

RECOMMENDED

# 2021-2026 CAPITAL IMPROVEMENT PROGRAM



Service Excellence for an Inspired Future.

# Capital Improvement Program

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# Capital Improvement Program

The City of Boulder's 2021-2026 Capital Improvement Program (CIP) contains information on how the city plans to invest available resources into key infrastructure and facilities between 2021 and 2026. The 2021-2026 CIP provides the funding plan (amount needed by year) for each CIP project in the document's summary sections and in each project sheet. This section contains: planned project funding summaries organized by department, project type, and fund; links to maps and detail project sheets illustrating the location of projects throughout the city; and narratives describing the rationale behind project prioritization. The 2021-2026 CIP has four main parts:

## **Introduction**

Provides an overview of the 2021-2026 CIP including process and highlights.

## **Funding Summaries**

Contains analysis of how the 2021-2026 CIP allocates dollars among city departments, project types, and funds.

## **Capital Project Overviews**

Contains highlights of each department's focus, operating and maintenance impacts, unfunded projects, CEAP projects, board action, 2021-2026 CIP, and a link to that department's project sheets.

## **CEAP (Community & Environmental Assessment Process)**

Contains a list of individual projects identified in the annual CIP process that will complete a CEAP.

# Capital Improvement Program

The funding tables (includes tables in the Funding Summaries section, as well as tables in the Capital Project Overviews section) show the six-year Estimated Total Cost for each project, which includes total approved budget for 2021, and the estimated cost for each year between 2021 through 2026.

Innovation & Technology							
	Estimated Total Cost	2020 Approved	2021 Projected	2022 Projected	2023 Projected	2024 Projected	2025 Projected
Capital Program Total	\$ 18,113,400	\$ 4,390,000	\$ 2,810,600	\$ 1,932,800	\$ 7,180,000	\$ 1,500,000	\$ 300,000
CIP-Capital Enhancement Total	\$ 550,000	\$ 550,000	\$ -	\$ -	\$ -	\$ -	\$ -
Enterprise CRM	\$ 300,000	\$ 300,000	\$ -	\$ -	\$ -	\$ -	\$ -
General Fund CIP. Replacement of current CRM system, Inquire Boulder. The current system has many deficiencies and has not been updated since its release in 2013. We will add requirements for the new CRM system to our Website Redesign RFP, which will be released in July 2019. We hope to find vendors who may have CRM functionality native to their proposed solution. This solution is an enterprise-level tool.							
Enterprise Data Warehouse	\$ 250,000	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ -
General Fund CIP. The siloed nature of various departments throughout the city makes sharing of internal information and data relatively difficult, as often it is unknown what data exists, what form it exists in, and whether it is compatible with data collected in another department. Having a citywide centralized system will allow departments to integrate data from multiple sources and applications into one location. A data warehouse would improve data quality and consistency throughout the City. This initial phase of the project is funding for consulting and cloud hosting services. An increase in the CRF of \$30,000/year has already been built into the FY2020 rates for continued support of this solution.							
CIP-Capital Maintenance Total	\$ 10,063,400	\$ 2,340,000	\$ 1,310,600	\$ 432,800	\$ 5,680,000	\$ -	\$ 300,000
Data Backup and Disaster Recovery	\$ 140,000	\$ -	\$ -	\$ 140,000	\$ -	\$ -	\$ -
The project reflects the hardware, software and support needed to ensure reliable high speed backup of files, databases and applications stored on the city's enterprise servers and data storage sub-systems. Note that these systems are required not only for disaster preparedness and recovery purposes, but to meet legal records retention requirements.							

Example

Funding tables in the Capital Project Overviews section list projects by the following types:

1. Capital Enhancement,
2. Capital Maintenance,
3. Capital Planning Studies,
4. Land Acquisition, or
5. New Facility/Infrastructure.

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Example

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# INTRODUCTION

The City of Boulder's Capital Improvement Program (CIP) is a comprehensive, six-year plan for capital investment in maintaining and enhancing public infrastructure. The CIP provides a forecast of funds available for capital projects and identifies all planned capital improvement projects and their estimated costs over the six-year period. A community's CIP is a guide that lays out the framework for achieving the current and future goals related to the physical assets of the community.

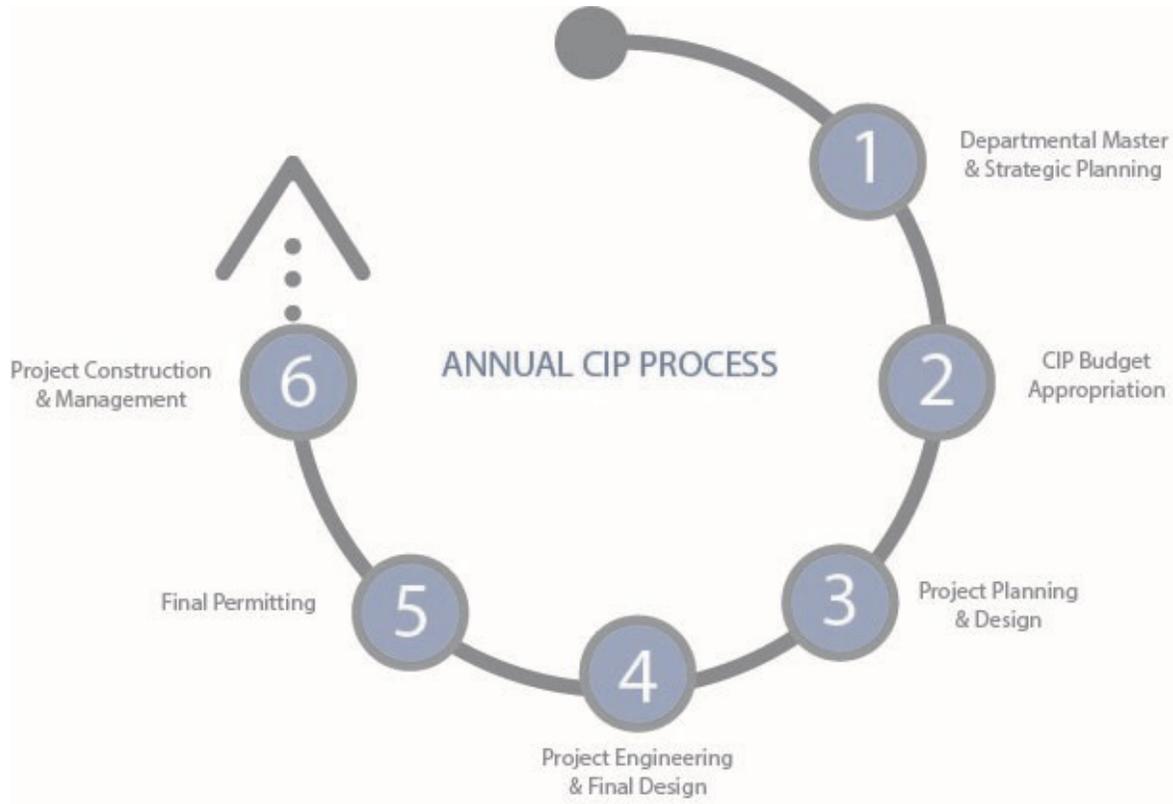
Boulder invests in facilities and infrastructure and provides a high-level of municipal services. The city owns and maintains 385 buildings and structures (including three recreation centers, five library facilities, eight fire stations, and five parking structures), 1,800 acres of parkland, 71.2 acres of Open Space & Mountain Parks, 305 centerline miles of streets, 159 centerline miles of bike facilities, 80 underpasses, two water treatment facilities, one wastewater treatment facility, 11 dams, and over 800 miles of water and wastewater piping.

The city funds the construction and maintenance of these assets using a wide range of sources, including tax revenues, bond proceeds, and fees and continues to look for ways to leverage its funding, through federal, state, and local grants and reimbursements, to maximize funding for CIP projects.

The CIP development process prioritizes the city's numerous needs across multiple departments and services with attention to the limits of each funding source, progress on ongoing CIP projects, funding commitments made by prior CIPs, and ongoing work.



# Introduction



# Introduction

## How Boulder Plans for Capital Improvements

The Capital Improvement Program is one component of the city's planning and review of capital projects. These phases represent a continuous process of planning, funding, and implementation (see graphic on previous page).

### Phase 1: Departmental Master or Strategic Planning

- Guided by the Boulder Valley Comprehensive Plan (BVCP) and the Sustainability + Resilience Framework, departmental master plans establish detailed policies, priorities, facility and system needs, and funding plans.
- Most master/strategic plans involve significant public participation and often result in CIP projects.
- Plans are reviewed by advisory boards/commissions and the Planning Board, and are accepted by City Council.

### Phase 2: Capital Improvement Program (CIP) and Budget Appropriation

- The CIP project prioritization is guided by departmental, sub-community, and area plans.
- The CIP forecasts available funds for capital projects and identifies all planned projects and estimated costs over a six-year period.
- First year's CIP program is adopted by City Council as a counterpart to the operating budget.

### Phase 3: Project Planning and Design

- Evaluates a full range of project alternatives and resulting impacts (not system-wide alternatives).
- Identifies an appropriate review process, including the Community and Environmental Assessment Process (CEAP), or a Concept Plan and Site Plan review. CEAPs are reviewed by department advisory boards/commissions, the Planning Board, and finally, City Council.
- Includes appropriate community engagement in design alternatives.
- Identifies if a project qualifies for public art.

### Phase 4: Project Engineering and Final Design

- Some projects require Technical Document Review and are reviewed internally through the Development Review Committee.

### Phase 5: Final Permitting

- Some projects require building, flood, stormwater discharge, or right-of-way permits.

### Phase 6: Project Construction and Management

- Projects requiring building, right-of-way, or wetlands permitting also require construction and post-construction follow-up.
- Once construction is complete, the project is closed out and becomes a city asset.

# Introduction

## Opportunities for Community Influence

The graphic on this page shows the general steps in Boulder’s planning process, along with the general expectations for community engagement and the level of detail in construction plans. Master plans include a robust community engagement process that ultimately results in conceptual CIP projects. These conceptual projects are then scheduled into the six-year CIP, with some design work and financing completed as they approach the budget funding cycle. Additional engagement often happens in Phase 3, especially when there are numerous alternatives to consider. Community engagement during final permitting and construction is limited to informing community members about impacts to their daily lives.

City Council, advisory boards/commissions, community members, and others have the highest amount of influence during the master planning process and in the scheduling of years two through six of the CIP.



# Introduction

## Current & Upcoming Master Plans

Several departmental master plan updates are underway (or will soon begin) and will inform future capital planning. These include:

- Flood and Stormwater Utility (2022)
- Facilities (2021)
- Police (2022)
- Parks & Recreation (2021)

## 2021-2026 Capital Improvement Program

The 2021-2026 CIP is impacted by the economic crisis caused by COVID-19. With goals of flattening the curve and protecting lives, city facility closures began March 13, 2020 and state and local stay-at-home and safer-at-home orders followed. This caused a shock to many of the city's revenue sources including sales and use tax, accommodations tax, admissions tax, licenses, permits, fees and charges for services including recreation fees and parking fees. In fact, staff has seen nearly 70% of revenue sources impacted. University of Colorado economists predict the recession will last three to five years before some city revenue sources recover to pre-COVID levels.

The 2021-2026 CIP includes \$675 million. This includes discrete projects as well as categories of funding for ongoing needs (e.g. local drainage improvements, major trail maintenance).

The city is spending the majority, about 82%, of its 2021-2026 capital funds on capital maintenance and enhancement of its existing assets. The CIP focuses on taking care of what the city already owns with an emphasis on making improvements to its core service areas. Capital enhancements involve upgrades to existing facilities that may include upgraded technologies, materials, and equipment that can be more efficient, effective and less costly to operate over time.

With that revenue picture, the proposed 2021-2026 CIP has just under \$81 million recommended for 2021, and approximately \$675 million is recommended for project allocations for years 2021-2026. The 2021 proposed CIP is lower than anticipated at this time last year as several projects shifted to out years and is lower than the 2020 Approved CIP (\$85.6 million). It is important to remember that, unlike an operating budget, the capital budget may significantly fluctuate between years due to timing of projects and availability of funding. Several large 2021 capital projects include:

- Interceptor Sewer Realignment \$3.6M
- Pavement Management Program \$4.8 million
- Broadband Fiber Backbone \$12M
- Ongoing repairs to Barker Gravity Pipeline \$3.8M
- General Parks Improvements \$900K

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# FUNDING SUMMARIES

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## Overview of Funding Summaries

The Funding Summaries section provides full detail of the city’s CIP budget needs from 2021 through 2026 by department, project type, and fund. For each of the three funding views, the following information is shown:

- Total project cost for 2021 through 2026
- Planned funding allocation in each year 2021-2026 and the six-year total
- Prior funded amount

The Funding Summaries focus on estimated budget needs for all projects. In practice, as projects are planned, designed, and constructed, during any given year, appropriated project sources almost always differ from project expenditures. In some circumstances, such as a large project that requires many years of accumulated funds before design or construction can commence, expenditures may significantly lag appropriations.

All tables and graphs in this section include transfers between departments. These transfers are included in the departments because they will appear in the individual department sections of the overall city budget.



# Funding Summaries

## Funding by Department

The Public Works Utilities and Transportation divisions have the greatest allocations of resources in the 2021-2026 CIP.

Many departments have dedicated revenue sources that keep their CIP funding relatively constant. For example, both Open Space & Mountain Parks and Parks & Recreation have dedicated revenue sources, and their CIP funding remains relatively constant.

During the renewal of the community, culture, and safety tax and the 2018 Budget process, discussions with Council highlighted that the General Fund CIP has been limited, generally to Facilities & Asset Management-related projects, and supplemented through voter-approved capital funding initiatives. With many unfunded capital projects residing in the General Fund, the 2018 Budget, for the first time, included \$3.65 million to begin phase one of a formal Capital Improvement Program for the General Fund.

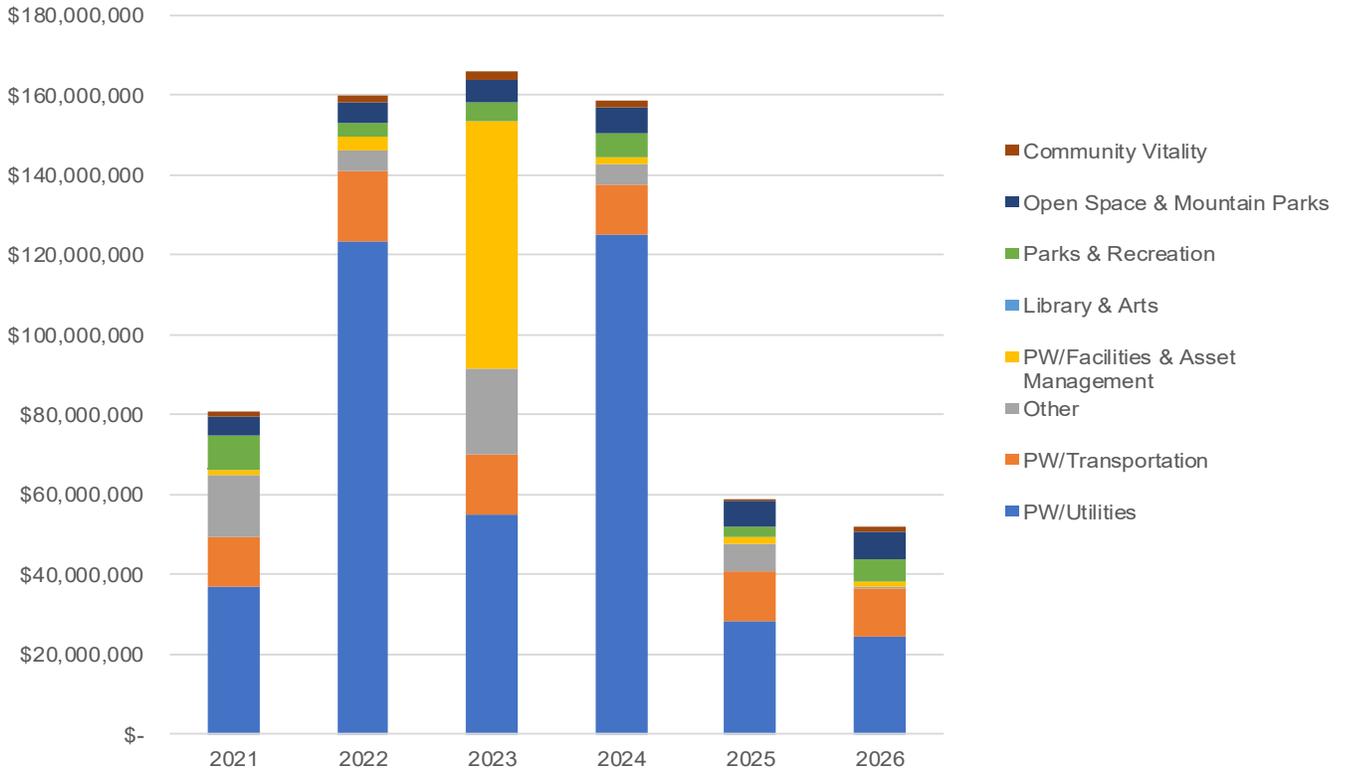
The chart on the following page displays the share of total 2021-2026 CIP spending by each department.

The following city departments are participating in the 2021-2026 CIP:

- Citywide
- Community Vitality
- Facilities & Asset Management
- Fire-Rescue
- Innovation & Technology
- Library & Arts
- Open Space & Mountain Parks
- Parks & Recreation
- Police
- Transportation
- Utilities & Greenways

# Funding Summaries

## 2021-2026 Funding by Department



### 2021-2026 FUNDING SUMMARY BY DEPARTMENT

	Estimated Total Cost	2021 Recommended	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
Citywide	\$ 20,440,544	\$ 1,440,704	\$ 4,339,440	\$ 4,886,800	\$ 4,886,800	\$ 4,886,800	\$ -
Community Vitality	8,900,000	1,240,000	1,805,000	1,975,000	1,870,000	500,000	1,510,000
Fire-Rescue	10,491,560	-	-	10,491,560	-	-	-
Innovation & Technology	23,228,400	13,860,600	682,800	5,930,000	575,000	1,855,000	325,000
Library & Arts	100,000	100,000	-	-	-	-	-
Open Space & Mountain Parks	34,818,485	4,466,705	5,139,780	5,928,000	6,178,000	6,428,000	6,678,000
Parks & Recreation	30,974,500	8,540,000	3,478,000	4,710,000	6,157,000	2,606,500	5,483,000
Police	80,000	80,000	-	-	-	-	-
PW/Facilities & Asset Management	71,373,046	1,578,841	3,178,841	61,798,841	1,578,841	1,658,841	1,578,841
PW/Stormwater & Flood Utility	139,075,927	9,285,391	14,345,078	7,272,982	96,672,471	4,806,821	6,693,185
PW/Transportation	82,353,396	12,263,869	17,638,444	15,392,000	12,433,333	12,542,250	12,083,500
PW/Wastewater Utility	117,354,642	14,694,831	55,245,894	28,923,000	5,690,918	5,860,000	6,940,000
PW/Water Utility	136,374,590	12,988,913	53,892,825	18,589,883	22,549,930	17,661,716	10,691,324
<b>TOTAL</b>	<b>\$ 675,565,091</b>	<b>\$ 80,539,854</b>	<b>159,746,101</b>	<b>\$ 165,898,065</b>	<b>\$ 158,592,294</b>	<b>\$ 58,805,928</b>	<b>\$ 51,982,850</b>

# Funding Summaries

## Funding by Project Type

Each CIP project has been classified as a city investment in one of five project types: Capital Enhancement, Capital Maintenance, Capital Planning Studies, Land Acquisition, and New Facility/Infrastructure.

The five project types are defined by the following criteria:

### 1. Capital Enhancement

- Construction results in the expansion or significant improvement of an existing facility or asset.
- Projects have a discrete start and end date.
- Projects are location specific.
- Projects are typically over \$100,000 in total project cost, but do not have to be. Innovation & Technology projects are typically over \$50,000 in total project cost.
- Projects result in a durable, long lasting asset, with a useful life of at least 15 years. Innovation & Technology projects may be as short as five years.
- Projects may qualify for a percent for art allocation.

### 2. Capital Maintenance

- Project results in the repair, replacement, or renovation of an existing asset.
- Projects may or may not have a discrete start and end date.
- Projects are location specific or programs that cover a geographic area.
- Projects are typically over \$100,000 in total project cost. Innovation & Technology projects are typically over \$50,000 in total project cost.

### 3. Capital Planning Studies

- Project results in the development of a study or plan which is intended to identify, plan, or prepare for the construction or acquisition of capital assets or a capital program.
- Projects have a discrete start and end date.
- Projects are typically for studies that are over \$100,000 in total cost.

### 4. Land Acquisition

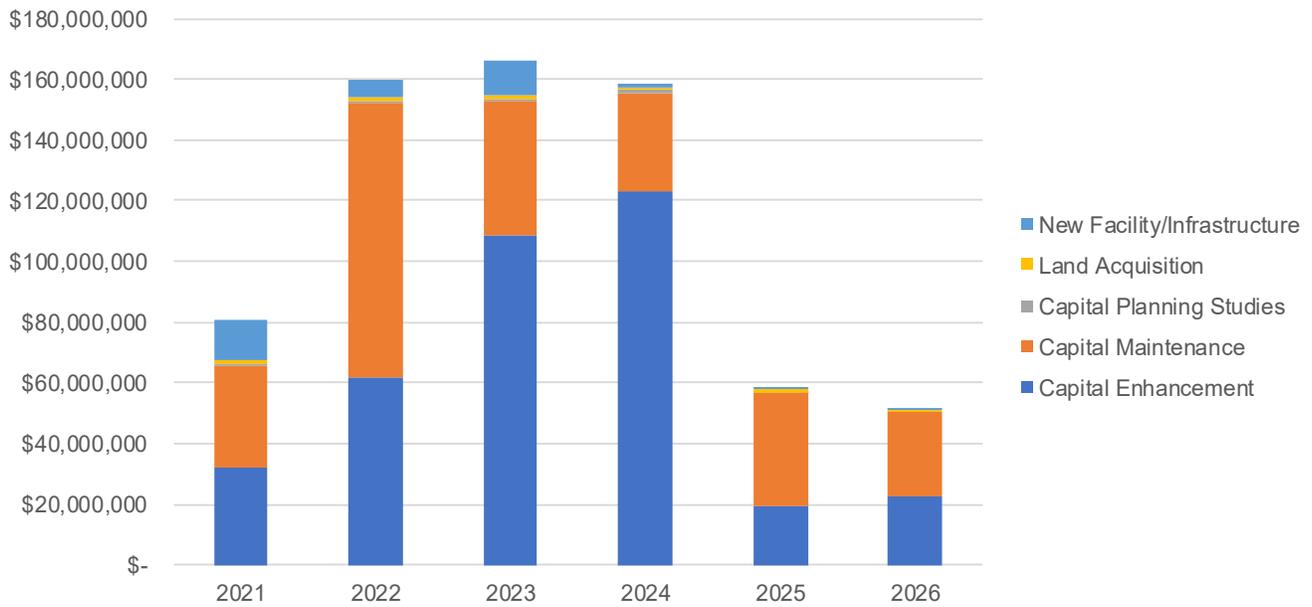
- Project or program results in the acquisition of real property, such as land, mineral or water rights, or permanent easements.
- Projects may have discrete start and end dates, or may be programmatic.
- Projects or programs may be location specific or citywide.
- Projects or programs typically include acquisitions totaling over \$100,000.

