders meeting the stated goals.
none. if and when it becomes feasible to build in this way, then companies will naturally do so when the technology is available at affordable costs.
It will be a great foundation for the future--let's not work incrementally on these codes, it's important to get this done.
Way less emissions
Not sure I see a benefit
This could lead to a large drop in carbon-based energy use in the energy-intensive commercial sector.
The 2021 codes continues to improve the energy usage of commercial buildings and is broadly understood and interpreted.
More efficient use of power
Cleaner air
Addressing climate change

Making some individual's in the city management feel like they are saving the world. Unfortunately they are shifting the financial impact to residents.
Reducing Louisville's carbon footprint
Environmental impacts, forward thinking community
I don't see a benefit for businesses.
Energy efficiency
Meeting the agenda of the city is all it's benefiting
Smaller footprint
There are none you are breaking our community.
Climate change impacts
I see no benefit at all
Future of the planet
Environmental impact
The environment, not worrying about the environment being able to support my future possible children
sustainability
Clean energy use. Lower carbon emissions
Be responsible beyond an individual's $.
None
Climate
We have to make these changes but it must provide resilient solutions, particularly in the face of climate change, I am particularly interested in subsidies for on-site or community solar solutions. If the grid has challenges, our proposals should provide resilient solutions.
Investing in the community where your business resides
Virtue signaling.
Commercial buildings likely have a much larger environmental footprint than residential buildings
I think it is a detractor and one of the reasons I sold my business in town.
encouraging companies to blend in with the culture of energy independence
It has the potential to save energy.
Non. I guess the council and mayor can feel like they have made a difference.. when in fact the city is becoming blighted (business). Maybe more efforts should be placed on business retention and promotion for new businesses
Savings in the long-run, plus client support due to the energy saving practices
No benefit, companies will select options that meet their needs at a reasonable cost.

While I'm all for doing all we can to lessen the impact buildings have on the environment, the main cause of global warming is vehicle exhaust. Why is the city not addressing this, rather than considering a code that might severely impact small businesses while failing to address the major causes of global warming.
Marginal impacts on overall climate
energy savings, but the savings must offset actual cost in a reasonable amount of time (5 years)
Don't see one
Incremental improvements are good if done in a more thoughtful way in cooperation with businesses and property owners. Louisville is no longer friendly to homeowers or businesses. This proposal makes that worse.
We have to get to decarbonized buildings & policy is the only way it will happen.
There are none that would justify these actions.
Better energy efficiency for new structures.
It is necessary.
The energy saving being cost effective in both short and long terms.
Saving our planet
Building better buildings.
These proposals sound good in theory. Educating Louisville residents and businesses about what these all mean and how you decided on them would be great. For example, I'm wondering why a 20% reduction? Why not more?
Reduction in overall emissions of GHGs.
N/A, I am unfamiliar with commercial building codes.
N/A for this question. However, perhaps a consideration for luring commercial customers - if they perceive the cost of building too high, they may take a pass on Louisville. They would need to be shown when the ROI is realized.
Stringency. You presented the proposals at a high level (20% reduction, net zero) but there is a lot of information still needed to make any kind of decision on the proposal at this time. How compliance is shown and differences based on building types and end-use.
Creating the conversation around what it means to be energy efficient.
Using renewable energy sources!
A livable planet
Until the industry knows how to do this, it would likely leave us stuck with old, inefficient buildings for a long time.
Should free up parking with lots of empty parking lots.
Need more information
pretty questionable as to any benefit

Makes city leadership appear effective
Let businesses decide for themselves.
lower energy costs and help towards reducing the effects of climate change
Too restrictive
This will reduce the carbon footprint for new-construction commercial properties.
Reducing reliance on fossil fuels and their emissions.
none at this moment
Insulation improvement is ok.
Impact on climate change
I'm all for residential and commercial to build to the latest standards but need to balance against cost and the ability to meet those requirements as they are a moving target (trained installers, rebates, etc)
While the impacts to the environment are obvious, I think what these codes can represent is the start of a workforce that is trained in building to higher standards. Codes like these are the future of buildings and it has to start somewhere, so let's start that here!
If we work together (industry and government) to GREATLY reduce the GHG emissions of homes and buildings in the Denver metropolitan area, then we have addressed one of the largest sectors of emissions in CO. This would give upcoming generations a foothold to fight the omnipresent climate crisis. We must invest NOW to help future generations, it's not about us.
They will help combat global warming and benefit the environment.
Less energy usage, more sustainability
There are none. Again, add incentives for different areas you want to increase.
Unsure, one community is a start but unless the world changes, not sure there is a benefit to justify forcing the cost on business since there are empty buildings here already
Need more info
Greatly reducing or eliminating direct fossil fuel consumption.
Benefit to the climate and setting an example to other communities of what is possible.
Some energy savings
Better for the environment
Zero
The general idea of being more energy efficient.
There would be a marginal benefit to the environment but without wide geographic support, it would be drop in the bucket at the expense of the local business community.

Increased energy efficiency is a really good thing, but it cannot be so expensive that it makes Louisville too expensive a place to do business.
none
Please don't lump me into the "Non-Environmentalist" category, but the answer is none. I think the current IECC without the additional code considerations will make more of an impact than adding additional modifications because you will have greater compliance.
There is no benefit
Environmental impact / Sustainability
Long term benefits
environmental
Climate
Climate change
If they actually have a positive environmental effect, that's good. But I'm concerned that this is just greenwashing.
Nothing!
Addresses climate change. But there are many options to accomplish this including better site design and addressing urban heat island effects. Why were mature trees removed from former Sam's Club parking lot? Actions like these also affect the energy use of existing buildings.
It will make surrounding cities more attractive for commercial investment. That's a benefit, right?
Commercial building consume large quantities of power - often 24/7. Since they consume large amounts of power, addressing their electricity consumption should have a real benefit from a climate change perspective.
Some kind of offset.
Solar is a good option for everyone to help offset carbon at least in the summer with a/c running via electricity. Won't help alot in the winter.
It'll save our planet and keep our home livable.
Business will just go to other places to setup business.
environment
I wonder if there could be a way to requiring commercial entities greater than a certain size to adopt stricter codes. Offer incentives for smaller sized businesses?
Image/marketing
A cleaner environment and help to balance who has to follow the codes
Same as residential... climate friendly, and -- not including the amortized cost of building to the new codes -- potentially less expensive to operate.

Even more important for longer term commercial buildings - should invest the money upfront for longer term payback.
Adopting new all electric codes would potentailly drive out low ccost industry and help a more expensive office and high tech client driven workspace. It would force developers to seek a higher paying end user rather than low cost warehouse space tenants that would likely site their operations along the I25 corridor.
We need to make sure businesses are not causing further environmental harm to our community or our world.
None
You are missing the point when you allow large expanses of concrete and asphalt to be installed, when you allow thousands of cars to enter and leave and traverse the community, when you are not limiting the types of emissions a vehicle such as diesel vehicles and not encouraging more electric vehicles, when you allow Xcel energy to limit the amount of solar production and not reimburse anyone who super produces power, when you don't even consider developing a solar farm in our community but rather have thousands of vehicles bringing in pollution and covering up green space with heat producing buildings in parking lots.
Uncertain; need more information
net zero energy should be mandatory
Climate impact reduction
Louisville will finally be taking real steps to address the global climate emergency
Not at this time. Look into the future with your crystal ball and see when we can have "clean electricity production".
Making sure that the upgrades can be achieved through cost savings that the city can bring.
reduction in greenhouse gas emissions
Louisville would feel good when meeting with other local communities.

What HVAC systems, process loads, other appliances, or specific building types do you think would need to be exempted from the commercial code options presented? (The rationale for exemptions could be prohibitively higher cost to operate, infeasible with current energy needs, technology does not exist, etc.)

all retail and industrial uses need to be exempt - maybe office building is a place to start with it occurring over a long timeframe.
Backup storage and generation where technology is emerging.
Where ever there is a trade off in the profit margin that can not be justified by incentives or tax breaks.

All
I think we need to be careful about making exemptions--with the rate that technology is progressing, it is extremely likely that more accessible paths toward a more stringent commercial code. I don't agree with exempting industrial from the commercial codes in a blanket fashion. Also there needs to be a way to update the requirements as new technology becomes available.
The policy should not be enacted.
Not sure at this point
I don't support the requirement for full electrification for businesses.
Industry specific would be things related to food production. I am sure their are many more industry specific needs for the use of gas.
Tax subsidies, perhaps at the Federal level, to encourage self-sufficiency with solar and newer technologies
This is way too technical a question to pose to residents. Come on.
There should not be exemptions, the law should not have prohibitively higher costs for any resident or business and absolutely should not be based on technology that does not exist.
Heat for industrial processes - no electrical options for some, excessive cost, lower reliability.
I don't know enough about this to offer any informed comment.
We should not adopt this code!
All of them. Let the owner decide.
All should be exempted. Costs in reality are always prohibited. Costs in your studies are always lower than actual. You need to present a realistic costs not just from advocates for net zero.
Backup heat sources for very low temp and emergency backup to electrical heat.
Don't know
Manufacturing, R&D, small business in non-tech sectors
Cooking, industrial uses, backup power.
coffee roasters
ALL of them - this needs to be optional
I don't feel qualified to respond
For new commercial spaces, there should be NO exemptions. All new commercial businesses should adhere to a net zero energy code.
there should be no exemptions based solely on the code affecting the company's profit. that is, if being all electric means their profits are 50% less than if they used gas, that is not a good enough reason for the exemption. i.e., if they are profitable,

but will be more profitable with the exemption, then that would not realize the benefit the code is trying to achieve
Without gas it would be impossible for a restaurant to operate. Electric equipment is nearly double the cost of gas.
the commercial codes are burdensome
Gas fired cooking equipment (restaurants), gas fired boil kettles (breweries), etc. Disallowing the use of natural gas would be infeasible and prohibitively costly to achieve for many small businesses in Louisville.
system requirements that are more stringent than the prevailing local codes in the State of Colorado
I do not support the proposed requirements in any form
Acute healthcare (like new Avista Buildings)
All
Older and historic structures, restaurants and breweries (all use gas appliances).
None, they can afford the requirement changes and should follow the commercial code to the "T". it is not fair to give them exemptions and while we the residents have to suffer.
Are there enough choices in all electric HVAC systems to make this reasonable?
All of the above
Hot water heating, which is currently more difficult through an air-source heat pump due to the larger scale of hot water use in Commercial buildings. Historic Preservation projects should be exempt on some level.
Again, I'd rather see a requirement to build to reduce energy use and emissions to a defined lower level than a requirement to use/not use any particular appliance or technology.
N/A, I am unfamiliar with commercial building codes.
HVAC and water: I think all electric should be used here. Stove: induction has been shown to be a good alternative by chefs, though it takes some getting used to. N/A for other areas. If you leave it to the builder or client to figure out how to be successful, it may not happen. I suggest having some strategies already worked out and available for builders/clients to review/modify.
Not my expertise so cannot say with any kind of knowledge base. I imagine cooking equipment would be one type of equipment. As for HVAC, that can easily be electrified with cold climate heat pump technology.
Frankly, I don't think any building type or industry should be exempt. There are examples all over the world of rec centers, Hostipal, manufacturing buildings, restaurants, etc. already using significantly less energy
None

The city should allow enough gas heat to keep vacant buildings from freezing up in the winter.
All of the above.
Need more information
Business that use natural gas as part of their product or services delivered
I don't recommend adopting the codes in the first place.
I don't know how to answer this question.
As with residential, make these code changes optional vs. mandatory
all of them; make it a choice
RTUs, water heaters, stove.
I don't have enough background to make an informed opinion on this.
ALL
I'm not sure I know enough about commercial building sciences to answer this question at the moment.
technology does not exist
all should be exempt
Let's obtain grants to help industry have the MOST efficient and low GHG emission options available to them! This is essential!
I'm not familiar enough with these to comment.
depends on the type of building
Commercial HVAC
Need more info
Restaurants
not sure
New builds and restaurants
Warehouse heaters, processing/production equipment, water heaters.
I think it is premature to adopt this code so exemptions become irrelevant.
High costs.
It is already clear that restaurants can't operate. Any electric heat pump systems are too high of a risk. I have not had any projects that were striving to be close to net zero have their mechanical systems in place for very long because they are such un-tested technology. The waste in removing and disposing those systems when the next generation comes along simply negates any perceived benefit.
Not sure
don't know
Non profits, depends on type of business.
Let us build what we want! Stop controlling us!

All of them. This is all pointless and stupid.
Hospitals would need flexibility.
Furnace
Heating. There is not enough electrical power nor the infrastructure to support the load. It will take 50 years to provide the power and infrastructure to support all electric. Batteries and not here yet so extra solar energy can't be stored for night usage. City should be listening to electrical engineers that understand the real physics of going all electric. I had a hybrid and the batteries were almost gone in 7 years.
ones that make cost prohibitive
Higher operating costs
Don't know enough to weigh in on this.
None - there are biofuel based fireplaces in lieu of gas and with homes becoming substantially more efficient who needs to burn a precious resource for ambience
Obvious potential exemptions for many existing businesses who have insufficient insulatinion to afford an all electric forced air heating system. Natural gas direct vent heaters are also extremely efficient as 100 percent of the heat from natural gas combustion is forced into the building airspace but at the expense of air qaulity and worker pulmonary health. Buildigs that use DV forced air heaters often run with open rollup doors in wintertime and have almost no insulation in a metal framed and sided warehouse structure.
All electric will significantly increase the cost for doing business in Louisville. Even if all lights are LED, higher insulation requirements, etc.
Do not allow Excel energy to limit solar panel production on any warehouse or building. You're missing the problem you're using the wrong solutions and so many of your standards that you're trying to adopt. You are destroying the community by allowing a super large development for business and commuting. You are making solar intolerable with Exel energy limits and standards. A lot of these standards seem to be a smoke screen for bigger problems and that is what is so upsetting to this business oriented person. Why do you let the big guy destroy our environment and expect all of us small guys to do some minuscule and expensive compensation. The big climate change pollution elephant in the corner is your big Red Tail ridge Project.
Uncertain; need more information
no exemptions, please
None
See above.
None, Exempt them all!

retail, restaurant, industrial, and office. easier to implement on hospitality, event space, big box retail,

ARE THERE ANY CONSIDERATIONS TO ADDRESS EQUITY FOR LOW-INCOME RESIDENTS OR DISPROPORTIONATELY IMPACTED COMMUNITIES THAT THE CITY OF LOUISVILLE SHOULD CONSIDER FOR ANY OF THE THREE COMMERCIAL CODE SCENARIOS CONSIDERED ABOVE?

don't understand the question
Low income housing when residents are faced with rent increases.
Address the issues through small business loans and grants. Provide consulting services to assist with application of the best solution for their business need.
Yeah…don't increase cost and make it even harder to live here or hav a business here
There's a tradeoff between higher building costs now and lower energy costs over time. I don't think we should modify the code to help with affordability. we need to require 30% affordable housing in new builds. that's a better way to take care of this.
Construction prices will increase and low income families will be less likely to live in Louisville.
There needs to be an option in this area
I don't support the requirement for full electrification for businesses.
Apply tiered rates that are low for low-income residents--these would be offset by higher rates for heavier users of energy (e.g., large homes).
No additional subsidies of politically chosen groups should not be increased due to the additional requirements placed by the City, the City should first exempt them.
Affordable housing needs to include standards for energy efficiency to reduce the level of HVAC needs, plus subsidies, as appropriate
Certainly - when I hear city council talk about affordable housing, but then consider cliff legislation on net zero, the former comes off purely as a political, hollow gesture a la the CAC.
Yes, stop with the elitist environmental laws that hurt low income residents and place unnecessary burden on higher income families by covering those costs through additional fees and taxes.
I imagine there would be
You shouldn't force this on anyone
Providing grants/scholarships for businesses of low-income residents in order for them to comply with new standards and allow them to remain valuable productive members of our community.

Again I don't know.
If we lose all of our businesses the entire tax burden for our community will need to be supported by the remaking residents including the low income residents
No, you should not even be considering this change.
Low income is relative! It's very expensive to live here even if you are middle class
We are being pushed out of our community by all these extra mandates that end up costing me a lot more money. My family is a fourth generation in this community and it's sad to see mandates pushing us out
Yes, allowing for rebates and incentives. Both UPFRONT and post building
City/county needs to build affordable housing following all these environment code
Care for them with full explanation of their long term work and needs. They need to meet our new codes.
Absolutely! Please make decisions that don't hurt people financially.
Yes, lower income demographic always bears the brunt. Subsidies and grants may be an option.
grants, incentives, financing
What low-income residents? The City has long since driven them out of town with prohibitive costs and burdensome regulations.
All of this makes it harder to provide low-income housing. Allow increased density.
If you force me out of business I expect to be compensated. You approved this equipment in 2019
Construction incentives, and awareness of any exemptions that disproportionately impact certain communities
louisville appears fairly uniform with respect to race/economics except for artificial affordable housing occupants
Yes, especially for low to middle income families rebuilding after the fire.
government assistance for people not for companies. not sure if that makes sense, but the government is of the people, by the people, and for the people. any code should more greatly affect / benefit the people before _any_ company's profits. Not saying revenue … profits.
Equity for low income. What a joke of a question. What low income resident can come to or even live in Louisville at this time?
This may be too off-topic to this code, but make sure that all low-income housing is required to to provide recycling AND composting for all residents.
Consideration should be made for any person living, working, or doing business in Louisville as to the feasibility and reality of requiring something that could both cost and impact these people in a very negative way. Consideration should also

be given for the economic impact of these codes and how the city could lessen that impact. Making a code requirement like this may be noble and desirous, but there needs to be a balance.
No - if the city recognizes there is an impact then it should waive that impact for everyone.
No. If you adopt them, everyone should have to pay the cost.
Yes. Provide support for non-profit groups and low-income renters.
A fund to provide onsite/ offsite solar.
Yes, these groups should be considered for all scenarios or it will significantly reduce diversity in an already minimally diverse area.
How to lower the cost of entry for low income residents.
It is in the Xcel rebates for leap, Xcel should provide more options for those who are living low income/impacted communities.
Are you creating a system that automatically needs to be subsidized? How difficult is it to apply and receive subsidies? Will this eliminate or reduce businesses owned by those for whom English is a second language? Are you willing to burden your citizens even more than the current rates?
No. Upfront costs will be paid for in energy savings
Incentivize inclusionary housing projects to reach certain levels of energy efficiency or energy independence with their projects.
I don't know.
Yes, criteria for considering equity and providing the subsidies or exemptions to achieve equity should be built into any ordinance.
N/A, I am unfamiliar with commercial building codes.
Absolutely - I think the only way to address this is through grants or some kind of funding from the city
Again, it is actually easier to make multi family homes more energy efficient than stand along buildings. If anything affordable housing should be held to a higher standard. It has greater long term benefits for the occupants than typical code built structures.
Set and meet these code requirements for everyone. Be sure to confer with these communities for the best solutions to meet their needs. Low-income residents and disproportionately impacted communities should be eligible for city grants to meet this code, we must invest in these communities.
Louisville is virtually uniformly white, so not really relevant
There should be free community solar and subsidized retrofits available for low incomes

The city should hire staff to pretend to care about low income residents. Boulder has used this scam for decades.
Low income residents would have a difficult time living in Louisville because the cost of living here is becoming prohibitive for lower and middle class residents.
Need more information
Don’t raise costs for any residents or businesses
I don't recommend adopting the codes in the first place.
Yes, I wonder how all of these changes affect the poor. Are these changes that only the wealthy can handle? Does this make this area even less affordable? How does this affect diversity and equality?
Yes, there should be income-based subsidies rather than exemptions. Poorer communities of color are disproportionately affected by dirty air, water, and other environmental issues, yet we are all part of their cause. We should prioritize community-wide change toward electrification, and support those who cannot afford it with subsidies.
for all residents!
Energy costs will be higher.
Just concerns about cost impacts.
DO NOT negatively impact any of the residents
Yeah, they shouldn't have to pay a dime of it. Tax the rich. :)
Yes, white people need to pay a privileged levy that pays the difference for all new buildings to meet the new codes and not the business themselves.
Only if they are not paying for it.
Yes, low income residents should get the most support. Education, funding, and follow through from local government and industry should center those most impacted. Grants should be centered on supporting these communities FIRST!
Perhaps give them subsidies.
I'm not familiar with good solutions. I recently learned of bonds like https://nlihc.org/resource/field-atlanta-passes-homeless-opportunity-bond and https://ballotpedia.org/California_Proposition_84,_Housing_and_Homeless_Bond_Measure_(1988)
We need to build low-income housing and subsidize energy bill costs for low-income residents.
There should be.
No.
Yes.
The city already doesn't have a balanced budget so to damage the business community - a major revenue source for the city - and then try to come up with

the money to make up for the damage is a downward spiral. The correct approach is to build the business community up first and then look at code updates when the community can absorb them.
No. The CC needs to help the Marshall Fire rebuild victims first before addressing "equity" of commercial builds for low-income residents or disproportionately impacted communities.
You cannot have this conversation and have a conversation about equity and low income at the same time. The only businesses that would choose to move forward under the proposed codes would be doing so by spending extra funds to make a statement. They will not simply absorb those costs. They will be passed along further creating a divide.
Businesses that help people/families shouldn't be scared away by all of these codes
Control control control
How about treating all residents equally instead of trying to foment class warfare?
There should be incentives or grants for low income citizens and public facilities primarily servicing low income citizens.
Low income can't afford to build in Louisville so no it is not needed
Generally low income residents are exposed to more pollution because they live in lower income areas, closer to higher commercial pollutants. Requiring new commercial construction to do better and be better, should arguably improve the health and quality of life for those living in low income areas. In fact, it'll eventually be better for all of us.
Why have anyone paying the high costs?
No specifics, but I do think there should be considerations for these type of residents.
Would like incentives for prior home owners/businesses especially if new construction is getting
I do not understand the question
Yes. We need to make some accommodations to allow for affordable housing. One of the key attributes Louisville had going for it was its focus on community (for lack of a better word). I wonder how much this counts any more as I look at some of the decisions/rules/requirements coming out of the Louisville City Council.
Build government sponsored low income housing
How many low income qualifying businesses operate within Louisville City limits. Can the be expempted if their numbers are very low?
Equity should be top of mind. Ideally, grants would be available rather than exceptions to the code.