### 5. New Facility/Infrastructure

- Project results in the construction or acquisition of a new asset.
- Construction results in additional square footage of an existing asset.
- Projects have a discrete start and end date.
- Projects are location specific.
- Projects are typically over \$100,000 in total project cost, but do not have to be.
- Projects result in a durable, long lasting asset, with a useful life of at least 15 years.
- Projects may qualify for a percent for art allocation.

# Funding Summaries

## 2021-2026 Funding by Project Type



### 2021-2026 FUNDING SUMMARY BY TYPE

	Estimated Total Cost	2021 Recommended	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
CIP-CAPITAL ENHANCEMENT	\$ 366,996,101	\$ 31,903,801	\$ 61,607,038	\$ 108,401,984	\$ 123,389,142	\$ 19,240,061	\$ 22,454,076
CIP-CAPITAL MAINTENANCE	266,413,494	33,656,064	90,851,704	44,589,048	32,105,092	37,490,351	27,721,237
CIP-CAPITAL PLANNING STUDIES	3,308,333	705,000	420,000	530,000	1,353,333	300,000	-
CIP-LAND ACQUISITION	6,140,603	1,324,989	1,352,360	1,060,474	769,727	800,516	832,537
CIP-NEW FACILITY/INFRASTRUCTUR	32,706,560	12,950,000	5,515,000	11,316,560	975,000	975,000	975,000
<b>Total</b>	<b>\$ 675,565,091</b>	<b>\$ 80,539,854</b>	<b>\$ 159,746,101</b>	<b>\$ 165,898,065</b>	<b>\$ 158,592,294</b>	<b>\$ 58,805,928</b>	<b>\$ 51,982,850</b>

# Funding Summaries

## Funding by Fund

Detailed descriptions of all of the city's funds are available in the introduction section of the 2020 Approved Budget. Many of the funds exist to handle dedicated revenues that can only be used for specific types of capital projects. These restrictions provide consistency in planning for project types, but also require the city to allocate resources to a specific category of infrastructure and maintain existing priorities. The Greenways Program is not a fund as defined above, but is used within the CIP to illustrate the funding structure of the Public Works - Greenways workgroup, and to call out the CIP projects associated with the work of Greenways.

The following funds qualify for a percent for art allocation: 0.25 Cent Sales Tax Fund, Facility Renovation & Replacement Fund, Governmental Capital/General Fund, Permanent Park & Recreation Fund, Transportation Fund, and Transportation Development Fund.

Similar to the department distributions described earlier in this section, the Transportation and Utility Funds are the largest contributors to the city's 2021-2026 CIP.

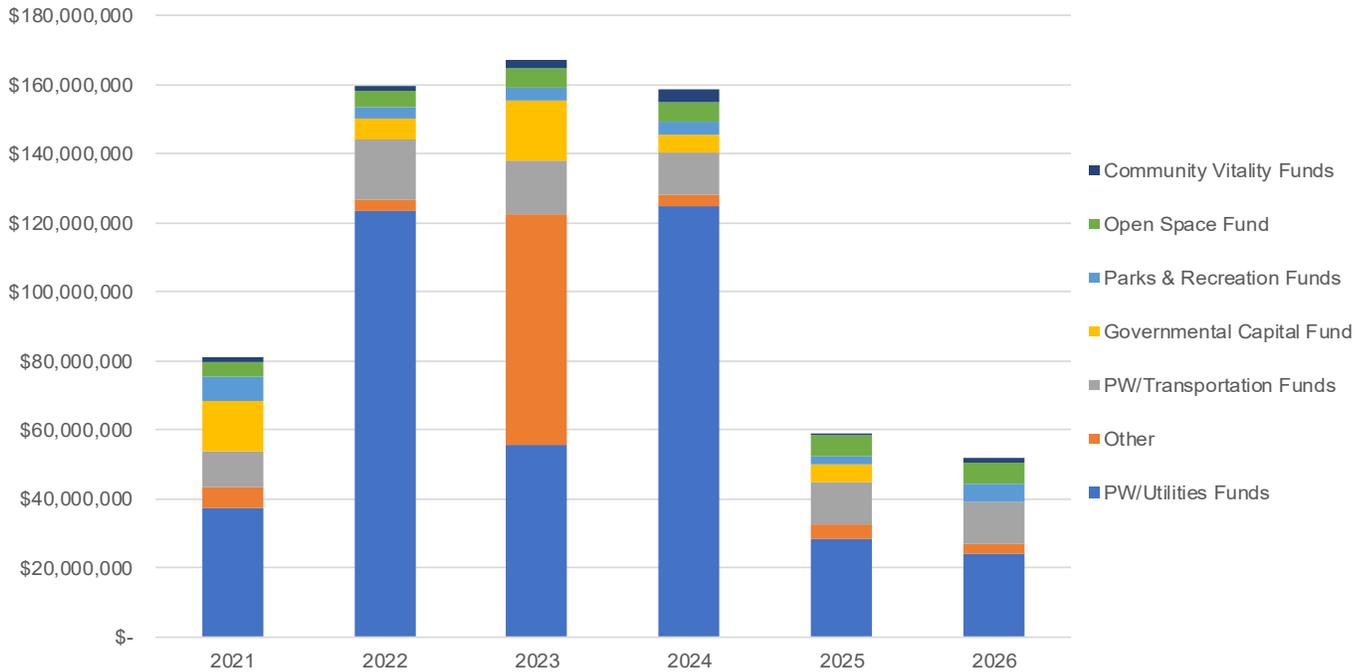
The following chart shows the distribution of six-year funding by fund.

The CIP projects are funded through the following 21 sources.

- .25 Cent Sales Tax Fund (for Parks & Recreation)
- Airport Fund
- Boulder Junction GID - Parking
- Capital Development Fund
- Community, Culture, & Safety Tax Fund
- Computer Replacement Fund
- Downtown Commercial District Fund
- Equipment Replacement Fund
- Facility Renovation & Replacement Fund
- Fleet Fund
- Governmental Capital Fund (tied to General Fund)
- Lottery Fund
- Open Space Fund
- Permanent Park & Recreation Fund
- Planning & Development Services Fund
- Stormwater & Flood Management Utility Fund
- Transportation Fund
- Transportation Development Fund
- University Hill Commercial District Fund
- Wastewater Utility Fund
- Water Utility Fund

# Funding Summaries

## 2021-2026 Funding by Fund



### 2021-2026 FUNDING SUMMARY BY FUND

	Estimated Total Cost	2021 Recommended	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
.25 Cent Sales Tax	\$ 8,037,000	\$ 2,165,000	\$ 1,750,000	\$ 1,022,000	\$ 1,000,000	\$ 600,000	\$ 1,500,000
Airport	333,333	-	-	-	333,333	-	-
Bldr Junction GID- Parking	2,100,000	-	-	210,000	1,890,000	-	-
Boulder Junction Capital Improvement	400,000	-	100,000	100,000	100,000	-	100,000
Capital Development	2,855,958	1,000,000	-	1,855,958	-	-	-
Community, Culture, and Safety Tax	6,225,199	2,552,000	434,000	3,239,199	-	-	-
Computer Replacement	4,745,872	1,278,072	432,800	580,000	575,000	1,555,000	325,000
Downtown Commercial District	8,350,000	1,090,000	1,705,000	1,875,000	1,770,000	500,000	1,410,000
Equipment Replacement	-	-	-	-	-	-	-
Facility Renovation & Replacement	69,380,788	1,186,583	1,578,841	61,798,841	1,578,841	1,658,841	1,578,841
General	100,000	100,000	-	-	-	-	-
Governmental Capital	45,494,205	13,597,962	6,189,440	15,633,203	4,886,800	5,186,800	-
Lottery	6,042,402	1,007,067	1,007,067	1,007,067	1,007,067	1,007,067	1,007,067
Open Space	32,250,485	4,038,705	4,711,780	5,500,000	5,750,000	6,000,000	6,250,000
Permanent Parks & Recreation	17,269,500	4,947,000	1,300,000	3,050,000	2,839,000	1,578,500	3,555,000
Planning and Development Services	19,099	19,099	-	-	-	-	-
Stormwater & Flood Management Utility	138,169,525	9,134,324	14,194,011	7,121,915	96,521,404	4,655,754	6,542,118
Transportation	70,312,492	9,790,298	11,654,444	14,542,000	11,300,000	11,742,250	11,283,500
Transportation Development	9,600,000	800,000	5,550,000	850,000	800,000	800,000	800,000
University Hill Comm District	150,000	150,000	-	-	-	-	-
Wastewater Utility	117,354,642	14,694,831	55,245,893	28,923,000	5,690,918	5,860,000	6,940,000
Water Utility	137,624,590	13,238,913	53,892,825	19,589,883	22,549,930	17,661,716	10,691,324
<b>Total</b>	<b>\$ 676,815,091</b>	<b>\$ 80,789,854</b>	<b>\$ 159,746,100</b>	<b>\$ 166,898,065</b>	<b>\$ 158,592,294</b>	<b>\$ 58,805,928</b>	<b>\$ 51,982,850</b>

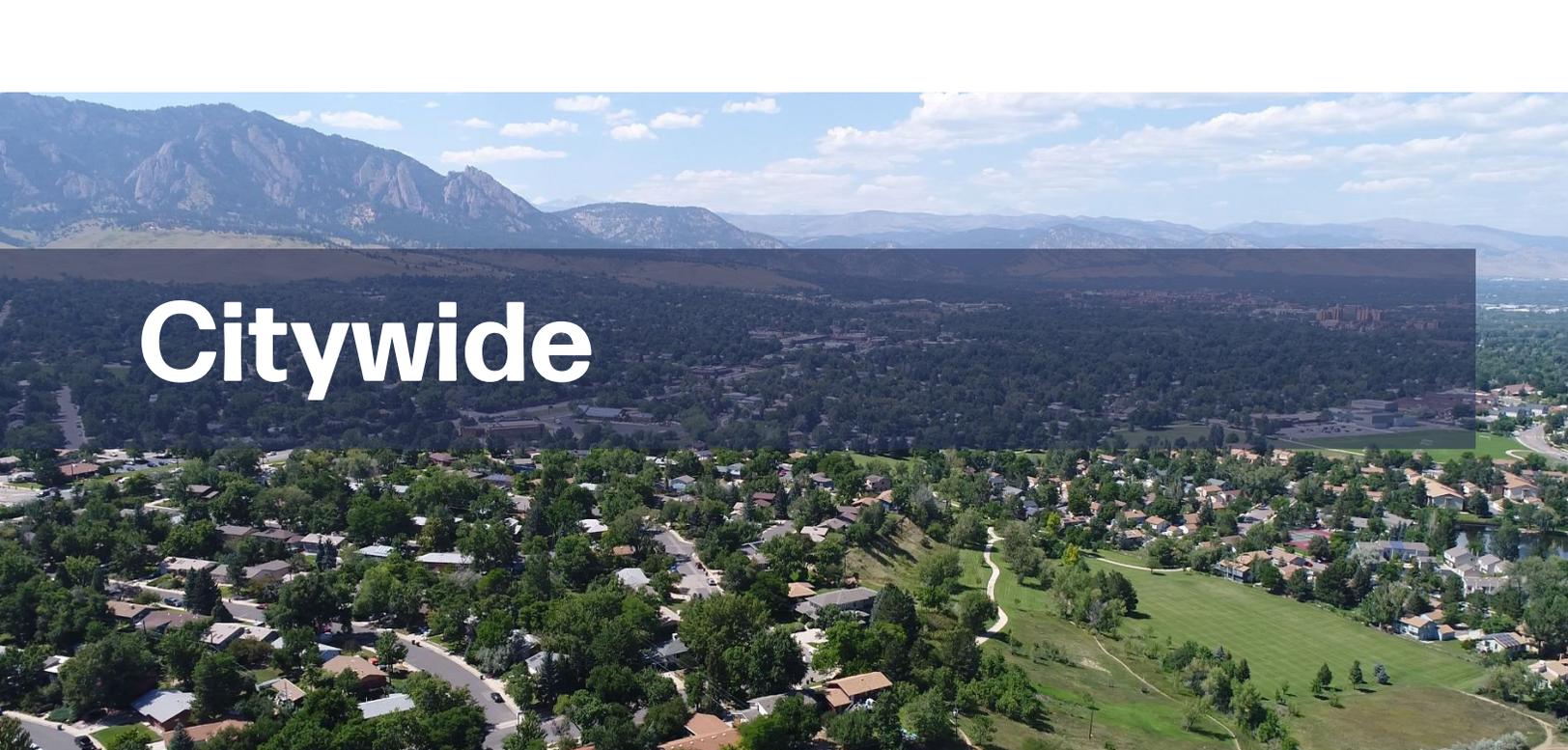
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# Citywide

## **Current Focus for Capital Planning & Projects in the 2021 Capital Budget**

The goals of the General Fund CIP are to provide a sustainable funding source for essential capital needs; improve resiliency of essential services; and save the city money in the long run by not deferring necessary improvements. Many General Fund CIP projects are found within the corresponding departments. However, there are several projects in 2021 that are true citywide projects and do not have an associated department focus. Projects in 2021 include:

**Continuing payment support for Hogan Pancost** - The Hogan Pancost property is a 22.2-acre parcel in area II contiguous to South East Boulder (see image on next page). After several attempts by developers to annex and develop the property, council decided that it would be in the best interest of the community for the city to purchase the land. Having control of the property will allow for a pause to consider the most appropriate uses. It will remove the incentive to maximize the return on investment. It will also allow time to consider the effects of the South Boulder Creek flood mitigation study and guarantee that the neighboring community has a voice in what ultimately happens on the property.

Additionally, citywide projects include Nonprofit Support outlined within the 2017 community, culture, and safety tax approved by voters. Projects in 2021 include:

- Renovation of the Boulder Museum of Contemporary Art (BMoCA);
- Improve facilities at Resource Central to expand recycling and reuse efforts.

## **Operating & Maintenance Impacts**

Operating costs will be included as appropriate.

## **Unfunded Projects & Emerging Needs**

Many of the city's unfunded needs reside in the General Fund and include facility backlogs, emerging technology needs, and large, unfunded facility replacements. The goal of this funding source is to address the backlog, critical infrastructure, and technology needs while also recognizing that additional funding sources will be needed to accomplish larger, high-dollar projects such as new facilities.

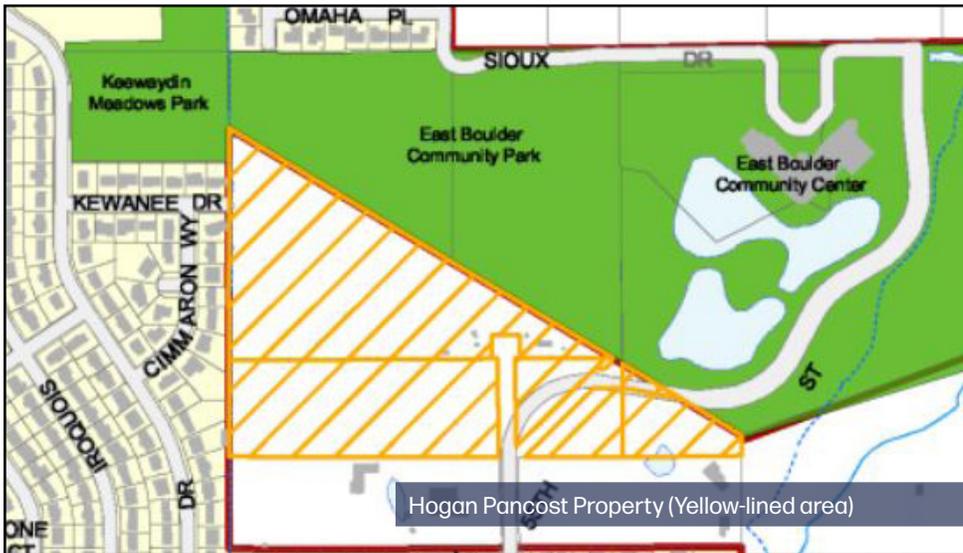
# Citywide Capital

CEAP Projects

N/A

Board Action

N/A



## 2021-2026 Capital Improvement Plan

Citywide	Estimated Total Cost	2021 Recommended	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
<b>Capital Program Total</b>	\$ 20,440,544	\$ 1,440,704	\$ 4,339,440	\$ 4,886,800	\$ 4,886,800	\$ 4,886,800	\$ -
<b>CIP-Capital Enhancement Total</b>	\$ 12,800,000	\$ 800,000	\$ 3,000,000	\$ 3,000,000	\$ 3,000,000	\$ 3,000,000	\$ -
<b>CCS Agreements - BMOCA</b>	\$ 500,000	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ -
Location: 1750 13th St							
BMOCA will renovate the current facility, which is necessary for the organization to sustain its current levels of growth and provide the best service for the community.							
<b>CCS Agreements - Resource Central</b>	\$ 300,000	\$ 300,000	\$ -	\$ -	\$ -	\$ -	\$ -
Location: 6400 Arapahoe Ave							
<b>Pavilion Debt Service</b>	\$ 12,000,000	\$ -	\$ 3,000,000	\$ 3,000,000	\$ 3,000,000	\$ 3,000,000	\$ -
Debt service payments in the out-years, in the event Pavilion reuse is approved by council.							
<b>CIP-Capital Maintenance Total</b>	\$ 6,038,784	\$ -	\$ 698,736	\$ 1,566,448	\$ 1,886,800	\$ 1,886,800	\$ -
<b>General Fund Capital</b>	\$ 6,038,784	\$ -	\$ 698,736	\$ 1,566,448	\$ 1,886,800	\$ 1,886,800	\$ -
General Fund Capital dollars transferred to the Governmental Capital Fund to provide a sustainable funding source for essential capital needs; improve resiliency of essential services; and save the city money in the long run by not deferring necessary improvements. Specific projects will be identified during the annual CIP process.							
<b>CIP-Land Acquisition Total</b>	\$ 1,601,760	\$ 640,704	\$ 640,704	\$ 320,352	\$ -	\$ -	\$ -
<b>Hogan Pancost Land Purchase</b>	\$ 1,601,760	\$ 640,704	\$ 640,704	\$ 320,352	\$ -	\$ -	\$ -

The Hogan Pancost property is a 22.2-acre parcel in area II contiguous to South East Boulder. After several attempts by developers to annex and develop the property, council decided that it would be in the best interest of the community for the city to purchase the land. Having control of the property will allow for a pause to consider the most appropriate uses. It will remove the incentive to maximize the return on investment. It will also allow time to consider the effects of the South Boulder Creek flood mitigation study and guarantee that the neighboring community has a voice in what ultimately happens on the property.



# Community Vitality

## Current Focus for Capital Planning and Projects in the 2021 Capital Budget

In alignment with city-wide goals and plans, Community Vitality developed a departmental strategic plan focusing on access for people, vision of place, and pursuit of vitality. During the COVID pandemic, the city's response and recovery, and within an economically constrained environment, it is critically important to adhere to community-supported plans for the purposes of prioritization and efficiency. Specific objectives within the CV Strategic Plan were helpful in guiding decisions within the development of the 2021-2026 Capital Improvement Plan (CIP):

- Invest in existing infrastructure to enhance and extend life of district-owned assets and develop a strategic asset plan for future opportunities.
- Set and achieve customer service enhancements such as, reducing in-person wait times, setting standards for responsiveness to customer issues, and further development of partnerships.
- Utilize existing programs to contribute to the city-wide Vision Zero goals; safety enhancements for pedestrians, bikes, and vehicles.
- To facilitate a diverse and dynamic economy where residents and businesses grow and succeed together through strategic partnerships (internal and external), policies, and programs.

Community Vitality manages several general improvement districts and the district-owned assets. In the Central Area General Improvement District (CAGID), Community Vitality manages five parking structures, two of which have leasable commercial property. Major 2020 projects in the parking structures included work at the Randolph Center to repair persistent water infiltration, structural improvements in the St. Julien Hotel parking structure, and completion of the staircase replacements at 1100 Spruce and 1500 Pearl buildings. The other major 2020 capital project was the replacement of most of the aging on-street parking stations. This is a necessary upgrade to aging infrastructure. This program is essential for maintaining healthy commercial areas and generates significant General Fund revenue. The project is funded through the Facilities and Asset Management Equipment Replacement Fund (ERF).

There are several impacts of the COVID-19 pandemic in terms of revenue loss and subsequent capital project reductions. Community Vitality is in a prominent role in supporting the economic recovery of the city and ensuring a successful and vibrant retail environment. This involves supporting small business grants,

# Community Vitality Capital

affordable commercial programs, and partnership development, all which have significant operational impact. Additionally, several customer service enhancements for parking products, including the continued effort to move towards more gateless systems at all parking structures was reduced and deferred to future years due to revenue losses in our parking structures.

Other COVID impact to the CV 2021-2026 CIP included the reduction of the planned capital investment in the University Hill Commercial Area. While lighting and public landscaping will be addressed in 2020-2021, other capital investment will be delayed indefinitely until the full revenue impact, completion of the Hill Hotel project, and future parking infrastructure planning are better understood.

Finally, significant reductions are included in the 2021 CAGID capital budget. In addition to delays in software and customer service improvements, reductions in scope were necessary for several projects, including elevator repairs and other structural improvements. Also, the CAGID deck repair program and the capital improvement program for Boulder Junction was cancelled for 2021.

## 2021 Capital Projects

- Completion of the St. Julien capital improvements
- Completion of the Randolph Center improvements
- Elevator repairs at St. Julien
- Affordable Commercial capital program pilot
- 1500 Pearl exterior brick repairs
- University Hill public landscaping

## 2020 Adjustments (if applicable)

- Reduction of scope for the pay station replacement project (\$225,000)
- Reallocation of parking deck repairs to St. Julien repairs (\$400,000)
- Postponement of Pearl Street Refresh Planning (\$65,000)
- Postponement of Phase 1 - Gateless Technology (\$130,000)
- Cancellation of other software enhancements (\$50,000)

## Operating and Maintenance Impacts

An operational impact that Community Vitality has closely monitored is the pace in which a project can be completed based on project management capacity within the department. With the addition of a project and program manager (added in 2019), departmental capacity to lead projects increased; however, the need for additional capacity to complete major projects still existed. The department retained Orion, Inc., to assist the department with project management through early 2021.

## Unfunded Projects and Emerging Needs

### *Unfunded Projects*

The Farnsworth Assessment (2017) identifies over \$12 million of parking structure facilities capital projects and repair and replacement suggested over a period of 10 years based on current conditions and urgency of attention. The 2021-2026 Community Vitality CIP reflects the top priorities in addressing deferred maintenance but cannot absorb the entire amount identified in the Assessment.

Additionally, planning for a future refresh of the Pearl Street Mall and surrounding area is prudent. A large project will require a community conversation and other funding sources than currently identified. The only funding included in the CIP is \$65,000 in 2021 as a shared portion of an initial internal planning effort (in conjunction with Parks and Recreation).

# Community Vitality Capital

## ***Emerging Needs***

The impact of COVID on the business community and the overall local economy will persist throughout 2021 and beyond. As a property owner and key partner with business organizations, Community Vitality will have to monitor the need for investment in district-owned spaces for affordable opportunities and other areas where city investment may be appropriate.

## **CEAP Projects**

N/A

## **Board Action**

The Downtown Management Commission (DMC) recommended approval of the Community Vitality 2021-2026 CIP at their July 14 meeting.

The Boulder Junction Access District Commissions (Parking & TDM) recommended approval of the Community Vitality 2021- 2026 CIP at their July 22 meeting.

The University Hill Commercial Area Management Commission (UHCAMC) will consider the Community Vitality 2021-2026 CIP at their August meeting.



Pearl Street in Spring

# Community Vitality Capital

## 2021-2026 Capital Improvement Plan

Community Vitality	Estimated Total Cost	2021 Recommended	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
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<b>Capital Program Total</b>	\$ 8,900,000	\$ 1,240,000	\$ 1,805,000	\$ 1,975,000	\$ 1,870,000	\$ 500,000	\$ 1,510,000
<b>CIP-Capital Enhancement Total</b>	\$ 2,000,000	\$ 300,000	\$ 475,000	\$ 175,000	\$ 850,000	\$ 100,000	\$ 100,000
<b>Affordable Commercial Capital Prog</b>	\$ 500,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ -

This is a likely program in 2020 with a portion of the program funded as capital projects in the existing CAGID owned retail spaces. A portion of this project work is funded through the General Fund transfer to CAGID. Council will define program details and scope of capital-related project work later in 2019 or early 2020.

<b>Gateless System Installation</b>	\$ 300,000	\$ -	\$ 300,000	\$ -	\$ -	\$ -	\$ -
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In alignment with the Access and Parking Management Strategy (AMPS), this project is to enhance the customer service through the application of innovative solutions within the parking garages. This technology, currently utilized at the Trinity Garage, will allow improved customer experience and reduced operating costs.

The project was initially scheduled for 2020-2021 and was delayed to 2022 as a budget reduction measure. This will coincide with the timing of the next phase of AMPS implementation.

Budgeting for Resiliency: Helpful.

<b>Parking Product Software Enhancemen</b>	\$ 225,000	\$ 50,000	\$ 75,000	\$ -	\$ -	\$ -	\$ 100,000
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In alignment with the City's Goals and Values and Community Vitality's areas of focus, this project seeks to improve customer service through the development and acquisition of software that enhances the current suite of parking products offered by Community Vitality. The scale and individual products will be developed through a department strategic planning process and the next phase of the AMPS implementation.

The overall scope of the project was reduced as a budget savings measure.

Budgeting for Resiliency: Helpful.

<b>University Hill Landscaping</b>	\$ 150,000	\$ 150,000	\$ -	\$ -	\$ -	\$ -	\$ -
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UHGD is responsible for a portion of the investment in public infrastructure. This is a partnership with Forestry to replace trees and otherwise improve the aesthetics in the public right-of-way.

Budgeting for Resilience: Amenity.

<b>Parking Garage Exterior Brick Rehab</b>	\$ 825,000	\$ -	\$ -	\$ 75,000	\$ 750,000	\$ -	\$ -
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This project is to address necessary rehabilitation of the brick structure at the Spruce and Pearl parking structure. This includes replacing necessary bricks and addressing any structural issues that arise during assessment. Some of this work is necessary to address issues that arose out of other construction projects in 2019-2020. Scope reduced in 2024.

Budgeting for Resiliency: Important

<b>CIP-Capital Maintenance Total</b>	\$ 6,835,000	\$ 875,000	\$ 1,330,000	\$ 1,800,000	\$ 1,020,000	\$ 400,000	\$ 1,410,000
<b>1500 Pearl Brick Repairs</b>	\$ 175,000	\$ 175,000	\$ -	\$ -	\$ -	\$ -	\$ -

Assessing the brick façade on the west, south, and east elevations of the parking structure and removing loose and deteriorated brick. Replacing the damaged bricks, and at all lintel locations, removing the mortar from the bed joints and installing a soft sealant joint.

The work will focus on areas where there is potential safety issues from loose materials.

Budgeting for Resiliency: Important

<b>Boulder Junction Public Improvemnts</b>	\$ 400,000	\$ -	\$ 100,000	\$ 100,000	\$ 100,000	\$ -	\$ 100,000
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Boulder Junction Parking District is responsible for the maintenance and enhancement of capital assets within the district. Since the establishment of the district, no funds have been aside for public improvements and other related enhancements to the district. While there is not an individual project identified at this time, there is expected necessary investment within the district, utilizing Boulder Junction Access District (Parking) funds.

This was initially planned for 2021. Due to lost revenue, this will be delayed until 2022. A long-term planning effort with the Boulder Junction Commissions will take place in 2020 to help inform future investment.

Budgeting for Resiliency: Helpful.

<b>Ceiling and Roof Repair/Replace</b>	\$ 400,000	\$ -	\$ 50,000	\$ 350,000	\$ -	\$ -	\$ -
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Significant patching and replacement of areas of the roof and ceilings within the Pearl and Spruce structures is necessary. Exact scoping for the improvements will occur in 2022 with construction in 2023.

Budgeting for Resiliency: Important.

# Community Vitality Capital

## 2021-2026 Capital Improvement Plan

Community Vitality							
	Estimated Total Cost	2021 Recommended	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
<b>Garage Deck &amp; Structural Cap Maint</b>	\$ 2,000,000	\$ -	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000
<p>The 2017 Farnsworth Facilities Assessment identified deferred maintenance to be addressed in all of the CAGID parking structures. Specifically, one the largest in scale was the annual cost of repairing the concrete parking decks and underlying structure that wears down over time. This Capital Maintenance program seeks to address deferred maintenance by making an annual investment of \$400,000 into various projects, with a focus on the concrete parking decks and underlying structure.</p> <p>The amount was reduced and reallocated in 2020 and 2021 to focus on specific projects and reduce overall budget impact.</p> <p>Budgeting for Resiliency: Important.</p>							
<b>HVAC System Repair-Replacement</b>	\$ 340,000	\$ -	\$ 20,000	\$ 300,000	\$ 20,000	\$ -	\$ -
<p>This project is the planning, scoping, and construction of HVAC systems at Spruce and Pearl garages. This impacts the parking areas, tenant spaces, and offices and represents a phased approach from 2022-2025.</p> <p>Budgeting for Resiliency: Helpful.</p>							
<b>Interior Tenant Space Repairs</b>	\$ 450,000	\$ 50,000	\$ 200,000	\$ 50,000	\$ 50,000	\$ -	\$ 100,000
<p>CAGID manages retail space for 13 tenants and approximately 16,000SF within the Pearl and Spruce structures. As the owner of the retail spaces, there is annual maintenance within the spaces and sometimes more extensive work required if/when a tenant space turns over. This represents the expected annual amount for more significant repairs.</p> <p>Additional consideration may be given to CAGID businesses impacted by the pandemic and assistance will be determined based on future criteria.</p> <p>Budgeting for Resiliency: Helpful.</p>							
<b>Parking Building Doors and Windows</b>	\$ 200,000	\$ -	\$ -	\$ -	\$ 200,000	\$ -	\$ -
<p>This is required capital maintenance on all CAGID assets based on the Farnsworth facility assessment report. Several doors and windows are in need of replacement and/or repair. This will help with the energy efficiency of these buildings. This project is projected to be completed in 2024.</p> <p>Budgeting for Resiliency: Helpful.</p>							
<b>Parking Garage Elevator Replacement</b>	\$ 1,000,000	\$ 250,000	\$ 500,000	\$ -	\$ -	\$ -	\$ 250,000
<p>This project is to address continued work in updating the elevators within the downtown parking garages. Work in replacing elevators at Spruce and Pearl Street garages is being completed in 2020. This project would plan, scope, and bid the next major repair and/or replacement (at the St. Julien) in 2021 and 2022. An assessment of the other garages allowed for an overall reduced scope and cost, \$310,000 in savings over three years.</p> <p>Budgeting for Resiliency: Important</p>							
<b>Parking Garage Fire Supp. Repairs</b>	\$ 350,000	\$ 100,000	\$ -	\$ -	\$ 250,000	\$ -	\$ -
<p>This project is to address critical repairs within parking structures to the fire suppression and sprinkler systems. An assessment is being conducted in 2020 and early information allows for the overall scope of the project to be reduced. Capital work is likely to be completed in 2021. Future work is expected in 2024.</p> <p>Budgeting for Resiliency: Important.</p>							
<b>ParkingGarage Staircase Replacement</b>	\$ 720,000	\$ -	\$ 60,000	\$ 600,000	\$ -	\$ -	\$ 60,000
<p>This project will continue the work to address deferred maintenance in all downtown parking garages. This will prioritize the replacement of staircases at the RTD garage. This work was delayed from 2021 to 2022-2023 to reduce budget.</p> <p>Budgeting for Resiliency: Important.</p>							
<b>Randolph Garage Deck Repairs</b>	\$ 700,000	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ 500,000
<p>CAGID is a 50% owner of the Randolph Center at 1100 Walnut. The facility has experienced persistent water penetration, leading to some infiltration into the tenant spaces below and adjacent to the parking structure. After an engineering report confirmed that the leaking is occurring due to poor sealing in the parking structure, immediate repairs are necessary.</p> <p>The estimated total amount of immediate repair is \$465,000.</p> <p>Through the Condo Association, additional assessment took place in 2020. This prioritized work to be completed in 2020. However, additional work will be necessary in 2021.</p> <p>Budgeting for Resiliency: Important.</p>							
<b>St. Julien Ramp Repairs</b>	\$ 100,000	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ -
<p>Coating leak prevention and repairs Traffic coating at the entrance to the parking structure on Level B1 removal and replacement to minimize water infiltration through the slab. The majority of work will be completed in 2020. Some additional work is necessary in 2021 as a part of the entire project.</p> <p>Budgeting for Resiliency: Important.</p>							

# Community Vitality Capital

## 2021-2026 Capital Improvement Plan

Community Vitality							
	Estimated Total Cost	2021 Recommended	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
<b>CIP-Capital Planning Studies Total</b>	\$ 65,000	\$ 65,000	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Pearl Street Mall Planning</b>	\$ 65,000	\$ 65,000	\$ -	\$ -	\$ -	\$ -	\$ -

This project is for internal planning dollars in support of a collaboration effort between Community Vitality and Parks and Recreation to plan for a future refresh of Pearl Street Mall. This represents half of the estimated amount of the planning effort. This is an initial internal step; public and stakeholder engagement will be mandatory as a part of any future funding beyond the scope of this internal planning process.

This project was postponed to 2021 as a budget reduction measure.

Budgeting for Resiliency: Important.



Pay to Park



# Facilities

## **Current Focus for Capital Planning and Projects in the 2021 Capital Budget**

In 2021, the Facilities Department will focus on three areas:(1) planning, designing, and constructing new and major renovation of building infrastructure, (2) maintaining existing infrastructure, and (3) completing the city's first-ever Facilities Master Plan and implementing an improved capital planning process for the city's building portfolio.

### ***New Construction and Major Renovation of Building Infrastructure***

The newly established Facilities Department is leading design and construction efforts on two new construction projects, the North Boulder Branch Library and Fire Station 3 relocation. A third major project is the redevelopment of the Alpine-Balsam site which was purchased by the city in December 2015. The first major project on the site occurred in 2018 with the renovation of the existing Brenton Building which consolidated the city's Finance Department into one building. This was followed by interior deconstruction of the Boulder Community Health (BCH) hospital and Medical Office Pavilion (Pavilion) to prepare for major renovation of the Pavilion building. The focus in 2021 will be continuing renovation of existing buildings and planning for redevelopment of the site into a centralized Western City Campus which will enable several existing city buildings, currently dispersed, to be consolidated into this one location to better serve the community. Through consolidation many efficiencies can be achieved through more effective use of physical space, reductions in deferred maintenance backlog, economy in operations and maintenance and advancements towards the city's climate commitment by creating high energy performing buildings.

### ***Maintenance of Existing Infrastructure***

The Facilities Department expanded the asset management program from 22 to 70 city facilities in 2020. The asset management software is used to prioritize building system replacement needs and assign a Facility Condition Index (FCI) score to each building. The Deferred Facility Maintenance Projects funding will be used on urgent or high priority system repairs or replacements in buildings with the lowest FCI score. Replacements funded with this project include HVAC systems, fire suppression/detection systems, major maintenance or replacement of roofing systems, etc.

Fire stations major maintenance will continue in 2021. The 24/7 occupancy of the city's eight fire stations and their status as essential facilities requires a higher level of maintenance. This annual CIP project is distributed among the eight Boulder fire stations to improve the quality of kitchen, dining, and living areas. The 2021 project plan is currently being developed in coordination with Boulder Fire-Rescue Department.

# Facilities Capital

The Parks and Recreation (BPR) Aquatics Facility Study (AFS) identified deferred maintenance needs within existing BPR facilities. Addressing the needs identified will be a multi-year effort and East Boulder Community Center (EBCC) will be the focus for 2021 and 2022. Facilities will partner with BPR on a Natatorium Enhancement project that addresses the identified deferred maintenance and improves the user experience. In 2021, funding will be used to supplement planning and design for the EBCC Natatorium Enhancement project and in 2022 funding will go toward implementation with the Facilities portion being used to address necessary facility repairs.

Facilities will partner with BPR on the Neighborhood and Community Park Capital Maintenance project. This project provides funding for asset maintenance throughout the Neighborhood and Community Park system as well as a complete renovation of one neighborhood park annually to meet the goals outlined within the BPR Master Plan and Capital Investment Strategy. Facilities will contribute funding and collaborate with BPR on the planning, design, and implementation of a renovation for North Boulder Park in 2021 and Martin Park in 2023.

## ***Facilities Master Plan Implementation***

The new Facilities Master Plan (FMP) is a comprehensive assessment of all city facilities encompassing more than 70 buildings and structures (it excludes OSMP barns and ranches and park shelters). Key goals of the first Facilities Master Plan are to identify a common vision and core values across all city facilities and to measure facility health and condition against these common values. It is also to guide a strategic implementation plan and capital investment strategy for near term, within the timeframe of CIP planning and over the long term, decades. Major milestones for investment strategies align with the city's Climate Commitment Goals in both 2030 for city buildings and 2050 with community wide goals.

A key strategic initiative of the FMP is to consolidate 22 facilities that are not otherwise tied to a specific geographic location such as a fire station or recreation center. There are numerous benefits that can be achieved through consolidation such as operational and maintenance efficiencies, energy efficiency, space economy, increased staff effectiveness and more.

Many of these benefits also result in cost savings and most importantly better delivery of essential services to the community. The completion of the FMP and development of the implementation strategy as it applies to capital planning will be a focus of the Facilities Department in 2021.



# Facilities Capital

## ***Covid-19 Impacts***

The COVID-19 pandemic has resulted in fiscal and staffing constraints for the Facilities Department and non-furloughed staff resources have been diverted to COVID Recovery. The planning and design schedule for the Alpine-Balsam redevelopment project has also been impacted. At this point, it is unclear if there will be an impact in 2021 on the overall Alpine-Balsam redevelopment timeline.

The Facilities Master Plan (FMP) adoption has been delayed due to the Covid-19 pandemic impact on the City Council schedule and some staff shifts to focus on COVID Recovery. In 2021 capital investment projects will be executed that align with City Council initiatives and maintain current building infrastructure. Strategic investment opportunities to reduce the backlog of deferred maintenance in city buildings will be addressed in the FMP in 2021 with implementation on prioritized projects anticipated to proceed in 2022.

## **2021 Capital Projects**

- BCH Hospital Deconstruction
- Western City Campus Development
- New Fire Station 3. More details can be found in BF&R CIP.
- New North Boulder Library. More details can be found in BPL CIP.
- North Boulder Park Shelter Repair
- Aquatic Facilities Major Maintenance
- Fire Stations Major Maintenance
- Major Maintenance of Building Systems

## **2020 Adjustments (if applicable)**

### ***Alpine-Balsam Hospital Deconstruction - Budget Deferral (\$1,600,000)***

As part of the Alpine-Balsam Area Plan, adopted by City Council on Oct. 1, 2019, the city is deconstructing the main hospital building at the Alpine-Balsam site. The timing of deconstruction of the exterior of the main hospital should be completed concurrent with flood mitigation construction along Balsam Ave. The flood mitigation work is not anticipated to begin until 2022 at the earliest. The funding for the exterior deconstruction of the hospital has already been appropriated but it does not need to be encumbered until 2022 to coincide with flood mitigation work. Therefore, \$1.6 million (one-time) of the hospital exterior deconstruction funding can be deferred until late 2021.

### ***Teahouse Entry Alterations - Budget Reduction (\$255,000)***

This CIP was created mostly in response to a need for thermal protection from the elements right at the main entry doors. Adding an entry vestibule has many challenges that had not been fully identified at the time the CIP was presented. A solution to provide a simple air curtain, which will cost under \$10k can be implemented to alleviate the primary concern.

### ***BMoCA Electrical Upgrade - Budget Reduction (\$104,000)***

This was originally planned as a 2017 CIP project to upgrade the electrical system in BMoCA. Since the CIP was approved in 2017, BMoCA has planned for an expansion of their facility and it was determined that an electrical upgrade to the facility should be completed as part of the expansion project and not independently. This project should be reassessed when BMoCA has determined what level of improvement (or none) they will be making to the facility.

### ***Aesthetic Improvements to City Buildings - Budget Reduction (\$150,000)***

This 2020 CIP was funded to make minor aesthetic improvements in various buildings as needed. These improvements are not necessary given current budget challenges and while most administrative buildings are closed to the public and staff are teleworking.

# Facilities Capital

## ***Municipal Building Flood Gates – Budget Reduction (\$94,000)***

The manual flood gates at the Municipal building are not currently working properly; however, a solution that meets current flood regulations has not been found. The project has been further delayed so that a solution that is well coordinated with other Civic Area improvements can be implemented. This project has been delayed indefinitely until such a solution is identified.

## **Operating and Maintenance Impacts**

The new North Boulder (NoBo) Library will be under construction in 2021. Boulder Public Libraries are currently leasing a 500 square foot storefront location and the new NoBo Library will be a 10,500 square foot high-performance building owned and maintained by the city. The estimated General Fund budget impact for the new NoBo library is \$300,000 annually. \$90,000 for O&M and Utilities and \$210,000 in FR&R contributions to fund major maintenance and repair & replacement over the life of the building.

The new Fire Station 3 and Pavilion remodel will be in the design phase in 2021 with construction expected to start in 2022. Facilities will develop the on-going funding needed for both buildings in the 2022 budget submittal.

NoBo Library and Fire Station 3 represent a net increase in total square footage and operating expenses when compared to their previous building locations. The Pavilion remodel project will allow for the consolidation of existing office buildings into a single high-performance building resulting in an overall net reduction in square footage which will lower O&M and Utility expenses for the overall city portfolio. Facilities operating expenses will increase in the short term as NoBo, Fire Station 3, and the Pavilion come online, but will start to decrease as the consolidated buildings are deconstructed, sold, or repurposed by the city. Operating expense reductions are not expected to be realized until 2026 and beyond.

O&M expenses for the remainder of the city's building portfolio are expected to remain steady as investments are made in replacing aging building infrastructure through the Deferred Facility Maintenance Projects CIP. Critical and high priority building system replacements will reduce the O&M for that specific building system, yet the balance of existing infrastructure will continue to age. The Facilities Master Plan will address the capital funding target for the city building portfolio and the impact to on-going operating and capital budgets will be clearer in 2021.

## **Unfunded Projects and Emerging Needs**

Fire Station #8, opened in 2015, and the Brenton Building, opened in 2018, have not been collecting facility renovation and replacement funding (FR&R). Best management practice recommends 2% of the facilities replacement value be collected annually to fund future renovations and replacements to maintain the value of the asset over its life cycle. Fire Station #8 has a \$6 million replacement value and the Brenton building is \$8 million. In total, \$280,000 of annual funding for future replacement needs are not being collected for these buildings.

The COVID-19 pandemic forced the closure of city administrative buildings and city staff who could work remotely were asked to do so for an extended period through 2020. As a result, the organization learned that the city can effectively telework and many staff now prefer to maintain some amount of telework permanently in their weekly schedule. Another lesson learned is that in-person engagement and collaboration is also necessary for true success and service excellence. The pandemic also brought to light the requirements for a healthy building, one that lessens the spread of infectious disease and promotes the health of individuals who occupy the spaces. These lessons will be incorporated into all new building projects moving forward and overall should result in reduction of costs per employee – both from physical space reduction as well as reduced health care expense.

# Facilities Capital

The Facilities Master Plan (FMP) will be completed in 2021. The FMP will guide the city's future capital investment strategy for the building portfolio. Guidance and direction provided in the FMP could significantly change the unfunded needs in 2022.

### CEAP Projects

N/A

### Board Action

N/A



# Facilities Capital

## 2021-2026 Capital Improvement Plan

### Facilities & Asset Management

	Estimated Total Cost	2021 Recommended	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
<b>Capital Program Total</b>	\$ 71,373,046	\$ 1,578,841	\$ 3,178,841	\$ 61,798,841	\$ 1,578,841	\$ 1,658,841	\$ 1,578,841
<b>CIP-Capital Enhancement Total</b>	\$ 61,992,258	\$ 392,258	\$ 1,600,000	\$ 60,000,000	\$ -	\$ -	\$ -
<b>BCH Hospital Deconstruction</b>	\$ 1,600,000	\$ -	\$ 1,600,000	\$ -	\$ -	\$ -	\$ -

On May 16, 2019 City Council voted to proceed with deconstruction of the main hospital to prepare the Alpine-Balsam site for future redevelopment. The full scope of the deconstruction project includes interior deconstruction of the main hospital and Pavilion to prepare the latter building for future renovation. The exterior of the hospital building will be deconstructed and separated from the Pavilion building and the holes in the side of Pavilion where the hospital was once connected will be temporarily patched back until full renovation of that building proceeds. The basement of the hospital building will be excavated and the whole left behind will be filled. The final phase of work necessary to complete the deconstruction project is grading of the site which is being coordinated with future flood mitigation plans so that grading as part of the deconstruction project can work towards achieving those future flood mitigation goals for the site.

The total project costs have been estimated between \$14M - \$16M for the work described above. The first ATB in 2019 appropriated \$11,850,000 to the project. This amount reflects what was available from year end balance carryover from 2018 to utilize towards this project. In the 2020 approved budget, \$3,350,000 was appropriated to bring total project appropriations up to \$16M in order to complete all phases of the hospital deconstruction.

The timing of deconstruction of the exterior of the main hospital should be completed concurrent with flood mitigation construction along Balsam Ave. The flood mitigation work is not anticipated to begin until 2022 at the earliest. The funding for the exterior deconstruction of the hospital has already been appropriated but it does not need to be encumbered until 2022 to coincide with flood mitigation work. Therefore, \$1.6 million (one-time) of the hospital exterior deconstruction funding can be deferred from the original 2020 budget to help fill a funding gap due to the COVID-19 Pandemic.