Low income would be impacted the most by the increased costs for all electric homes.
Exchanging homes into LED lights is a significant savings at minimal cost. No diesel vehicles be allowed in the community. You must allow natural gas options for heating. Electric heating and clothes drying can be exorbitantly more expensive. Quit preserving historic outmoded homes as if they are some kind of sacred cow. We must stop having to preserve old miners shacks and kit homes for some kind of aesthetic. Allow new and more efficient structures to replace them. Encourage all warehouse structures and residences to produce all the solar power that they want to contribute without penalties and without limits into our grid. If you don't limit what larger building surfaces can produce you'll have plenty of extra energy to help out with programs to contribute to disadvantaged or low income homes. Community Solar Farm. Whether affluent or financially struggling it is horrible to mandate more appliances such as heat pumps and electric furnaces and electric heating elements in a home where Xcel energy also has the ability to limit how much solar is produced per unit of residential and commercial space. Shame on you for your plans and financial obligations to buy these electric utilities for our homes and businesses when you allow the electricity company to maintain high prices and not reward those who can super produce more electricity. You are allowing Xcel energy to torture us and some of us are not dumb enough to fall for it.
Uncertain; need more information
all people benefit from all-renewable, net zero codes
Some short term break should be given up front.
Yes. I don't have enough info to comment in specifics, but the City should always consider low-income/disproportionately impacted communities in everything it does. That's part of being an inclusive and equitable community.
Don't impose any more silly restrictions upon any of us at this time. It makes no sense. Encourage a 10-20% reduction and incentives but don't impoverish anyone for a silly goal of all-electric before everyone can afford it. Remember that you're trying to be inclusive. On the other hand I do not entirely approve of incentives-which is only another word for taking tax dollars from some to give to others. That has to be done carefully for deserving people who can prove they need help which I do support.
Dont adopt them and low income residents will be able to live in Louisville.
The effects of climate change already impact such communities more severely, providing further motivation for the adoption of stronger building codes.

If you make residential and commercial properties more expensive to build, you are going to continue to push lower income residents and business' out of Louisville.

WHAT'S THE MOST IMPORTANT CONSIDERATION FOR THE CITY IN ADOPTING STRICTER ENERGY CODES FOR RESIDENTIAL AND COMMERCIAL CONSTRUCTION? ('OTHER' ANSWERS)

Be aware of the cost and burden this places on residents and the assumption that these costly requirements and rules have no proof to help alter any human impact on the environment
Energy codes for construction are a violation the property rights of residential and commercial property owners. Regulations take away the ability of the property owner to use their property as they see fit and decrease the value. Each individual is in the best position to decide how to best built their property to suit their needs.
City cannot be unreasonable with building code demands. Turning into Boulder will drive away residents like me.
We almost had to move our 42 year old business out of Louisville because of costs. With Boulder, Broomfield and now Erie pulling the larger businesses away from Louisville we should be a safe haven for small businesses and need to be careful policies do not price them/us out of 80027.
The city should not adopt stricter energy requirements we are already losing businesses and can not afford to lose more
Affordability impact on culture, making it affordable for mid-class and fixed income households
This isn't important at all
I disagree with stricter energy codes
HONESTLY balancing the need to address energy efficiency and promote economic development.
how about making this optional!
should not be mandated if has no meaningful impact on climate and is impractical for multiple reasons
I don't think they should
Stricter codes well hurt economic development
reasonable cost benefit analysis
I don't believe the city should make stricter codes at this time
Cost to residents and building owners
You ignore residential costs. Balance climate change with reasonable costs to business and residential owners and renters.
Don't enforce any of these.

all of above. also City of Louisville should provide electric bike rebates Denver is beating us to the punch and they are effective and ahead of us. we need to step up our game
Research from various sources, don't just go with the trend. What are the long-term costs from creation to post-use of materials? What is the true gain of efficiency? The difference between the 2018 and 2021 codes are not gigantic, yet the cost differences are huge.
Cost/benefit analysis
Priceing out people who are not "true believers."
Stop making it astronomically impossible for our children to live here!!!!!
none of the above; sensible and based on citizens' afordability and needs
NOT imposing extra costs on the homeownwers
COST
Less government interference with construction.
Impact on economic development and growth
1) Addressing climate change while promoting economic development is a prime concerns. 2) However, many people will not be able to afford the upgrades!!!! While my husband and I are able to afford them, the installation of solar panels, for instance, is tricky given the amount of hail storms we have here in Louisville wherein the solar panels break. It takes an extremely long time to get them replaced. The hail storm of 2018 was a prime example wherein pretty much everyone in Louisville had to replace their roofs. Those with solar panels waited as long as a year to have them replaced. How much product will be available given the decrease of a plethora of products due to the Covid-19 pandemic?
Businesses and residences need to recover from a massive fire and a possible redesign. We do not need to spend money on unsustainable programs. Louisville residents need to recover and rebuild before we go green unnecessarily.
The city council implemented building codes to conform to their political agenda. They "thought they would have time to figure it out".
Does it actually support your goals
Codes should not be stricter. The city will be making it more difficult to afford updating homes or building new
Diversity of residents, can't price some people out with this
There is no climate emergency, it's all about control! I should be able to have what I want in my house, not what the government says I should have! Are you going to pay my bills?
Why don't you stop imposing stupid regulations that make the city a less affordable and less desirable place to live?

I do not support all electric. Doesn't it still require coal or some other gas emitting resources to create electricity? Xcel will only allow so electricity for solar panels. Electric heat is not as warm or affordable as gas.
The economic development and climate change issues *do* need to be balanced in order for fixes to the climate emergency to work, which means that both the climate emergency and economic development must be number 1 priorities.
High cost of electricity and infrastructure to provided power, unlike CA with rolling blackouts.
Traffic congestion and smog. Bad air quality days.
I'm all for all-electric but it is not feasible at this time. We can barely produce or afford it. The grid is not adequate for the additional load and the price is going to increase, not decrease - am I correct?
costs are ultimately passed onto users of the building. if its too difficult/expensive in louisville, they will go to erie, longmont, lafayette, etc. it will only hurt Louisville is they do not maintain competitiveness with the nearby communities.

Appendix B: Survey Questions

Demographic Questions:

1) Name & email

2) Would you like to be updated by email on the energy code development process?

   a) Yes

   b) No

3) Which of the following best describes you (check all that apply)? (*optional*)

   a) Asian or Pacific Islander

   b) Black or African American

   c) Hispanic or Latino

   d) Native American or Alaskan Native

   e) Native Hawaiian or Other Pacific Islander

   f) White

   g) Multiracial or Biracial

   h) A race/ethnicity not listed here (write-in)

4) What sector do you primarily represent (select one):

   a) Building owner

   b) Building Developer

   c) Business owner/manager

   d) Tradesperson (electrician, plumber, etc.)

   e) Energy efficiency expert

   f) Energy or facility manager

   g) Engineer, Architect or Designer

   h) General Contractor

i) Affordable Housing representative

j) Residential tenant or occupant

k) Home owner

l) Other Business (Write-in)

5) Are you currently operating a business or considering owning/operating a business within the City of Louisville?

a) Already owns or operates in a business located in Louisville.

b) Already owns or operates in a business that conducts business in Louisville but is not located in the City.

c) Considering starting or expanding a business in Louisville.

d) No I am not.

6) Do you work within the City of Louisville?

a) Yes

b) No

7) Do you live within the City of Louisville?

a) Yes

b) No

8) How would you rate your knowledge/understanding of the City of Louisville's current energy code?
a) (Scale 1-10)

Group 1: Building Owner / Building Developer

Note: For all open-response questions, if you don't know or do not have feedback, please write-in NA.

Page 1 Group 1

9) Does your company have sustainability or climate related goals?

a) Yes, we have a sustainability plan/program and goals.

b) Yes, we have started small efforts to be more sustainable but no official plan/program or goals.

c) No, we've discussed internally but don't have climate or sustainability goals, plans, or programs.

d) No, we don't have climate or sustainability goals, plans or programs.

10) If so, please provide a high-level overview of your sustainability/climate related goals, plans, or programs.

a) [open-ended / optional]

11) Are you planning any major building or tenant space retrofits within the next 1-3 years?

a) Yes.

b) Yes after 3+ years.

c) No.

12) Do you have plans to build or acquire new property(ies) within the City of Louisville in the next 1-3 years?

a) Yes.

b) Yes after 3+ years.

c) No.

13) What are your main considerations when operating and/or working in Louisville? (check all that apply)

a) Cost of doing business

b) Comfort

c) Environmental impact / Sustainability

d) Culture/community

e) Rules/regulations

f) Other (write-in)

14) How would you rate your experience installing/maintaining heat-pumps and other efficient all-electric HVAC systems?

a) [scale 1-10]

15) Do any of your current buildings or tenant spaces utilize heat-pumps or other efficient all-electric HVAC systems?

a) Yes, more than one.

b) Yes, just one.

c) No.

16) How often do you currently design/build/install all-electric HVAC systems in new construction projects?

a) Never.

b) Minority of projects.

c) Approximately half of all projects.

d) Majority of the projects.

17) What's the most important consideration for the City in adopting stricter energy codes for residential and commercial construction?

a) The climate emergency.

b) Economic development.

c) Balancing the need to address climate change and promote economic development.

d) Other [write-in].

Group 1 Page 2

Intro:

Current Energy Code:

The City of Louisville has adopted the 2021 IECC, as well as additional amendments requiring further energy savings and all-electric construction items:

Commercial New Construction

- Increased insulation levels
- Increased fenestration efficiency requirements
- Increased HVAC efficiency
- Electric vehicle charging and infrastructure
- Electric-ready wherever gas appliances are installed
- Solar-ready zone required

Residential New Construction

- Increased insulation levels
- Increased ductwork and piping insulation requirements
- Mandatory heat recovery
- Electric vehicle charging and infrastructure
- Electric-ready wherever gas appliances are installed
- Net zero Appendix RC required

Commercial Code Scenarios for Consideration:

The City of Louisville is considering updates to the commercial energy code to improve the environmental and operational performance of new commercial buildings. These updates could include, but are not limited to, all-electric new construction, stricter efficiency requirements, energy offset requirements using solar, or net zero requirements, such as those found in Appendix CC of the current IECC 2021 code.

Residential Code Scenarios for Consideration:

For residential energy code adoption, Louisville has already adopted Appendix RC as a mandatory measure for all new construction buildings. The Appendix RC requires new single-family residential homes to meet a specific energy efficiency criteria and offset their energy use with onsite or offsite solar. Future residential code scenarios could include all-electric construction requirements.

Note, for all open response questions, if you don't know or do not have feedback, please write in NA.

Questions Page 2 Group 1

18) How do you perceive the new considerations for energy code would impact your ability to develop/design/build housing affordably in the City of Louisville?

a) [open ended]

19) How do you perceive the new considerations for energy code would impact your ability to develop/design/build commercial buildings in the City of Louisville?

a) [open ended]

20) Do you need/want training on the current energy code?

a) Yes

b) No

21) Would you need/want training on the proposed codes/policies if enacted?

a) Yes

b) No

22) What data or information do you need to better understand the potential impacts of energy code options on your business and operations?

a) [open-ended]

23) Would you prefer energy code requirements that:

a) Set an energy consumption performance target and allow for flexibility in how a building meets that requirement which can include onsite PV if needed to meet the performance target. (Performance approach).

b) Set an energy consumption performance target that specifies an efficiency standards for equipment that must be met and requires mandatory solar on all new buildings. (Performance + prescriptive approach).

24) How much flexibility in building design would you prefer to achieve code/policy requirements?

a) The more flexibility the better.

b) Some flexibility but some clear expectations/rules.

c) Set prescriptive standards (equipment efficiency, envelope requirements, mandatory solar, etc).

25) Would you be willing to pay more upfront for all-electric new construction with onsite solar if the payback was longer in order to reduce the carbon/environmental impact of the building?

a) Not willing

b) Somewhat not willing

c) Undecided

d) Somewhat willing

e) Willing

26) What is the payback time frame that you would be comfortable with, for additional upfront costs that support carbon reduction, all-electric, or net zero construction?

a) 0-5 years

b) 5-10 years

c) 10-20 years

d) 20-30 years

e) 30+ years

f) I am not interested in increasing upfront construction costs for carbon reduction.

27) What payback period would be your minimum threshold to consider solar onsite for a mixed-fuel building if it represented a higher up-front cost?

a) 0-5 years

b) 5-10 years

c) 10-20 years

d) 20-30 years

e) 30+ years

f) I am not interested in increasing upfront construction costs for solar.

28) What payback period would be your minimum threshold to consider solar onsite for an all-electric building if it represented a higher up-front cost?

a) 0-5 years

b) 5-10 years

c) 10-20 years

d) 20-30 years

e) 30+ years

f) I am not interested in increasing upfront construction costs for solar.

29) The City has in place the IECC 2021 code along with some efficiency strengthening amendments. How supportive would you be of including a minimum energy offset requirement in addition to the 2021 code, which would require on-site or off-site solar?

a) I do not support this code option.

b) I am neutral on this code option.

c) I support the adoption of this code option.

d) I need more information.

30) How supportive would you be if the City were to consider an all-electric requirement for new commercial construction code if industrial processes were exempt?

a) I do not support this code option.

b) I am neutral on this code option.

c) I support the adoption of this code option.

d) I need more information.

31) How supportive would you be if the City were to consider an energy code that required a 20% reduction in energy use from the 2021 energy code for commercial construction?

a) I do not support this code option.

b) I am neutral on this code option.

c) I support the adoption of this code option.

d) I need more information.

32) How supportive would you be if the City were to consider a commercial energy code that required net zero energy through efficiency and onsite/off-site renewable energy?

a) I do not support this code option.

b) I am neutral on this code option.

c) I support the adoption of this code option.

d) I need more information.

33) What is your biggest concern or perceived barrier to the commercial code considerations presented?

a) [open-ended question]

34) In your opinion, what is the biggest benefit to the commercial code considerations presented?

a) [open-ended question / optional]

35) What HVAC systems, process loads, other appliances, or specific building types do you think would need to be exempted from the commercial code options presented? (The rationale for exemptions could be prohibitively higher cost to operate, infeasible with current energy needs, technology does not exist, etc.)

a) [open-ended question / optional]

36) Are there any considerations to address equity for low-income residents or disproportionately impacted communities that the City of Louisville should consider for any of the three commercial code scenarios considered above?

a) [open-ended question / optional]

37) If the City provides incentives for energy efficiency or electrification upgrades, would you be more likely to support this code adoption?

a) I already support this code option.

b) Not likely to change my support.

c) Somewhat likely to change my support.

d) Yes, it would change my support.

Group 2: Business Owner, Tradesperson (electrician, plumber, etc), Energy Efficiency Expert, Energy or Facility Manager, Engineer, Architect, Designer, General Contractor and Other Business.

Group 2 Page 1

Note, for all open response questions, if you don't know or do not have feedback, please write in NA.

38) Does your business rent or own your office/workplace in the City of Louisville?

a) Rent.

b) Own.

c) Don't have an office/workplace in the City of Louisville.

39) Does your company have sustainability or climate related goals?

a) Yes, we have a sustainability plan/program and goals.

b) Yes, we have started small efforts to be more sustainable but no official plan/program or goals.

c) No, we've discussed internally but don't have climate or sustainability goals, plans, or programs.

d) No, we don't have climate or sustainability goals, plans or programs.

40) If so, please provide a high-level overview of your sustainability/climate related goals, plans, or programs.

a) [open-ended]

41) Do you have plans to build new or retrofit existing office space within the City of Louisville in the next 1-3 years?

a) Yes

b) Yes after 3+ years

c) No

42) What payback period would be your minimum threshold to consider solar onsite for your business?

a) 0-5 years

b) 5-10 years

c) 10-20 years

d) 20-30 years

e) 30+ years

f) I am not interested in solar for my business.

g) I already have solar onsite for my business.

43) What are your main considerations when operating and/or working in Louisville? (check all that apply)

a) Cost

b) Comfort

c) Environmental impact / Sustainability

d) Culture/community

e) Rules/regulations

f) Other (write-in)

44) How would you rate your experience designing/building/installing heat-pumps and other efficient all-electric HVAC systems?

a) [scale 1-10 or Not Applicable]

45) What's the most important consideration for the City in adopting stricter energy codes for residential and commercial construction?

a) The climate emergency.

b) Economic development.

c) Balancing the need to address climate change and promote economic development.

d) Other [write-in].

Group 2 Page 2

Intro:

Current Energy Code:

The City of Louisville has adopted the 2021 IECC, as well as additional amendments requiring further energy savings and all-electric construction items:

Commercial New Construction

- Increased insulation levels
- Increased fenestration efficiency requirements
- Increased HVAC efficiency
- Electric vehicle charging and infrastructure
- Electric-ready wherever gas appliances are installed
- Solar-ready zone required

Residential New Construction

- Increased insulation levels
- Increased ductwork and piping insulation requirements
- Mandatory heat recovery
- Electric vehicle charging and infrastructure
- Electric-ready wherever gas appliances are installed
- Net zero Appendix RC required

Commercial Code Scenarios for Consideration:

The City of Louisville is considering updates to the commercial energy code to improve the environmental and operational performance of new commercial buildings. These updates could include, but are not limited to, all-electric new construction, stricter efficiency requirements, energy offset requirements using solar, or net zero requirements, such as those found in Appendix CC of the current IECC 2021 code.

Residential Code Scenarios for Consideration:

For residential energy code adoption, Louisville has already adopted Appendix RC as a mandatory measure for all new construction buildings. The Appendix RC requires new single-family residential homes to meet a specific energy efficiency criteria and offset their energy use with onsite or offsite solar. Future residential code scenarios could include all-electric construction requirements.

Note, for all open response questions, if you don't know or do not have feedback, please write in NA.

Questions Page 2 Group 2:

46) How do you perceive the new considerations for energy code would impact your ability to maintain or expand your current business in the City of Louisville?

a) [open ended]

47) Do you need/want training on the current energy code?

a) Yes

b) No

48) Would you need/want training on the proposed codes/policies if enacted?

a) Yes

b) No

49) What data or information do you need to better understand the potential impacts of energy code options on your business and operations?

a) [open-ended]

50) The City has in place the IECC 2021 code along with some efficiency strengthening amendments. How supportive would you be of including a minimum energy offset requirement in addition to the 2021 code, which would require on-site or off-site solar?

a) I do not support this code option.

b) I am neutral on this code option.

c) I support the adoption of this code option.

d) I need more information.

51) How supportive would you be if the City were to consider an all-electric requirement for new commercial construction code if industrial processes were exempt?

a) I do not support this code option.

b) I am neutral on this code option.

c) I support the adoption of this code option.

d) I need more information.

52) How supportive would you be if the City were to consider an energy code that required a 20% reduction in energy use from the 2021 energy code for commercial construction?

a) I do not support this code option.

b) I am neutral on this code option.

c) I support the adoption of this code option.

d) I need more information.

53) How supportive would you be if the City were to consider a commercial energy code that required net zero energy through efficiency and onsite/off-site renewable energy?

a) I do not support this code option.

b) I am neutral on this code option.

c) I support the adoption of this code option.

d) I need more information.

54) What is your biggest concern or perceived barrier to the commercial code considerations presented?

a) [open-ended question]

55) In your opinion, what is the biggest benefit to the commercial code considerations presented?

a) [open-ended question / optional]

56) What HVAC systems, process loads, other appliances, or specific building types do you think would need to be exempted from the commercial code options presented? (The rationale for exemptions could be prohibitively higher

cost to operate, infeasible with current energy needs, technology does not exist, etc.)

a) [open-ended question / optional]

57) Are there any considerations to address equity for low-income residents or disproportionately impacted communities that the City of Louisville should consider for any of the three commercial code scenarios considered above?

a) [open-ended question / optional]

58) If the City provides incentives for energy efficiency or electrification upgrades, would you be more likely to support this code adoption?

a) I already support this code option.

b) Not likely to change my support.

c) Somewhat likely to change my support.

d) Yes, it would change my support.

Group 3: Residential Section

Group 3, Page 1

Intro:

Current Energy Code:

The City of Louisville has adopted the 2021 IECC, as well as additional amendments requiring further energy savings and all-electric construction items:

Commercial New Construction

- Increased insulation levels
- Increased fenestration efficiency requirements
- Increased HVAC efficiency
- Electric vehicle charging and infrastructure

Residential New Construction

- Increased insulation levels
- Increased ductwork and piping insulation requirements
- Mandatory heat recovery
- Electric vehicle charging and infrastructure

- Electric-ready wherever gas appliances are installed
- Solar-ready zone required

- Electric-ready wherever gas appliances are installed
- Net zero Appendix RC required

Commercial Code Scenarios for Consideration:

The City of Louisville is considering updates to the commercial energy code to improve the environmental and operational performance of new commercial buildings. These updates could include, but are not limited to, all-electric new construction, stricter efficiency requirements, energy offset requirements using solar, or net zero requirements, such as those found in Appendix CC of the current IECC 2021 code.

Residential Code Scenarios for Consideration:

For residential energy code adoption, Louisville has already adopted Appendix RC as a mandatory measure for all new construction buildings. The Appendix RC requires new single-family residential homes to meet a specific energy efficiency criteria and offset their energy use with onsite or offsite solar. Future residential code scenarios could include all-electric construction requirements.

Note, for all open response questions, if you don't know or do not have feedback, please write in NA.