The Capital Funding Plan below reflects needing the \$1,600,000 back in 2022 to complete the project.

This project is considered 'Essential' using the Budgeting for Resilience classification in that it could not be cut without a significant impact, or risk of impact, to the city's basic operation and functioning. The BCH Hospital building is partially deconstructed and finishing deconstruction of the exterior will enable the rest of the site to be made ready for future redevelopment. Leaving the building standing as a unoccupied cold shell poses significant health, life, and safety risks.

<b>Western City Campus Redevelopment</b>	\$ 60,392,258	\$ 392,258	\$ -	\$ 60,000,000	\$ -	\$ -	\$ -
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The Alpine-Balsam Area Plan was adopted by Council in the fall of 2019. The plan included the intent to renovate the Medical Office Pavilion for city services and redevelop the eastern portion of the site as a new consolidated Western City Campus. In 2020, a budget of \$1.7M was appropriated to begin design work to advance development of the site for this purpose and to prepare the remainder of the site for future housing development. Early design work included development of a city-wide master consolidation program to inform an approach for delivery of city services now and into the future as well as flood mitigation design and other horizontal infrastructure analysis necessary to complete the project. An additional \$392,258 in 2021 will bring the total appropriations to \$2,100,000 covering most, if not all, design work required for the project.

Construction on the site is anticipated to begin in 2023 and early estimated costs for the city portion of redevelopment work are approximately \$60,000,000. This number includes renovation costs of the Pavilion building, site improvements, and escalation for a construction start in 2023. The number also includes the deconstruction cost of Park Central and New Britain buildings which will be possible once city staff and services are relocated out of those buildings and onto the Western City Campus. It may also capture flood mitigation work on site and additional horizontal infrastructure such as roads and pedestrian paths that are required by regulatory agencies to be constructed as part of the Western Campus redevelopment. Design work at this stage is conceptual, and therefore cost estimates on all aspects of the project will be further developed as the project progresses and is refined. As more details develop on various aspects of the project such as flood mitigation, these may develop in subsequent years as separate and discrete CIP projects.

Funding for the Western Campus Redevelopment project will be through bond proceeds in the General Fund. A portion of debt service for the bond will be offset from lease savings from vacating Center Green city offices.

This project is considered 'Essential' using the Budgeting for Resilience classification in that it could not be cut without a significant impact, or risk of impact, to the city's basic operation and functioning. This project enables the city to realize significant operational and cost efficiency through consolidation of multiple aging buildings into a single high performance city campus.

<b>CIP-Capital Maintenance Total</b>	\$ 9,030,788	\$ 1,186,583	\$ 1,578,841	\$ 1,798,841	\$ 1,428,841	\$ 1,458,841	\$ 1,578,841
<b>Aquatics Facility Repairs</b>	\$ 1,476,000	\$ 100,000	\$ 1,123,000	\$ 253,000	\$ -	\$ -	\$ -

The Parks and Recreation (P&R) Aquatics Facility Study (AFS) identified deferred maintenance needs within P&R existing facilities. P&R operates 11 pools within the city including indoor and outdoor leisure pools, lap pools and hot tubs. As part of the Aquatics Facility Study ongoing maintenance and repairs to recreation facilities have been prioritized starting with the three indoor facilities. 2021 funding will be used to supplement planning and design funding for East Boulder Recreation Center (EBRC). 2022 funding will be used to supplement EBRC Natatorium enhancements, with the Facilities portion going to address necessary facility repairs. 2023 funding will go toward funding the remaining Aquatic Facility repairs identified in the Aquatics Feasibility Study.

This project is considered 'Helpful' using the Budgeting for Resilience classification in that it could be cut without significant or immediate impacts to the city's basic operations and functioning.

<b>Building Perf Energy Requirements</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
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Perform energy assessments and retro commissioning (RCx) to comply with Boulder Building Performance Ordinance (BPO) (Ordinance no. 8071). The RCx requires implementing cost effective RCx measures within two years of the study. FAM will be performing the energy assessments, RCx, and implement cost-effective measures on buildings greater than 5,000 square feet.

<b>Deferred Facility Maint Projects</b>	\$ 5,764,788	\$ 816,583	\$ 305,841	\$ 705,841	\$ 1,278,841	\$ 1,228,841	\$ 1,428,841
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The Facilities Department has performed asset reviews for 80 city facilities and loaded that data into an asset management software. Facilities used that software to create building and system priorities. For example, a recreation center is maintained to a higher standard than a maintenance shop, and roofing systems are given a higher priority than interior finishes. The software program allows Facilities to prioritize system replacements based on a buildings Facility Condition Index (FCI). Replacements funded with this project include HVAC systems, boilers, parking lot repairs, and various other building systems. The ultimate goal with this funding is to address system replacements in buildings with the lowest FCI to drive to an acceptable FCI for the portfolio over time.

# Facilities Capital

## 2021-2026 Capital Improvement Plan

### Facilities & Asset Management

	Estimated Total Cost	2021 Recommended	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
<b>Fire Stations Major Maintenance</b>	\$ 900,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000

The 24/7 occupancy of the city's eight fire stations and the status as essential facilities requires a higher level of maintenance. This annual CIP project will be distributed among the eight Boulder fire stations to maintain finishes to industry standards, and upgrade kitchen, dining and living areas. Work on Fire Station 3 will be limited due to future replacement scheduled to be complete in 2023.

This project is considered 'Important' using the Budgeting for Resilience classification in that it could not be cut without a significant impact, or risk of impact, to the city's basic operation and functioning. Fire Stations are essential but the types of projects funded out of Fire Stations Major Maintenance are classified as 'Important'. The types of projects funded include non-infrastructure upgrades to fire stations that support first responder's ability to perform their job functions. Building infrastructure system repair and replacement projects for Fire Stations (i.e. roof, HVAC, water heater, etc. replacements) are funded through Deferred Facility Maintenance Projects which is classified as 'Essential'.

<b>Fleet - System Repairs/Replacements</b>	\$ 300,000	\$ -	\$ -	\$ 220,000	\$ -	\$ 80,000	\$ -
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The Fleet Services Building, originally constructed in 1989, has numerous system repairs and upgrades needed including upgrades to the fire alarm panels, mechanical ventilation system replacement and asphalt repair and replacement. Utilizing the Facilities Department new capital asset planning software system, projects will be prioritized and bundled to efficiency implement.

This project is considered 'Important' using the Budgeting for Resilience classification in that it could not be cut without a significant impact, or risk of impact, to the city's basic operation and functioning. This project will fund building infrastructure maintenance required for the life, health, and safety of city staff and visitors.

<b>Martin Park Shelter Major Maint</b>	\$ 170,000	\$ -	\$ -	\$ 170,000	\$ -	\$ -	\$ -
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The P&R Round 1, Capital Investment Strategy project improved the shelter's exterior to include ADA access to the shelters, lighting upgrades, amenities (benches/tables), bear proof trash/recycling receptacles and concrete flatwork. FR&R funding was not available with 2013/2014 CIS project. This project upgrades the plumbing and fixtures and renews interior and exterior surface finishes of this facility constructed in 1962. Minor cosmetic work totaling \$16,000 was last done in 2007. Code upgrades for the electrical systems will also be accomplished as required with any major renovation project. The funding for this project will be combined with Parks & Rec funding for Neighborhood and Community Park Capital Maintenance to complete the repairs at Martin Park in 2023.

This project is considered 'Helpful' using the Budgeting for Resilience classification in that it could be cut without significant or immediate impacts to the city's basic operations and functioning.

<b>No Boulder Park Shelter Repair</b>	\$ 120,000	\$ 120,000	\$ -	\$ -	\$ -	\$ -	\$ -
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The P&R Round 1, Capital Investment Strategy project improved the shelter's exterior to include ADA access to the shelters, lighting upgrades, amenities (benches/tables), bear proof trash/recycling receptacles and concrete flatwork. FR&R funding was not available to time with CIS project. This project upgrades the plumbing systems and fixtures and renews interior and exterior surface finishes of the facility built in 1969. Minor concrete work totaling \$19,000 was last done in 2007. Electrical code upgrades will also be accomplished as required with major renovation projects. The funding for this project will be combined with Parks & Rec funding for Neighborhood and Community Park Capital Maintenance to complete the repairs at North Boulder Park in 2021.

This project is considered 'Helpful' using the Budgeting for Resilience classification in that it could be cut without significant or immediate impacts to the city's basic operations and functioning.

<b>Tantra Park Shop Renovation</b>	\$ 300,000	\$ -	\$ -	\$ 300,000	\$ -	\$ -	\$ -
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Renovate the Tantra Park Shop for continuing use for Park Operations maintenance staff. The 3,000 square foot facility, constructed in 1984, needs repairs and renovations to major building systems. At this time, no specific scope has been identified for this project planned in 2023.

This project is considered 'Important' using the Budgeting for Resilience classification in that it could not be cut without a significant impact, or risk of impact, to the city's basic operation and functioning. Tantra Park is the south zone Parks Operations and Maintenance team's maintenance shop. Tantra Park is assessed as 'Important' rather than 'Helpful' because of the building's role in supporting the daily operations of the team providing the maintenance of all neighborhood and community parks in the south zone.

<b>CIP-Capital Planning Studies Total</b>	\$ 350,000	\$ -	\$ -	\$ -	\$ 150,000	\$ 200,000	\$ -
<b>Facilities Master Plan Updates</b>	\$ 350,000	\$ -	\$ -	\$ -	\$ 150,000	\$ 200,000	\$ -

This project funds the first update to the new Facilities Master Plan (FMP) which is a comprehensive assessment of all city facilities encompassing more than 70 buildings and structures (it excludes OSMP barns and ranches and P&R shelters). Key goals of the first Facilities Master Plan were to identify a common vision and core values across all city facilities and to measure facility health and condition against these common values to guide a strategic implementation plan and capital investment strategy for near term, within the time frame of CIP planning and over the long term, decades. Major milestones for investment strategies align with the city's Climate Commitment Goals in both 2030 for city buildings and 2050 to align with community wide goals.

A key strategic initiative of the FMP is to consolidate 22 facilities that are not otherwise tied to a specific geographic location such as a fire station or recreation center. There are numerous benefits that can be achieved through consolidation such as operational and maintenance efficiencies, energy efficiency, space economy, increased staff effectiveness and more. Many of these benefits also result in cost savings and most importantly better delivery of essential services to the community.

The update to the FMP, funded by this project, will provide an update on progress towards goals identified in the original plan and define the next near term strategic investment plan based on what has been achieved, new opportunities that have arisen and other influences experienced since the first FMP was adopted.

This project is considered 'Helpful' using the Budgeting for Resilience classification in that it could be cut without significant or immediate impacts to the city's basic operations and functioning. Funding is already appropriated for the first city-wide Facilities Master Plan (FMP), anticipated to be adopted in 2021. The update to the FMP in 2024 & 2025 will provide an update on progress towards goals identified in the original plan and define the next near term strategic investment plan based on what has been achieved, new opportunities that have arisen and other influences experienced since the first FMP was adopted.



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# Fire-Rescue

## **Current Focus for Capital Planning and Projects in the 2021 Capital Budget**

Fire-Rescue updated its departmental Master Plan in early 2020 and included a number of capital replacement and enhancement elements that would enable the department to achieve its Council-accepted strategic goals over the next 7-10 years under three funding scenarios: Fiscally-Constrained, Action, and Vision. At the Fiscally-Constrained level, the Master Plan called for the city to move forward with the relocation and replacement of Fire Station #3 to accomplish three objectives. Fire-Rescue made much progress in 2020 on sourcing and engaging with design and architecture firms to replace Fire Station #3. The full design and permitting process is expected to last into early 2022. Construction timelines are being planned with built-in flexibility to accommodate evolving space needs and changing financial circumstances.

Boulder Fire-Rescue's primary CIP focus for 2021 will be the design and permitting for the relocation of Fire Station 3. The project has completed conceptual design work and is now in the pre-application phase. The relocation accomplishes three primary goals. First, the station is being moved to take it out of a 100-year floodplain. Second, the new station is being re-located to an area that is better situated to respond to higher call volumes. Finally, the replacement of Station #3 will expand Fire-Rescue's system-wide facility capacity to expand into fire-based advanced life support (paramedicine) and transport as well as potentially accommodate administrative staffing space needs. The relocation and replacement of Fire Station #3 is being funded from a number of sources including dedicated dollars generated by the Community, Culture, and Safety Tax that was passed in 2017 in addition to supplemental General Fund capital funding and use of Fire-Rescue's balance of impact fees and development excise taxes in the Capital Development Fund.

In addition to facility capital projects, Fire-Rescue maintains a capital investment program to achieve the timely replacement of its rolling capital stock of eleven front-line and three reserve fire apparatus. Fire-Rescue will be incorporating the fire apparatus replacement model into the CIP to allow for increased coordination of these capital purchases with other overall city planning efforts. In 2021, Fire-Rescue will be replacing one of its fire engines that will operate out of Fire Station #2 and an additional engine in 2021 that will operate out of Fire Station #3.

# Fire-Rescue Capital

In addition, Fire-Rescue also secured \$250,000 in one-time General Fund capital funding to complete renovations at its seven stations. These renovations resolved gender neutrality deficiencies and also provided for health and safety compliant storage and maintenance space for firefighter personal protective equipment including bunker gear and self-contained breathing apparatus.

## 2021 Capital Projects

- Fire Station #3 Relocation
- Replacement of a Type 1 Fire Engine

## 2020 Adjustments

The station three project has been evaluated for scalability and staff is proceeding with the project in a measured way. Because the station has just completed the pre-application process, there are currently no further fiscal impacts that can be mitigated during the 2020 budget year. Apparatus replacement modeling would have called for the replacement of one engine this year, but due to budgets adjustments in 2019, this was delayed to 2021.

## Operating and Maintenance Impacts

Constructing a new Fire Station #3 will reduce facility maintenance and energy costs relative to the current Station #3 facility that was built in the 1960s. The new station may also include administrative office space along with community and shared meeting space that could be used by other city departments as well as community members. Additionally, the station renovations that were completed in 2020 resulted in system-wide installation of health-compliant laundry facilities which negated the need for separate third-party laundry service generating thousands of dollars in annual operational savings.

## Unfunded Projects and Emerging Needs

Fire-Rescue's Master Plan called for a number of capital investments for which sufficient funding has not been identified. At the Fiscally-Constrained level, the relocation and replacement of Fire Station #3 is falling short of approved funding levels. Depending upon the final design of the station, it is anticipated that a range of \$4.9 million to \$11.1 million in additional funding will be needed. At the Action-Level, Fire-Rescue's capital strategy focuses on relocating Fire Station #4 and Fire Station #2, with priority on the latter. In both cases, relocation will remedy the size and functionality deficiencies that currently exist at the outdated stations and likely involve land acquisition. No funding has been identified for either station relocation.

Fire-Rescue has also identified the potential need to better address maintenance in the near-term and repairs in the long-term at the Boulder County Regional Fire Training Center (FTC). The FTC assets for which current maintenance funding is insufficient and replacement funding does not exist include the teaching and administrative space, the fire ground's driving pad, and the burn and smoke buildings. Fire-Rescue manages the FTC under an agreement with the FTC's Board and Boulder County. The City of Boulder is set to take ownership of the facility in 2034 at which point deferred maintenance and replacement will be shouldered solely by the city. In addition to maintenance and replacement, Fire-Rescue intends to eventually pursue phase II of the FTC facility master plan which calls for expansion of the on-site classroom space and adding dormitories to accommodate increased demand. This is identified at the Vision-level within Fire-Rescue's Master Plan.

## CEAP Projects

N/A

## Board Action

N/A

# Fire-Rescue Capital



## 2021-2026 Capital Improvement Plan

Fire-Rescue	Estimated Total Cost	2021 Recommended	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
Capital Program Total	\$ 10,491,560	\$ -	\$ -	\$ 10,491,560	\$ -	\$ -	\$ -
CIP-New Facility/Infrastructure Total	\$ 10,491,560	\$ -	\$ -	\$ 10,491,560	\$ -	\$ -	\$ -
Fire Station 3 Desn & Construction	\$ 10,491,560	\$ -	\$ -	\$ 10,491,560	\$ -	\$ -	\$ -

Fire Station #3 is being moved north on 30th Street to a location that removes it from a 100-year floodplain, better situates it to serve growing call volumes, and allow Fire-Rescue to build a modern station that can address system-wide capital deficiencies and supports possible service enhancements into fire-based advanced life support. The station's \$12.5 million relocation was originally approved and funded out of the 2017 Community, Culture and Safety Tax with \$6.2 million in additional General Fund support. The land acquisition and recent completion of the Fire Master Plan coincided with the design phase of the project and present the city with the ability to help achieve 9 of 22 of Fire's master plan goals relating to system-wide facility capacity, expansion into ALS, and response improvement depending upon the station's approved design. Design options showing varying station size or phasing will be carried through the Site Review regulatory process currently planned to continue through 2021. The station's alternate designs lead to total construction costs ranging from \$25.5 million to \$31.7 million generating funding shortfalls of \$4.9 million to \$11.1 million. Construction is being delayed until 2023 to allow time for financial conditions to improve and station design to be fully vetted and finalized.



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# Innovation & Technology

## **Current Focus for Capital Planning and Projects in the 2021 Capital Budget**

During 2019 the city continued the projects recommended by the 2018 assessment of citywide IT operations. A significant and almost immediate outcome of this work has been improved transparency into the IT needs, gaps, and opportunities in the city. This includes major gaps in IT capital funding and technical debt from legacy systems that still demand resources. The next step in IT Transformation is to enhance and streamline the IT funding model citywide which will likely have impacts on the city's IT capital management.

A number of internal and constituent facing technology projects are planned for 2021. From an infrastructure standpoint, the city is investing in upgrades to the existing network infrastructure, redundant backup of critical IT business systems to cloud hosted disaster recovery services, and implementation of a significant network capital project, a 50+ mile dark fiber broadband backbone. Early phases of this project will begin to address data connectivity for underserved members of the community. On the application side, the city is refreshing the website and implementing an enterprise Data Warehouse. These projects will continue into and beyond 2021.

While typically most of IT's projects are capital maintenance projects that involve the replacement and upgrade to existing systems and software, in the next three years, it is expected that significant departmental efforts will need to focus on transforming technical operations and capacity. This is likely to require investment in both capital and operating dollars. IT Transformation is currently underway, including a redesign of the city's technology funding.

On a strategic level, the city is currently looking at how to treat capital funding for technology projects recognizing several factors:

- A strong shift towards a cloud first technology posture;
- Shorter, more significant technology innovation, and obsolescence, cycles;
- Convergence of software and hardware;
- Rapidly increasing bandwidth consumption and connected devices; and
- Increased focus on mobile technology solutions.

# Innovation & Technology Capital

## 2021 Capital Projects

- Initiation and replacement of the city's web platform and constituent relationship management system; Replacement and upgrade of Network Firewall equipment;
- Refresh and upgrade to Laserfiche, the city's document management system;
- Replacement of the Data Backup and disaster recovery system
- Replacement of the virtual server and storage system; and
- Expand the Enterprise wide Data Warehouse.

## 2020 Adjustments (if applicable)

During 2020 the Constituent Relationship Management project was put on hold due to COVID-19 constraints. The project will be moved to 2021. As a result of COVID-19 the replacement of the City's telephone infrastructure will be transitioned from a on premise VoIP system to a cloud delivered Microsoft Teams solution. It is anticipated this project will result in ongoing cost savings for the city organization.

## Operating and Maintenance Impacts

Many of IT's CIP assets already have established maintenance and operations funding. No significant increases are anticipated as the result of near-term projects. Additionally, while device replacement has traditionally been captured in the CIP, the operating model manages this as an ongoing operational expense, and going forward, will be captured in the department Computer Replacement Fund operational budget and no longer included in the CIP.

## Unfunded Projects and Emerging Needs

Unfunded projects and emerging needs fall into three categories: system replacement, technology transformation, and market dynamics.

### ***System Replacement***

Based on the more than 300 applications managed across the city, total system replacement is estimated to be between \$8 million and \$18 million. The wide range is due to various factors, including opportunities for system/function consolidation, new tech market entrants/consolidation, a changing technology landscape, and increasing cost of contracted IT labor.

### ***Technology Transformation***

IT is changing more quickly than it ever has. A few examples include cybersecurity, software defined infrastructure, preeminence of cloud technologies, expanding data use and needs, and the internet of things/connected devices. The current capital funding model does not consider these factors in its approach or strategy and will need to be reworked in 2020 and onwards.

### ***Market Dynamics***

Middle market technology firms that traditionally serve local governments are being consolidated and acquired more quickly than in the past. The outcome can be that a vendor chooses to support and continue one application over others from their portfolio of similar products. The impact to the city is that a system with a planned five to seven year lifecycle may only be vendor supported two to four years, and the city must move to a new product.