Page 1 Group 3 Questions:

59) What are your main considerations for choosing to live in Louisville? (check all that apply)

a) Cost

b) Comfort

c) Environmental impact / Sustainability

d) Culture/community

e) Rules/regulations

f) Other (write-in)

60) Outside the Marshall Fire rebuild efforts, do you plan to build a new home or undergo a major retrofit on your home in the next 1-3 years

a) Yes

b) No

c) My home is part of the Marshall Fire rebuild effort.

61) Do you currently live in an all-electric and/or net zero home OR have you taken steps to start to electrify your home?

a) Yes, I live in an all-electric home.

b) Yes, I live in a net-zero home.

c) Yes, I am working on electrifying my home.

d) Yes, I am working on making my home net zero energy.

e) No.

62) Do you currently have solar installed on your home?

a) Yes.

b) No.

63) What's the most important consideration for the City in adopting stricter energy codes for residential and commercial construction?

a) The climate emergency.

b) Economic development.

c) Balancing the need to address climate change and promote economic development.

d) Other [write-in].

The City has adopted the Zero Energy Appendix (Appendix RC) for all new single-family home construction:

64) Do you have a clear understanding of the City of Louisville's current residential new construction code requirements?

a) [Sliding scale 1-5]

65) How do you perceive that Louisville's residential building code standards impact affordability of housing in the City?

a) Positively impact housing by reducing energy costs for residents and tenants.

b) Negatively impact housing by increasing upfront costs.

c) I don't see there being an impact.

d) Other [write-in].

66) What is your biggest concern or perceived barrier to building new homes to the Zero Energy Appendix?

a) [open-ended question]

67) In your opinion, what is the biggest benefit to building new homes to the Zero Energy Appendix?

a) [open-ended question / optional]

68) If the City were to consider an all-electric requirement for new single-family home construction:

69) What is your biggest concern or perceived barrier to building all-electric new homes?

a) [open-ended question]

70) In your opinion, what is the biggest benefit to building all-electric new homes?

a) [open-ended question / optional]

71) Should there be an exemption or flexibility granted for certain community members to allow them to build with natural gas?

a) [open-ended question / optional]

72) If the City provides incentives for electrification, would you be more likely to support an all-electric code requirement for new single-family home construction?

a) I already support this code option.

b) Not likely to change my support.

c) Somewhat likely to change my support.

d) Yes, it would change my support.

Optional Commercial Code Questions for Group 3:

The City of Louisville is considering updates to the commercial energy code to improve the environmental and operational performance of new commercial buildings. These updates could include, but are not limited to, all-electric new construction, stricter efficiency requirements, energy offset requirements using solar, or net zero requirements, such as those found in Appendix CC of the current IECC 2021 code.

73) The City has in place the IECC 2021 code along with some efficiency strengthening amendments. How supportive would you be of including a minimum energy offset requirement in addition to the 2021 code, which would require on-site or off-site solar?

a) I do not support this code option.

b) I am neutral on this code option.

c) I support the adoption of this code option.

d) I need more information.

74) How supportive would you be if the City were to consider an all-electric requirement for new commercial construction code if industrial processes were exempt?

a) I do not support this code option.

b) I am neutral on this code option.

c) I support the adoption of this code option.

d) I need more information.

75) How supportive would you be if the City were to consider an energy code that required a 20% reduction in energy use from the 2021 energy code for commercial construction?

a) I do not support this code option.

b) I am neutral on this code option.

c) I support the adoption of this code option.

d) I need more information.

76) How supportive would you be if the City were to consider a commercial energy code that required net zero energy through efficiency and onsite/off-site renewable energy?

a) I do not support this code option.

b) I am neutral on this code option.

c) I support the adoption of this code option.

d) I need more information.

77) What is your biggest concern or perceived barrier to the commercial code considerations presented?

a) [open-ended question]

78) In your opinion, what is the biggest benefit to the commercial code considerations presented?

a) [open-ended question / optional]

79) What HVAC systems, process loads, other appliances, or specific building types do you think would need to be exempted from the commercial code options presented? (The rationale for exemptions could be prohibitively higher cost to operate, infeasible with current energy needs, technology does not exist, etc.)

a) [open-ended question / optional]

80) Are there any considerations to address equity for low-income residents or disproportionately impacted communities that the City of Louisville should consider for any of the three commercial code scenarios considered above?

a) [open-ended question / optional]

81) If the City provides incentives for energy efficiency or electrification upgrades, would you be more likely to support this code adoption?

a) I already support this code option.

b) Not likely to change my support.

c) Somewhat likely to change my support.

d) Yes, it would change my support.

Appendix C

2021 International Energy Conservation Code

About I-Codes: Building codes improve the quality of construction of the built environment and thereby promote the health, safety, resiliency, affordability, sustainability, and general welfare of our communities. Building codes set a bare minimum construction quality that local officials deem necessary and that consumers expect. Most jurisdictions across the country adopt model building codes published by the International Code Council, and these are updated every three years in an extensive process involving builders, trades, architects, manufacturers and suppliers, low-income advocates, and, crucially, local building officials who are ultimately responsible for enforcing the codes. These codes are then adopted at local level. The 2021 codes are the most recent edition.

About the 2021 International Energy Conservation Code (IECC): After two previous cycles of stagnant efficiency, building officials voted overwhelmingly in favor of provisions in the latest IECC to strengthen energy efficiency. Overall, the 2021 IECC reduces energy by 8-9% (and reduces energy bills by 8-9%) compared to the previous 2018 IECC. The 2021 also includes language clean-up and clarifications, and an expanded focus on flexibility and options. Most of the changes "tighten up" provisions already in the code. Key changes for residential new construction include a better "thermal envelope" (e.g. walls, insulation, windows, doors, etc.), windows that take into account "solar heat gain" in climate zone 5B (the climate zone for the front range of Colorado), changes to duct testing, and increased use of lighting controls. On the commercial side, key changes include air barrier commissioning (i.e. testing and verification of the layer in walls that keeps outside air out and clean, conditioned inside air in), more efficient mechanical systems, technology for energy monitoring in larger buildings so that building operators can better measure and track their building's energy use, and increased options for additional energy efficiency "points."

Jurisdictions with the 2021 IECC: Arapahoe County, Aurora, Fort Collins, Larimer County, Longmont, Louisville, Parker, Superior, and Vail. At least 39 other jurisdictions covering 49% of Colorado's population have announced plans to adopt the 2021 IECC within the next year.

New Colorado Law (2022): The Colorado legislature passed a new bipartisan law that updates minimum energy code requirements. Jurisdictions must adopt at least the 2021 IECC, along with EV-ready, PV-ready, and electric-ready, when updating any other building codes between July 1, 2023 and July 1, 2026. After that date, jurisdictions must adopt at least a low-energy and carbon code. A new Energy Code Board will identify code language for the EV-ready, PV-ready, electric-ready, and low energy and carbon code, and jurisdictions can choose to adopt that code language, something equivalent, or something stronger.

Cost Discussion: An extensive analysis from the Pacific Northwest National Labs (PNNL, the entity charged by the U.S. Congress to perform energy code cost-effectiveness studies) calculates that the increased first cost per household is $3,376 for the 2021 IECC versus the 2015 IECC in Climate Zone 5B (as of Dec. 2021). PNNL's analysis is considered the most credible compared to other estimates because of PNNL's long-standing peer-reviewed methodology, and its absence of profit motive or conflict of interest. The majority of the first cost increase compared to the 2015 IECC is an increase in insulation levels. (Cost data is roughly similar between the 2015 and 2018 IECC, since the efficiency levels were similar.)

- Note: Applying a 19% inflation/supply chain adder as recommended by the National Association of Home Builders, and slightly increasing the size of the average house to better represent our region, yields an increased first cost of $5,118, per PNNL. Also, natural gas prices for residential customers in Colorado have nearly doubled since the study, which would improve the energy cost savings as compared to the original report.

Increased First Cost (vs 2015)	Mortgage Increase	Annual Energy Savings	Net Savings	Years to Positive Savings	Lifecycle Cost Savings
$3,376	$122	$161	$20/yr	9	$1,247

Mild/Medium/Aggressive Rating: Mild. The 2021 IECC is the minimum energy code required by the state of Colorado and even before the state law, jurisdictions covering half of Colorado's population had already announced plans to adopt it. As such, "mild" also includes EV-ready, PV-ready, and electric-ready as required by Colorado law. A "medium" rating would include a higher degree of electric transition – for instance, allowing a choice of either all-electric or mixed fuel new construction but requiring mixed fuel homes and buildings to pursue additional energy efficiency to make up for the extra emissions from fossil gas use onsite. An "aggressive" rating would include either all-electric requirements, the zero energy appendices, or both.

Notes on Cost Studies:

- In a memo to Marshall fire households, the Home Builders Association. of Metro Denver estimated $100,000 in additional upfront costs for 2021 IECC, then scaled back to $11,000 at the state legislature in April 2022 based on a study from Home Innovation Research Labs for National Association of Home Builders.
- Another study from ICF International showed HIRL/NAHB's $11,000 estimate used incorrect economic assumptions, and determined that the estimates in PNNL's study are more accurate.
- A City of Louisville survey of two builders estimated $6,450 in additional first cost for the 2021 IECC vs Louisville's amended 2018 IECC (for a slightly larger house size).
- Natural gas prices were $6.06/thousand cubic feet in PNNL's analysis, versus $11.93 as of April 2022, per EIA.

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Date Updated: July 19, 2022

SWEEP
SOUTHWEST ENERGY EFFICIENCY PROJECT

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Solar-Ready

About: Solar-Ready appendices (RB for residential and CB for commercial) are officially prepared by the International Code Council as "add-on" to the IECC. They prepare homes and buildings for the future installation of solar by requiring conduit, space on the electrical panel, space reserved on the roof free from obstructions and shady objects, adequate roof structural capacity, notation on construction documentation, and a permanent certificate. Shady roofs are exempted. The current appendices only include multifamily buildings 4-5 stories tall, so an amendment is needed to include all multifamily buildings – a provision we call "expanded solar-ready".

Cost Discussion: Upfront costs are minimal (<$200). Cost savings include avoiding the need to tear up walls, redo wiring, and potentially upgrade an electrical panel. They also avoid the situation where roof penetrations for attic vents, etc. are poorly placed in a way that prevents future solar.

Jurisdictions with Solar-Ready: Avon, Boulder, Boulder County, Breckenridge,* Craig, Denver, Fort Collins, Frisco,* Golden, Lafayette, Louisville, Superior, Vail, and Wheat Ridge. Others considering or in the process of adopting it, besides Code Cohort communities, include Eagle County (*via Summit County sustainability program). Note: a new 2022 Colorado law requires all upcoming IECC adoptions to include solar-ready provisions equivalent to or better than a version to be identified by the state's Energy Code Board. We highly anticipate Appendices RB and CB with the multifamily fix will meet the law.

Mild/Medium/Aggressive Rating: Mild. A "medium" rating would require solar to actually be installed on some buildings for part of the energy load, plus a residential solar access law. An "aggressive" rating would require solar installed on all buildings for all of the energy load, a residential solar access law, and a retrofit policy.

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SWEEP
SOUTHWEST ENERGY EFFICIENCY PROJECT

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EV-Ready

About: Electric Vehicle Ready (EV-Ready) appendices prepare homes and buildings for the current transition to electric vehicles. These appendices recognize that the vast majority of all electric vehicle charging will occur at home, with some charging infrastructure needed at work or around town. New single family homes will require one EV-ready space, and new multifamily and commercial buildings will require a percentage of EV-capable, EV-ready, and EV-installed spaces depending on the building type and use.

- Note: EV-ready is especially important for multifamily buildings, for equity reasons, since renters can't retrofit their parking lot or garage to install a 240-volt outlet on their own.

These percentages align with levels recently approved by Denver's code committee, and are less than the percentages adopted in some other jurisdictions (Superior, for instance). Multifamily percentages were reduced to ease the cost impact to new housing, and commercial building percentages were reduced to account for charging behavior based on building type.

Building Type	Minimum EV Installed Spaces	Minimum EV Ready Spaces	Minimum EV Capable Spaces
Single-family Duplex, Townhome	N/A	1 Space	N/A
Group A, B, E, M	10%	5%	10%
Group F, I, R-3, R-4	2%	0%	5%
Group R-1 and R-2[a]	15%	5%	40%
Group S-2 Parking Garages	10%	5%	0%

a. Where all (100%) parking serving R-2 occupancies are EV ready spaces, requirements for EVSE spaces for R-2 occupancies shall not apply.

(In I-code terminology, Group A is Assembly, B is Business, E is Education, F is Factory & Industrial, I is Institutional, M is Mercantile, R-1 is transient residential, R-2 is apartments and other non-transient residential, R-3 and R-4 are small group homes including halfway houses, rehab centers, care facilities, etc., and S is Storage.)

Market Discussion: EVs comprised 9% of new vehicle sales in Colorado in Q1 2022, and dealers continue to have long waitlists, especially with the recent rises in gas prices. All major auto brands have announced plans to shift the majority of their fleets to EVs by the mid-2030s or sooner. Newer models have ranges of well over 300 miles. Besides the reduced environmental impact, buyers like the faster acceleration, the low maintenance, the safety ratings, and the convenience of avoiding trips to the gas station.

Cost Discussion: One EV-ready space for a single-family home averages about $325-$400 at the time of construction. Federal and Xcel Energy rebates are available. Retrofitting even just the wiring later can run $481-$1,493 per space (depending on the distance from the panel to the garage) plus potential costs to upgrade the electrical panel. For commercial and multifamily, costs can run $300 for EV-capable, $1,300 for EV-ready, and $2,500 for EV-Installed per space. Federal, Colorado, and Xcel Energy rebates are available. Retrofits done later can cost several times more, and may include the need to tear up and rebuild walls (and in the case of commercial and multifamily, parking lots and landscaping), redo wiring, and upgrade the electrical panel.

Jurisdictions with EV-Ready: Aspen, Avon, Boulder, Boulder County, Breckenridge, Denver, Dillon, Durango, Eagle County, Fort Collins, Frisco, Golden, Lafayette, Lakewood, Larimer County, Louisville, Pueblo County, Steamboat, Summit County, Superior, Westminster, and Vail, Others in the Code Cohort communities are also planning to adopt it. Note: a new 2022 Colorado law requires all upcoming IECC adoptions to include EV-ready provisions equivalent to or better than a version to be identified by the state's Energy Code Board. We highly anticipate these amendments will meet the new law.

Mild/Medium/Aggressive Rating: Medium. A “mild” rating would have lower percentages for commercial and multifamily. An "aggressive" rating would require every space in multifamily to have some level of infrastructure, plus a policy for renovations.

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SWEEP
SOUTHWEST ENERGY EFFICIENCY PROJECT

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Electric-Ready and Electric Preferred

About: Electric-ready amendments prepare homes and buildings for the choice between electric and gas equipment and appliances by ensuring they have the wiring and panel capacity available for future electric equipment (and enough physical space, in the case of water heaters). Electric-transition amendments, the next step, still allow new construction to be either all-electric or "mixed fuel" (e.g. natural gas) but mixed fuel homes and buildings require extra efficiency to make up for extra emissions.

In particular, the residential amendments in the prescriptive path require mixed fuel homes to select three "additional efficiency packages" instead of one. Mixed fuel homes choosing the "Energy Rating Index" (ERI) pathway would seek a score of 50 instead of 55.* For commercial buildings, mixed fuel buildings would choose extra efficiency options totaling an extra 10 points. The amendment also fixes two places in the commercial code where gas equipment was given more points than electric.

Market Developments: Air source heat pumps have been commonplace in other parts of the country, and are now making inroads in Colorado thanks to rapid technological developments that allow "cold climate" heat pumps to supply heat even when outdoor temps fall to -22F. Other configurations are possible as well, such as a non-cold-climate heat pump plus extra "strip heat" that can kick in for extra cold times. (This configuration is cheaper upfront but more expensive to run in extra cold temperatures when the heat strips are on.) For water heating, heat pump water heaters are an easy replacement for a typical gas or electric hot water storage tank. Finally, on the cooking side, some homeowners may express a preference for gas, but induction stoves are proving their mettle with twice-as-fast boil times, more finely-tunable controls, safety protections (e.g. the ability to touch the burner and not get burned) and the near-elimination of harmful air pollutants that lead to increased asthma rates and other respiratory distress.

Cost Discussion: Upfront costs depend highly on the configuration selected by the builder. All-electric homes, depending on supply chain availability and builder/contractor familiarity, can be built at no additional cost compared to mixed fuel [1]. Although the upfront costs of an air source heat pump and heat pump water heater are typically more than gas equivalents, the big savings come from avoiding the gas connection and gas piping costs to and within the home or building, and state and utility rebates offset the cost as well. For mixed fuel homes, electric-ready infrastructure is estimated at $300 for a water heater and the same for a stove (or possibly increased to $400 each with inflation and a tight labor market). No additional costs are incurred for electric readiness for a furnace, because central air conditioning or other space cooling would be provided anyway.

* Before 5% efficiency required in R401

(Cost Discussion Cont'd) A high-efficiency gas furnace (95-96% AFUE vs 92-93% AFUE), one of the most likely options for the required "additional efficiency package," is a difference of $200-$500 plus labor [2]. Data from the forthcoming Colorado Residential Field Study shows half of new homes are installing high-efficiency gas furnaces already. For water heaters, the difference between meeting the federal minimum efficiency standards of 0.63 UEF and an 0.92 UEF on-demand water heater is $500 plus labor [3] [4]. After heating and water heating, mixed fuel homes would then need to select one more "additional efficiency package" from the list provided in the 2021 IECC.

- Note: separate market transformation efforts are underway to train builders and contractors for the transition to all-electric equipment, and the familiarity and economies of scale are expected to bring total costs down as well.

Jurisdictions with Electric-Ready and/or Electric Transition: Boulder, Boulder County, Denver (in progress), Fort Collins, Longmont, Louisville, Superior, other Code Cohort communities (in progress). Note: a new 2022 Colorado law requires all upcoming IECC adoptions to include electric-ready provisions equivalent to or better than a version to be identified by the state's Energy Code Board. We highly anticipate these amendments will be in compliance with the law.

Mild/Medium/Aggressive Rating: Medium. A “mild” rating would be just electric ready – i.e. just the wiring and panel capacity. An “aggressive” rating would require all-electric heating and water heating for most residential, multifamily, and commercial buildings, or, even further, no gas connections at all.

[1] Despite a few recent studies, a couple local home builders report challenges getting the costs to "pencil out." State policies passed since then, like the 10% tax credit for heat pumps, heat pump water heaters, and panels, plus regulatory dockets underway at the Public Utilities Commission, may improve the cost calculations.
[2] Manufacturer model database review from electrification expert David Petroy, January 23, 2022. Note: Mr. Petroy notes that some comparisons may show wider differences because more efficient models are more likely to have higher-end “bells and whistles” that don’t affect performance.
[3] Home Depot website comparison of in-stock 0.64 UEF gas storage water heater ($800) and 0.93 gas tankless water heater ($1,300), Feb 9, 2022.
[4] Another full study on the economics of all-electric homes in CO is available at https://swenergy.org/pubs/heat-pump-study-2022

Efficiency Amendments

About: One amendment improves the lighting efficiency in horticulture facilities, and another amendment addresses the heat island effect, as explained below.

These two were selected from a wide array of other strengthening amendments, including a review of other nearby jurisdictions' codes, decarbonization model codes, and the 2024 IECC proposals. These two were selected based on a balance of technical and practical implementability, simple code language, and sustainability impact.

No additional efficiency-strengthening amendments are proposed for residential buildings (beyond those in the electric preferred proposals). This is recognition of the already-decent efficiency improvements in the 2021 IECC, the current challenges with the cost of construction, and the general preferences for simplicity and focused impact.

Horticulture lighting. Energy consumption from lighting in marijuana grow facilities, as well as other indoor agricultural facilities, is staggering, and is projected to continue increasing. Lighting can account for 50% to 80% of an indoor facility's energy use and 30% of a greenhouse's energy use. Traditionally, grow facilities hadn't invested in efficient lighting because of uncertainty in their market and shifting legal policies. This proposal is cost-neutral for greenhouses and has a 3-year payback for indoor facilities. This proposal has been approved by the 2024 IECC Commercial Consensus Committee.

Cool roofs. Cool roofs are made of materials that reflect more sunlight and absorb less heat. They are usually, though not always, made of lighter-color materials. Cool roofs still allow the installation of solar panels, skylights, mechanical equipment, rooftop amenities, and/or vegetative roofs at the building owner's discretion. This only affects low-sloped (i.e. flat or nearly flat) roofs, and it doesn't apply to roof repairs or replacements. Cool roofs are already in the IECC, but this brings them into our climate zone (5B) in recognition of increased summer temperatures and the growing problem of the heat island effect. Higher urban temperatures also speed the formation of ground-level ozone, the primary component of smog. Costs for a cool roof are equivalent to costs for a black roof, and most suppliers and contractors supply both types. Energy costs are not notably impacted, because more recent energy codes have high amounts of insulation in the attic that limit the roof's impact on inside temperatures. Instead, as noted, the significant benefits here are for reducing heat island and improving air quality.

Jurisdictions with Efficiency Amendments: Denver requires a cool roof and has improved horticulture lighting. Other jurisdictions in the area have selected various other amendments to increase the efficiency of their homes and buildings, including Boulder, Boulder County, Breckenridge, Denver, Fort Collins, Frisco, Golden, Louisville, Summit County, and Superior.

Mild/Medium/Aggressive Rating: Medium. A "mild" rating would be just the 2021 IECC unamended. An "aggressive" rating would have prescriptive table updates, stricter performance path requirements (e.g. 10% more efficient), and/or more amendments approved for the 2024 IECC.

ORDINANCE NO. 1845
SERIES 2022

(Second reading amendments shown with deleted text in ~~**Bold Strikethrough**~~ and new text in **Bold Double Underline**.)