## CEAP Projects

N/A

## Board Action

N/A

# Innovation & Technology Capital

## 2021-2026 Capital Improvement Plan

### Innovation & Technology

	Estimated Total Cost	2021 Recommended	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
<b>Capital Program Total</b>	\$ 23,228,400	\$ 13,860,600	\$ 682,800	\$ 5,930,000	\$ 575,000	\$ 1,855,000	\$ 325,000
<b>CIP-Capital Enhancement Total</b>	\$ 1,050,000	\$ 550,000	\$ 250,000	\$ 250,000	\$ -	\$ -	\$ -
<b>Enterprise CRM</b>	\$ 300,000	\$ 300,000	\$ -	\$ -	\$ -	\$ -	\$ -
General Fund CIP. Replacement of current CRM system, Inquire Boulder. The current system has many deficiencies and has not been updated since its release in 2013. This solution is an enterprise-level tool. Originally approved for 2020 project has been put on hold due to the affects of COVID-19 on the organization.							
<b>Enterprise Data Warehouse</b>	\$ 750,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ -	\$ -	\$ -
General Fund CIP. The siloed nature of various departments throughout the city makes sharing of internal information and data relatively difficult, as often it is unknown what data exists, what form it exists in, and whether it is compatible with data collected in another department. Having a citywide centralized system will allow departments to integrate data from multiple sources and applications into one location. A data warehouse would improve data quality and consistency throughout the City. This initial phase of the project is funding for consulting and cloud hosting services. An increase in the CRF of \$30,000/year has already been built into the FY2020 rates for continued support of this solution.							
<b>CIP-Capital Maintenance Total</b>	\$ 10,178,400	\$ 1,310,600	\$ 432,800	\$ 5,680,000	\$ 575,000	\$ 1,855,000	\$ 325,000
<b>Data Backup and Disaster Recovery</b>	\$ 140,000	\$ -	\$ 140,000	\$ -	\$ -	\$ -	\$ -
The project reflects the hardware, software and support needed to ensure reliable high speed backup of files, databases and applications stored on the city's enterprise servers and data storage sub-systems. Note that these systems are required not only for disaster preparedness and recovery purposes, but to meet legal records retention requirements.							
<b>Database Hardware Replacement</b>	\$ 540,600	\$ 65,600	\$ -	\$ 300,000	\$ -	\$ 150,000	\$ 25,000
Hardware and related software necessary to provide and support the computing infrastructure that delivers critical database services. Project includes maintenance and end of life equipment replacement.							
<b>Network Hardware Replacement</b>	\$ 2,920,000	\$ 290,000	\$ 275,000	\$ 280,000	\$ 500,000	\$ 1,300,000	\$ 275,000
This is an ongoing project and includes the hardware and related software used to provide and support a reliable and secure high-speed data and voice communications infrastructure to connect City computing devices to internal data repositories and computing services, while supporting connectivity to the Internet and other external data resources and services. Project involves maintenance and end of life equipment replacement. Most elements of the network infrastructure have a useful life of six years. This is the maximum lifecycle recommended by the equipment vendor and industry best practices.							
<b>Security Administration</b>	\$ 252,800	\$ 30,000	\$ 17,800	\$ -	\$ 75,000	\$ 105,000	\$ 25,000
Equipment used to provide and support network devices and software needed to ensure the city's network, server and computing infrastructure are secured against external Cyber-threats such as viruses, malware and hackers in compliance with FBI, CIP (Critical Infrastructure Protection) and PCI (Purchasing Card Industry) security standards. Project includes maintenance and end-of life-equipment replacement.							
<b>Server Hardware Replacement</b>	\$ 825,000	\$ 825,000	\$ -	\$ -	\$ -	\$ -	\$ -
Hardware and related software necessary to provide and support the computing infrastructure that delivers critical services, including enterprise software applications (e.g. financial, payroll, permitting and licensing, electronic mail, etc.), critical departmental applications (e.g. police and fire records, court case management, recreation registration, etc.) enterprise data storage resources, internal/external web systems, and electronic document management repositories. Project includes maintenance and end of life equipment replacement.							
<b>Software Replacement</b>	\$ 5,500,000	\$ 100,000	\$ -	\$ 5,100,000	\$ -	\$ 300,000	\$ -
This project reflects the software and other project expenses needed to ensure timely replacement of the city's software applications. These systems are necessary to conduct day to day city business.							
<b>CIP-New Facility/Infrastructure Total</b>	\$ 12,000,000	\$ 12,000,000	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Broadband Fiber Backbone</b>	\$ 12,000,000	\$ 12,000,000	\$ -	\$ -	\$ -	\$ -	\$ -
The outcome of the project will be a roughly 90+ mile redundant fiber backbone throughout Boulder to support connectivity for future broadband and smart city efforts.							



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# Library & Arts



## **Current Focus for Capital Planning and Projects in the 2021 Capital Budget**

Continuing to provide library destinations that welcome diversity, anchor the community, strengthen its identity, and allow staff members to provide service excellence to all community members is the purpose of the library's capital improvement program. The library in collaboration with the Facilities Department is pursuing capital projects to address library master plan goals to open a full-service branch library in North Boulder and to update public spaces at the George Reynolds Branch Library.

### ***North Boulder Branch Library***

The first two phases (i.e. planning and site design) of the north Boulder branch library are complete. Both phases were informed by extensive community input. The building design incorporates passive heating and cooling, solar voltaic panels, and other features to make the building net zero ready and reduce ongoing maintenance and energy costs. The facility will include space for the Boulder Reads adult literacy program, public meeting space, and a makerspace. Site design includes convenient multimodal access to community members who reside in surrounding neighborhoods and a walking path that connects directly to The Meadows manufactured home community property.

The site review process will be complete in 2020. Construction is anticipated to begin in 2021. The project is funded from community, culture, and safety (CCS) tax for capital improvements revenues, development excise tax (DET) and impact fee revenues collected for the library, a council-initiated, one-time General Fund contribution, and Library Fund reserves. The total amount of CCS tax revenues for the project is \$5 million, \$4 million are from DET and impact fee revenues, a \$700,000 one-time General Fund contribution, and a generous \$500,000 donation from the Boulder Library Foundation.

The COVID-19 pandemic impacted the project schedule, delaying start of construction by approximately two months. There are no impacts to project funding which is primarily restricted to this purpose and was allocated in 2020.

### ***George Reynolds Branch Library Public Space Reconfiguration***

The George Reynolds Branch is home library to many older adult patrons and families who reside in south Boulder. The facility reached 50 years old in 2018 and is overdue for interior renovation. The public spaces,

# Library & Arts Capital

furnishings and collection floor plan have not been updated for several years and do not have the flexibility and functionality to meet the current needs and expectations of the library's patrons. The project includes reducing the height and footprint of book stacks to improve ADA access and site lines, creating more space for collaborative workspace, public computing and seating, and redesigning the children's space making it conducive to exploration and learning.

## ***Office of Arts & Culture Community Cultural Plan***

The Office of Arts & Culture is currently implementing phase two of the Community Cultural Plan. The mission of the division is "to facilitate an alignment in the community around the community's vision for culture: Together, we will craft Boulder's social, physical, and cultural environment to include creativity as an essential ingredient for the well-being, prosperity, and joy of everyone in the community."

Eight municipal strategies are recommended in the Cultural Plan to realize this vision. In phase one, the division had a focus on foundation programs including cultural grants, programs for artists and creative professionals, and public art. For phase two, 2019 through 2021, those three strategies will be enhanced while new initiatives are launched including support for the NoBo Art District, the Creative Neighborhoods program, and new ways to support cultural venues.

In addition to accomplishments in support for cultural organizations, programs for artists, the creative workforce, and other focus areas, the primary capital component of the Community Cultural Plan is the public art program. Currently, there are 12 public art projects underway in different phases of artist selection, design, and construction. There are also two donation proposals being processed which may result in the acquisition of artworks. The major accomplishments of the past year include the pilot Creative Neighborhood murals program, the installation of temporary artworks in the Civic Area and at CU, and a series of mural installations along pedestrian and bike routes including in Martin Acres and along the Boulder Creek Path. Site-specific murals will be featured in the Main Library public restroom renovations.



North Boulder Library Branch Artist Rendering

# Library & Arts Capital

## ***Public Art Program***

The Office of Arts & Culture public art program is the primary capital component in the Community Cultural Plan. Public Art is guided by the Cultural Plan, as well as the Public Art Policy and the biennial Public Art Implementation Plan. The 2020 deployment of approximately \$200,000, generated through the CCS tax, is dedicated to public art projects within the city. Introduced to the public art policy in 2018, allocation of a percent for art funding within qualifying CIP projects will thoughtfully integrate public artworks into many CIP projects across departments. These public art allocations are captured in the department project sheets of qualifying CIP projects.

## ***Creative Neighborhoods Mural Project***

The Creative Neighborhoods Mural Program is planned for a second round of artworks in 2020. The funding provides for new artwork commissions on residential properties, visible from public paths and streets, throughout Boulder. Through open calls, homeowners and professional artists will apply to participate. Selected homeowners will work with the Office of Arts & Culture to partner with regional artists from the City-approved mural artist roster. These homeowner + artist teams develop a design, share it with neighbors, and then paint the murals on homes, garages and fences that can be seen from the public right-of-way. Homeowners commit to maintaining the mural for at least five years

## **2021 Capital Projects**

- Construction of the north Boulder branch library
- George Reynolds Branch Library public space reconfiguration

## **2020 Adjustments (if applicable)**

The COVID-19 pandemic delayed the start of construction of the north Boulder branch library by approximately two months. The George Reynolds Branch Library public space reconfiguration, funded by the Library Fund, was postponed in 2020 due to impacts of the COVID-19 pandemic. The Main Library north building renovation feasibility study was cancelled in 2020.

## **Operating and Maintenance Impacts**

North Boulder Branch Library - In 2022, the north Boulder branch library will require approximately \$830,000 in ongoing personnel and operating funds for security, equipment maintenance, courier service, etc. This is in addition to the current annual personnel allocation for the NoBo Corner Library, as those staff members will be reassigned to the new branch library. Ongoing building maintenance and utilities costs, which are managed by the Facilities Department, are currently estimated at \$300,000, annually.

## ***George Reynolds Branch Library Public Space Reconfiguration***

This reconfiguration project will have minimal impacts to operating and maintenance of the facility.

## ***Office of Arts & Culture Public Art Maintenance***

General maintenance of the public art collection is the responsibility of the host department. Technical maintenance, conservation, restoration, or repair is the responsibility of the Office of Arts & Culture.

In 2018, the Office of Arts & Culture received \$30,000 of dedicated funding for maintenance of the public art assets, generated through the General Fund. This was a one-time allocation with an anticipated five-year commitment (2018 through 2022). Funds are committed to the maintenance needs of a portion of the existing collection of urban design and public art projects.

As public art projects increase in volume through the introduction of the percent for art rule, staff demands continue to be stretched. The Office of Arts & Culture has one dedicated Full Time Equivalent (FTE) employee to oversee the public art policy, commissioned projects, public art maintenance, murals and the neighborhood mural program, and donations. An additional public art FTE position is a goal of the Office of Arts & Culture.

# Library & Arts Capital

## Unfunded Projects and Emerging Needs

### *Library*

The 2018 Boulder Public Library Master Plan identifies unfunded projects for 2022 and later, such as: opening a Gunbarrel Corner Library; conducting a renovation feasibility study of the Main Library's north building; renovation of the Main Library's north building to upgrade and/or reconfigure the Canyon Theater, expand the BLDG 61 makerspace, and make more space for community partners; and Carnegie Library for Local History restoration.

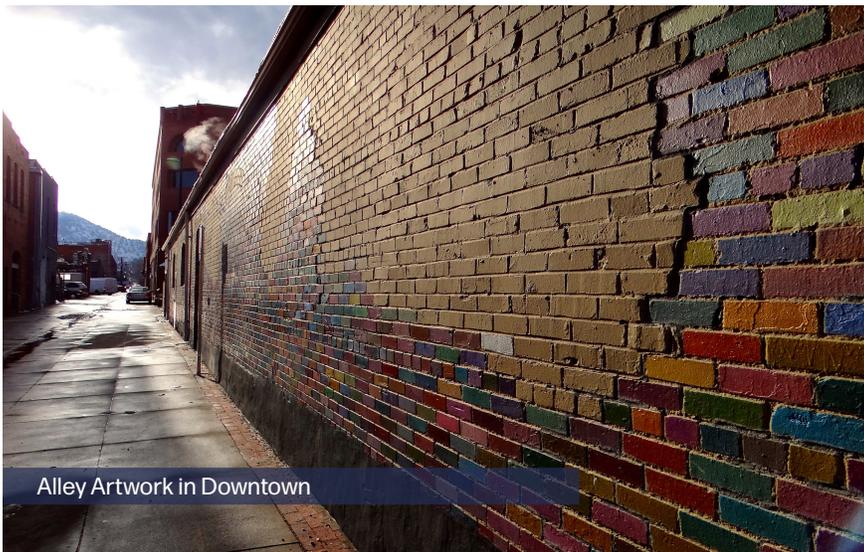
Ongoing operating fund for grounds maintenance is an emerging need for the north Boulder branch library project that will need to be addressed through a joint 2022 budget request from the library and the Parks and Recreation Department. Cost estimates for grounds maintenance are forthcoming.

As the library adds staff members to meet master plan goals there is also an emerging need for staff workspace. There may be some opportunity to reconfigure and modify current workspaces that may meet the criteria for a capital project. All city-owned library facility building systems will need to be assessed for energy sustainability in the next few years.

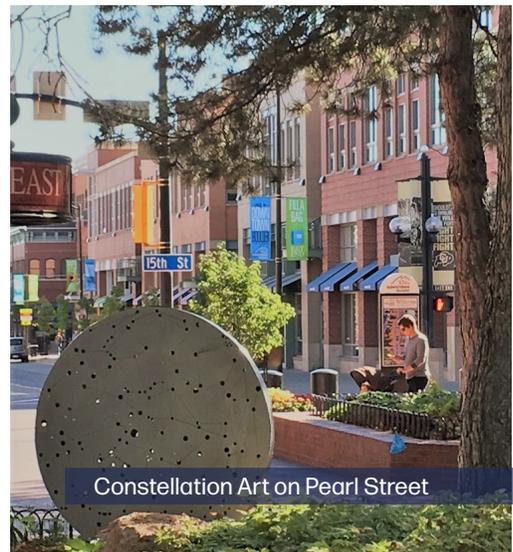
### *Office of Arts & Culture*

The city is committed to commissioning a diversity of public artworks that range in duration and media and material, from a breadth of artists. This will be accomplished through a fund mix that financially supports the flexibility needed to reach commissioning goals. Current funding includes a percent for art dedicated from capital parent projects - new capital or capital enhancement projects that qualify for public art allocation - and community, culture, and safety tax. Collectively, these two fund sources are estimated to reach about half of the annual recommended fund mix. Additionally, nearly half of the projects underway are showing a budget gap from construction cost escalation, site variables, permitting reviews, and costs which are impacting direct investment into public art.

A strategy for funding gaps in personnel, commissioning, and maintaining assets acquired through the commissioning of public art continues to be a priority as the collection grows.



Alley Artwork in Downtown



Constellation Art on Pearl Street

# Library & Arts Capital

## CEAP Projects

N/A

## Board Action

Staff will seek the Library Commission’s advice on overall priority for new capital projects. The commission’s favorable recommendation for capital project funding from the Library Fund (required by city charter) and Library Fund reserves (not required) will be sought. All public art projects receive review and ultimately approval by the Boulder Arts Commission (Arts Commission) before advancing to the City Manager for approval. Additionally, the Arts Commission reviews and ultimately approves Public Art Implementation Plan, which serves as the public art workplan

## 2021-2026 Capital Improvement Plan

Library & Arts							
	Estimated Total Cost	2021 Recommended	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
Capital Program Total	\$ 100,000	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ -
CIP-Capital Enhancement Total	\$ 100,000	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ -
GRB Library Public Space Reconfig	\$ 100,000	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ -

(Helpful) The George Reynolds Branch Library is home library to many patrons who reside in south Boulder. The facility reached 50 years in 2018. The public spaces and collection layout have not been updated for several years. The current floor plan and furnishings do not meet the needs and expectations of its users. Public spaces need reconfiguration to align with the ways the community wants to use the library.



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# Open Space & Mountain Parks

## **Current Focus for Capital Planning and Projects in the 2021 Capital Budget**

The 2021 Open Space & Mountain Parks (OSMP) Department capital budget includes projects that are a part of the department's core mission, including capital maintenance of trailheads and trails; agricultural lands management; capital ecosystem maintenance and restoration; and strategic and resource planning. The department's 2021 capital budget is the first that fully incorporates guidance from the OSMP Master Plan that was adopted in 2019. Projects will align with the Master Plan focus areas, which serve as departmental work program priorities for 2021:

- **Agriculture Today and Tomorrow** - Agriculture and water projects aim to improve soil health, integrate sustainable agricultural practices and resource protection, take care of existing infrastructure, and support the next generation of ranchers and farmers.
- **Community Connections, Education, and Inclusion** - Interpretive and integrated planning projects support citywide engagement with federally recognized American Indian Tribes and indigenous peoples, foster connection with nature, and engage youth corps to encourage stewardship as a career and responsible lifestyle.
- **Ecosystem Health and Resilience** - Ecological and restoration projects safeguard large habitat blocks and corridors, reduce undesignated trails, maintain and restore grasslands, forests, wetlands and riparian areas, control invasive species, and promote biodiversity of plants and animals.
- **Responsible Recreation, Stewardship, and Enjoyment** - These projects maintain and improve trails and visitor infrastructure, support enjoyable passive recreation opportunities on OSMP lands, protect scenic resources, and address visitation levels and growth where appropriate.
- **Financial Sustainability** - Capital projects across OSMP support department efforts to take care of what we have and understand total cost of system management. In 2021, OSMP will continue to invest in asset management and other systems in support of Master Plan objectives.

Like other departments, OSMP has experienced revenue shortfalls related to COVID-19 and has taken steps to steward Open Space Fund dollars during pandemic response and recovery. The 2021 CIP reflects a 25% decrease from the initial CIP created by the department. Reductions focused on phasing and rescaling

# Open Space & Mountain Parks Capital

projects to ensure fiscally responsible capital maintenance and high priority projects can still occur. The revised \$4.4M CIP supported by the Open Space Fund and the Lottery Fund will deliver on department commitments and work to address maintenance backlogs on the land system. The 2021 CIP will support business needs while understanding that additional adjustments will be necessary over the coming years as the department implements the Master Plan.

## 2021 Capital Projects

- Centennial Trailhead Maintenance
- Fish Passage at East Boulder Ditch
- Gebard/Greenbelt Meadows Integrated Site Project Implementation
- Gunbarrel Integrated Site Project Implementation
- Implement Tall Oatgrass Operating Plan
- Improve Ecosystem Services and Soil Health on Irrigated Lands
- Maintain Agricultural, Irrigation, and Water Management Infrastructure
- North Trail Study Area Implementation (North Foothills Sub-Area)
- Prairie Dog Management
- Restore Habitat and Ecological Functioning on Lower Boulder Creek
- Royal Arch Trail Repair
- Upper Bear Canyon Trail Reroute and Restoration



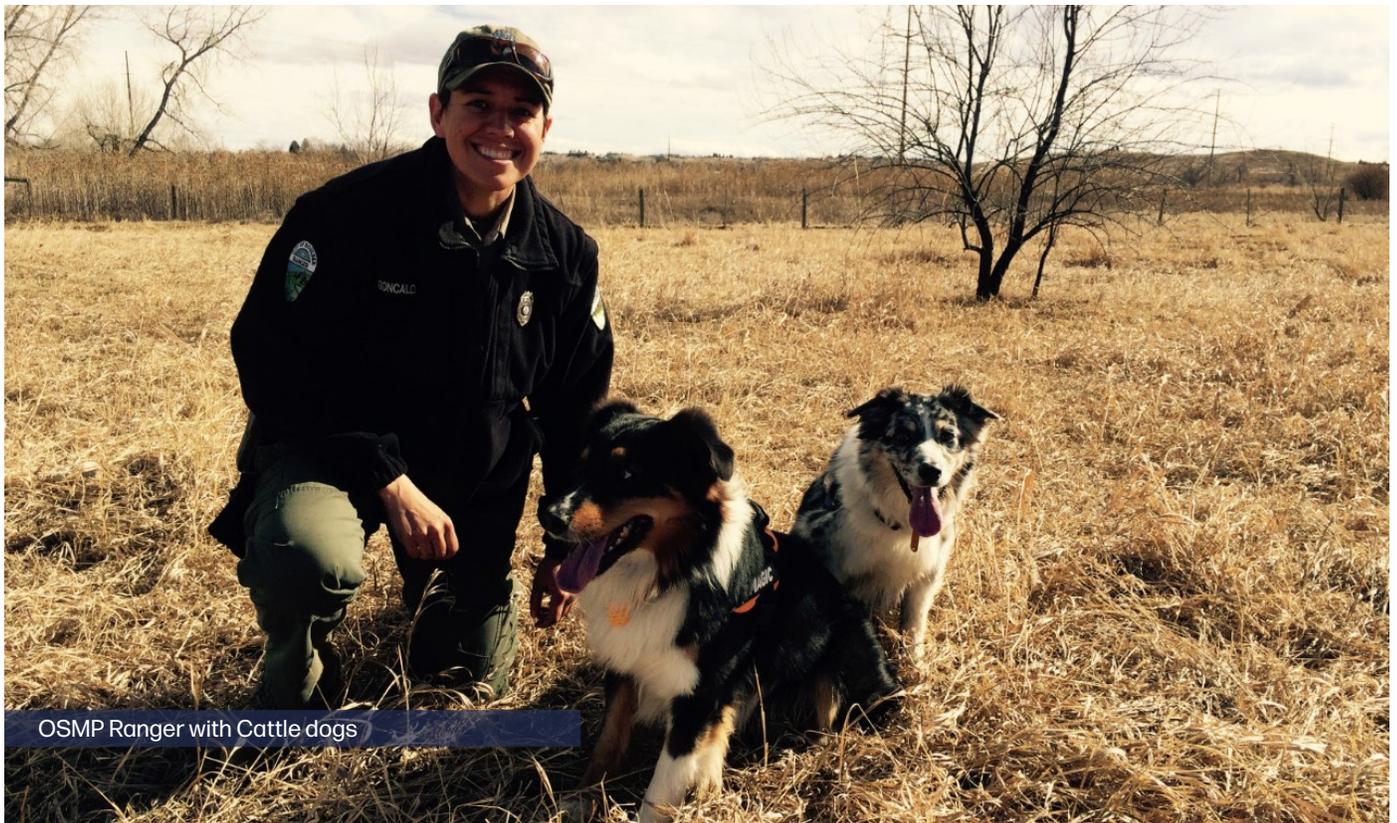
# Open Space & Mountain Parks Capital

## 2020 Adjustments (if applicable)

OSMP reduced approximately \$3.4M from the 2020 budget in response to COVID-19 revenue impacts to the Open Space Fund. Department personnel expenditures were reduced by approximately \$1M as a result of the citywide hiring freeze on non-essential positions and the furlough of 38 department employees from April-June 2020. Notably, the Junior Ranger program was cancelled to prevent group gathering and use of shared vehicles and equipment during COVID-19 response and recovery. The remainder of department budget adjustments were accomplished through 25% reductions to non-personnel, 2020 capital, and 2019-2020 capital carryover projects. The department utilized its work planning system to make reductions based on criteria including maintenance condition, staffing impacts, project connection to Master Plan tiered strategies, and more. Reductions focused on rescaling and rephasing projects to still accomplish system maintenance in 2020 while adhering to physical distancing and other regulations.

## Operating and Maintenance Impacts

In 2021, OSMP will focus on maintaining irrigation and water infrastructure on leased land, restoring ecological functioning of riparian, floodplain, and grassland habitat, closing and restoring social trails, and addressing trail maintenance backlogs. These projects are aimed at reducing deferred maintenance and some savings are expected on operations and maintenance because of these efforts. For example, ecological restoration projects will remove sediment to allow fish passages while reducing maintenance to head gates. Increases to operations and maintenance will occur where new infrastructure is added, for example, around improved agricultural irrigation. OSMP is confident that any added O&M can be supported by existing operating budget.



OSMP Ranger with Cattle dogs

# Open Space & Mountain Parks Capital

## Unfunded Projects and Emerging Needs

Over the last year, the Open Space Board of Trustees and City Council have made recommendations around prairie dog management and soil health resulting in the off-cycle addition of two fixed-term positions and capital dollars to support these efforts. In the first quarter of 2020, the OSBT made recommendations around prairie dog management that included potential for increased funding. Due to COVID-19 work plan impacts, City Council review of the OSBT recommendations has been delayed. It is possible that after Council review or at Council direction, additional dollars will be added to the 2021 capital budget via Adjustment to Base process. Related to funding, Open Space and Mountain Parks derives most of its revenue from sales and use taxes. Over the past three years, OSMP has experienced several changes to its sales tax structure, including the sunset of a 0.11 percent sales tax increment and the sunset of the annual General Fund transfer to the Open Space Fund. Most recently, voters extended a 0.15 percent sales tax that had been set to expire in 2019, through 2039. The first-year revenue collection from this increment, estimated at \$5.3M, will support purchase of a conservation easement at Long's Gardens. Along with sales and use tax changes, OSMP anticipates revenue impacts from COVID-19 given its sales tax structure. In 2021, OSMP will continue to strategically set conservative budgets as department funding stabilizes.

Based on strategies implemented in previous and current budget cycles, OSMP feels prepared to develop a 2021 budget that reflects financial realities and upholds our commitment to stewarding the land system. OSMP has maintained contingency reserves at 20% of operating plus debt, maintained strong fund balances, repaid debt in advance of expiring tax increments, de-obligated capital carryover, and improved work planning processes to better understand capital needs. OSMP will be actively monitoring and adapting to revenue projections over the next several years.

## CEAP Projects

There are no CEAP projects in the OSMP CIP. All 2021 department capital projects are guided by existing plans, including the Master Plan, Agricultural Resources Management Plan, Grassland Ecosystem Management Plan, Forest Ecosystem Management Plan, and the North and West Trail Study Area Plans. In some cases, these approved plans called for sub-area plans, and several 2021 capital projects are the result of those sub-planning efforts. This includes the Gebhard and Gunbarrel Integrated Site Projects, initiation of property integration planning for the Fort Chambers/Wells site, and the North Trail Study Area Implementation (North Foothills Sub-Area).

## Board Action

The Open Space Board of Trustees unanimously recommended the 2021-2026 CIP on June 3, 2020 after previous review at the April 22 and May 13 business meetings.

# Open Space & Mountain Parks Capital

## 2021-2026 Capital Improvement Plan

Open Space & Mountain Parks							
	Estimated Total Cost	2021 Recommended	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
<b>Capital Program Total</b>	<b>\$ 34,818,485</b>	<b>\$ 4,466,705</b>	<b>\$ 5,139,780</b>	<b>\$ 5,928,000</b>	<b>\$ 6,178,000</b>	<b>\$ 6,428,000</b>	<b>\$ 6,678,000</b>
<b>CIP-Capital Enhancement Total</b>	<b>\$ 18,645,580</b>	<b>\$ 1,135,000</b>	<b>\$ 2,380,740</b>	<b>\$ 2,919,960</b>	<b>\$ 3,095,960</b>	<b>\$ 4,411,960</b>	<b>\$ 4,701,960</b>
<b>Emergent Lottery Projects</b>	<b>\$ 1,712,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 428,000</b>	<b>\$ 428,000</b>	<b>\$ 428,000</b>	<b>\$ 428,000</b>
This program captures Lottery Fund CIP dollars that support multiple OSMP charter purposes. The annual funding amount is determined by the budget division of the Finance department and OSMP selects appropriate project sites based on criteria for Lottery Fund spending. Capital dollars in 2020 will primarily support completion of multiyear projects. This may include maintenance and/or renovations to trails, facilities, or other infrastructure on the land system. Projects include:							
1.) Anemone Trail Construction (\$223,000) - Construction of West Trail Study Area reroute of the 3-mile Anemone Trail loop and associated closures/restoration of rerouted and undesignated trails. Final construction in 2020 after bid and final design in 2019.							
<b>Emergent OS Projects</b>	<b>\$ 11,598,479</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 1,495,563</b>	<b>\$ 1,844,996</b>	<b>\$ 3,983,960</b>	<b>\$ 4,273,960</b>
This project is to capture multiple projects all funded through the OS fund not originally tied to a project account so OSMP can start to understand capital spending on unanticipated projects.							
<b>Fish Passage at East Boulder Ditch</b>	<b>\$ 250,000</b>	<b>\$ 250,000</b>	<b>\$ -</b>				
(Helpful) OSMP will collaborate with Xcel Energy to install fish passage at the East Boulder Ditch diversion structure that is owned by Xcel Energy. The project will create a more gently sloping diversion structure that will be more easily navigable for native and sport fish, including several species of state concern. Creating fish passage will connect four miles of aquatic habitat that is currently fragmented. It will also allow sediment to be naturally transported through the system thereby reducing the need for regular sediment removal. The 2013 flood destabilized much of South Boulder Creek resulting in high sediment deposition at the EBD headgate. This has led to significant structural issues and increased maintenance needs resulting in resource impacts adjacent to the headgate in high quality riparian habitat, including critical habitat for Prebles Meadow Jumping Mouse. The project accomplishes key objectives of the Ecosystem Health and Resilience focus area of the Master Plan, specifically strategy EHR.1) Preserve and restore important habitat blocks and corridors.							
<b>Fish Passage at Goodhue Ditch</b>	<b>\$ 655,000</b>	<b>\$ 55,000</b>	<b>\$ 600,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
(Helpful) The project will create a fish passage at the Goodhue Ditch by building a fishway at the ditch diversion on South Boulder Creek. Irrigation diversion dams create barriers to the movement of aquatic organisms in rivers, including disrupting spawning, fragmenting habitat and isolating populations of native and sport fish. Goodhue ditch has several fish species of state concern and creating this fish passage will connect five miles of aquatic habitat that is currently fragmented. OSMP will pursue partnership funding from the Colorado Water Conservation Board, USFWS National Fish Passage Program, and the Colorado Parks and Wildlife Fishing is Fun program. This project accomplishes key objectives of the Ecosystem Health and Resilience focus area of the Master Plan, specifically strategy EHR.1) Preserve and restore important habitat blocks and corridors.							
<b>Gebhard ISP Construction</b>	<b>\$ 250,000</b>	<b>\$ 250,000</b>	<b>\$ -</b>				
(Helpful) Upon completion of the Integrated Site Project for Gebhard in 2020, the project will transition to construction. In 2019, OSMP began a planning project at Gebhard/Greenbelt Meadows to assess the condition of visitor infrastructure, habitat conditions, restoration opportunities, interpretation, and other items for the area. Priority action items from the plan include restoring fragile natural resources, construction of a bridge as well as the addition of a separated pedestrian only path. The department anticipates that this infrastructure will reduce habitat impacts while meeting community passive recreational needs. After construction, the department will close and restore undesignated trails. This project accomplishes key objectives of two focus areas of the OSMP Master Plan: Ecosystem Health and Resilience, and Community Connections, Education, and Inclusion. It links to multiple strategies in the Master Plan, primarily addressing EHR.1) Preserve and restore important habitat blocks and corridors.							
<b>Gunbarrel Hill Trail Management</b>	<b>\$ 1,530,000</b>	<b>\$ 480,000</b>	<b>\$ 1,050,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
(Helpful) This project will design and construct "Loop A" as defined by the Integrated Site Plan for Gunbarrel Hill that was completed with the community over the last two years. OSMP will designate the Loop A trail and close undesignated social trails. Interpretive educational signage will be added along the designated trail to enhance communications with visitors heighten community understanding of land management efforts. After closure of undesignated trails, a separate but related 2021 CIP project "Gunbarrel Hill Vegetation Restoration" will restore grassland habitat in the construction area. This trail project will improve ecological systems by increasing habitat block size while enhancing the visitor experience on a designated, more sustainable trail system. Undesignated trails within Gunbarrel are encroaching on grassland habitat, and this project will better protect the densest population of Grasshopper Sparrows in Boulder County. This project accomplishes key objectives of three focus areas of the OSMP Master Plan: Community Connections, Education, and Inclusion, Ecosystem Health and Resilience, and Responsible Recreation, Stewardship, and Enjoyment. It links to multiple strategies in the Master Plan, primarily addressing EHR.1) Preserve and restore important habitat blocks and closures, and EHR.4) Reduce undesignated social trails.							
<b>NTSA N Foothills Sub-Area Implement</b>	<b>\$ 2,650,101</b>	<b>\$ 100,000</b>	<b>\$ 730,740</b>	<b>\$ 996,397</b>	<b>\$ 822,964</b>	<b>\$ -</b>	<b>\$ -</b>
(Helpful) The North Trail Study Area Plan approved by City Council in 2016 calls for additional actions in the North Foothills Sub-Area. This project will create a North Foothills sub-area implementation plan that incorporates visitor infrastructure, habitat, restoration, interpretation, and other management actions for that area. The project will result in an agreed upon alignment for the North Sky Trail. Additionally, it will incorporate restoration work for the draws along the trail, needed actions at the Coyote Trailhead, potential activation of a Habitat Conservation Area, actions at Mahogany Loop, recommendations for structures (Wright House, Joder House), and possibilities for interpretive education signage in the area. This project accomplishes key objectives of two focus areas of the OSMP Master Plan: Ecosystem Health and Resilience, and Responsible Recreation, Stewardship, and Enjoyment. It links to multiple strategies in the MP, primarily addressing RRSE.7) Build new trails as guided by past and future plans, and EHR.1) Preserve and restore important habitat blocks and corridors.							
<b>CIP-Capital Maintenance Total</b>	<b>\$ 14,162,905</b>	<b>\$ 2,991,705</b>	<b>\$ 2,489,040</b>	<b>\$ 2,478,040</b>	<b>\$ 2,212,040</b>	<b>\$ 2,016,040</b>	<b>\$ 1,976,040</b>
<b>Agricultural Fencing Maintenance</b>	<b>\$ 485,000</b>	<b>\$ 67,000</b>	<b>\$ 80,000</b>	<b>\$ 82,000</b>	<b>\$ 84,000</b>	<b>\$ 86,000</b>	<b>\$ 86,000</b>
(Important) This project will address deferred capital maintenance to internal and boundary fencing to allow continued leasing services to the agricultural community. The project also mitigates risk of encroachments onto OSMP leased lands if boundaries are not properly maintained. Each year, OSMP strives to replace/maintain 15,000-20,000 linear feet of fence based on replacement needs across the system. Infrastructure to be maintained includes barbed wire and high tensile fences, livestock handling corrals, and vehicle access gates. Livestock grazing is the predominant use of OSMP land leased for agriculture, and specific fencing has been designed to reduce any impacts to wildlife movements. Fencing also protects grassland habitats supported by grazing on agricultural properties. This project accomplishes key objectives of two focus areas of the OSMP Master Plan: Agriculture Today and Tomorrow and Financial Sustainability. It links to multiple strategies in the Master Plan, primarily addressing ATT.1) Reduce maintenance backlog for agriculture and water infrastructure.							
<b>Rehab Lewis House for Ag Use</b>	<b>\$ 210,000</b>	<b>\$ 210,000</b>	<b>\$ -</b>				
(Helpful) This project supports implementation of the 2017 facilities assessment, which identified deferred maintenance on structures across the OSMP system. It also supports implementation of the Agricultural Resources Management Plan, which identified nine properties/sites for their potential for future agricultural operations. Each year, OSMP aims to complete at least one major renovation to an identified site, including remodeling the farmhouses to prepare them for agricultural tenancy. In 2021, project dollars will support renovations and upgrades to the Lewis House. The Lewis House is a historic structure on an OSMP agricultural property that has been vacant for many years. The rehabilitation work will make the house livable for agriculture tenants as well as reduce our facility maintenance backlog. This project accomplishes key objectives of two focus areas of the OSMP Master Plan: Agriculture Today and Tomorrow, and Financial Sustainability. It links to multiple strategies in the Master Plan, primarily addressing ATT.1) Reduce maintenance backlog for agriculture and water infrastructure.							

# Open Space & Mountain Parks Capital

## 2021-2026 Capital Improvement Plan

### Open Space & Mountain Parks

	Estimated Total Cost	2021 Recommended	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
<b>Centennial TH Outhouse Replacement</b>	\$ 70,000	\$ 70,000	\$ -	\$ -	\$ -	\$ -	\$ -
<small>(Helpful) This project involves replacing the existing outhouse at this trailhead which, due to increased visitation in recent years, is now undersized and no longer functions as designed. It uses a</small>							
<b>Eco Resto and GMAP Implementation</b>	\$ 825,000	\$ 125,000	\$ 140,000	\$ 140,000	\$ 140,000	\$ 140,000	\$ 140,000
<small>(Helpful) This project will support large non-native tree removal projects, contracted herbaceous weed spraying and removal, seeding, planting, soil stabilization, and other tasks related to restoring and enhancing native ecosystems in priority habitat areas. These project areas are largely riparian and wetland areas that received the lowest indicator ratings in the 2010 Grassland Ecosystem Management Plan (GMAP) and were further heavily damaged by the 2013 flooding. Most of these projects fall within riparian, wetland, and grassland systems across OSMP and may include non-native species removal, native plantings, maintenance mowing or spraying, fencing, etc. The project accomplishes key objectives of the Ecosystem Health and Resilience focus area of the Master Plan, specifically strategy EHR.1) Preserve and restore important habitat blocks and corridors.</small>							
<b>Facilities Assessment Repairs</b>	\$ 2,790,000	\$ 400,000	\$ 460,000	\$ 470,000	\$ 480,000	\$ 490,000	\$ 490,000
<small>This program supports the facilities maintenance needed to fulfill multiple OSMP charter purposes. In 2017, OSMP began a facilities assessment to inventory all OSMP structures, determine their condition and what is needed to maintain them including the priority of each facility along with estimated maintenance and repair costs both immediate and long term. This information was delivered to OSMP in 2017 as the Facilities Assessment and has been used to prioritize facility maintenance. This project accomplishes key objectives of the OSMP Master Plan, primarily Financial Sustainability, FS.4) Take care of what we have.</small>							
<b>Farm Site Improvements</b>	\$ 765,000	\$ 85,000	\$ 160,000	\$ 310,000	\$ 210,000	\$ -	\$ -
<small>(Important) This project will support construction of new or significant enhancement of existing infrastructure on irrigated and grazing land. Infrastructure to be constructed includes irrigation ponds and/or cisterns and necessary pumps, and out-building construction or modifications to support these operations. Eight infrastructure improvement projects will take place at the Hunter Kolb, Manchester, Hartnagle, and ERTL properties. All four properties are included among nine sites identified for potential diversified agricultural operations in the Agricultural Resources Management Plan. This project accomplishes key objectives of three focus areas of the OSMP Master Plan: Agriculture Today and Tomorrow, Ecosystem Health and Resilience, and Financial Sustainability. It links to multiple strategies in the Master Plan, primarily addressing ATT.5) Encourage diverse and innovative agricultural operations, and ATT.6) Support the success of ranchers and farmers.</small>							
<b>Gunbarrel Hill Veg Restoration</b>	\$ 125,000	\$ 75,000	\$ 50,000	\$ -	\$ -	\$ -	\$ -
<small>(Helpful) Gunbarrel restoration work will be coordinated with the associated 2021 CIP "Gunbarrel Hill Trail Management" which will construct "Loop A" as defined by the Integrated Site Plan with associated closure of undesignated trails. Restoration work will include preparation of disturbed areas for seeding and erosion control. In addition to restoration work associated with trails, islands of native forbs will be drill-seeded to improve native plant diversity in untrailed habitat blocks. Enhancement and protection of high-quality grassland bird habitat and improvement of visitor infrastructure are priorities in the Gunbarrel area. This project accomplishes key objectives of the Ecosystem Health and Resilience focus area of the Master Plan, primarily addressing EHR.1) Preserve and restore important habitat blocks and closures, and EHR.4) Reduce undesignated social trails.</small>							
<b>Improve Soil Health and Agroecology</b>	\$ 1,107,000	\$ 182,000	\$ 185,000	\$ 185,000	\$ 185,000	\$ 185,000	\$ 185,000
<small>(Important) This project accomplishes soil health improvement and restoration efforts on un-leased agricultural properties and properties where prairie dogs have been removed either by a plague event or removal efforts. Tasks and methods include compost applications, keyline plowing, cover crop and/or perennial seeding, rotational grazing, invasive plant species management, hay cutting, prairie dog barrier fence installation, and field irrigation infrastructure maintenance. The goal is to restore viable agricultural production to un-leased agricultural properties while enhancing ecosystem services (which includes soil health and carbon sequestration). This project accomplishes key objectives of two focus areas of the OSMP Master Plan: Agriculture Today and Tomorrow, and Ecosystem Health and Resilience. The project links to multiple strategies in the Master Plan, primarily addressing ATT.2) Increase soil health and resilience.</small>							
<b>Irrigation Infra Maintenance</b>	\$ 697,500	\$ 119,500	\$ 112,000	\$ 114,000	\$ 116,000	\$ 118,000	\$ 118,000
<small>(Important) This project replaces or improves existing irrigation structures and infrastructure on priority agricultural leased and unleased lands, including diversion structures, irrigation ditches, laterals, and measuring devices. Where appropriate, OSMP will add telemetry infrastructure. A well maintained and functioning water delivery infrastructure is critical to OSMP irrigated properties. In some cases, novel ecosystems have developed that are dependent on the continued delivery of these water rights. Maintenance priorities are established on a three-year basis and implemented annually based on conversations with the agriculture and water community. This project accomplishes key objectives of two focus areas of the OSMP Master Plan: Agriculture Today and Tomorrow, and Ecosystem Health and Resilience. It primarily supports strategy ATT.1) Reduce maintenance backlog for agriculture and water infrastructure.</small>							
<b>Lower Boulder Creek Restoration</b>	\$ 701,750	\$ 266,750	\$ 335,000	\$ 100,000	\$ -	\$ -	\$ -
<small>(Helpful) This project will improve ecological functioning of lower Boulder Creek from 75th Street to Hwy 287. The project will restore riparian and floodplain wetlands that existed along Boulder Creek prior to gravel mining, converting formerly mined gravel pits/ponds to habitat that will support northern leopard frogs, a Colorado Tier 1 Species of Greatest Conservation Need. Non-native grasslands will be converted to native grasslands. Restored aquatic habitat will support several native fish species of concern. Most of the work will be done using heavy equipment to recontour the site and redistribute the numerous waste piles left over from mining operations. Seeding, planting and weed management will take place following earth work. The project accomplishes key objectives of the Ecosystem Health and Resilience focus area of the Master Plan, specifically strategy EHR.1) Preserve and restore important habitat blocks and corridors.</small>							
<b>Prairie Dog Management</b>	\$ 1,262,500	\$ 112,500	\$ 150,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000
<small>(Important) This annual CIP supports relocation of prairie dogs where there are conflicts with agriculture and neighbors. Project dollars support relocation, barrier fence installation, and basic restoration. Specifically, OSMP will hire contractors to perform relocation of prairie dogs to identified receiving sites. Management of prairie dogs and consultation/coordination on city and private projects is crucial to supporting the citywide goal of prairie dog protection, management and conflict reduction. Prairie dog management is a high priority for City Council and the community. This project accomplishes key objectives of two focus areas of the OSMP Master Plan: Agriculture Today and Tomorrow, and Ecosystem Health and Resilience. It links to multiple strategies in the MP, primarily addressing ATT.3) Address conflicts between agriculture and prairie dogs.</small>							
<b>Prairie Dog Wkg Grp Implementation</b>	\$ 1,735,200	\$ 290,000	\$ 317,040	\$ 327,040	\$ 267,040	\$ 267,040	\$ 267,040
<small>(Important) This planning project supports implementation of Prairie Dog Working Group recommendations, which encompass prairie dog management, prairie dog conservation, conflict mitigation, education, and funding. At the direction of City Council, OSMP began to implement recommendations in 2020, with continuation in 2021. Dollars in 2021 will support updates and revisions to the prairie dog habitat suitability model for use in plan updates, work with neighboring landowners and stakeholders to begin assessing the viability of reintroducing the black-footed ferret in the Southern Grasslands, and work to update the Grassland Ecosystem Management Plan. This project accomplishes key objectives in two focus areas of the OSMP Master Plan: Agriculture Today and Tomorrow, and Ecosystem Health and Resilience. The project links to two strategies in the MP: ATT.3) Address conflicts between agriculture and prairie dogs, and EHR.2) Update and continue implementing system plans guiding ecosystem management.</small>							