AN ORDINANCE AMENDING CHAPTER 15.18.030 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING AMENDMENTS AND DELETIONS TO THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE TO INCLUDE REQUIREMENTS FOR COMMERCIAL ENERGY USE INTENSITY PERFORMANCE TARGETS AND RESTRICTIONS OF FOSSIL FUEL SPACE AND WATER HEATING EQUIPMENT

WHEREAS, the City Council has adopted from time to time certain building and construction standards; and

WHEREAS, it is deemed to be in the interest of the public health, safety and general welfare to adopt by reference thereto the 2021 edition of the International Energy Conservation Code; and

WHEREAS, the City of Louisville remains committed to its adopted goals to reduce energy consumption, increase clean energy sources, and support the transition to a low-carbon community as outlined in the Sustainability Action Plan and Resolution 25, Series 2019, "A Resolution Setting Clean Energy and Carbon Reduction Goals"; and

WHEREAS, reducing building energy consumption is an effective strategy to reduce community-wide energy consumption and increase long-term cost savings for businesses; and

WHEREAS, the City Council desires to add requirements for energy use intensity performance standards and building electrification to build a more resilient building stock and support future building electrification efforts pursued and businesses; and

WHEREAS, the City Council, after proper notice as required by law, has held a public hearing on this ordinance providing for the adoption of said codes; and

WHEREAS, the 2021 edition of the International Energy Conservation Code, with amendments, has been submitted to the City Council in writing and the City Council has determined that such codes should be adopted as herein set forth.

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

Chapter, 15.18.030 of the Louisville Municipal Code, concerning amendments and deletions to the 2021 International Energy Conservation Code, is hereby amended to read as follows, with new text in underline:

1. Section C202 GENERAL DEFINITIONS is amended to add the following definitions in alphabetical order:

EMERGENCY POWER SYSTEM. A source of automatic electric power of a required capacity and duration to operate required life safety, fire alarm, detection, and ventilation systems in the event of a failure of the primary power. Emergency power systems are those required for electrical loads where interruption of the primary power could result in loss of human life or serious injuries.

ENERGY USE INTENSITY (EUI). The annual building site energy use per square foot of gross floor area in units of kBTU/sq ft.

STANDBY POWER SYSTEM. A source of automatic electric power of a required capacity and duration to operate required building, hazardous materials or ventilation systems in the event of a failure of the primary power. Standby power systems are those required for electrical loads where interruption of the primary power could create hazards or hamper rescue or fire-fighting operations.

2. Section C401.2 Application is deleted in its entirely and replaced as follows:

C401.2. Commercial *buildings* and their building site shall comply with one of the following, as applicable:

C401.2.1 Performance targets. New commercial *building* types included in the scope of Appendix PT shall comply with Appendix PT and Sections C403.2.4 and C404.10.

C401.2.2 Core and shell. Core and shell buildings shall comply with the provisions of Section C402.1.3 through C402.5. When mechanical systems are installed, core and shell buildings shall also meet the provisions in **C403.2.4, C404.10, and** Section C408.

C401.2.2.1 Core and shell buildings shall submit a letter of agreement to the City stating the tenant spaces included in the scope of Appendix PT shall meet the EUI target established in Table PT103, and shall include these requirements in their lease or purchase agreements.

C401.2.3 Tenant finish. Tenant finishes included in the scope of Appendix PT shall comply with Appendix PT **and C403.2.4 and C404.10**. All other tenant finishes shall comply with the Prescriptive Compliance option, which requires compliance with Sections C401.3, C401.4, C402 through C406, and C408.

C401.2.4 Other commercial building types. Commercial *building* types not included above shall comply with the Prescriptive Compliance option, which requires compliance with Sections C401.3, C401.4, C402 through C406, and C408.

Exception: Additions, alterations, repairs, and changes of occupancy to existing buildings complying with Chapter 5.

3. Section C403.2 System design is modified as follows:

C403.2 System design. Mechanical systems shall be designed to comply with Sections C403.2.1 through ~~C403.2.3~~ C403.2.4. Where elements of a building's mechanical systems are addressed in Sections C403 through C403.14, such elements shall comply with the applicable provisions of those sections.

4. Section C403.2.4 Space heating equipment is added as follows:

C403.2.4 Space heating equipment. Fossil-fuel ~~**warm-air furnaces**~~ **appliances** and electric resistance space heating equipment shall not be permitted for space heating.

Exceptions:

1. **Emergency backup.** Where it is required by an applicable law or regulation to provide space heating with an emergency power system or a standby power system.
2. ~~**Where cfm/sq. ft. ventilation requirements result in conditions where the Building Official determines that space heating requirements cannot reasonably be met without combustion space heating systems.**~~
2. ~~3.~~ **Certain make-up air systems.** Electric resistance in make-up air systems where energy recovery ventilation is prohibited by the International Mechanical Code.
3. ~~4.~~ **Supplementary heat.** Electric resistance heat used for supplementary heat in accordance with Section C403.4.1.1
4. ~~5.~~ **Electric resistance budget. In addition to any exceptions in this section, ~~Up~~ up** to 5 W of electric resistance space heating per square foot of *conditioned floor area* in the *building*, not including supplementary heat.
   Electric resistance heating elements integrated into heat pump equipment.
5. ~~6.~~ **Integrated units.** Electric resistance heating elements integrated into heat pump equipment.
6. ~~7.~~ **Heated plenums.** Electric resistance in heated plenums.
7. **Temporary systems. Temporary electric resistance heating systems are permitted where serving future tenant spaces that are unfinished and unoccupied, provided that the heating equipment is sized and controlled to**

achieve interior space temperatures no higher than needed to prevent freezing.

8. **Freeze protection.** ~~**Electric resistance for freeze protection elements.**~~ **Electric resistance in heating systems intended for freeze protection.**
9. **Outdoor systems.** Equipment used for outdoor heating.
10. **Specific conditions. Portions of buildings that require fossil fuel or electric resistance space heating for specific conditions approved by the Building Official for research, health care, process or other specific needs that cannot practicably be served by heat pump or other space heating systems. This does not constitute a blanket exception for any occupancy type.**
11. ~~**10.**~~ **Replacements.** Replacement fuel-fired ~~**furnace equipment**~~ **appliances**.

5. Section C404.10 Water heating equipment is added as follows:

C404.10 Water heating equipment. Fossil fuel and electric resistance instantaneous and storage water heaters shall not be used to provide hot water.

Exceptions:

1. **Emergency backup. Where it is required by an applicable law or regulation to provide water heating with an emergency power system or a standby power system.**
2. ~~**1.**~~ **Integrated units.** Resistance heating elements integrated into heat pump water heating equipment.
3. ~~**2.**~~ **Recirculation loops.** Electric resistance elements used for recirculation loop temperature maintenance.
4. ~~**3.**~~ **Small systems.** Electric storage water heaters with a rated water storage volume no greater than 20 gallons.
5. ~~**4.**~~ **Point-of-use systems.** Instantaneous electric water heaters located within 10 feet of the point of use.
6. ~~**5.**~~ **Renewable electricity.** Electric resistance equipment where not less than 100 percent of the annual service water-heating requirement is provided by an *on-site renewable energy system* not used to meet any other provision of this code.
7. ~~**6.**~~ **Renewable or waste thermal energy.** Electric resistance storage water heating equipment in *buildings* where not less than 75% of the annual service water heating requirement is met by a solar thermal system or other renewable thermal system.
8. ~~**7.**~~ **High-temperature requirements.** Water heating systems that serve end-uses or have a storage requirement that necessitates a water temperature of 141°F (55°C) or hotter.
9. **Electric resistance budget. In addition to any exceptions in this section, a budget of 24 kW plus 0.1 watts per square foot of building area of electric resistance service water heating capacity per building.**
10. **Commercial kitchens. Electric booster-heaters serving commercial dishwashers, commercial food service equipment, and other approved**

process equipment that require supply water temperatures of 120°F (49°C) or higher.

11. ~~8.~~ **Replacements.** Replacement of gas-fired storage water heaters or instantaneous water heaters.

APPENDIX PT
MODELING TO A PERFORMANCE TARGET

PT101 Scope. This section establishes criteria for demonstrating compliance with a performance target, and is required for new multifamily (occupancy R-2), offices greater than 5,000 ft^2, primary and secondary schools, parking garages, and warehouses. All end use load components within and associated with the building and their building sites shall be modeled.

PT102 Mandatory requirements. The requirements in this section are mandatory requirements and shall be required in addition to the provisions of ASHRAE 90.1 Appendix G.

PT103 Performance target. Projects of the types listed in Table PT103 shall demonstrate that the proposed design reaches a fixed energy use intensity (EUI) less than or equal to the values in Table PT103, calculated utilizing the energy modeling procedures of Appendix G of ASHRAE 90.1. For *buildings* with multiple occupancy types, the modeled performance target shall be a weighted average of the floor area of each occupancy type.

> **Exception:** Energy used for electric vehicle charging, data centers, and process loads shall be excluded from compliance modeling.

TABLE PT103
PERFORMANCE TARGETS

BUILDING TYPE	PERFORMANCE TARGET (kBTU/ft2)
Multifamily (Occupancy R-2)	32
Office, small (>5,000 ft2)	19
Office, medium (5,000 – 50,000 ft2)	23
Office, large (>50,000 ft2)	28
School, primary	34
School, secondary	31
Warehouse	11

PT104 Renewable Energy. On-site renewable energy generated by a system installed as part of this project that is used by the building shall be subtracted from the proposed design energy consumption prior to calculating the proposed building performance.

PT105 Performance documentation. Documentation to verify compliance with this section shall be provided to the code official.

PT105.1 Projected compliance report. Permit submittals shall include a report documenting the proposed design is projected to meet the EUI target. The compliance report shall include the following specific information beyond the information required in ASHRAE 90.1 Appendix G:

1. Address of the building.
2. An inspection checklist documenting the building component characteristics of the proposed design.
3. Name of individual completing the report.
4. Name and version of compliance software tool.
5. Documentation of the reduction in energy use associated with on-site energy.

PT105.2 Construction plan requirements. Construction plans shall depict all component characteristics of the proposed design utilized for the EUI in accordance with ASHRAE 90.1 Appendix G.

PT105.3 Measured performance report. Projects shall demonstrate compliance with this code by documenting that the building has achieved the EUI performance calculated based on 12 months of metered energy use after occupancy.

PT105.3.1 Demonstration of operating energy use. Metered energy data demonstrating compliance with the EUI target shall be reported to the building official using Energy Star Portfolio Manager and adjusted for the percentage of floor area occupied. While at least 75 percent occupied, the building shall operate at or below its assigned energy use target established in Section PT103 for any recording period of 12 consecutive months that is completed within three years of the date of the Certificate of Occupancy. The owner shall notify the building official when this 12-month period has been successfully completed.

PT106 Energy metering and monitoring. All projects must install submetering or monitoring capabilities to support building energy performance analysis. The project must include capabilities to store and access a 24-month continuous data set on an ongoing basis.

PT106.1 End-use monitoring. Measurement devices shall be installed in new *buildings* to monitor the electric energy use of each of the following separately:

1. Total electric energy.
2. HVAC systems energy use.
3. Interior lighting.
4. Exterior lighting.
5. Receptacle circuits.
6. Data centers representing over 10 percent of total building load or 5 percent of building floor area.
7. Other process loads that represent 10 percent or more of total building energy use based on building energy use modeling.

PT106.2 Independent metering. The following items shall be independently metered. Individual meters used to comply with this section may not serve multiple *buildings*.

1. All fuel sources serving the building.
2. Energy production from on-site renewable energy systems.
3. Electric vehicle (EV) supply equipment.
4. Data centers representing over 10 percent of total building load or 5 percent of building floor area.
5. Other process loads that represent 10 percent or more of total building energy use based on building energy use modeling.
6. Individual tenant energy loads.

6. Section R202 GENERAL DEFINITIONS is amended as follows:

RESIDENTIAL BUILDING. For this code, includes detached one- and two-family dwellings and townhouses, as well as Group R-2 other than for *multifamily*, R-3, and R-4 buildings three stories or less in height above grade plane with separate means of egress.

MULTIFAMILY. Apartments, condominiums, and other similar-type buildings regardless of the number of stories.

INTRODUCED, READ, PASSED ON FIRST READING, AND ORDERED PUBLISHED this 15th day of November, 2022.

Ashley Stolzmann, Mayor

ATTEST:

Meredyth Muth, City Clerk

APPROVED AS TO FORM:

Kelly PC, City Attorney

PASSED AND ADOPTED ON SECOND AND FINAL READING, this 20th day of December, 2022.

Ashley Stolzmann, Mayor

ATTEST:

Meredyth Muth, City Clerk

MOTION: Councilmember Dickinson moved to approve Resolution No. 54, Series 2022; seconded by Councilmember Most.

VOTE: Motion passed by unanimous roll call vote.

ORDINANCE NO. 1845, SERIES 2022 – AN ORDINANCE AMENDING CHAPTER 15.18.030 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING AMENDMENTS AND DELETIONS TO THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE TO INCLUDE REQUIREMENTS FOR COMMERCIAL ENERGY USE INTENSITY PERFORMANCE TARGETS AND RESTRICTIONS OF FOSSIL FUEL SPACE AND WATER HEATING EQUIPMENT – 2nd READING, PUBLIC HEARING (advertised *Daily Camera* 12/2/22) *continued from 12/6/22*

Mayor Stolzmann introduced the item and opened the public hearing.

Community Development Director Zuccaro stated this ordinance would amend chapter 15.18.030 of the Louisville Municipal Code concerning amendments and deletions to the 2021 International Energy Conservation Code. It includes requirements for commercial energy use intensity (EUI) performance targets for specific building types; restricts fossil fuel space and water heating equipment; and applies only to new commercial construction.

This item is a part of the City's Sustainability Action Plan and the City Council's 2023 work plan. He reviewed the work done on energy modeling, policy research, and reviewed the public engagement process.

Director Zuccaro reviewed the proposed ordinance noting it includes energy use intensity (EUI) performance based targets for seven building types; other building types would be required to meet a prescriptive commercial base energy code (IECC 2021 + strengthening amendments); and all building types must meet space and water heating equipment requirements (all-electric). He reviewed the energy use performance targets and the space and water heating exemptions. He reviewed cost comparisons for electric versus mixed fuel uses.

Sustainability Coordinator Kayla Betzold reported on the regional building code cohort (which includes municipalities from across the region) which has completed its phase 2 planning meetings to develop the net zero new construction roadmap. A draft roadmap is currently under review with a final roadmap to be published in early 2023. Plans include stricter EUI targets and demand response capability by 2027 as well as stricter EUI targets and energy storage required by 2030.

Councilmember Dickinson asked if upgrades would be required for remodels. Chad Root, Chief Building Official, stated if the existing systems can meet the needs of the remodel they can be maintained. If they can't meet those needs, new equipment that meets the current code would be required.

Councilmember Dickinson asked why Louisville is not a part of the Cohort. Christine Brinker, SWEEP, stated a group applied to DOLA for a grant for this project and during the time if took the grant to come through Louisville decided to move forward more quickly on its own. It will be a part of the cohort for the phase 2 process.

Public Comments

Christian Dino, Louisville, (pooled time with Peter Geise) stated he was concerned about the costs of these new requirements. He stated he has done a case study on his own home and has found the costs to be much higher than the current code. He stated the metering equipment is costly and hard to get. He added this code requires equipment that has not been proven and may have a long lead time to get. This will keep people from building here or renting vacant spaces if they can build more quickly and cheaper in neighboring communities. He urged a no vote.

Eric Lund, Louisville Chamber of Commerce, stated his restaurant members have many concerns about the cost of refurbishing properties and they have said that clarification on the rules would be helpful. He suggested postponing a decision until clarification can be made. He stated that for Louisville to be competitive with neighbors, our rules should align with the cohort and not be too far ahead.

Matt Berry, Louisville, stated this code is too far in advance to the current technology and will create waste as new technology arrives in just a couple of years. He does not want to have to dispose of technology when something better and easier to use arrives on the market in a few years. He urged a no vote.

Rick Kron, Downtown Business Association, urged a no vote on this ordinance. Louisville should not get ahead of the cohort but rather should act in line with the cohort so we are not ahead of them and businesses then choose to go elsewhere. We don't yet know the real costs or benefits of this change. This ordinance it is not clear what it does in some places and needs additional work.

Jeff Sheets, Koelbel and Company, stated in his other developments there are serious delays in getting equipment and asking for this type of specific equipment will make it even worse. We need to better understand what this ordinance does. It has flaws in how it calculates costs for owners and tenants. This ordinance will make Louisville less competitive for businesses. He urged a no vote.

Tiffany Boyd, Louisville, urged Council to approve this ordinance. She suggested waiting for the cohort is just waiting for the inevitable and Louisville should be at the forefront. We should not kick the can down the road. We need stringent greenhouse gas limits to be put in place.

Tess Weltzin, Lafayette, urged Council to approve the ordinance to address the climate crisis for the next generation. This ordinance will help drive the path for energy efficiency. She stated local action is what is needed.

Ilana Diddams, Louisville, urged a yes vote to support the goals of the City's Sustainability Plan. She stated voting against the ordinance would not be addressing the climate crisis and the sustainability goals.

Mayor Stolzmann ended the first round of public comments noting that she would not take online comments given earlier problems with the system. She noted that she already asked people to attend in person and as presiding officer she can make that determination. She asked the City Attorney to review the Rules of Procedure for this process.

City Attorney Kelly reviewed the Rules of Procedure noting the rules state that if there are technical problems that preclude electronic participation, the in person meeting shall continue if a quorum is present in the room. She added that the Rules state the chair has reasonable discretion to apply the meeting procedures subject to the right of any member of Council to appeal to the Council in which case the matter shall be resolved by a vote of the members.

MOTION: Councilmember Leh moved to override the Mayor's decision to not take electronic comments. He stated he wants to be sure to hear from those online if it is possible. Seconded by Mayor Pro Tem Maloney.

VOTE: Motion passed by 4-3 vote with Mayor Pro Tem Maloney and Councilmembers Fahey, Leh, and Dickinson voting yes.

Larry Donner, Louisville, stated he does not support this ordinance. He feels this ordinance will ensure vacant buildings won't get repurposed and more businesses will leave town. The codes are premature and we don't fully understand the impacts.

Susan Loo, Louisville, stated the previous cost estimates on residential net zero were not accurate and it is likely these estimates for commercial are not accurate as well. There hasn't been a full look at the details of what this ordinance will do.

Councilmember Brown stated this ordinance applies to new construction only. He noted that staff did a great deal of public outreach on this and people were able to give input.

Councilmember Leh asked if the business community was specifically asked for input on this ordinance as presented here. Director Zuccaro stated there was no specific outreach to the business community about the code as drafted and presented here.

Councilmember Leh reviewed the City's sustainability goals as set out in Resolution No. 25, Series 2019 and noted everyone on Council wants to meet those goals. It is just a matter of how we get there and the timing.

Public Comments

Jeff Sheets, Koelbel and Company, stated developers aren't opposed to this but would be looking for very specific costs to build. He suggested taking more time and meeting with developers to look at real costs and understand what this looks like to see it if achievable. He suggested that could be done quickly and brought back in first quarter of next year. He asked Council to delay this a bit.

Tamar Krantz, Louisville, stated she is happy Louisville is on the forefront of this issue. She urged approval to help meet the City's sustainability goals. She does not think it will prevent businesses from coming here. She urged approval.

Josh Cooperman, Louisville, urged approval as a way to reduce greenhouse gases. He stated he wants this in place for new construction, particularly any large projects that are coming through. This code is not a stretch and should be approved.

Rick Kron, Downtown Business Association, stated he is not convinced the cost estimates in the report are not accurate and the ROI on some items are very long. He stated he would have liked the draft ordinance available earlier so that people could have more time to read and understand it before this Council meeting. He stated there are some types of businesses could build here under this ordinance.

Tiffany Boyd, Louisville, stated these changes are inevitable to address the climate crisis. All buildings will need to retrofit when this becomes required so it makes sense to approve this now.

2:34

Councilmember Fahey stated she thinks this is a good compromise and will promote sustainable building in new construction. It does apply only to new construction and has exemptions for hospitals and restaurants. The State is going to be putting very similar regulations in place in a few months and the cohort will be considering even stricter regulations for surrounding communities.

MOTION: Councilmember Fahey moved to approve the ordinance; Councilmember Most seconded the motion.

Mayor Pro Tem Maloney stated he wants more information on the ordinance. He noted all members of council support the sustainability goals, however he has concerns about process and timing. There is a sense of urgency to do this we have to do it soon, however we need to know what is happening at the State and with the cohort.

SUBSTITUTE MOTION: Mayor Pro Tem Maloney moved to table the ordinance to a date uncertain but take action in Q1 or Q2 of 2023 when we have more information. Councilmember Leh seconded the motion.

Councilmember Leh stated everyone agrees we have a serious and urgent climate problem that needs to be addressed. We all agree on our sustainability goals. We all agree on the cohort process that will establish regional standards. He would like staff to get additional public input on this version of the ordinance given there have been so many changes since first reading. He would rather table this until staff could get additional public input and bring it back in first quarter of 2023.

Councilmember Leh made a friendly amendment to table the ordinance to February 21 to allow time for a roundtable with the business community to take input on the ordinance. Mayor Pro Tem Maloney accepted the amendment.

Councilmember Most stated she thinks there has been reasonable public input and additional time is not likely to change any minds or garner more support. She stated this is a good compromise so continuing to keep this open is not an effective use of everyone's time. She understands the desire for more engagement but there is a point we need take action and we can address problems if they arise.

Councilmember Fahey stated she is comfortable the Council took enough input from the two public meetings. Staff did incorporate comments from the business community to get to where we are and allowing specific exceptions. The Council can amend this if we need to and we can look at incentives for new buildings if we want to.

Councilmember Dickinson stated the City has been leading the way in code adoption. He is excited about the cohort bringing this to all communities. This will happen sooner than later regionally. He would prefer moving with the cohort rather than ahead of them. He stated he likes this code as presented but would prefer to do this in conjunction with the cohort or doing it in Q1.

Mayor Stolzmann closed the public hearing.