# Open Space & Mountain Parks Capital

## 2021-2026 Capital Improvement Plan

Open Space & Mountain Parks							
	Estimated Total Cost	2021 Recommended	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
<b>RIS Application Support &amp; Software</b>	\$ 331,705	\$ 131,705	\$ 60,000	\$ 60,000	\$ 40,000	\$ 40,000	\$ -
<small>(Helpful) The Resource Information Services group completed a strategic operating plan in 2018. Annual capital dollars support implementation of plan recommendations. Additionally, dollars support OSMP's portion of enterprise technology investments as guided by IT. Dollars in 2021 will support ongoing configuration of the Beehive Asset Management system for OSMP and go-live of additional data sets within this system. OSMP will partner with other departments to purchase and process LiDar, including classification of points and derivation of products including Tree Canopy and Elevation Contours. The department will purchase updated ESRI ELA/Imagery and is prepared to support OSMP specific action items around web content management as the city develops its new website. This project accomplishes two strategies within the Financial Sustainability focus area of the Master Plan: FS.3) Understand total cost of system management, and FS.4) Take care of what we have.</small>							
<b>Road and Vehicle Bridge Maintenance</b>	\$ 640,000	\$ 90,000	\$ 110,000	\$ 110,000	\$ 110,000	\$ 110,000	\$ 110,000
<small>(Essential) This project supports inspection and maintenance of vehicle bridges including inventory and load rating. Additionally, dollars support deferred road and engineered trail maintenance across roads owned by OSMP. By addressing road maintenance, the department accomplishes objectives of the Financial Sustainability focus area of the Master Plan, specifically FS.4) Take care of what we have. Both the public and staff benefit from better maintained roads and it reduces future costs.</small>							
<b>Royal Arch: Trail Re-Route &amp; Repair</b>	\$ 166,000	\$ 166,000	\$ -	\$ -	\$ -	\$ -	\$ -
<small>(Important) This CIP will support critical repairs to the popular and heavily used Royal Arch Trail to mitigate safety hazards and reduce impacts to surrounding ecosystems. Deteriorating conditions exist in sections of the trail requiring a 500-foot reroute to improve trail safety and sustainability. Additionally, repairs are needed to address an undermined retaining wall on a steep slope of the trail that is resulting in erosion and deteriorating steps. Total repairs are estimated at 2,500 feet of trail in steep and rocky terrain. The project will accomplish the West Trail Study Area objective to repair and reroute the Royal Arch Trail. Intermittent trail closures are expected during construction. This project accomplishes key objectives of the Responsible Recreation, Stewardship, and Enjoyment focus area of the</small>							
<b>Tall Oatgrass Management</b>	\$ 431,250	\$ 56,250	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000
<small>(Important) This project implements action items from the 2018 Tall Oatgrass Ecological Impact Study. The project supports mapping, containment, eradication, and early detection of the aggressive non-native tall oatgrass on OSMP lands with collaboration across the county and the Colorado Front Range. Actions include mowing, grazing, mechanical and herbicide treatments, research related to treatment efficacy, and monitoring in the eradication zones. Dollars may support fencing and water infrastructure to support cattle grazing to remove tall oatgrass. Tall oatgrass invasion poses an immediate threat to native ecosystems, decreases overall plant and animal species diversity, has the potential to change fuel loads and fire behavior, and has dramatically expanded its extent on OSMP lands in the past 5-10 years. This project accomplishes key objectives of two focus areas of the OSMP Master Plan: Agriculture Today and Tomorrow, and Ecosystem Health and Resilience. It primarily supports strategy EHR.1) Preserve and restore important habitat blocks and corridors.</small>							
<b>Upper Bear Canyon Reroute &amp; Restore</b>	\$ 290,000	\$ 290,000	\$ -	\$ -	\$ -	\$ -	\$ -
<small>(Helpful) This project will reroute 1,600 feet of the Upper Bear Canyon Trail to move the trail further from the riparian area. Restoration and habitat mitigation will improve ecological functioning of the Bear Creek riparian habitat, which is being impacted by the current trail alignment. The project addresses deferred maintenance as outlined in the Trails Condition Assessment. The project delivers on commitments associated with other trail re-route work in this area completed in 2015-2016 and fulfills the requirements of the City Wetlands Permit. This project accomplishes key objectives of two focus areas of the OSMP Master Plan: Ecosystem Health and Resilience, and Responsible Recreation, Stewardship, and Enjoyment. Specifically, it supports strategies EHR.1) Preserve and restore important habitat blocks and corridors, and RRSE.2) Reduce trail maintenance backlog.</small>							
<b>Youth Corps and Contracted Crews</b>	\$ 1,530,000	\$ 255,000	\$ 255,000	\$ 255,000	\$ 255,000	\$ 255,000	\$ 255,000
<small>(Helpful) This project supports annual hiring of contracted trail crews and youth corps to augment and accelerate work of in-house trail crews and accomplish deferred trail maintenance. Annual contracts are scalable based on available crew weeks and trail maintenance needs. Youth corps members benefit from exposure to a variety of hard skills, career development, and an increased understanding of land use management. In 2019, 30% of our standard and temporary trails staff previously worked with an organization we partner with for conservation corps, and 66% of our standard and temporary trails staff have been part of a conservation corp. The annual work plan is determined based on trail condition assessment results from 2019. In 2021, work will focus on Mt. Sanitas, undesignated trail restoration, Red Rocks, Range View/Ute, Saddle Rock, and other general deferred maintenance. This project accomplishes key objectives of four focus areas of the OSMP Master Plan: Community Connections, Education, and Inclusion, Ecosystem Health and Resilience, Financial Sustainability, and Responsible Recreation, Stewardship, and Enjoyment. It links to multiple strategies in the Master Plan, primarily addressing RRSE.2) Reduce trail maintenance backlog.</small>							
<b>CIP-CAPITAL PLANNING STUDIES</b>	\$ 2,010,000	\$ 340,000	\$ 270,000	\$ 530,000	\$ 870,000	\$ -	\$ -
<b>2021 Resident Survey</b>	\$ 65,000	\$ 65,000	\$ -	\$ -	\$ -	\$ -	\$ -
<small>(Helpful) This project occurs every five years and is a 12-month visitor survey conducted at OSMP exit points to understand, update, and trend information about our visitor population. The survey has been administered since 1992 and helps OSMP understand the "who, what, why, when and how" behind visitation estimate numbers. Updated and current visitor information is necessary to successfully manage operations, infrastructure planning, staffing allocation, amenity provision, and public process and decision making for recreation management. It is a needed input into planning processes, including the Visitor Use Management Plan and Integrated Site Plans. This project will support prioritization of Master Plan implementation. This project accomplishes key objectives of the Responsible Recreation, Stewardship, and Enjoyment focus area of the Master Plan, primarily addressing RRSE.1) Update and implement visitor use management guidance.</small>							
<b>Chautauqua Ranger Cottage Site Plan</b>	\$ 1,420,000	\$ 100,000	\$ 200,000	\$ 400,000	\$ 720,000	\$ -	\$ -
<small>(Helpful) This site plan for the Chautauqua Ranger Cottage will explore options for improving visitor flow and orientation, interpretive signs, interpretive exhibits, restrooms, and visitor amenities at the Chautauqua Ranger Cottage. Out-year work will explore programming, maintenance and enforcement opportunities to help achieve desired outcomes. This project would include a phased approach to designing site improvements considering resource concerns, visitor experience, perceived crowding and neighborhood impacts. This project accomplishes key objectives of three focus areas of the OSMP Master Plan: Community Connections, Education, and Inclusion, Ecosystem Health and Resilience, and Responsible Recreation, Stewardship, and Enjoyment. It links to multiple strategies in the Master Plan, primarily addressing RRSE.8) Provide welcoming and inspiring visitor facilities and services.</small>							
<b>Property Integration Fort Chambers</b>	\$ 270,000	\$ 100,000	\$ 20,000	\$ 80,000	\$ 70,000	\$ -	\$ -
<small>(Helpful) This project will assist with identifying short- and long-term management actions at the Fort Chambers/Poor Farm property purchased by OSMP in 2018. This planning project will assess future needs, purposes and functions around the Queen Anne house, associated outbuildings and the surrounding agricultural, natural and cultural landscape. The plan will identify the best approach for the future management of the site. Project scope includes sites inventories, analysis, and management recommendations with associated phasing and costing. This project will support citywide engagement with recognized tribes and indigenous peoples and result in a fiscally constrained management approach for the buildings and property. The project accomplishes key objectives of the OSMP Master Plan in three focus areas: Agriculture Today and Tomorrow, Community Connections, Education and Inclusion, and Ecosystem Health and Resilience. It links to multiple strategies in the MP, including addressing CCEI.4) Support citywide engagement with federally recognized American Indian Tribes and indigenous peoples.</small>							
<b>Visitor Use Management Planning</b>	\$ 255,000	\$ 75,000	\$ 50,000	\$ 50,000	\$ 80,000	\$ -	\$ -
<small>(Helpful) This project will continue department work to implement and adapt visitor management strategies guided by the 2005 Visitor Master Plan (VMP). Incorporating findings from visitor use studies and land management best practices OSMP will assess and update the types and specifications of in-use or potential visitor management practices the department may consider and deploy to manage visitor use and build a monitoring strategy to inform site-specific management decisions. OSMP will develop a toolkit of visitor use management strategies to consider in relation to other aspects of service delivery. Through this project, specific coordination work will occur on the systemwide trailhead shuttle feasibility study and regional visitor management coordination including efforts such as the NOCO 2050 project. This project accomplishes key objectives of the Master Plan in the Responsible Recreation, Stewardship, and Enjoyment focus area. The project primarily supports the strategy RRSE.1) assess and manage increasing visitation but also works towards RRSE.4) Encourage multimodal access to trailheads and RRSE.5) Manage passive recreation activities requiring an OSMP permit.</small>							

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A photograph of the East Boulder Community Center building. The building is a two-story structure with a brick and stone facade. A large sign above the entrance reads "EAST BOULDER COMMUNITY CENTER". In the foreground, there is a paved area with a bicycle rack containing several bicycles. To the left, there is a landscaped area with green plants and a wooden bench. The sky is clear and blue.

# Parks & Recreation

## Current Focus for Capital Planning and Projects in the 2021 Capital Budget

The comprehensive approach to the department's 2021 capital program is founded on implementing the key themes of the BPR Master Plan, primarily on taking care of existing assets that provide core services to the community while strategically enhancing key parks and facilities outlined within the department's capital investment strategy. In 2020, staff have started the five-year update to the master plan as adopted within the current CIP to refine the goals and strategies to guide the next several years. Staff have consistently prioritized funding on specific projects that meet several criteria related to safety, usage, efficiencies, and revenue generation.

Staff have identified options for reducing spending strategically as a standard practice for this fiscal environment and especially as it applies to the CIP. For both 2021 as well as the full 6-year CIP staff have performed careful analysis and projections for all funds that make up the department CIP and adjusted the spending accordingly to remain within funding projections while still maintaining a healthy fund balance for reserves. Over half of the CIP is now funded exclusively out of the Permanent Parks and Recreation fund while the remaining is funded appropriately out of the .25 Cent Sales Tax, Lottery Fund and Capital Development Fund. Staff will continue to monitor and adjust spending as necessary with new fund projections and revenue information are available related to COVID-19.

Staff have also been innovative in partnering when possible to leverage capital funding that align with many key themes identified in the BPR Master Plan, including:

- Community Health and Wellness - Parks and facilities are being improved with capital maintenance and enhancements to the Flatirons Golf Course Facility, Boulder Reservoir, and many outdoor facilities such as courts, playgrounds and ballfields. The amenities are critical to the department's core services and outlined in recent plans and studies.
- Taking Care of Existing Facilities - through implementation of the Asset Management Software, improvements to North Boulder Park, Boulder Reservoir South Shore, and Columbia Cemetery will extend the useful life of priority facilities and increase the condition of many assets.

# Parks & Recreation Capital

- Building Community Relationships - BPR continues to address the Emerald Ash Borer epidemic in Boulder and maintain as much tree canopy as possible. With help from the Tree Trust, developed by the PLAY Boulder Foundation, staff are making progress in fighting the pest and planting replacement trees through capital funding.
- Youth Activity and Engagement - many youth sports facilities and play areas will be enhanced and renovated through the 2021 projects that will continue to allow the department to focus on youth and provide opportunities for children in the community.

## 2021 Capital Projects

### *Flatirons Golf Course Capital Enhancements*

The Flatirons Golf Course is the primary focus for BPR in 2021 and comprises \$6.9M of the overall \$9M CIP. Flatirons is the only public course in Boulder and provides a highly desired recreation amenity while also contributing to funding sources through revenue generation that are so important in helping BPR deliver the recreation programs and services to the community. The golf course has many planned enhancements to ensure playability and provide necessary visitor amenities. This project will provide design and construction of a new pro shop, clubhouse and staff office to replace the former events center that was demolished as a result of the 2013 flood. The proposed facility is not intended to replace the previous event center facility in terms of the previous functions and use such as catered events and banquets. Programming for the golf course and surrounding community needs have been analyzed to build a facility for maximized community benefit. The new facility would include basic services indoors and new outdoor spaces to take advantage of the beautiful Colorado weather and the amazing views of the flatirons from this location. The existing building, containing the pro shop and cart storage, would receive some minor renovations for a consistently pleasing experience. The new facility, including outdoor spaces, would increase the functional space by 130% while remaining safely outside of floodplains.



Existing Golf Course Pro Shop & Clubhouse

# Parks & Recreation Capital

The design of the replacement facility will occur in 2020 and construction to begin in 2021. Throughout the past several years, the community has experienced residential and commercial growth providing opportunities to expand the services and community programs at the Flatirons Golf Course if new facilities were available. Construction of a new facility has been a priority since the necessary demolition of the event center. Proposed improvements have been carefully considered to fit the current and projected community growth while following the BPR Master Plan guidance of creating multi-use facilities that will serve a wide range of community members. The proposed facility will offer enhanced golf services with a strong focus on the customer experience and flexibility in use to accommodate a variety of programs and events of interest to golfers and non-golfers. Additionally, the facility will be designed to meet the City's Energy Conservation Code and other climate action goals for energy efficiency and environmental sustainability. The City of Boulder is projected to grow an average of 17% in population, jobs and housing over the next 25 years, and the area immediately north of the golf course has been targeted to support much of that growth as a federal Opportunity Zone. The East Arapahoe Transportation Plan has designated East Arapahoe Avenue a "complete street" to allow it to handle increasing traffic volumes through improvements that encourage non-single-occupancy vehicle use.

## ***Aquatics Facility Capital Enhancements***

Based on recommendations of the 2015 Boulder Aquatics Feasibility Plan, this project provides implementation of priority indoor and outdoor pool enhancements for Boulder's aquatics programs. In 2021, the East Boulder Community Center leisure pool will be redesigned with community input to determine a new and improved family aquatics experience. This work will include a new multi-use leisure pool for warm water classes and instruction, a new play structure and an outdoor splash pad will be completed in 2022 in partnership with Facilities and Asset Management funding necessary facility repairs.

## ***Athletic Field Capital Enhancements***

Based on key recommendations of the Athletic Field Study, this program will allow implementation of field repairs and enhancements including turf, field renovations and expansion to accommodate additional capacity for sports uses. Average cost for a complete renovation of an irrigation system is \$63K and which is necessary to ensure preventative maintenance of the systems. System failures can lead to field closures and loss of revenue from field use. In 2021, funding will be used to plan and design access improvements for Pleasantview Fields.

## ***Natural Lands Management***

The department's natural lands team manages over 1,000 acres of wildlife and vegetation conservation areas to support the regions vulnerable ecosystems within urban areas. Capital funding helps support planning and implementation of critical conservation measures and management strategies on the properties. In 2021, funding will provide an opportunity to partner with other departments in developing a comprehensive restoration and management plan for Boulder Creek to balance recreation and public use with maintaining the streams ecosystem which is critical to Boulder.

## ***Boulder Reservoir South Shore Capital Enhancements***

Continuing to implement the 2012 Master Plan and recent Concept Plan and Capital Strategy, this project will provide key improvements to the south shore recreation area and various visitor amenities to serve the region. Funding is planned to continue key enhancement priorities that are outlined each year in the recently approved Concept Plan and Capital Strategy. Projects include a variety of amenities including but not limited to signage, dock repairs, trail connections, pavilions, facility maintenance, road repair, landscaping, and parking lot repair.

## ***Urban Forest Management***

This project provides annual funding to continue the EAB response by allowing critical safety measures of removing identified trees throughout the city and replacing with new tree species to slow the spread of the pest and ensure safety of the public as well as expanded urban forest management practices. This project also provides treatment of trees designated for preservation and associated infrastructure improvements such as irrigation to ensure sustainability of the new trees.

# Parks & Recreation Capital

## ***Department Master Plan Update***

This project will provide funding for consultants and staff to continue a 5-year update to the department's master plan to ensure alignment of departmental programs, services and facilities to meet the needs and goals of the community. This project will include various research tools such as a recreation facilities and programs assessment, an updated community survey and outreach to all members of the community to analyze the mission and offerings of the department. A comprehensive historic and cultural plan will be completed in conjunction with this master plan update to provide for goals and recommendations to ensure the sustainability of the departments' historic and cultural assets over time.

## ***Neighborhood and Community Park Capital Maintenance***

This project provides funding for asset maintenance throughout the system as well as a complete renovation of one neighborhood park annually to meet the goals outlined within the BPR Master Plan and Capital Investment Strategy. The renovations typically include playground replacement, irrigation renovation, forestry maintenance, ADA compliance and shelter repairs. In 2021, renovations will be focused at North Boulder Park.

## ***Recreation Facility Capital Maintenance***

Based on recommendations of the 2016 Facility Strategic Plan and upcoming Recreation Needs Assessment, this program will provide annual capital funding for implementation of key facility repairs and renovations at the city's three recreation centers to ensure acceptable facility conditions and continue cost-effectively meeting the needs of health and wellness opportunities within Boulder. This project is combined with funding from the Facilities and Asset Management (FAM) Division of Public Works. In 2021, exterior security cameras will be installed at all three recreation centers to increase safety outside the centers within the parking lots and discourage illegal activity outside of normal operating hours.



Civic Area Gathering

# Parks & Recreation Capital

## 2020 Adjustments

Given the current uncertainty related to COVID-19, staff reprioritized the current CIP projects and considering pauses and delays on specific projects to provide the greatest flexibility and responsiveness to budget challenges that exist. Staff have reviewed prioritization criteria to determine what projects should continue and what projects should pause. The following projects were paused and delayed in 2020 to be continued in 2021:

- Flatirons Golf Course Capital Enhancements \$2,195,000
- Master Plan Update \$140,000
- General Park Improvements \$42,000

## Equitable Distribution

In planning and developing the CIP, the department strives to provide equitable distribution of improvements throughout the city, both geographically and socio-economically. In planning projects and identifying needs, the department reviews all asset management information to prioritize the critical deficiencies and engages staff as well as the PRAB to understand the capital priorities that exist throughout the community. The planned six-year CIP includes a variety of projects throughout Boulder’s many subcommunities and even emphasizes development of assets within areas not currently serviced as park amenities.



## Operating and Maintenance Impacts

The department prioritizes capital projects based on maintaining existing assets and decreasing the maintenance backlog of the department’s portfolio of parks and facilities. Therefore, most projects included in the department’s Capital Improvement Program will not have an impact on maintenance costs due to replacement of aging infrastructure and efficiencies associated with new and improved facilities and systems. However, as the department fulfills commitments relative to long-term planning needs such as the increase in facilities at Scott Carpenter Park, future phases of Valmont City Park, Boulder Junction Park, or Violet Neighborhood Park, the department will need to carefully design enhancements in sensitivity to the department’s O&M funding and not overburden funds with maintenance of these new facilities. Staff are also carefully planning future facilities and current renovations to include energy efficiency and opportunities for reducing short-term and long-term O&M needs. This not only reduces maintenance costs and ongoing expenses but meets the city’s climate goals

# Parks & Recreation Capital

by reducing emissions and achieving environmental sustainability objectives. As an example, irrigation systems are much more efficient now using digital systems, rain sensors, and other technology to not over water. Also, building systems include efficient lighting, pumps, and filters for pools and sustainable materials.

## **Unfunded Projects and Emerging Needs**

In the long-term, additional funding will need to be secured to develop any new major facilities, as well as improve service standards for maintenance operations and to fund deferred maintenance. The department's master plan includes a list of priority items to complete based on various funding levels (fiscally constrained, action and vision). The department's 2016 Capital Investment Strategy identified investments of \$104 million with available funding of only \$64 million over the next 10 years. Staff continue to evaluate deferred maintenance needs, including park sites and recreation facility needs, and have implemented an Asset Management Plan (AMP) to assist in capital planning and day-to-day operations. The current maintenance and facility improvements backlog, including major repairs and replacements, is significant. The department anticipates that this backlog will continue until funding levels reach appropriate amounts to accommodate life-cycle projections for the department's assets.

The current budget reflects an economic reality that is not predicted to shift anytime soon, and it is within this reality that the department must plan. With maintenance backlog estimated at over \$16 million on approximately \$215 million in assets, the department faces difficult trade-off decisions about how to manage and operate its facilities and provide its programs. City guidelines regarding capital improvement prioritize the maintenance of current assets over the development of new facilities, and through the master planning process, the community has indicated strong support for this concept. Even with the .25 cent sales tax renewal, the department must focus on maintaining and improving all deteriorating assets. Simultaneously, the department must respond to the community's shifting values related to new facilities by providing adequate facilities to meet those needs and by making them accessible to the entire community.

## **Key Unfunded Projects Include:**

- Boulder Reservoir South Shore enhancements to accommodate increased use and visitation as well as basic amenities to support the regional destination as outlined in the Boulder Reservoir Master Plan and currently evaluated through the Concept Plan and Capital Strategy.
- The Recreation Facility Strategic Plan projected a total of \$4.5 million in deferred maintenance and an additional \$3 million over the next ten years in the three recreation centers. This funding need will also be refined and updated with the upcoming master plan related to the Recreation Facilities Needs Assessment.
- The city's pools and recreation centers represent the largest contributors of natural-gas-related greenhouse gas emissions within the entire city operations. Transitioning these facilities to electric solutions will be critical for the city to achieve its 2030 80% greenhouse gas reduction goal. While technology solutions are emerging, but have mixed results for public pools, retrofitting an existing facility represents a cost premium that has not currently been factored into the CIP projects. Staff will need to research and determine the best solution and cost relative to achieving a balanced approach to the city's various goals.
- Increased capacity and additional facilities for youth and adult sports fields.
- Expansion and enhancement of recreation centers and aquatics facilities that accommodate increased demand for lap swimming, fitness equipment and multi-use classroom space that could be expanded.

# Parks & Recreation Capital

## To mitigate the impacts of limited funding, staff is:

- Working collaboratively with Facilities & Asset Management (FAM) to prioritize funding for deferred, major and ongoing facility maintenance.
- Deferring low-priority improvements and new capital projects that cannot be funded operationally.
- Completing projects to achieve energy efficiencies at recreation facilities; and
- Developing long-term partnerships and non-traditional funding sources to support desired new facilities and enhancements to existing facilities.

## CEAP Projects

N/A

## Board Action

The Parks & Recreation Board (PRAB) unanimously approved the following two resolutions in support of the BPR 2021-2026 CIP at the June 22, 2020 meeting: a motion to approve the 2021 recommended expenditures from the Permanent Parks & Recreation Fund and a motion to approve the Draft 2021-2026 Parks & Recreation Department Capital Improvement Program. Based on updated revenue assumptions, the department shifted funding in out years from the original proposal reviewed on June 22, 2020. The PRAB approved two revised resolutions in support of the BPR 2021-2026 CIP at the August 24, 2020 meeting: a motion to approve the 2021 recommended expenditures from the Permanent Parks & Recreation Fund and a motion to approve the Draft 2021-2026 Parks & Recreation Department Capital Improvement Program.

## 2021-2026 Capital Improvement Plan

Parks & Recreation							
	Estimated Total Cost	2021 Recommended	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected

Capital Program Total	\$ 30,974,500	\$ 8,540,000	\$ 3,478,000	\$ 4,710,000	\$ 6,157,000	\$ 2,606,500	\$ 5,483,000
CIP-Capital Enhancement Total	\$ 17,768,000	\$ 6,610,000	\$ 1,638,000	\$ 1,790,000	\$ 3,630,000	\$ 100,000	\$ 4,000,000
Aquatic Facility Enhancements	\$ 2,858,000	\$ 120,000	\$ 1,638,000	\$ -	\$ -	\$ 100,000	\$ 1,000,000

Based on recommendations of the 2015 Boulder Aquatics Feasibility Plan, this project provides implementation of priority indoor and outdoor pool enhancements for Boulder's aquatics programs. In 2020, funding will provide the final touches to the new Scott Carpenter pool with infrastructure and equipment to operate the facility. In 2021, the East Boulder Community Center leisure pool will be redesigned with community input to determine a new and improved family aquatics experience. This work will include a new multi-use leisure pool for warm water classes and instruction, a new kids play structure and an outdoor splash pad will be completed in 2022 in partnership with Facilities and Asset Management funding necessary facility repairs. Finally, in 2025, funding is provided to partner with City Transportation to begin the design of the 30th street improvements along Scott Carpenter park to remain in compliance with necessary infrastructure required through the city's regulatory planning and development review process for Scott Carpenter Pool enhancements. The construction of the 30th street improvements is anticipated to be approximately \$1M and is required to be complete by 2026. This project is categorized as "helpful".

Capital Infrastructure Enhancements	\$ 2,580,000	\$ -	\$ -	\$ 1,580,000	\$ 1,000,000	\$ -	\$ -
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This project will provide capital funding to implement enhancements at parks and facilities throughout the system. Currently undeveloped park sites such as Violet Park in north Boulder and Eaton Park in Gunbarrel have planned amenities that need to be implemented to meet service levels of surrounding neighborhoods. Other properties have seen a dramatic shift in land use adjacent to the park and warranting a redevelopment option to serve more residents such as Mapleton Ballfields. Additionally, this project will provide implementation of planned amenities at developed park sites that haven't been constructed such as restrooms, ballfields, additional sport courts and play areas. The Recreation Facility Needs Assessment completed in 2021 will also outline future priorities that will be funded through this project that will enhance the existing recreation facilities. In 2021, funding is identified to support the redevelopment of the Flatirons Golf Course facility to meet the needs of the community. The new facility will result in an increase of square footage and capital development funds are being used to address the growth related aspects and expansion of city services at Boulder's only public golf course. This project is categorized as helpful.