VOTE ON SUBSTITUTE MOTION: Motion failed on a 4-3 vote with Mayor Stolzmann, and Councilmembers Brown, Councilmember Fahey, Councilmember Most voting no.

VOTE ON ORIGINAL MOTION: Motion carried by unanimous roll call vote.

RESOLUTION NO. 55, SERIES 2022 – A RESOLUTION AMENDING THE 2022 BUDGET BY AMENDING APPROPRIATIONS IN THE SOLID WASTE & RECYCLING FUND AND GOLF COURSE FUND FOR ADDITIONAL APPROPRIATIONS WITHIN SUCH FUNDS – PUBLIC HEARING (advertised *Daily Camera* 12/16/2022)

City of Louisville
COLORADO • SINCE 1878

CITY COUNCIL COMMUNICATION
AGENDA ITEM 8F

SUBJECT: **ORDINANCE NO. 1872, SERIES 2024 – AN ORDINANCE AMENDING TITLE 17 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING ELECTRIC VEHICLE CHARGING INFRASTRUCTURE – 1st READING, SET PUBLIC HEARING 2024**

DATE: **MARCH 19, 2023**

PRESENTED BY: **ROB ZUCCARO, AICP, COMMUNITY DEVELOPMENT DIRECTOR**

SUMMARY:
Staff is presenting a proposed ordinance that updates the City's standards for Electric Vehicle Charging Infrastructure that must be installed with new development. The update is intended to align with the standards set forth in the Colorado Model Electric and Solar Ready Code, published by the Colorado Energy Office.

BACKGROUND:
The City adopted Ordinance No. 1816, Series 2021 on October 19, 2021, which established Electric Vehicle (EV) Charging Infrastructure requirements for all new residential and commercial developments in the City and additions that add 25% or more new commercial building area or 50% or more new residential building area to an existing development. The standards established categories for *EV Installed, Capable* and *Ready* parking spaces. An *EV Installed* parking space is a fully functional charging station. An *EV Ready* parking space is wired for a charging station but does not have the charger installed. An *EV Capable* parking space has a conduit for a future wiring and space reserved in the electrical service panel to install future wiring and a charger. The City based the number of spaces required on a review of similar ordinances from other jurisdictions and anticipated demand by use. Table 1 below summarizes the currently adopted number of spaces required by use.

In 2021 and 2022, the City also adopted a series of building code amendments to improve energy efficiency in new development and redevelopments. This included adoption of the 2021 International Energy Conservation Code, with amendments, requirements for all new commercial development to incorporate all-electric water and space heating systems as a way to limit the use of fossil fuels, and a requirement for certain commercial and multi-family developments to meet minimum *Energy Use Intensity* (EUI) ratings.

Table 1: EV Charging Standards Established by Ordinance No. 1816, Series 2021

	EV Installed	EV- Ready	EV Capable
Residential Uses			
Single-Family unit		1 space	1 space
Multi-Family unit, with dedicated parking spaces or garages		1 space	1 space
Tier 1			
Multi-Family, without dedicated parking spaces or garages	10% of spaces	10% of spaces	50% of spaces
Hotel, Motel, Extended Stay Lodging Facility			
Tier 2 – Employment oriented uses	7% of spaces	10% of spaces	15% of spaces
Business and Professional Offices			
General research facilities, light industrial facilities including manufacturing, assembly, warehouse and fabrication			
Hospital			
Tier 3 – Service and Sales oriented uses	5% of spaces	10% of spaces	10% of spaces
Private and public recreational and social facilities, membership clubs, lodges, and fraternal organizations			
Religious institution			
Commercial amusement, indoor and outdoor			
Schools, including public, private, vocational or business			
Restaurant			
Retail			
Personal service			
Medical and dental clinics			

Following the adoption of each of these ordinances, the City Council asked City staff to conduct additional outreach to businesses, commercial property owners and developers to address concerns over feasibility of implementing certain parts of these new ordinances. The City held a public open house in August of 2023 to review the codes and gather input. Included in the input from this open house was that the City consider aligning its EV charging infrastructure standards with the Colorado Model Electric and Solar Read Code, which the Colorado Energy Office adopted June 1, 2023 (see Attachment 2). This new model code has less stringent standards than what the City has adopted.

PROPOSAL:
The proposed ordinance would combine use types into three categories: commercial, multifamily residential (commercial R-2 occupancies), and other residential uses. A new category of *EV Capable Light* parking spaces is added. This category only requires a conduit from the electrical panel to the parking space for future upgrades, but does not require electrical panel capacity for the circuit. The number of required *EV Installed, Ready* and *Capable* parking spaces would all be reduced under the proposal from the current ordinance for commercial and multifamily development. The number of required spaces for other residential development would remain the same as the current ordinance. Table 2 below provides a summary of the proposed number of EV charging spaces.

Table 2: Proposed Revised EV Charging Standards

Building Type	EVSE Installed Space	EV Ready Space	EV Capable Space	EV Capable Light Space
Commercial Buildings: Non R-2 Occupancies				
With 10 or less parking spaces	0	2 spaces	0	0
With greater than parking spaces	2% of spaces	8% of spaces	10% of spaces	10% of spaces
Commercial Buildings: R-2 Occupancies				
With 10 or less parking spaces	1 space	1 space	1 space	1 space
With greater than 10 parking spaces	5% of spaces	15% of spaces	10% of spaces	30% of spaces
Residential Buildings				
Per Dwelling	0	1 space	1 space	0

The proposal also adds definitions to the zoning code (LMC Title 17) that currently exist in the building code (LMC Title 15) for ease of reference. A definition for *EV Capable Light* space would also be added to the code.

ANALYSIS:
In a review of other local codes, the City's existing EV Charging Infrastructure code is more stringent than some and less stringent than others. For example, Boulder County's EV charging code requires a lower percent of EV Installed spaces for commercial development and does not require for EV Capable or Ready spaces (see Attachment 3). Lafayette's code does require EV Capable and Ready spaces in addition to Installed Spaces, but with some categories at a higher percentage than the City's existing code (see Attachment 4). Aligning with the Colorado Model Electric and Solar Ready Code is a way to provide more consistency and predictability for property developers, while still meeting the City's goals to promote EV infrastructure.

PUBLIC COMMENTS:
No public comments have been submitted.

FISCAL IMPACT:
No fiscal impact is anticipated from the changes to the code.

PLANNING COMMISSION RECOMMENDATION:
The Planning Commission reviewed the draft ordinance at their February 8, 2024 meeting and voted unanimously to recommend approval with the following conditions:

- Provide language to ensure a minimum “Level 2” EV charging station standards for installed spaces.
- Change R-2 multi-family residential occupancy with 10 or fewer parking spaces to require at least one EVSE Installed Space.
- Add language so that if EVSE Installed Spaces are provided above the minimum number that a credit can be provided to the required number of EV Capable, EV Ready, or EV Ready Light Spaces.
- Require labeling in electrical panels for the spaces reserved for breakers to support future EV Capable Spaces.

All Commission conditions were incorporated into the 1st reading draft for City Council.

The recording of the meeting is at the following link (6:30 – 1:14:30).
https://www.youtube.com/live/YCc4rVSudEc?si=hzQH-bhurnTipPHf

Minutes from the meeting will be available for the public hearing and second reading of the proposed ordinance.

STAFF RECOMMENDATION:
Staff recommends approval of Ordinance No. 1872, Series 2024 on first reading and setting the public hearing for April 16, 2024

ATTACHMENTS:

1. Ordinance No. 1872, Series 2024
2. Colorado Model Electric and Solar Ready Code
3. Boulder County Building Code Section K111.4, and R329
4. Lafayette Building Code Sections CD103, RD103, RD104, and RD105
5. Planning Commission Resolution 1, Series 2024

STRATEGIC PLAN IMPACT:

☐	**Financial Stewardship & Asset Management**	☐	**Reliable Core Services**
☒	**Vibrant Economic Climate**	☐	**Quality Programs & Amenities**
☒	**Engaged Community**	☐	**Healthy Workforce**
☐	**Supportive Technology**	☐	**Collaborative Regional Partner**

ORDINANCE NO. 1872
SERIES 2023

AN ORDINANCE AMENDING TITLE 17 OF THE LOUISVILLE MUNICIPAL CODE CONCERNING ELECTRIC VEHICLE CHARGING INFRASTRUCTURE

WHEREAS, the City of Louisville remains committed to its adopted goals to reduce energy consumption, increase clean energy sources, and support the transition to a low-carbon community as outlined in the Sustainability Action Plan and Resolution 25, Series 2019, "A Resolution Setting Clean Energy and Carbon Reduction Goals"; and

WHEREAS, the City Council desires to add requirements for solar readiness, electric vehicle charging infrastructure, and building electrification to build a more resilient building stock and support future building and transportation electrification efforts pursued by residents and businesses; and

WHEREAS, by Ordinance No. 1816 adopted on October 19, 2021, the City Council amended the Zoning Code to require new construction include electric vehicle charging infrastructure; and

WHEREAS, the City Council desires to amend the City's electric vehicle charging standards to better align with the Colorado Model Electric Ready and Solar Ready Code, published June 1, 2023 by the Colorado Energy Office; and

WHEREAS, the Planning Commission, after property notice required by law, held a public hearing on this ordinance on February 8, 2024 and provided a recommendation to the City Council on its adoption; and

WHEREAS, the City Council, after proper notice as required by law, has held a public hearing on this ordinance providing for the adoption of said code; and

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

Section 1. Louisville Municipal Code Section 17.20.170. – Electric Vehicle Charging Infrastructure, is hereby amended as follows (words added are underlined; words deleted are ~~stricken through~~):

Sec. 17.20.170. – Electric Vehicle Charging Infrastructure.

A. Purpose and Intent. The purpose and intent of this section is to facilitate and encourage the use of electric vehicles, to expedite the establishment of convenient and cost-effective electric vehicle infrastructure, and establish the minimum requirements for such infrastructure to serve both short and long-term parking needs.

B. Definitions. The following definitions shall apply to this Section:

Commercial Buildings, for this section, means commercial buildings and R-Occupancies that are covered by the International Building Code.

Electric Vehicle (*EV*) means a vehicle registered for on-road use, primarily powered by an electric motor that draws current from a rechargeable storage source that is charged by being plugged into an electrical current source.

Electric Vehicle Supply Equipment (EVSE) means the electrical conductors and associated equipment external to the electric vehicle that provide a connection between the premises wiring and the electric vehicle to provide electric vehicle charging.

Electric Vehicle (EV) Capable Space means a designated parking space that is provided with conduit sized and rated for a minimum 40-amp, 208/240-Volt dedicated branch circuit and shall be no less than 1" in size. Conduit must be continuous from the future or existing electrical panelboard or switchboard location(s) and end at a junction box or receptacle located within close proximity of the parking space. The electrical panel serving the parking space shall have sufficient capacity and physical space for a dual-pole, 40-amp breaker and shall be labeled “For Future Electric Vehicle Supply.” The conduit shall be sealed at the junction or outlet box that is capped off, with the conduit sealed and the cap labeled as "For future electric vehicle charging."

Electric Vehicle (EV) Capable Light Space means a designated parking space that is provided with conduit sized and rated for a minimum 40-amp, 208/240-Volt dedicated branch circuit and shall be no less than 1" in size and has sufficient physical space adjacent to the existing electrical equipment for future electric upgrades.

Electric Vehicle (EV) Ready Space means a designated parking space that is provided with a dedicated branch circuit with wiring capable of supporting a minimum 40-ampere, 208/240-Volt circuit that terminates at a receptacle, plug, junction box, or an installed electric vehicle supply equipment within close proximity of the parking space. There shall be adequate reserved space in an electrical panelboard or switchboard to meet the electric vehicle requirements.

Electric Vehicle Supply Equipment (EVSE) Installed Space means a designated parking space with dedicated electric vehicle supply equipment capable of supplying a minimum 40-amp, dedicated circuit rated at 208/240 Volt from a building electrical panelboard.

Electric vehicle charging stations (EVCS) means a public or private parking space that is served by battery charging station equipment that has

as its primary purpose the transfer of electric energy (by conductive or inductive means) to a battery or other energy storage device in an electric vehicle.

Electric vehicle charging station – private restricted use means an electric vehicle charging station that is:

1. Privately owned and restricted access (e.g., single-family dwelling unit, executive parking, designated employee parking, assigned parking at multi-family residential building); or

2. Publicly owned and restricted (e.g., fleet parking with no access to the general public).

Electric vehicle charging station – public use means an electric vehicle charging station that is:

1. Publicly owned and publicly available (e.g., Park-n-ride, public library parking lot, Recreation and Senior Center lot, etc); or

2. Privately owned and available to visitors of the use (e.g., shopping center, hotel, office, etc.)

Electric vehicle parking space means any marked parking space that identifies the use to be exclusively for the parking of an electric vehicle.

Residential Buildings, for this section, means dwellings that are covered by the International Residential Code

C. Number of required electric vehicle charging stations. The following table sets forth the number of required charging stations for all new development or redevelopments as required in Chapter 15.18 of the Louisville Municipal Code. ~~This list is not intended to be exhaustive of each use category, however is intended to establish general categories of use tiers. The Director of Planning and Building Safety shall determine the appropriate tier if the use is not identified in the table below.~~ For each EVSE Installed Space beyond the minimum number of required spaces, a credit may be given for a required EV Ready, EV Capable, or EV Capable Light Space.

1. Requirements will be rounded up to the nearest whole number.

2. Minimum electrical and hardware requirements for EVSE Installed, EV Ready, and EV Capable are set forth in Chapter 15.18 of the Louisville Municipal Code.

3. Minimum Charging Rate. Each installed EVSE shall comply with one of the following:

a. Be capable of charging at a minimum rate of 6.2 kVA (or 30A at 208/240V).

b. When serving multiple EVSE installed spaces and controlled by an energy management system providing load management, be capable of simultaneously sharing each EVSE installed space at a minimum charging rate of no less than 3.3 kVA.

	~~EV Installed~~	~~EV- Ready~~	~~EV Capable~~
~~**Residential Uses**~~			
~~Single-Family unit~~		~~1 space~~	~~1 space~~
~~Multi-Family unit, with dedicated parking spaces or garages~~		~~1 space~~	~~1 space~~
~~**Tier 1**~~			
~~Multi-Family, without dedicated parking spaces or garages~~	~~10% of spaces~~	~~10% of spaces~~	~~50% of spaces~~
~~Hotel, Motel, Extended Stay Lodging Facility~~			
~~**Tier 2 – Employment oriented uses**~~	~~7% of spaces~~	~~10% of spaces~~	~~15% of spaces~~
~~Business and Professional Offices~~			
~~General research facilities, light industrial facilities including manufacturing, assembly, warehouse and fabrication~~			
~~Hospital~~			
~~**Tier 3 – Service and Sales oriented uses**~~	~~5% of spaces~~	~~10% of spaces~~	~~10% of spaces~~
~~Private and public recreational and social facilities, membership clubs, lodges, and fraternal organizations~~			
~~Religious institution~~			
~~Commercial amusement, indoor and outdoor~~			
~~Schools, including public, private, vocational or business~~			

~~Restaurant~~			
~~Retail~~			
~~Personal service~~			
~~Medical and dental clinics~~			

Building Type	EVSE Installed Space	EV Ready Space	EV Capable Space	EV Capable Light Space
Commercial Buildings: Non R-2 Occupancies				
With 10 or less parking spaces	0	2 spaces	0	0
With greater than parking spaces	2% of spaces	8% of spaces	10% of spaces	10% of spaces
Commercial Buildings: R-2 Occupancies				
With 10 or less parking spaces	1 space	1 space	1 space	1 space
With greater than 10 parking spaces	5% of spaces	15% of spaces	10% of spaces	30% of spaces
Residential Buildings				
Per Dwelling	0	1 space	1 space	0

D. Permitted locations.

1. EVCS are permitted in every zoning district when accessory to a principal permitted use. Such stations located a single-family and designated multi-family units shall be private restricted use only.

2. If the primary use of the parcel is the retail electric charging of vehicles, then the use shall be considered an automotive fueling station for zoning purposes. Installation shall be located in zone districts which permit this use.

E. General requirements.

1. Accessible spaces. A charging station will be considered accessible if it is located adjacent to, and can serve, an accessible parking space as defined and required by the ADA. It is not necessary to designate the EVSE exclusively for the use of vehicles parked in the accessible space.

2. EVCS – public use shall be subject to the following requirements.

a. The EVCSs shall be located in a manner that will be easily seen by the public for informational and security purposes.

b. The EVCSs shall be located in desirable and convenient parking locations will serve as an incentive for the use of electric vehicles.

c. The EVCSs must be operational during the normal business hours of the use(s) that it serves.

d. The EVSE shall be maintained in all respects, including the functioning of equipment. A phone number or other contact information shall be provided on the equipment for reporting problems with the equipment or access to it.

e. The property owner may collect a service fee for the use of EVSE.

Section 2. If any article, section, paragraph, sentence, clause, or phrase of this ordinance is held to be unconstitutional or invalid for any reason, such decision shall not affect the validity or constitutionality of the remaining portions of this ordinance. The City Council hereby declares that it would have passed this ordinance and each part or parts hereof irrespective of the fact that any one part or parts be declared unconstitutional or invalid.

Section 3. The repeal or modification of any provision of any prior ordinance 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 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 _____ day of _____, 2023.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Meredyth Muth, City Clerk

APPROVED AS TO FORM:

_____
Kelly PC, City Attorney

PASSED AND ADOPTED ON SECOND AND FINAL READING, this _____ day of _____, 2023.

_____
Christopher M. Leh, Mayor

ATTEST:

_____
Meredyth Muth, City Clerk

COLORADO
Energy Office

Colorado Model Electric Ready and Solar Ready Code

Published: June 1, 2023

COLORADO
Department of Local Affairs

Chapter 1 Scope and Administration

SECTION 101 SCOPE AND GENERAL REQUIREMENTS.

101.1 Title. This code shall be known as the **Electric Ready and Solar Ready Code** of [NAME OF JURISDICTION], and shall be cited as such. It is referred to herein as "this code".

101.2 Scope. This code applies to all buildings and dwelling units, and the buildings' sites and associated systems and equipment.

101.3 Intent. This code shall regulate the design and construction of buildings to prepare new buildings for solar photovoltaic or solar thermal, electric vehicle charging infrastructure, and electrification of building systems. This code is intended to provide flexibility and balance upfront construction costs with the future cost to retrofit buildings to accommodate these systems. This code is not intended to abridge safety, health or environmental requirements contained in other applicable codes or ordinances.

101.4. Applicability. Where, in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall govern.

> **101.4.1 Residential Buildings.** *Residential buildings* must comply with the Residential Chapters of this code.
>
> **101.4.2 Commercial Buildings.** *Commercial buildings* must comply with the Commercial Chapters of this code.

SECTION 102 WAIVER AND VARIANCE.

102.1 Scope. The following waivers shall be permitted to be requested if buildings meet the following requirements.

> **102.1.1 Commercial Buildings Greater than 10,000 sq. ft.** *Commercial buildings* that have a gross floor area greater than 10,000 sq. ft. shall be eligible to request

a partial waiver to the requirements of this code if they meet the requirements of Section **102.2**.

102.1.2 Buildings Impacted by a Natural Disaster. [NAME OF JURISDICTION] is permitted to authorize, upon appeal in specific cases, a waiver from the requirements of this code where, owing to a declared natural disaster that has destroyed buildings or resulted in other exceptional and extraordinary circumstances as determined by [NAME OF JURISDICTION], and [NAME OF JURISDICTION] determines enforcement of the provisions of this code will result in unnecessary hardship.

102.2 Substantial Cost Differential Waiver. [NAME OF JURISDICTION] shall be permitted to authorize, upon appeal, a waiver from the requirements of this code for an applicant that asserts that compliance with this code will result in a substantial cost differential. [NAME OF JURISDICTION], when authorizing such a waiver, shall be permitted to waive certain requirements of this code only until the cost differential for compliance with the remaining requirements reaches one percent or less. The burden of proof is upon the applicant to provide substantiation of a cost differential, such as quotes or other licensed design professional analyses as *approved* by [NAME OF JURISDICTION].

102.2.1 Substantial Cost Differential. For the purposes of Section **102.2**, "substantial cost differential" means costs incurred as a result of compliance with the requirements of this code would exceed one percent of total mechanical, electrical, and plumbing construction costs inclusive of materials and labor.

SECTION 103 CONSTRUCTION DOCUMENTS.

103.1 General. Construction documents and other supporting data shall be submitted in one or more sets, or in a digital format where allowed by the *code official*, with each application for a permit. The construction documents shall be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed. Where special conditions exist, the *code official* is authorized to require necessary construction documents to be prepared by a registered design professional.

Exception: The *code official* is authorized to waive the requirements for construction documents or other supporting data if the *code official* determines they are not necessary to confirm compliance with this code.

103.2 Information on Construction Documents. Construction documents shall be drawn to scale on suitable material. Electronic media documents are permitted to be submitted where *approved* by the *code official*. Construction documents shall be of sufficient clarity to indicate the location, nature, and extent of the work proposed, and show in sufficient detail pertinent data and features of the building, systems, and equipment as herein governed. Details shall include, but are not limited to, the following as applicable:

1. Location and size of the *solar-ready zone.*
2. Structural design loads of roof dead load and roof live load.
3. Pathways for routing of conduit from the *solar-ready zone* to the electrical service panel.
4. Number and location of *EV capable light spaces.*
5. Number and location of *EV capable spaces.*
6. Number and location of *EV ready spaces.*
7. Number and location of *EVSE installed spaces.*
8. Locations of conduit and termination points serving the aforementioned parking spaces.
9. Location for condensate drainage where *combustion equipment* for space heating and water heating is installed.

103.3 Examination of Documents. The *code official* shall examine or cause to be examined the accompanying documents and shall ascertain whether the construction indicated and described is in accordance with the requirements of this code and other pertinent laws or ordinances. The *code official* is authorized to utilize a registered design professional, or other *approved* entity not affiliated with the building design or construction, in conducting the review of the plans and specifications for compliance with the code.

103.3.1 Approval of Construction Documents. When the *code official* issues a permit where construction documents are required, the construction documents shall be endorsed in writing and stamped "Reviewed for Code

Compliance". Such *approved* construction documents shall not be changed, modified, or altered without authorization from the *code official*. Work shall be done in accordance with the *approved* construction documents.

One set of "Reviewed for Code Compliance" construction documents shall be retained by the *code official*. The other set shall be returned to the applicant, kept at the site of work, and shall be open to inspection by the *code official* or a duly authorized representative.

103.3.2 Previous Approvals. This code shall not require changes in the construction documents, construction, or designated occupancy of a structure for which a lawful permit has been heretofore issued or otherwise lawfully authorized, and the construction of which has been pursued in good faith within 180 days after the effective date of this code and has not been abandoned; except that the *code official* is authorized to grant one or more extensions of time for additional periods not exceeding 180 days each.

103.3.3 Phased Approval. The *code official* shall have the authority to issue a permit for the construction of part of a solar ready, EV ready, or electric ready installation before the construction documents for the entire system have been submitted or *approved*, provided that adequate information and detailed statements have been filed complying with all pertinent requirements of this code. The holders of such permit shall proceed at their own risk without assurance that the permit for the entire solar ready, EV ready, or electric ready installation will be granted.

I103.4 Amended Construction Documents. Changes made during construction that are not in compliance with the *approved* construction documents shall be resubmitted for approval as an amended set of construction documents.

103.5 Retention of Construction Documents. One set of *approved* construction documents shall be retained by the *code official* for a period of not less than 180 days from the date of completion of the permitted work, or as required by state or local laws.

103.6 Building Documentation and Closeout Submittal Requirements. The construction documents shall specify that the documents described in this section be

provided to the building owner or owner's authorized agent within 90 days of the date of receipt of the certificate of occupancy.

Exception: *Residential buildings.*

103.6.1 Record Documents. Construction documents shall be updated to convey a record of the completed work. Such updates shall include mechanical, electrical, and control drawings that indicate all changes to size, type, and location of components, equipment, and assemblies.

103.6.2 Compliance Documentation. Compliance documentation and supporting calculations shall be delivered in one document to the building owner as a part of the project record documents or manuals, or as a standalone document. This document shall include the specific energy code edition utilized for compliance determination for each system.

SECTION 104 INSPECTIONS.

104.1 General. Construction or work for which a permit is required shall be subject to inspection by the *code official*, his or her designated agent or an *approved agency*, and such construction or work shall remain visible and able to be accessed for inspection purposes until *approved*. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction. Inspections presuming to give authority to violate or cancel the provisions of this code or of other ordinances of the jurisdiction shall not be valid. It shall be the duty of the permit applicant to cause the work to remain visible and/or able to be accessed for inspection purposes. Neither the *code official* nor the jurisdiction shall be liable for expenses entailed in the removal or replacement of any material, product, system or building component required to allow an inspection to validate compliance with this code.

104.2 Required Inspections. The *code official*, his or her designated agent or an *approved agency*, upon notification, shall make the inspections set forth in Sections **104.2.1** through **104.2.4**.

104.2.1 Solar Ready. Inspections shall verify all of the following as required by this code, *approved* plans, and specifications:

1. The location and size of the *solar-ready zone* or the capacity of an installed on-site renewable energy system.
2. Electrical capacity and reserved physical space for circuit breakers in the main electrical service panel that are properly labeled.

104.2.2 Electric Vehicle Ready. Inspections shall verify all of the following as required by this code, *approved* plans, and specifications:

1. *EV* power transfer infrastructure requirements.
2. Electrical equipment associated with each parking space type, including branch circuits, conduit and/or raceway, junction boxes, receptacles, and *EVSE* are properly labeled and installed.
3. Electrical capacity and reserved physical space for circuit breakers in the main electrical service panel are properly labeled, if applicable.

104.2.3 Electric Ready. Inspections shall verify all of the following as required by this code, *approved* plans, and specifications:

1. Branch circuits, conduit and/or raceway, wiring, junction boxes, and receptacles for *future electric equipment* or appliances are properly labeled and installed, as applicable.
2. Reserved physical space for *future electric equipment* or appliances.
3. Electrical capacity and reserved physical space for circuit breakers in the main electrical service panel are properly labeled.

104.2.4 Final Inspection. The final inspection shall include verification of the installation and proper labeling of all requirements of this code.

104.3 Reinspection. A building shall be reinspected where determined necessary by the *code official*.

104.4 Approved Inspection Agencies. The *code official* is authorized to accept reports of third-party inspection agencies not affiliated with the building design or construction, provided that such agencies are *approved* as to qualifications and reliability relevant to the building components and systems that they are inspecting.

104.5 Inspection Requests. It shall be the duty of the holder of the permit or their duly authorized agent to notify the *code official* when work is ready for inspection. It shall

be the duty of the permit holder to provide access to and means for inspections of such work that are required by this code.

104.6 Reinspection and Testing. Where any work or installation does not pass an initial test or inspection, the necessary corrections shall be made to achieve compliance with this code. The work or installation shall then be resubmitted to the *code official* for inspection and testing.

SECTION 105 NOTICE OF APPROVAL.

105.1 Approval. After the prescribed inspections indicate that the work complies in all respects with this code, a notice of approval shall be issued by the *code official*.

105.2 Revocation. The *code official* is authorized to suspend or revoke, in writing, a notice of approval issued under the provisions of this code wherever the certificate is issued in error, or on the basis of incorrect information supplied, or where it is determined that the building or structure, premise, or portion thereof is in violation of any ordinance or regulation or any of the provisions of this code.

SECTION 106 VALIDITY.

106.1 General. If a portion of this code is held to be illegal or void, such a decision shall not affect the validity of the remainder of this code.

SECTION 107 REFERENCED STANDARDS.

107.1 General. The codes and standards referenced in this code shall be listed in Section **107.2**, and such codes and standards shall be considered as part of the requirements of this code to the prescribed extent of each such reference.

107.2 Referenced Codes and Standards. The codes and standards referenced in this code are as follows:

1. International Building Code
    a. Chapter 3
    b. Chapter 11
2. International Energy Conservation Code
3. International Fire Code

4. International Residential Code
5. National Electrical Code Article 625
6. UL2202 and 2594

107.2.1 Conflicts. Where conflicts occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

107.2.2 Provisions in Referenced Codes and Standards. Where the extent of the reference to a referenced code or standard includes subject matter that is within the scope of this code, the provisions of this code, as applicable, shall take precedence over the provisions in the referenced code or standard.

107.3 Applications of References. References to chapter or section numbers, or to provisions not specifically identified by number, shall be construed to refer to such chapter, section, or provision of this code.

107.4 Other Laws. The provisions of this code shall not be deemed to nullify any provisions of local, state, or federal law.

SECTION 108 STOP WORK ORDER.

108.1 Authority. Where the *code official* finds any work regulated by this code being performed in a manner contrary to the provisions of this code or in a dangerous or unsafe manner, the *code official* is authorized to issue a stop work order.

108.2 Issuance. The stop work order shall be in writing and shall be given to the owner of the property, the owner's authorized agent, or the person performing the work. Upon issuance of a stop work order, the cited work shall immediately cease. The stop work order shall state the reason for the order and the conditions under which the cited work is authorized to resume.

108.3 Emergencies. Where an emergency exists, the *code official* shall not be required to give a written notice prior to stopping the work.

108.4 Failure to Comply. Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be subject to fines established by [NAME OF JURISDICTION].

SECTION 109 BOARD OF APPEALS.

109.1 General. In order to hear and decide appeals of orders, decisions, or determinations made by the *code official* relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals. The *code official* shall be an ex officio member of said board but shall not have a vote on any matter before the board. The board of appeals shall be appointed by the governing body and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business and shall render all decisions and findings in writing to the appellant with a duplicate copy to the *code official*.

109.2 Limitations on Authority. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply or an equally good or better form of construction is proposed. The board shall not have the authority to waive the requirements of this code.

109.3 Qualifications. The board of appeals shall consist of members who are qualified by experience and training and are not employees of [NAME OF JURISDICTION].

Chapter 2 Definitions

SECTION 201 GENERAL.

201.1 Scope. Unless stated otherwise, the following words and terms in this code shall have the meanings indicated in this chapter.

201.2 Interchangeability. Words used in the present tense include the future; words in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural includes the singular.

201.3 Terms Defined in Other Codes. Terms that are not defined in this code but are defined in the International Building Code, International Fire Code, International Fuel Gas Code, International Mechanical Code, International Plumbing Code, International Energy Conservation Code, or International Residential Code shall have the meanings ascribed to them in those codes.

201.4 Terms not Defined. Terms not defined by this chapter or the codes listed under 201.3 shall have ordinarily accepted meanings such as the context implies.

SECTION 202 GENERAL DEFINITIONS.

APPROVED. Acceptable to the *code official*.

APPROVED AGENCY. An established and recognized agency that is regularly engaged in conducting tests or furnishing inspection services, or furnishing product certification, where such agency has been approved by the *code official.*

CODE OFFICIAL. The officer or other designated authority charged with the administration and enforcement of this code, or a duly authorized representative.

COMBUSTION EQUIPMENT. For this code, any equipment or appliance used for space-heating, service water heating, cooking, clothes drying or lighting that uses *fuel gas* or *fuel oil*.

COMMERCIAL BUILDING. For this code, all commercial buildings and R-Occupancies that are covered by the International Building Code.

CORE AND SHELL. The first phase of a commercial project that has the outer building envelope constructed and may contain interior lighting and heating and has not received a permanent Certificate of Occupancy.

DIRECT CURRENT FAST CHARGER (DCFC) EVSE. Equipment capable of fast charging on a 100A or higher 480VAC three-phase branch circuit. AC power is converted into a controlled DC voltage and current within the *EVSE* that will then directly charge the *electric vehicle*.

ELECTRIC VEHICLE (EV). An automotive-type vehicle for on-road use, including but not limited to, passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, and electric motorcycles, primarily powered by an electric motor that draws current from a building electrical service, *EVSE*, a rechargeable storage battery, a fuel cell, a photovoltaic array, or another source of electric current. Off-road, self-propelled electric mobile equipment, including but not limited to, industrial trucks, hoists, lifts, transports, golf carts, airline ground support equipment, tractors, and boats are not considered electric vehicles.

ELECTRIC VEHICLE CAPABLE LIGHT SPACE (EV CAPABLE LIGHT SPACE). A designated vehicle parking space that has conduit and/or raceway installed to support future implementation of *electric vehicle* charging installation, and has sufficient physical space adjacent to the existing electrical equipment for future electric upgrades.

ELECTRIC VEHICLE CAPABLE SPACE (EV CAPABLE SPACE). A designated vehicle parking space that has the electric panel capacity and conduit and/or raceway installed to support future implementation of *electric vehicle* charging.

ELECTRIC VEHICLE READY SPACE (EV READY SPACE). A designated vehicle parking space that has the electric panel capacity, raceway wiring, receptacle, and circuit overprotection devices installed to support future implementation of *electrical vehicle* charging.

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). An *electric vehicle* charging system or device that is used to provide electricity to a plug-in *electric vehicle* or *plug-in hybrid electric vehicle*, is designed to ensure that a safe connection has been made between the electrical grid and the vehicle, and is able to communicate with the vehicle's control system so that electricity flows at an appropriate voltage and current level.

ELECTRIC VEHICLE SUPPLY EQUIPMENT INSTALLED SPACE (EVSE INSTALLED SPACE). A vehicle parking space that is provided with a dedicated *EVSE* connection.

FIRST TENANT FINISH. The first tenant finish(es) in a new structure or *core and shell* building that is credited towards meeting the requirements of this Chapter.

FUEL GAS. A natural gas, manufactured gas, liquefied petroleum gas, or mixtures of these gasses.

FUEL OIL. Kerosene or any hydrocarbon oil having a flash point of not less than 100°F (38°C).

FUTURE ELECTRIC EQUIPMENT. Equipment or appliances necessary to support future all-electric space and water heating, cooking, or clothes drying.

PLUG-IN HYBRID ELECTRIC VEHICLE. An *electric vehicle* having a second source of motive power.

RESIDENTIAL BUILDING. For this code, one- and two-family dwellings and townhouses as defined in the International Residential Code.

SOLAR-READY ZONE. A section or sections of the roof or building overhang designated and reserved for future installation of a solar photovoltaic system or solar thermal system.

Chapter 3 Electric Ready

PART 1 RESIDENTIAL ELECTRIC READY

SECTION RE301 SCOPE

RE301.1 General. These provisions shall be applicable for all new buildings, and major renovations and additions.

SECTION RE302 ADDITIONAL ELECTRIC INFRASTRUCTURE

RE302.1 Additional Electric Infrastructure. *Combustion equipment* in *residential buildings* must meet the requirements of Sections **RE302.2** through **RE302.6**.

Exceptions:

1. Interior fireplaces that do not serve as a primary source of heating.
2. Exterior fireplaces and firepits.

RE302.2 Combustion Equipment. *Combustion equipment* shall be provided with all of the following:

1. A dedicated, appropriately phased branch circuit sized to accommodate *future electric equipment* or appliances to serve a comparable capacity to meet the heating load.

2. An electric receptacle or junction box that meets the requirements of Section **RE302.5**, and is connected to the electrical panel through the branch circuit. Each electrical receptacle or junction box shall have reasonable access to the *combustion equipment* or dedicated physical space for *future electric equipment* with no obstructions other than the current *combustion equipment*.

3. Where *combustion equipment* is used for space or water heating, dedicated physical space shall be provided for *future electric equipment,* including an electric resistance backup coil for ducted systems, if applicable.

   Exception: Dwelling units with installed air conditioning systems are not required to provide additional dedicated physical space for an outdoor heat pump.

RE302.3 Electrical Panel Space. The electrical panel shall have a reserved space for a minimum two-pole circuit breaker for each branch circuit provided for *future electric equipment* or appliances.

RE302.4 Labeling. The junction box or receptacle and the dedicated circuit breaker space serving *future electric equipment* or appliances in the electrical panel shall be labeled for their intended use.

RE302.5 Adjacency. The electrical receptacle or junction box must be provided within 3 feet of the *combustion equipment* or appliances, or within 3 feet of the dedicated physical space for *future electric equipment* or appliances.

   Exception: For *combustion equipment* dedicated to space or water heating, the electrical receptacle or junction box shall be located not more than 6 feet from the *combustion equipment* or the dedicated physical space for *future electric equipment*.

RE302.6 Condensate Drain. Where *combustion equipment* for space heating and water heating is installed, a location shall be provided for condensate drainage.

PART 2 COMMERCIAL ELECTRIC READY

SECTION CE301 SCOPE

CE301.1 General. These provisions shall be applicable for all new buildings, additions, and *first tenant finish* permits.

   CE301.1.1 First Tenant Finishes. In the case that a *first tenant finish* to a commercial *core and shell* building or unfinished space is credited towards meeting the requirements of this Chapter, the *code official* shall not issue a

Certificate of Occupancy to the tenant until the requirements of Section **CE302** are met.

SECTION CE302 ADDITIONAL ELECTRIC INFRASTRUCTURE

CE302.1 Additional Electric Infrastructure. *Combustion equipment* in *commercial buildings* shall meet the electric infrastructure requirements of Sections **CE302.2** or **CE302.3**.

Exceptions:

1. Interior fireplaces that do not serve as a primary source of heating.
2. Exterior fireplaces and fire pits.
3. Additions to buildings that do not provide new space-heating equipment will not be required to provide additional electrical infrastructure to the existing space-heating equipment.

CE302.2 Commercial Buildings Less than 10,000 sq. ft. and all R-Occupancies. *Commercial buildings* that have a gross floor area of less than 10,000 sq. ft., and all R-occupancies of any size, shall comply with Sections **CE302.2.1** through **CE302.2.5**.

CE302.2.1 Combustion Equipment. *Combustion equipment* shall be provided with all of the following:

1. A dedicated, appropriately phased branch circuit sized to accommodate *future electric equipment* or appliances to serve a comparable capacity to meet the heating load.

2. An electric receptacle or junction box that meets the requirements of Section **CE302.2.5**, and is connected to the electrical panel through the branch circuit. Each electrical receptacle or junction box shall have reasonable access to the *combustion equipment* or dedicated physical space for *future electric equipment* with no obstructions other than the current *combustion equipment*.

3. Where *combustion equipment* is used for space or water heating, dedicated space shall be provided for all *future electric equipment*,

including an electric resistance backup coil for ducted systems if applicable.

Exception: Buildings with installed air conditioning systems are not required to provide additional dedicated physical space for an outdoor heat pump.

CE302.2.2 Electrical Panel Space. The electrical panel shall have reserved physical space for a minimum two-pole or three-pole circuit breaker for each branch circuit provided for *future electric equipment* or appliances. The physical space in the electrical panel for each circuit breaker shall be sized with sufficient breaker capacity to meet the electrical demand of the *future electric equipment* or appliance that is sized to serve a comparable capacity to meet the heating load.

CE302.2.3 Labeling. The junction box or receptacle and the dedicated circuit breaker space serving *future electric equipment* or appliances in the electrical panel shall be labeled for their intended use.

CE302.2.4 Adjacency. The electrical receptacle or junction box must be provided within 3 feet of the *combustion equipment* or appliances or within 3 feet of the dedicated physical space for *future electric equipment* or appliances.

Exception: For *combustion equipment* dedicated to space or water heating, the electrical receptacle or junction box shall be located not more than 6 feet from the *combustion equipment* or the dedicated physical space for *future electric equipment*.

CE302.2.5 Condensate Drain. Where *combustion equipment* dedicated to space heating and water heating is installed, a location shall be provided for condensate drainage.

CE302.3 Commercial Buildings 10,000 sq. ft. or Greater. All *commercial buildings* that have a gross floor area of 10,000 sq. ft. or greater shall comply with the following requirements.

Exception: R-occupancies.

CE302.3.1 Combustion Equipment or Appliances. All *combustion equipment* shall be provided with the following:

1. A junction box that is located in the same physical space as the *combustion equipment* and is reasonably accessible, and that is connected to the electrical panel by continuous conduit and/or raceways.
2. Dedicated electrical panel space for an appropriately phased branch circuit sized to accommodate *future electric equipment* or appliances to serve a comparable capacity to meet the heating load.
3. Where *combustion equipment* is used for space and water heating, dedicated physical space shall be provided for all *future electric equipment*.

CE302.3.2 Electrical Panel Space. The electrical panel shall have reserved physical space for a minimum two-pole or three-pole circuit breaker for each branch circuit provided for *future electric equipment* or appliances. The physical space in the electrical panel for each circuit breaker shall be sized with sufficient breaker capacity to meet the electrical demand of the *future electric equipment* or appliance that is sized to serve a comparable capacity to meet the heating load.

CE302.3.3 Labeling. The dedicated circuit breaker space serving *future electric equipment* or appliances in the electrical panel shall be labeled "For future electric equipment".

CE302.3.4 Physical Space. Dedicated physical space shall be provided for additional electric equipment, including but not limited to transformers and cabinets, necessary for electrical service to *future electric equipment* or appliances.

Chapter 4 Solar Ready

PART 1 RESIDENTIAL SOLAR READY.

SECTION RS401 SCOPE.

RS401.1 General. These provisions shall be applicable for new buildings, and major renovations and additions.

SECTION RS402 SOLAR READY ZONE.

RS402.1 General. New *residential buildings* with not less than 600 square feet of roof area oriented between 110 degrees and 270 degrees of true north or that is a low-sloped roof, shall comply with Sections **RS402.2** through **RS402.8**.

Exceptions:

1. New residential dwelling units with a permanently installed on-site renewable energy system that provides electricity to the dwelling unit's electrical system.
2. A building where all areas of the roof that would otherwise meet the requirements of Section **RS402** are in full or partial shade for more than 70 percent of daylight hours annually.

RS402.2 Construction Document Requirements for Solar-Ready Zone. Construction documents shall indicate the *solar-ready zone*.

RS402.3 Solar-Ready Zone Areas. The total *solar-ready zone* area for each dwelling unit shall be not less than 300 square feet exclusive of mandatory access or setback areas as required by the International Fire Code. The *solar-ready zone* shall be composed of areas not less than 5 feet in width and not less than 80 square feet exclusive of access or setback areas as required by the International Fire Code.

Exception: New townhouses three stories or less in height above grade plane and with a total floor area less than or equal to 2,000 square feet of conditioned space per townhouse unit shall have a *solar-ready zone* area of not less than 150 square feet.

RS402.4 Obstructions. *Solar-ready zones* shall be free from obstructions, including but not limited to, vents, chimneys, and roof-mounted equipment.

RS402.5 Shading. The *solar-ready zone* shall be set back from any existing or new permanently affixed object on the building or site that is located south, east, or west of the *solar-ready zone* a distance not less than two times the object's height above the nearest point on the roof surface. Such objects include, but are not limited to, taller portions of the building itself, parapets, chimneys, antennas, signage, rooftop equipment, trees, and roof plantings either existing at the time of permit application or planned for on the construction documents.

RS402.6 Roof Load Documentation. The structural design loads of roof dead load and roof live load shall be clearly indicated on the construction documents.

RS402.7 Interconnection Pathway. Construction documents shall indicate at least one potential pathway for routing of conduit and/or raceway from the *solar-ready zone* to the electrical service panel and shall be labeled as "Potential Pathway" on the construction documents.

RS402.8 Electrical Service Reserved Space. The main electrical service panel shall have sufficient reserved space to allow the installation of a dual pole circuit breaker for future solar electric installation and shall be labeled "For Future Solar Electric." The reserved space shall be positioned at the opposite (load) end from the input feeder location or main circuit location.

RS402.9 Construction Documentation Certificate. A permanent certificate, indicating the *solar-ready zone* and other requirements of this Part, shall be posted near the electrical distribution panel, water heater, or other conspicuous location.

PART 2 COMMERCIAL SOLAR READY

SECTION CS401 SCOPE

CS401.1 General. These provisions shall be applicable for new buildings, and major renovations and additions.

SECTION CS402 SOLAR-READY ZONE

CS402.1 General. A *solar-ready zone* shall be located on the roof of all new *commercial buildings* that are oriented between 110 and 270 degrees of true north or have low-sloped roofs. *Solar-ready zones* shall comply with Sections **CS402.2** through **CS402.7**.

Exceptions:

1. A building with a permanently-installed, on-site renewable energy system that meets the following criteria.
    a. The system produces the energy output equivalent to covering 40 percent of the net roof area with solar photovoltaic calculated as the horizontally projected gross roof area less the area covered by skylights, occupied roof decks, vegetative roof areas, and mandatory access or set back areas as required by the International Fire Code.
    b. The system is located on the roof or overhang of the building or on the roof or overhang of another structure located within 250 feet of the building, on the building premises, on covered parking, or another *approved* location installed with the building project and under the same property ownership.
2. A building with a *solar-ready zone* that is shaded for more than 70 percent of daylight hours annually.
3. A building where a licensed design professional certifies that the incident solar radiation available to the building is not suitable for a *solar-ready zone*.
4. A building where a licensed design professional certifies that the *solar-ready zone* area required by Section **CS402.3** cannot be met because of extensive rooftop equipment, skylights, vegetative roof areas, or other obstructions.

CS402.2 Construction Document Requirements for a Solar-Ready Zone. Construction documents shall indicate the *solar-ready zone*.

CS402.3 Solar-Ready Zone Area. The total *solar-ready zone* area shall not be less than 40 percent of the roof area calculated as the horizontally projected gross roof area less the area covered by skylights, occupied roof decks, vegetative roof areas, and mandatory access or set back areas as required by the International Fire Code. The *solar-ready zone* shall be a single area or smaller, separated sub-zone areas. Each sub-zone area shall be not less than 5 feet in width in the narrowest dimension.

The *solar-ready zone* shall be located on the roof or overhang of the building or on the roof or overhang of another structure located within 250 feet of the building, on the building premises, on covered parking, or another *approved* location installed with the building project and under the same property ownership .

CS402.4 Obstructions. *Solar-ready zones* shall be free from obstructions, including pipes, vents, ducts, HVAC equipment, skylights, and roof-mounted equipment.

CS402.5 Roof Loads and Documentation. The structural design loads for roof dead load and roof live load shall be indicated on the construction documents.

CS402.6 Interconnection Pathway. Construction documents shall indicate at least one potential pathway for routing of conduit and/or raceway from the *solar-ready zone* to an electrical service panel and shall be labeled as "Potential Pathway" on the construction documents.

CS402.7 Electrical Service Reserved Space. The main electrical service panel shall have a minimum bus bar rating of not less than 200 amps. The main electrical service panel shall have a reserved space to allow installation of a dual-pole circuit breaker for future solar electric. This space shall be labeled "For Future Solar Electric." The reserved space shall be positioned at the end of the panel that is opposite from the panel supply conductor connection.

PART 3 RESIDENTIAL SOLAR PANEL CAPACITY

SECTION RS410 SCOPE

RS410.1 General. These provisions shall be applicable for all new buildings, and major renovations and additions.

RS410.2 Electric Service Reserved Space. The main electrical service panel shall have sufficient reserved space to allow installation of a dual pole circuit breaker for future solar electric installation and shall be labeled "For Future Solar Electric." The reserved space shall be positioned at the opposite (load) end from the input feeder location or main circuit location.

> **Exception**: A dwelling unit that already must comply with the solar ready provisions in Chapter 4 or that has a permanently installed on-site renewable energy system that provides electricity to the dwelling unit's electrical system.

PART 4 COMMERCIAL SOLAR PANEL CAPACITY

SECTION CS410 SCOPE

CS410.1 General. These provisions shall be applicable for new buildings, and major renovations and additions.

CS410.2 Electric Service Reserved Space. The main electrical service panel shall have a minimum bus bar rating of not less than 200 amps. The main electrical service panel shall have sufficient reserved space to allow installation of a dual pole circuit breaker for future solar electric installation and shall be labeled "For Future Solar Electric." The reserved space shall be positioned at the opposite (load) end from the input feeder location or main circuit location.

> **Exception:** A building that already must comply with the solar ready provisions in Chapter 4 or that has a permanently installed on-site renewable energy system that provides electricity to the building's electrical system.

Chapter 5 Electric Vehicle Ready

PART 1 RESIDENTIAL ELECTRIC VEHICLE READY

SECTION RV501 SCOPE

RV501.1 General. These provisions shall be applicable for all new buildings, and major renovations and additions.

SECTION RV502 ELECTRIC VEHICLE POWER TRANSFER INFRASTRUCTURE

RV502 Electric Vehicle Power Transfer Infrastructure. New vehicle parking spaces for *residential buildings* shall be provided in accordance with Sections **RV502.1** and **RV502.3**.

RV502.1 One- and Two-family Dwellings and Townhouses. Each dwelling unit with a dedicated attached or detached garage or other onsite designated parking provided for the dwelling unit shall be provided with one *EV ready space* per dwelling unit.

RV502.2 EV Ready Spaces. Each *EV ready space* shall have a branch circuit that complies with all of the following:

1. Terminates at a receptacle, located within 3 feet of each *EV ready space* it serves. *EV ready* includes two adjacent parking spaces if the receptacle for the electrical facilities of this section is installed adjacent to and between both parking spaces.
2. Has a minimum circuit capacity of 8.3 kVA (40A 208/240V).
3. The electrical panel, electrical distribution equipment directory, and all outlets or enclosures shall be marked "For future electric vehicle supply equipment".

   Exception: A receptacle need not be provided if a hard-wired *EVSE* is installed.

RV502.3 Identification. Construction documents shall designate the *EV ready space* and indicate the locations of raceway and/or conduit and the termination points serving them. The circuits or spaces reserved in the electrical panel for *EV ready spaces* shall be clearly identified in the panel or subpanel directory.

PART 2 COMMERCIAL ELECTRIC VEHICLE READY

SECTION CV501 SCOPE

CV501.1 General. These provisions shall be applicable for all new buildings, and major renovations and additions.

SECTION CV502 ELECTRIC VEHICLE POWER TRANSFER INFRASTRUCTURE

CV502 Electric Vehicle Power Transfer Infrastructure. Where new parking is provided for *commercial buildings,* it shall be provided with *electric vehicle* power transfer infrastructure in compliance with Sections **CV502.1** through **CV502.9**.

CV502.1 Quantity. The number of required *EVSE installed spaces, EV ready spaces, EV capable spaces,* and *EV capable light spaces* shall be determined in accordance with this Section and **Table CV502.1** based on the total number of provided vehicle parking spaces and shall be rounded up to the nearest whole number. This includes all covered parking under carports or detached garages.

CV502.1.1 Where more than one parking lot is provided on a building site, the number of provided vehicle parking spaces required to have *EV* power transfer infrastructure shall be calculated separately for each parking lot.

CV502.1.1.1 R-2 Occupancies, as defined in Chapter 3 of the International Building Code, shall use the total parking requirement for the entire development to determine the *EV* power transfer infrastructure requirements using **Table CV502.1**.

CV502.1.2 For *commercial buildings* that install a *DCFC EVSE,* each *DCFC EVSE* installed shall be permitted to be substituted for other space types as follows:

1. *Commercial buildings* other than R-2 Occupancies shall be permitted to substitute up to 10 spaces when the building provides a minimum of 20 percent of parking spaces as a combination of *EV Capable*, *EV ready*, or *EVSE installed spaces*.
2. R-2 Occupancies shall be permitted to substitute up to 5 spaces when the building provides a minimum of 60 percent of parking spaces as a combination of *EV Capable light, EV Capable, EV ready*, or *EVSE installed spaces*.

CV502.1.3 *EVSE installed spaces* that exceed the minimum requirements of this section are permitted to be used to meet minimum requirements for *EV ready spaces*, *EV capable spaces*, and *EV capable light spaces*.

CV502.1.4 *EV ready spaces* that exceed the minimum requirements of this section are permitted to be used to meet minimum requirements for *EV capable spaces* and *EV capable light spaces*.

CV502.1.5 *EV capable spaces* that exceed the minimum requirements of this section are permitted to be used to meet the minimum requirements for *EV capable light spaces*.

CV502.1.6 All attached garages with direct connection to a dwelling unit will be required to have one *EV ready space*.

Table CV502.1: EV Power Transfer Infrastructure Requirements

Building Type / Space Type	*EVSE Installed Space*	*EV Ready Space*	*EV Capable Space*	*EV Capable Light Space*
All *commercial buildings*, except for R-2 occupancies, with 10 or less parking spaces.	0	2 spaces	0	0
***Commercial buildings*, except for R-2 occupancies, with greater than 10 parking spaces.**	2% of spaces	8% of spaces	10% of spaces	10% of spaces
R-2 occupancies with 10 or less parking spaces	0	15% of spaces	10% of spaces	10% of spaces
R-2 occupancies with greater than 10 parking spaces.	5% of spaces	15% of spaces	10% of spaces	30% of spaces

CV502.2 EV Capable Light Spaces. Each *EV capable light space* shall comply with all of the following:

1. A continuous raceway and/or conduit shall be installed between a suitable electrical panel or other electrical distribution equipment and terminate within 3 feet of the *EV capable light space* and shall be capped. *EV capable light* includes two adjacent parking spaces if the raceway and/or conduit terminates adjacent to and between both parking spaces.
2. Installed raceway and/or conduit shall be sized and rated to supply a minimum of 208 volts and a minimum of 40-ampere rated circuits.
3. Dedicated physical space to accommodate all equipment necessary for electrical service to future *EVSE*.
4. The routing of the raceway and/or conduit must be noted on the construction documents and the raceway shall be permanently and visibly marked "EV CAPABLE" at the load center and termination point locations.

CV502.3 EV Capable Spaces. Each *EV capable space* shall comply with all of the following:

1. A continuous raceway and/or conduit shall be installed between a suitable electrical panel or other electrical distribution equipment and terminate within 3 feet of the *EV capable space* and shall be capped. *EV capable* includes two adjacent parking spaces if the raceway and/or conduit terminates adjacent to and between both parking spaces.
2. The installed raceway and/or conduit shall be sized and rated to supply a minimum of 208 volts and a minimum of 40-ampere rated circuits.
3. The electrical panel or other electrical distribution equipment to which the raceway and/or conduit connects shall have sufficient dedicated space and spare electrical capacity to supply a minimum of 208 volts and a minimum of 40-ampere rated circuits.
4. The termination point of the conduit and/or raceway and the electrical distribution equipment directory shall be marked: "For future electric vehicle supply equipment (EVSE)."
5. Reserved capacity shall be no less than 8.3 kVA (40A 208/240V) for each *EV capable space*.

CV502.4 EV Ready Spaces. Each *EV ready space* shall have a branch circuit that complies with all of the following:

1. Terminates at a receptacle or junction box located within 3 feet of each *EV ready space* it serves. *EV ready* includes two adjacent parking spaces if the receptacle is installed adjacent to and between both parking spaces.
2. Has a minimum circuit capacity of 8.3 kVA (40A 208/240V).
3. The electrical panel, electrical distribution equipment directory, and all outlets or enclosures shall be marked "For future electric vehicle supply equipment (EVSE)."

CV502.5 Electric Vehicle Supply Equipment (EVSE). All *EVSE* shall meet all of the following requirements:

1. The installed *EVSE* shall meet one of the following requirements:
    a. A power capacity of at least 6.2 kVa (or 30A at 208/240V) and has the ability to connect to the internet.
    b. An inductive charging system for battery-powered *electric vehicles* that:
        i. Is ENERGY STAR certified; and
        ii. Has the ability to connect to the internet.
2. An *electric vehicle* charging system shall be wall-mounted or pedestal style and may provide multiple cords to connect with *electric vehicles*.
3. An *electric vehicle* charging system shall be listed and labeled for *EV* charging and must comply with the current version of Article 625 of the National Electrical Code.

CV502.6 EVSE Installed Spaces. An installed *EVSE* with multiple output connections shall be permitted to serve multiple *EVSE installed spaces*. Each *EVSE* installed serving either a single *EVSE installed space* or multiple *EVSE installed spaces*, shall comply with all of the following:

1. Have a minimum charging rate in accordance with Section **CV502.7**.
2. Be located within 3 feet of each *EVSE installed space* it serves.
3. Be installed in accordance with Section **CV502.8**.
4. Have a minimum circuit capacity of 8.3 kVA (40A 208/240V).
5. Must meet the requirements of Section **CV502.5**.

CV502.7 EVSE Minimum Charging Rate. Each installed *EVSE* shall comply with one of the following:

1. Be capable of charging at a minimum rate of 6.2 kVA (or 30A at 208/240V).
2. When serving multiple *EVSE installed spaces* and controlled by an energy management system providing load management, be capable of simultaneously sharing each *EVSE installed space* at a minimum charging rate of no less than 3.3 kVA.

CV502.8 EVSE Installation. *EVSE* shall be installed in accordance with NFPA 70 and shall be listed and labeled in accordance with UL 2202 or UL 2594. When serving an accessible parking space, *EVSE* shall be accessible in accordance with the International Building Code Chapter 11.

CV502.9 Identification. Construction documents shall designate all *EVSE installed spaces, EV ready spaces, EV capable spaces,* and *EV capable light spaces,* and indicate the locations of raceway and/or conduit and termination points serving them. The circuits or spaces reserved for *EVSE installed spaces, EV ready spaces,* and *EV capable spaces* shall be clearly identified in the panel or subpanel directory. The raceway and/or conduit for *EV ready spaces, EV capable spaces* and *EV capable light spaces* shall be clearly identified at both the panel or subpanel and the termination point at the parking space.

IBC APPENDIX CHAPTER K
ADMINISTRATIVE PROVISIONS

SECTION K111
ELECTRICAL PROVISIONS

Note: Delete the published text for Section K111.4 and replace it with provisions for electric vehicle charging receptacles.

K111.4 Electric vehicle (EV) charging receptacle outlets. Level 2 (240-volt) electric vehicle (EV) charging receptacle outlets are to be installed for all new commercial, industrial or multiple-family residential buildings or additions or alterations to existing such buildings that increase the existing total floor area of the building by either fifty percent or by 5,000 square feet in accordance with Table K111.4. Charging receptacle outlets shall be installed in accordance with the requirements of Article 625 of the Electrical Code.

TABLE K111.4
ELECTRIC VEHICLE (EV) CHARGING RECEPTACLE OUTLETS

TOTAL PARKING SPACES PROVIDED	1-19	20-50	51-100	101-150	151-200	201-250	251-300	301-350	351-400	401-450	451-500	501 and over
REQUIRED MINIMUM NUMBER OF EV CHARGING OUTLETS	0	1	2	3	4	5	6	7	8	9	10	2% of total

R327.5.13 Weed barrier and gravel or crushed rock. A weed barrier and gravel or crushed rock not less than ¾-inch in diameter applied at least 2 inches thick must be installed beneath decks, unenclosed floors, and around the perimeter of the building to extend at least 3 feet beyond the exterior walls and at least 2 feet beyond the driplines of decks, bay windows and other eaves and overhangs.

Exception: Noncombustible surfaces, such as poured concrete or asphalt, or other approved noncombustible materials, such as a weed barrier and brick, concrete or stone pavers, may satisfy this requirement.

SECTION R328
SOLAR PRE-WIRE OPTION

R328.1 Solar pre-wire option. In accordance with Section 1, Article 37.7 of title 38 of the Colorado Revised Statutes, every new single-family detached residence shall include one of the following:

1. A residential photovoltaic solar generation system or a residential solar thermal system, or both, or
2. Upgrades of wiring or plumbing, or both, installed by the builder to accommodate the future installation of a residential photovoltaic solar generation system or a residential solar thermal system, or both, or
3. A metallic chase or conduit, or both, constructed to allow ease of future installation of the necessary wiring or plumbing for a residential photovoltaic solar generation system or a residential solar thermal system, or both.

IRC SECTION R329
ELECTRIC VEHICLE CHARGING PRE-WIRE OPTION

R329.1 Electric vehicle charging pre-wire option. In addition to the one 125-volt receptacle outlet required for each car space by NEC Section 210.52(G)(1.), every new garage or carport that is accessory to a one- or two-family dwelling or townhouse shall include at least one of the following, installed in accordance with the requirements of Article 625 of the Electrical Code:

1. A Level 2 (240-volt) electric vehicle charging receptacle outlet, or
2. Upgraded wiring to accommodate the future installation of a Level 2 (240-volt) electric vehicle charging receptacle outlet, or
3. Electrical conduit to allow ease of future installation of a Level 2 (240-volt) electric vehicle charging receptacle outlet.

IRC CHAPTER 4
FOUNDATIONS

SECTION R401
GENERAL

R401.3 Drainage.

R401.3.1 Gutters and downspouts. Gutters, downspouts, and downspout extensions are required on all buildings.

Exceptions:

1. Post framed buildings.
2. Buildings where, in the opinion of the building official, the gutters will become damaged by sliding snow.
3. Roofs with eaves or overhangs of six feet or greater.
4. Roofs that are constructed with internal roof drains
5. Buildings where an approved alternate means of drainage is designed by a soils engineer or other qualified registered design professional.

IRC CHAPTER 8
ROOF-CEILING CONSTRUCTION

SECTION R806
ROOF VENTILATION

R806.1 Roof ventilation. See the provisions of Section R327.4.12 for attic ventilation in Wildfire Zone 1.

IRC CHAPTER 9
ROOF ASSEMBLIES

SECTION R902
ROOF COVERING MATERIALS

Add a sentence to Section R902.1, as follows:

R902.1 Roof covering materials. See Section R327.4.1 for roof covering materials requirements in Wildfire Zone 1 and Section R327.5.1 for roof covering materials requirements in Wildfire Zone 2.

SECTION R903
ROOF DRAINAGE

R903.4.1.1 Sizing of roof drains, scuppers, and downspouts. The rainfall amount to be used to size roof drainage components shall be 2.4 inches per hour.

CB 102 General Definitions

MAJOR ALTERATION. Any building where the work area exceeds 50 percent of the aggregate area of the building.

CB103 Solar-Ready Zone

CB103.1 General. A solar-ready zone shall be located on the roof of all new buildings that are subject to the commercial provisions of the IECC and that are oriented between 110 degrees and 270 degrees of true north or have low-slope roofs. Solar-ready zones shall comply with Sections CB103.2 through CB103.9.

This section hereby creates and adopts a new **Appendix CD EV Readiness - Commercial:**

APPENDIX CD

EV READINESS - COMMERCIAL

CD101 Scope

CD101.1 Purpose and Intent. The purpose and intent of this Appendix CD is to accommodate the growing need for EV charging infrastructure. Including these measures during initial commercial construction substantially reduces the costs and difficulty of installing EV infrastructure at a later date.

CD101.2. Applicability. This Appendix CD shall apply to all new commercial construction to which the current International Building Code applies and to major alterations, which the current International Existing Building Code applies.

Section CD102 Definitions.

AUTOMOBILE PARKING SPACE. A space within a building or private or public parking lot, exclusive of driveways, ramps, columns, office, and work areas, for the parking of an automobile.

DIRECT CURRENT FAST CHARGING (DCFC) EVSE: EV power transfer infrastructure capable of fast charging on a 100A or higher 480VAC three-phase branch circuit. AC power is converted into a controlled DC voltage and current within the *EVSE* that will then directly charge the *electric vehicle*.

EV LOAD MANAGEMENT SYSTEM: A system designed to allocate charging capacity among multiple *EVSE* and that complies with the current National Electric Code.

ELECTRIC VEHICLE (EV). An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood *electric vehicles*, and electric motorcycles, primarily powered by an electric motor that draws current from an electric source.

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). Equipment for plug-in power transfer including the ungrounded, grounded, and equipment grounding conductors, and the *electric vehicle* connectors, attachment plugs, personal protection system and all other fittings, devices, power outlets or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the *electric vehicle*.

ELECTRIC VEHICLE SUPPLY EQUIPMENT INSTALLED SPACE (EVSE space). An automobile parking space that is provided with a dedicated *EVSE* connection.

ELECTRIC VEHICLE CAPABLE SPACE (EV CAPABLE SPACE). A designated automobile parking space that is provided with electrical infrastructure, such as, but not limited to, raceways, cables, electrical capacity, and panelboard or other electrical distribution equipment space, necessary for the future installation of an *EVSE*.

ELECTRIC VEHICLE READY SPACE (EV READY SPACE). An automobile parking space that is provided with a branch circuit and either an outlet, junction box or receptacle, that will support an installed *EVSE*.

MAJOR ALTERATION. Any building where the work area exceeds 50 percent of the aggregate area of the building.

UNIVERSAL VEHICLE CHARGING STATION. A charging station installed in a parking space for a minimum vehicle width of 120 inches (3048 mm) with 36-inch access aisles (915 mm) on each side.

CD103 Electrical Vehicle Readiness

CD103.1 Electric vehicle power transfer infrastructure. New parking facilities shall be provided with *electric vehicle* power transfer infrastructure in compliance with Sections CD104.1 through CD104.6, CD105, and CD106.

CD103.2 Quantity. The number of required *EVSE* spaces, *EV ready* spaces, and *EV capable* spaces shall be determined in accordance with this Section and Table CD104.1 based on the total number of *automobile parking spaces* and shall be rounded up to the nearest whole number. For R-2 buildings, the Table requirements shall be based on the total number of dwelling units or the total number of *automobile parking spaces*, whichever is less.

1. Where more than one parking facility is provided on a building site, the number of required *automobile parking spaces* required to have EV power transfer infrastructure shall be calculated separately for each parking facility.
2. Where one shared parking facility serves multiple building occupancies, the required number of spaces shall be determined proportionally based on the floor area of each building occupancy.
3. Installed *EVSE* spaces that exceed the minimum requirements of this section may be used to meet minimum requirements for *EV ready* spaces and *EV capable* spaces.
4. Installed *EV ready* spaces that exceed the minimum requirements of this section may be used to meet minimum requirements for *EV capable* spaces.
5. Where the number of *EV ready* spaces allocated for R-2 occupancies is equal to the number of dwelling units or to the number of *automobile parking spaces*, whichever is less, requirements for *EVSE* spaces for R-2 occupancies shall not apply.

6. In commercial multi-family (R-2, R-3, and R-4) complexes, four stories or greater, that contain multiple buildings, required EV spaces shall be dispersed throughout parking areas so that each building has access to a similar number of spaces per dwelling unit.

7. Requirements for a Group S-2 parking garage shall be determined by the occupancies served by that parking garage. Where new *automobile parking spaces* do not serve specific occupancies, the values for Group S-2 parking garage in Table CD104.1 shall be used.

8. Direct Current Fast Charging. The number of *EVSE* spaces for Groups A, B, E, I, M and S-2 Occupancies may be reduced by up to ten per *DCFC EVSE* provided that the building includes not less than one parking space equipped with a *DCFC EVSE* and not less than one *EV ready* space. A maximum of fifty spaces may be reduced from the total number of *EVSE* spaces.

Exception: Parking facilities, serving occupancies other than R-2 with fewer than 10 *automobile parking spaces*.

TABLE CD103.1

REQUIRED EV POWER TRANSFER INFRASTRUCTURE

BUILDING TYPE	MINIMUM EV INSTALLED SPACES	MINIMUM EV READY SPACES	MINIMUM EV CAPABLE SPACES
Group A, B, E, M	**15%[b]**	**5%**	**30%**
Group F, I, R-3, R-4	**2%[b]**	**0%**	**5%**
Group R-1 and R-2[a]	**25%[b]**	**5%**	**60%**
Group S-2 Parking Garages	**10%[b]**	**5%**	**0%**

a. Where all (100%) parking serving R-2 occupancies are EV ready spaces, requirements for EVSE spaces for R-2 occupancies shall not apply.

b. For each EV installed space above the required percentage, 4 EV ready spaces can be eliminated.

CD103.2 EV capable spaces. Each *EV capable* space used to meet the requirements of Section CD103.1 shall comply with all of the following:

1. A continuous raceway or cable assembly shall be installed between an enclosure or outlet located within 3 feet (914 mm) of the *EV capable* space and a suitable panelboard or other onsite electrical distribution equipment.
2. Installed raceway or cable assembly shall be sized and rated to supply a minimum circuit capacity in accordance with CD103.5
3. The electrical distribution equipment to which the raceway or cable assembly connects shall have sufficient dedicated space and spare electrical capacity for a 2-pole circuit breaker or set of fuses.
4. The electrical enclosure or outlet and the electrical distribution equipment directory shall be marked: "For future electric vehicle supply equipment (EVSE)."
5. Reserved capacity shall be no less than 4.1 kVA (20A 208/240V) for each *EV capable* space.

CD103.3 EV ready spaces. Each branch circuit serving *EV ready* spaces used to meet the requirements of Section CD103.1 shall comply with all of the following:

1. Terminate at an outlet or enclosure, located within 3 feet (914 mm) of each *EV ready* space it serves.
2. Have a minimum circuit capacity in accordance with CD104.5.
3. The panelboard or other electrical distribution equipment directory shall designate the branch circuit as "For electric vehicle supply equipment (EVSE)" and the outlet or enclosure shall be marked "For electric vehicle supply equipment (EVSE)."

CD103.4 EVSE spaces. An installed *EVSE* with multiple output connections shall be permitted to serve multiple EVSE spaces. Each *EVSE* installed to meet the requirements of Section CD103.1, serving either a single *EVSE* space or multiple *EVSE* spaces, shall comply with all of the following:

1. Have a minimum circuit capacity in accordance with CD103.5.
2. Have a minimum charging rate in accordance with CD103.4.1.
3. Be located within 3 feet (914 mm) of each *EVSE* space it serves.
4. Be installed in accordance with Section CD103.6 and CD103.7.

CD103.4.1 EVSE minimum charging rate. Each installed *EVSE* shall comply with one of the following:

1. Be capable of charging at a minimum rate of 6.2 kVA (or 30A at 208/240V).
2. When serving multiple *EVSE* spaces and controlled by an energy management system providing load management, be capable of simultaneously charging each *EVSE* space at a minimum rate of no less than 3.3 kVA.

3. When serving *EVSE* spaces allowed to have a minimum circuit capacity of 2.7 kVA in accordance with CD103.5.1 and controlled by an energy management system providing load management, be capable of simultaneously charging each *ESVE* space at a minimum rate of no less than 2.1 kVA.

CD103.5 Disbursement. Required EVSE, EV Ready, and EV Capable spaces shall be disbursed throughout parking areas in commercial developments that contain multiple buildings so that each building has access to roughly the same number of spaces.

CD103.6 Circuit capacity. The capacity of electrical infrastructure serving each *EV capable* space, *EV ready* space, and *EVSE* space shall comply with one of the following:

1. A branch circuit shall have a rated capacity not less than 8.3 kVA (or 40A at 208/240V) for each EV ready space or *EVSE* space it serves.
2. The requirements of CD103.5.1.

CD103.6.1 Circuit capacity management. The capacity of each branch circuit serving multiple *EVSE* spaces, *EV ready* spaces or *EV capable* spaces designed to be controlled by an energy management system providing load management in accordance with NFPA 70, shall comply with one of the following:

1. Have a minimum capacity of 4.1 kVA per space.
2. Have a minimum capacity of 2.7 kVA per space when serving *EV ready* spaces or *EVSE* spaces for a building site where all (100%) of the automobile parking spaces are designed to be *EV ready* or *EVSE* spaces.

CD103.7 EVSE installation. *EVSE* shall be installed in accordance with NFPA 70 and shall be listed and labeled in accordance with UL 2202 or UL 2594.

CD103.8. EVSE ENERGY STAR. All *EVSE* shall be ENERGY STAR certified.

CD104 Universal Vehicle Charging Stations.

CD104.1 Universal vehicle charging stations. Where *electric vehicle* charging stations are provided for public use, or where *electric vehicle* charging stations are shared by multiple multi-family dwelling units, the number of universal vehicle charging stations shall be provided in accordance with Table CD104.1. When multiple stalls are required, access aisles may be shared.

TABLE CD104.1

UNIVERSAL EV SPACE REQUIREMENTS

TOTAL # OF EV CHARGING STATIONS	MINIMUM # OF UNIVERSAL VEHICLE CHARGING STATIONS

1 or more	**25%**

CD105. Identification.

CD105.1 Identification. Construction documents shall designate all *EV capable* spaces, *EV ready* spaces and *EVSE* spaces and indicate the locations of conduit and termination points serving them. The circuit breakers or circuit breaker spaces reserved for the *EV capable* spaces, *EV ready* spaces, and *EVSE* spaces shall be clearly identified in the panel board directory. The conduit for *EV capable* spaces shall be clearly identified at both the panel board and the termination point at the parking space.

Residential Provisions of the IECC

Section R101 Scope and General Requirements

R101.1 Title. This code shall be known as the International Energy Conservation Code of the City of Lafayette, Colorado, and shall be cited as such. It is referred to herein as "this code".

Section R103 Construction Documents

Section R103.2 Information on construction documents, is amended by adding items 10, 11, and 12 as follows:

10. Details of additional electric infrastructure, including branch circuits, conduit, or pre-wiring, and panel capacity in compliance with the provisions of this code.
11. Location of pathways for routing of raceways or cable from the solar ready zone to the electrical service panel.
12. Location of designated EVSE spaces, EVSE Universal spaces, EV-Ready spaces, and EV-Capable spaces in parking facilities, as applicable.

Section R202 GENERAL DEFINITIONS is amended to add the following definitions in alphabetical order:

ALL-ELECTRIC BUILDING. A *building* and building site that contains no *combustion equipment*, or plumbing for *combustion equipment*, and that uses heat pump technology as the primary supply for heating, cooling, and service water heating loads.

COMBUSTION EQUIPMENT: Any equipment or appliances used for space heating, cooling, water heating (including pools and spas), cooking, clothes drying or lighting that uses natural gas, propane, other fuel gas, or fuel oil.

INVOLUNTARY DEMOLITION OR INVOLUNTARY DESTRUCTION. The destruction or demolition of a structure caused by natural forces such as fire, flood, or tornado but not by human forces or human error.

R408.2.2 More efficient HVAC equipment. Heating and cooling equipment shall meet one of the following efficiencies:

1. Greater than or equal to 10 HSPF/16 SEER air source heat pump.

2. Greater than or equal to 3.5 COP ground source heat pump.

Section R408.2.3 Reduced energy use in service water-heating option is amended as follows:

R408.2.3 Reduced energy use in service water-heating option. The hot water system shall meet one of the following efficiencies:

1. Greater than or equal to 2.0 EF electric service water-heating system.

2. Greater than or equal to 0.4 solar fraction solar water-heating system.

Appendix RB is hereby adopted and amended to read: "**Appendix RB Solar Ready Provisions."**

Section RB101 Scope

RB101.1 General. These provisions shall be applicable for new construction and major alterations where solar-ready provisions are required.

RB103 Solar-Ready Zone

RB103.1 General. New residential buildings with not less than 600 square feet (55.74 m 2) of roof area oriented between 110 degrees and 270 degrees of true north shall comply with Sections RB103.2 through RB103.8.

Exceptions:

1. Residential buildings with a permanently installed on-site renewable energy system.
2. A building where all areas of the roof that would otherwise meet the requirements of section RB103 are in full or partial shade for more than 70 percent of daylight hours annually.

This section hereby creates and adopts a new **Appendix RD EV Readiness – Residential:**

APPENDIX RD

EV READINESS - RESIDENTIAL

RD101 Scope

RD101. Purpose and intent. The purpose and intent of this Appendix RD is to accommodate the growing need for EV charging infrastructure, in particular meeting preferences for charging at home. Including these measures during initial construction substantially reduces the costs and difficulty of installing future EV infrastructure.

RD101.2 Applicability. This Appendix RD shall apply to all new residential construction and to major alterations to which the International Residential Code applies.

RD102. Definitions.

AUTOMOBILE PARKING SPACE. A space within a building or private or public parking lot, exclusive of driveways, ramps, columns, office, and work areas, for the parking of an automobile.

DIRECT CURRENT FAST CHARGING (DCFC) EVSE: EV power transfer infrastructure capable of fast charging on a 100A or higher 480VAC three-phase branch circuit. AC power is converted into a controlled DC voltage and current within the *EVSE* that will then directly charge the *electric vehicle*.

EV LOAD MANAGEMENT SYSTEM: A system designed to allocate charging capacity among multiple *EVSE* and that complies with the current National Electric Code.

ELECTRIC VEHICLE (EV). An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood *electric vehicle*s, and electric motorcycles, primarily powered by an electric motor that draws current from an electric source.

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). Equipment for plug-in power transfer including the ungrounded, grounded, and equipment grounding conductors, and the *electric vehicle* connectors, attachment plugs, personal protection system and all other fittings, devices, power outlets or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the *electric vehicle*.

ELECTRIC VEHICLE SUPPLY EQUIPMENT INSTALLED SPACE (EVSE space). An automobile parking space that is provided with a dedicated *EVSE* connection.

ELECTRIC VEHICLE CAPABLE SPACE (EV CAPABLE SPACE). A designated automobile parking space that is provided with electrical infrastructure, such as, but not limited to, raceways, cables, electrical capacity, and panelboard or other electrical distribution equipment space, necessary for the future installation of an *EVSE*.

ELECTRIC VEHICLE READY SPACE (EV READY SPACE). An automobile parking space that is provided with a branch circuit and either an outlet, junction box or receptacle, that will support an installed *EVSE*.

MAJOR ALTERATION. Any building where the work area exceeds 50 percent of the aggregate area of the building.

UNIVERSAL VEHICLE CHARGING STATION. A charging station installed in a parking space for a minimum vehicle width of 120 inches (3048 mm) with 36-inch access aisles (915 mm) on each side.

RD103 One- and two- Family Dwellings and Townhouses

RD103.1 General. One *EV ready* space shall be provided for each dwelling unit. The branch circuit shall be identified as *EV ready* in the service panel or subpanel directory, and the termination location shall be marked as *EV ready*.

Exception: Dwelling units where no parking spaces are either required or provided.

RD103.1.1 Receptacle. The EV ready space shall be provided with a receptacle, over current protection, and GFCI protection as required by NFPA 70.

RD103.1.2 Voltage and ampacity. The EV ready space shall be supplied with 240 volts and 40 amps.

RD104 Residential Multi-Family Dwellings

RD104.1 General. New dwelling units for residential multi-family buildings, other than duplexes and townhomes, shall be provided with *electric vehicle* power transfer infrastructure in compliance with Sections RD104.1 through RD104.6 and Sections RD105 through RD106.

RD104.2 Quantity. The number of required *EVSE* spaces, *EV ready* spaces, and *EV capable* spaces shall be determined in accordance with this Section and Table RD105.1 based on the total number of *automobile parking spaces* and shall be rounded up to the nearest whole number. For R-2 buildings, the Table requirements shall be based on the total number of dwelling units or the total number of *automobile parking spaces*, whichever is less.

1. Where more than one parking facility is provided on a building site, the number of required *automobile parking spaces* required to have EV power transfer infrastructure shall be calculated separately for each parking facility.
2. Installed *EVSE* spaces that exceed the minimum requirements of this section may be used to meet minimum requirements for *EV ready* spaces and *EV capable* spaces.
3. Installed *EV ready* spaces that exceed the minimum requirements of this section may be used to meet minimum requirements for *EV capable* spaces.
4. Where the number of *EV ready* spaces allocated for R-2 occupancies is equal to the number of dwelling units or to the number of *automobile parking spaces* allocated to R-2 occupancies, whichever is less, requirements for *EVSE* spaces for R-2 occupancies shall not apply.
5. In residential multi-family complexes that contain multiple buildings, required EV spaces shall be dispersed throughout parking areas so that each building has access to a similar number of spaces per dwelling unit.

TABLE RD104.2

REQUIRED EV POWER TRANSFER INFRASTRUCTURE FOR MULTI-FAMILY

BUILDING TYPE	MINIMUM EV INSTALLED SPACES	MINIMUM EV READY SPACES	MINIMUM EV CAPABLE SPACES

Group R-1 and R-2[a]	**15%**	**5%**	**40%**
Group R-3 and R-4	**2%**	**0%**	**5%**

a. Where all (100%) parking serving R-2 occupancies are EV ready spaces, requirements for *EVSE* spaces for R-2 occupancies shall not apply.

RD104.3 EV capable spaces. Each *EV capable* space used to meet the requirements of Section RD105.1 shall comply with all of the following:

1. A continuous raceway or cable assembly shall be installed between an enclosure or outlet located within 3 feet (914 mm) of the *EV capable* space and a suitable panelboard or other onsite electrical distribution equipment.
2. Installed raceway or cable assembly shall be sized and rated to supply a minimum circuit capacity in accordance with RD104.5
3. The electrical distribution equipment to which the raceway or cable assembly connects shall have sufficient dedicated space and spare electrical capacity for a 2-pole circuit breaker or set of fuses.
4. The electrical enclosure or outlet and the electrical distribution equipment directory shall be marked: "For future electric vehicle supply equipment (EVSE)."
5. Reserved capacity shall be no less than 4.1 kVA (20A 208/240V) for each *EV capable* space.

RD104.4 EV ready spaces. Each branch circuit serving *EV ready* spaces used to meet the requirements of Section RD105.1 shall comply with all of the following:

1. Terminate at an outlet or enclosure, located within 3 feet (914 mm) of each *EV ready* space it serves.
2. Have a minimum circuit capacity in accordance with RD104.5.
3. The panelboard or other electrical distribution equipment directory shall designate the branch circuit as "For electric vehicle supply equipment (EVSE)" and the outlet or enclosure shall be marked "For electric vehicle supply equipment (EVSE)."

RD104.5 EVSE spaces. An installed *EVSE* with multiple output connections shall be permitted to serve multiple EVSE spaces. Each *EVSE* installed to meet the requirements of Section RD104.1, serving either a single *EVSE* space or multiple *EVSE* spaces, shall comply with all of the following:

1. Have a minimum circuit capacity in accordance with RD104.5.
2. Have a minimum charging rate in accordance with RD104.4.1.
3. Be located within 3 feet (914 mm) of each *EVSE* space it serves.

4. Be installed in accordance with Section RD104.6 and RD104.7

RD104.5.1 EVSE minimum charging rate. Each installed *EVSE* shall comply with one of the following:

1. Be capable of charging at a minimum rate of 6.2 kVA (or 30A at 208/240V).
2. When serving multiple *EVSE* spaces and controlled by an energy management system providing load management, be capable of simultaneously charging each *EVSE* space at a minimum rate of no less than 3.3 kVA.
3. When serving *EVSE* spaces allowed to have a minimum circuit capacity of 2.7 kVA in accordance with RD104.5.1 and controlled by an energy management system providing load management, be capable of simultaneously charging each *ESVE* space at a minimum rate of no less than 2.1 kVA.

RD 104.6 Disbursement. Required EVSE, EV ready, and EV capable spaces shall be disbursed throughout the parking areas in Residential Multi-family developments that contain multiple buildings so that each building has access to roughly the same number of spaces.

RD104.7 Circuit capacity. The capacity of electrical infrastructure serving each *EV capable* space, *EV ready* space, and *EVSE* space shall comply with one of the following:

1. A branch circuit shall have a rated capacity not less than 8.3 kVA (or 40A at 208/240V) for each EV ready space or *EVSE* space it serves.
2. The requirements of RD104.5.1.

RD104.7.1 Circuit capacity management. The capacity of each branch circuit serving multiple *EVSE* spaces, EV ready spaces or EV capable spaces designed to be controlled by an energy management system providing load management in accordance with NFPA 70, shall comply with one of the following:

1. Have a minimum capacity of 4.1 kVA per space.
2. Have a minimum capacity of 2.7 kVA per space when serving *EV ready* spaces or *EVSE* spaces for a building site when all (100%) of the automobile parking spaces are designed to be *EV ready* or *EVSE* spaces.

RD104.8 EVSE installation. *EVSE* shall be installed in accordance with NFPA 70 and shall be listed and labeled in accordance with UL 2202 or UL 2594.

RD104.9. EVSE ENERGY STAR. All *EVSE* shall be ENERGY STAR certified.

RD105 Universal vehicle charging stations

RD105.1 General. Where *electric vehicle* charging stations are provided for public use, or where *electric vehicle* charging stations are shared by multiple multi-family dwelling units, the number of universal vehicle charging stations shall be provided in accordance with Table RD105.1. When multiple stalls are required, access aisles may be shared.

TABLE RD105.1

UNIVERSAL EV SPACE REQUIREMENTS

TOTAL # OF EV CHARGING STATIONS	MINIMUM # OF UNIVERSAL VEHICLE CHARGING STATIONS
1 or more	25%

RD106. Identification

RD 106.1 General. Construction documents shall designate all EV Capable spaces, EV Ready spaces and EV Installed spaces and indicate the locations of conduit and termination points serving them. The circuit breakers or circuit breaker spaces reserved for the EV Capable spaces, EV Ready spaces, and EV Installed spaces shall be clearly identified in the panel board directory. The conduit for EV Capable spaces shall be clearly identified at both the panel board and the termination point at the parking space.

Article 10 – Amendments to the 2021 International Swimming Pool and Spa Code

Chapter 1. Chapter 1 is hereby deleted. Please refer to the 2021 International Building Code Chapter 1 and 2023 Lafayette Building Code Chapter 1 amendments to the International Building Code for Scope and Administrative requirements.

Article 11 – Amendments to the 2021 International Property Maintenance Code

Chapter 1. Chapter 1 is hereby deleted. Please refer to the 2021 International Building Code Chapter 1 and 2023 Lafayette Building Code Chapter 1 amendments to the International Building Code for Scope and Administrative requirements.

RESOLUTION NO. 1
SERIES 2024

A RESOLUTION RECOMMENDING APPROVAL OF AN ORDINANCE AMENDING LOUISVILLE MUNICIPAL CODE SECTION 17.20.170 - ELECTRIC VEHICLE CHARGING INFRASTRUCTURE

WHEREAS, the City of Louisville is a Colorado home rule municipal corporation duly organized and existing under laws of the State of Colorado and the City Charter; and

WHEREAS, City of Louisville municipal code Title 17, Zoning, establishes standards for the development of land within the City, including standards for parking and energy efficient development; and

WHEREAS, by Ordinance No. 1816 adopted on October 19, 2021, the City Council amended the Zoning Code to require new construction include electric vehicle charging infrastructure; and

WHEREAS, the City of Louisville remains committed to its adopted goals to reduce energy consumption, increase clean energy sources, and support the transition to a low-carbon community as outlined in the Sustainability Action Plan and Resolution 25, Series 2019, "A Resolution Setting Clean Energy and Carbon Reduction Goals";

WHEREAS, the Planning Commission desires to amend the City's electric vehicle charging standards to better align with the Colorado Model Electric Ready and Solar Ready Code, published June 1, 2023 by the Colorado Energy Office; and

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 concerning Electric Vehicle Charging Infrastructure with the following conditions:

- Provide language to ensure a minimum "Level 2" EV charging station standards for installed spaces.
- Change R-2 multi-family residential occupancy with 10 or fewer parking spaces to require at least one installed EVSE Installed Space.
- Add language so that if EVSE Installed Spaces are provided above the minimum number that a credit can be provided to the required number of EV Capable, EV Ready or EV Ready Light Spaces.
- Require labeling in electrical panels for the spaces reserved for breakers to support future EV Capable Spaces.

PASSED AND ADOPTED this 8th day of February, 2024.

By: _____

Steve Brauneis, Chair
Planning Commission

Attest: _____
Jeffrey Moline, Secretary
Planning Commission