East Mapleton Ballfield Enhancement	\$ 2,100,000	\$ -	\$ -	\$ 210,000	\$ 1,890,000	\$ -	\$ -
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As a result of the implementation of the Boulder Junction area along 30th street near Mapleton, the area has increased in residential units resulting in more demand for community park and recreation amenities such as playgrounds, dog parks, open lawn areas and other multi-use amenities. The original area plan indicated a goal of providing park and recreation amenities to this new residential area as development occurs. This project will result in the addition of new amenities at the existing East Mapleton Ballfield site that is in close proximity to Boulder Junction connected by the underpass along Goose Creek. A community planning project will be completed to determine the final design and priorities for construction. Any reduction in ballfields will be replaced at other sports complexes as included in the department's Athletic Field Study completed in 2015.

Flatirons Golf Course Enhancement	\$ 6,990,000	\$ 6,490,000	\$ -	\$ -	\$ 500,000	\$ -	\$ -
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The Flatirons Golf Course is the only public course in Boulder and provides a highly desired recreation amenity while also contributing to funding sources through revenue generation. The golf course has many planned enhancements to ensure playability and provide necessary visitor amenities. This project will provide design and construction of a new pro shop, clubhouse and staff office to replace the former events center that was demolished as a result of the 2013 flood. The design of the replacement facility will occur in 2019, permitting in 2020 and construction to begin in 2021. In 2024, funding is provided to allow for various course improvements including tee boxes, cart paths, turf and irrigation maintenance. This project is categorized as amenity.

# Parks & Recreation Capital

## 2021-2026 Capital Improvement Plan

<b>Valmont City Park - Phase 2</b>	\$ 3,240,000	\$ -	\$ -	\$ -	\$ 240,000	\$ -	\$ 3,000,000
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This project provides for the development of the next major phase of Valmont City Park, south of Valmont Road. Potential amenities to be built include adventure playground elements, community garden space, a splash pad, skate elements, an event pavilion and additional parking. Final plans will be completed in 2023 to determine amenities for development as well as available funding. Final design and permitting will occur in 2024 with construction to commence in 2026. This project also allows for increased park service to the surrounding areas of east Boulder as well as the entire Boulder community. This project is categorized as helpful.

<b>CIP-Capital Maintenance Total</b>	\$ 13,006,500	\$ 1,730,000	\$ 1,840,000	\$ 2,920,000	\$ 2,527,000	\$ 2,506,500	\$ 1,483,000
<b>Athletic Field Improvements</b>	\$ 176,000	\$ 50,000	\$ -	\$ 63,000	\$ -	\$ 63,000	\$ -

Based on key recommendations of the Athletic Field Study, this program will allow implementation of field repairs and enhancements including turf, field renovations and expansion to accommodate additional capacity for sports uses. Average cost for a complete renovation of an irrigation system is \$63K which is necessary to ensure preventative maintenance of the systems. System failures can lead to field closures and loss of revenue from field use. In 2021, funding will be used to design parking lot expansion improvements for Pleasantview Fields. This project is categorized as "helpful".

<b>Boulder Reservoir South Shore</b>	\$ 2,676,500	\$ 200,000	\$ -	\$ 1,300,000	\$ 355,000	\$ 721,500	\$ 100,000
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Continuing to implement the 2012 Master Plan and recent Concept Plan and Capital Strategy, this project will provide key improvements to the south shore recreation area and various visitor amenities to serve the region. Funding is planned through 2026 to continue key enhancement priorities that are outlined each year in the recently approved Concept Plan and Capital Strategy. Projects include a variety of amenities including but not limited to signage, dock repairs, trail connections, pavilions, facility maintenance, road repair, landscaping, and parking lot repair. This project is categorized as helpful.

<b>Columbia Cemetery Capital Maintenance</b>	\$ 168,000	\$ -	\$ 40,000	\$ 32,000	\$ 32,000	\$ 32,000	\$ 32,000
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The cemetery is a designated landmark and requires ongoing maintenance to meet the preservation requirements associated with all the infrastructure ranging from headstones, markers, ornamental fencing and grounds maintenance. This project will provide necessary funding to complete projects as well as local match for leveraging state grant funds. This project is categorized as a helpful project.

### Parks & Recreation

	Estimated Total Cost	2021 Recommended	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
<b>General Park Improvements</b>	\$ 5,481,000	\$ 900,000	\$ 1,000,000	\$ 900,000	\$ 640,000	\$ 1,190,000	\$ 851,000

This project provides funding for asset maintenance throughout the system as well as a complete renovation of one neighborhood park annually to meet the goals outlined within the BPR Master Plan and Capital Investment Strategy. The renovations typically include playground replacement, irrigation renovation, forestry maintenance, ADA compliance and shelter repairs. The current list of parks within the CIP include:

- 2021 -North Boulder Park
- 2022 - East Boulder Community Park
- 2023 - Martin Park
- 2024 - Parkside Park
- 2025 - Shanahan Ridge Park
- 2026 - Elmer's Two-Mile Park

This project is categorized as important.

<b>Natural Lands Management</b>	\$ 675,000	\$ 50,000	\$ 50,000	\$ 75,000	\$ 500,000	\$ -	\$ -
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The department's natural lands team manages over 1,000 acres of wildlife and vegetation conservation areas to support the regions vulnerable ecosystems within urban areas. Capital funding helps support planning and implementation of critical conservation measures and management strategies on the properties.

In 2021, funding will provide an opportunity to partner with other department's in developing a comprehensive restoration and management plan for Boulder Creek to balance recreation and public use with maintaining the streams ecosystem which is critical to Boulder. In 2022, funding will allow for the replacement of a trail bridge at Coot Lake Natural Area that is in disrepair and in danger of failure if not replaced within the next year. In 2023, funding will allow the department to complete and inventory and prioritization of the department's populations of prairie dogs across the system to better manage the colonies aligned with the department's goals. In 2024, funding will allow the department to begin relocation of the prairie dogs at Valmont Park to allow for the next phase of planned improvements.

This project is categorized as "Important".

<b>Recreation Facility Capital Maint</b>	\$ 1,030,000	\$ 30,000	\$ 500,000	\$ -	\$ 500,000	\$ -	\$ -
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Based on recommendations of the 2016 Facility Strategic Plan and upcoming Recreation Needs Assessment, this program will provide annual capital funding for implementation of key facility repairs and renovations at the city's three recreation centers to ensure acceptable facility conditions and continue cost-effectively meeting the needs of health and wellness opportunities within Boulder. This project is combined with funding from the Facilities and Asset Management (FAM) Division of Public Works. In 2021, exterior security cameras will be installed at all three recreation centers to increase safety outside the centers within the parking lots and discourage illegal activity outside of normal operating hours. In 2022, facility maintenance will be focused on the East Boulder Community Center in conjunction with the planned improvements to the leisure pool. This project is categorized as helpful.

<b>Urban Forest Management</b>	\$ 2,800,000	\$ 500,000	\$ 250,000	\$ 550,000	\$ 500,000	\$ 500,000	\$ 500,000
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Trees are important assets to the community and provide many benefits to Boulder. In September 2013, Forestry staff discovered an Emerald Ash Borer (EAB) infestation within the city. The subsequent delimitation survey showed that EAB was well established within a corridor in central Boulder. Over the next 15 years, EAB management, including tree removal, tree replacement, wood disposal and pesticide treatments will have a significant direct budgetary impact to the city and private residents. The loss of tree canopy will have considerable economic, social, and environmental impacts for decades. In September of 2015, an Information Item detailing the Emerald Ash Borer management plan was presented to City Council.

As a result of the recent discovery of the Emerald Ash Borer (EAB), a response plan has been developed to slow the spread of the pest and maintain a safe community from the potential hazards

<b>CIP-Capital Planning Studies Total</b>	\$ 200,000	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ -
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<b>Master Plan Update</b>	\$ 200,000	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ -
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This project will provide funding for consultants and staff to complete a 5-year update to the department's master plan to ensure alignment of departmental programs, services and facilities to meet the needs and goals of the community. This project will include various research tools such as a recreation facilities and programs assessment, an updated community survey and outreach to all members of the community to analyze the mission and offerings of the department. A comprehensive historic and cultural plan will be completed in conjunction with this master plan update to provide for goals and recommendations to ensure the sustainability of the departments' historic and cultural assets over time. This project is categorized as important.





# Police

## **Current Focus for Capital Planning and Projects in the 2021 Capital Budget**

The 2021 capital needs for the Police Department focus on replacement of high-dollar equipment as opposed to rolling stock as in the past few years. The following project is brought forward:

**Bomb Squad Suit Replacement:** The Boulder Police Department Bomb Team provides regional response to all of Boulder County and City of Longmont and responds to over 100 calls per year. Approximately 6% require the use of the bomb suit. The bomb squad suits are unfunded and will have an estimated replacement cost of \$40,000 each. The suits were last replaced around 2008-2010 and the life expectancy of a typical suit is five years. The department needs two suits immediately and two more in the near future. One of our previous suits was purchased for us by the University of Colorado Environmental hazardous material division as compensation for all the money the bomb team saves them by disposing of their explosive laboratory chemicals. We may be able to investigate the possibility of them funding a third or fourth suit. Because the suits are expired by at least double the recommended useful life, this is a critical need for the Police Department.

## **2021 Capital Projects**

- Bomb Squad Suit Replacement

## **2021 Project Delays and Cuts**

Since the Bomb Squad Suits are currently 10 to 12 years old which is over twice the typical life expectancy, if the suits are not replaced, they could pose a critical life-threatening safety failure to bomb response staff.

## **2020 Adjustments (if applicable)**

Although no 2020 capital projects have been adjusted due to COVID-19, our 2019 project, Incident Command Vehicle, which was not yet started, has been deferred in 2020 and may once again be deferred in 2021, depending on required budget reductions.

## **Operating and Maintenance Impacts**

The only operating impact is the ongoing replacement amounts needed for future bomb suit replacement \$16,800 annually.

# Police Capital

## Unfunded Projects and Emerging Needs

In the future, BPD will incorporate new initiatives into the planning and budget processes as city resources allow. Examples include: upgrading technology to improve response times and increase efficiency; and expanding the Public Safety Building to better accommodate staffing and technology needs.

- **Public Safety Building 1st Floor Tile Replacement:** The tile floor on the first floor of the Public Safety Building is over 30 years old, dated-looking and is showing much wear and tear. Not only is the floor showing wear, some of the tiles are cracked while some are coming up and need to be replaced. Replacing the first-floor tiles will require less ongoing maintenance and give the first floor a consistent and more updated look.
- **Public Safety Building Expansion and Renovation.** Construct a 25,000 square-foot expansion for Police functions, along with associated renovations to the existing facility. The renovation would focus on net zero, generating its required energy from an on-site solar system. This will provide many opportunities to leverage financial incentives such as rebates, production incentives for the solar system, or even tax credits (captured by a partner with tax liability and passed through to the city). These financial incentives can cover as much as 50% of the incremental cost that is required to go above the minimum energy code requirements. Estimated cost \$25 million to \$30 million.
- **Bomb Robots.** The current bomb robots were purchased in 2012. The current replacement fund has approximately \$100,000 towards the replacement. The actual costs for replacement will fall between \$400,000 and \$635,000. This is an underfunded project.

The Police Department has no short or long-term emerging capital needs related to COVID-19 and related revenue losses.

## CEAP Projects

N/A

## Board Action

N/A

## 2021-2026 Capital Improvement Plan

Police							
	Estimated Total Cost	2021 Recommended	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
<b>Capital Program Total</b>	\$ 80,000	\$ 80,000	\$ -	\$ -	\$ -	\$ -	\$ -
<b>CIP-Capital Enhancement Total</b>	\$ 80,000	\$ 80,000	\$ -	\$ -	\$ -	\$ -	\$ -
<b>PD Bomb Squad Suits</b>	\$ 80,000	\$ 80,000	\$ -	\$ -	\$ -	\$ -	\$ -

BFCR Category: Essential. The Boulder Police Department Bomb Team provides regional response to all of Boulder County and City of Longmont and responds to over 100 calls per year. Approximately 6% require the use of the bomb suit. The bomb squad suits are unfunded and will have an estimated replacement cost of \$40,000 each. The suits were last replaced around 2008-2010 and the life expectancy of a typical suit is five years. The department needs two suits immediately and two more in the near future. One of our previous suits was purchased for us by the University of Colorado Environmental hazardous material division as compensation for all the money the bomb team saves them by disposing of their explosive laboratory chemicals. We may be able to investigate the possibility of them funding a 3rd or 4th suit. Because the suits are expired by at least double the recommended useful life, this a critical need for the Police Department.



# Transportation

## Current Focus for Capital Planning and Projects in the 2021 Capital Budget

The projects that have been included in the Transportation Capital Improvement Program were selected and developed to implement Transportation Master Plan (TMP) investment policies and principles identified under Initiative 10 of the 2019 TMP Update “Funding the Transportation System”. The key investment principles include the following:

- Maintain and operate the existing, valuable multi-modal system, including investments in safety
- As additions are made to the system, address ongoing operation and maintenance needs
- Continue to advance innovations in the design, construction, operation, and maintenance of the system
- Strategically enhance the Complete Street network, prioritizing projects that have maximum impact improving safety, mobility, and efficiency
- Advance corridor studies integrating the city’s Sustainability Framework and resiliency strategy
- Leverage external funds extending the ability of local dollars to implement city goals. Continuously strive for efficiency and effectiveness in how work is accomplished Assure budget decisions are sustainable over time
- Keep in mind the goal of identifying long-term, sustainable funding that is tied to vehicle use

The 2019 TMP Update also identified the need to prioritize investment in the existing transportation system to preserve existing infrastructure as well as safety. An key area of focus within the TMP is the new Low-Stress Walk/Bike Network, which consists of vertically separated infrastructure, buffered infrastructure and neighborhood green streets. As the Low-Stress Walk/Bike Network and other key TMP initiatives are consistent with the 2019 TMP, the goal of each CIP project and program is to improve safety for all users of the transportation system, including pedestrians, cyclists, transit users, and vehicles. Each of these components are a focus within the individual CIP projects as well as multi-modal CIP programs. One example of this in the program portion of the CIP includes the Neighborhood Speed Management Program (NSMP), which was a renewed focus area beginning in 2017, and continues as part of the 2021-2026 portfolio.

# Transportation Capital

Additionally, CIP line items that were created in the 2020 CIP will carry forward in the 2021-2026 program which include capital funding for implementation of the Low-Stress Walk/Bike network (aka neighborhood greenstreets), intersection and crossing safety improvements as part of Vision Zero, and transit infrastructure improvements in fulfillment of the Renewed Vision for Transit.

The COVID-19 pandemic has significantly impacted the Capital Improvement Program for Transportation. Because the Transportation Fund is largely sales tax dependent, the fund is expected to see a 20% or greater reduction for 2020 and 2021. Staffing and budget reductions combined have notably limited the ability of projects and programs to be funded, managed and implemented. Several transportation projects have external grant funding, and staff are working with these partners to obtain scheduling extensions to allow city budgets and staffing to stretch out to match the demands of each project. Annual major capital maintenance programs have also been reduced for 2021 in response to reduced funding.

## 2021 Capital Projects

- Intersection Safety Projects
- HSIP/VZ Traffic Signal Reconstruction
- Pavement Management Program
- Downtown Boulder Transit Station Improvements
- Arapahoe Multi-Use Path/Transit Enhancements
- Mesa Elementary SRTS
- Major Capital Reconstruction
- Traffic Signal Broadband Fiber
- Sidewalk Maintenance
- CMPI Ped Crossing Treatments
- 47<sup>TH</sup>/BNSF Sidewalk Crossing



## 2020 Adjustments

In response to the reduction on Transportation Fund Revenue due to the COVID-19 pandemic, a number of projects and programs have been adjusted. The following are of projects

- Postponed 6th / 9th Bridge Deck Repairs
- Delayed one NSMP Complex Project
- Deferred Low Stress Walk/Bike Project
- Delay Deficient Street Light Replacement
- Reduced Multi-Use Path Maintenance Projects

## Operating and Maintenance Impacts

Each of the projects included in the current Transportation CIP will improve operational and/or maintenance conditions and needs. For example, the HSIP/VZ Traffic Signal Reconstruction project will improve operations, safety and reduce maintenance demands on staff because the infrastructure and technology will be new. Also, the Pavement Management Program repaves miles of city streets each year, which reduces the need to fill potholes by city maintenance crews. Major portions of CIP expenditures are focused on preservation of the system, which reduces costly total replacements of facilities and extends infrastructure service life at optimal timing intervals

# Transportation Capital

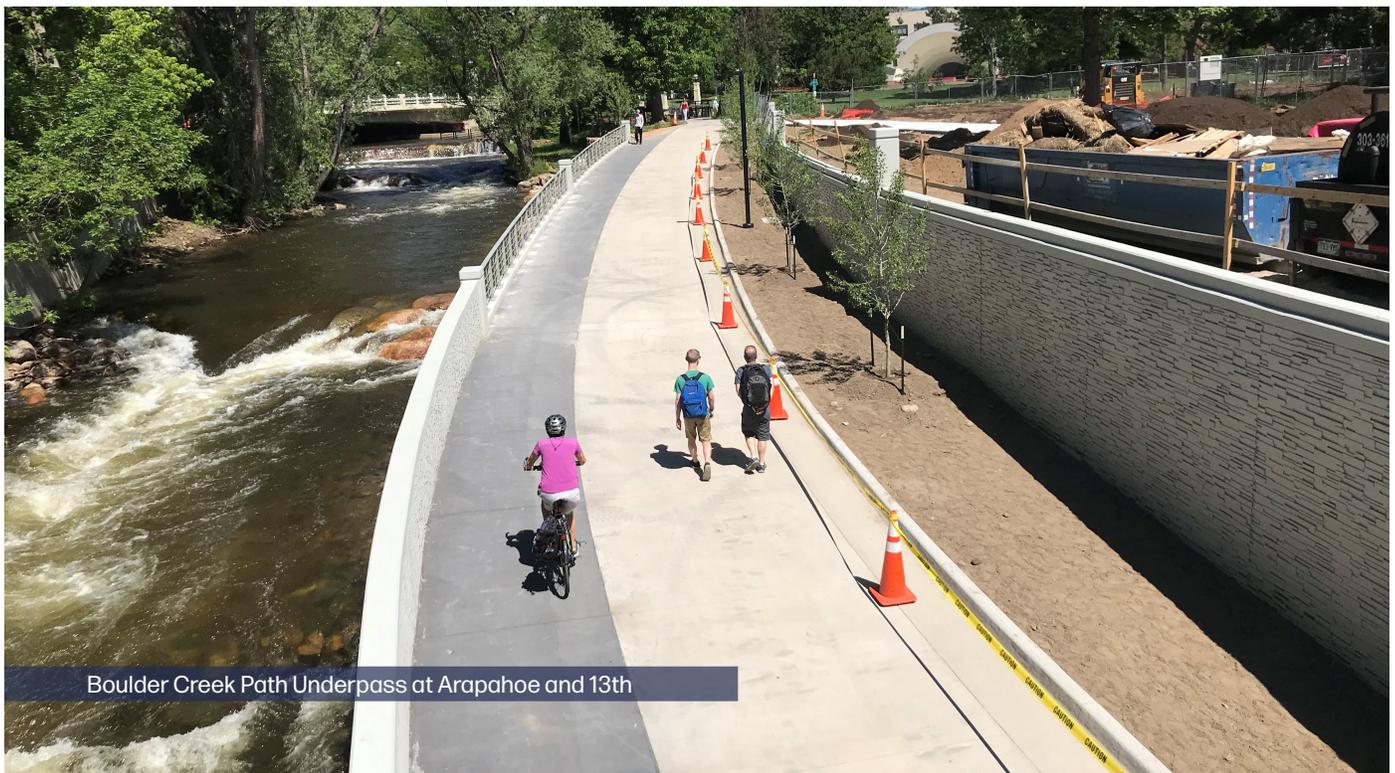
## Unfunded Projects and Emerging Needs

The Transportation division has a number of unfunded projects identified in the Transportation Master Plan (TMP). These projects range from reconstructing existing underpasses and bridges, reconstructing aging streets, completing missing links of sidewalks and multi-use paths. Transportation has historically used an opportunistic approach to fund major rehabilitation, reconstruction, and enhancement projects by taking advantage of external grant funding opportunities. Transportation will continue to use an asset management/prioritization approach to taking on capital projects. This includes optimizing investments in the system in a manner that is fiscally prudent and consistent with the TMP.

Transportation funding is limited and highly dependent on sales tax. Sales tax revenue accounted for 80 percent of the \$32.8 million local transportation budget (not including federal funds) in 2018. Transportation's dedicated sales tax revenue is not keeping up with inflation, resulting in declining purchasing power. Even with 78 percent of our expenditures going to essential operations and maintenance, we are still deferring maintenance, which is more costly over time. Outside of local funding, the city is facing increased competition for regional, state and federal funding. A needs assessment evaluated all areas of transportation's essential services in the community, including capital maintenance and the Capital Improvement Program (CIP). This assessment identified \$20.8 million in one-time capital expenditures.

### **Key Unfunded Projects Include:**

- Large portions of the Low/Stress Walk and Bike Network
- A number of segments from the 30th Street and Colorado Avenue Corridor Complete Street Plan.
- The East Arapahoe Transportation Plan has identified key improvements for investment that should be prioritized in coming years.
- Canyon Boulevard Complete Streets investments currently have no identified funding.



Boulder Creek Path Underpass at Arapahoe and 13th

# Transportation Capital

## CEAP Projects

**Downtown Boulder Transit Station Improvements:** This project will expand the number of bays along Canyon Boulevard and 14th Street and adjacent to the Downtown Boulder Transit Station. This project is in fulfillment of the Renewed Vision for Transit goals and is funded in part by federal grant funds.

**Arapahoe Multi-Use Path/Transit Enhancements:** This project will upgrade existing and missing sidewalk sections to a multi-use along Arapahoe between Foothills and Cherryvale. It will also enhance existing transit stops and access along the corridor. This project is consistent with the Transportation Master Plan and the East Arapahoe Transportation Plan goals and is funded in part by federal grant funds.

## Board Action

The Transportation Advisory Board (TAB) recommended approval of the draft 2021-2026 Capital Improvement Program on July 13, 2020.

## 2021-2026 Capital Improvement Plan

Transportation								
	Estimated Total Cost	2021 Recommended	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026	Projected
<b>Capital Program Total</b>	\$ 82,353,396	\$ 12,263,869	\$ 17,638,444	\$ 15,392,000	\$ 12,433,333	\$ 12,542,250		12,083,500
<b>CIP-Capital Enhancement Total</b>	\$ 58,248,063	\$ 9,383,869	\$ 9,718,444	\$ 12,162,000	\$ 8,870,000	\$ 9,291,250		8,822,500
<b>47TH/BNSF Sidewalk</b>	\$ 636,250	\$ -	\$ -	\$ 127,500	\$ -	\$ 508,750		-
Project includes pedestrian improvements Resilience Classification: Important								
<b>Arapahoe Multi-Use Path/Transit Enh</b>	\$ 1,900,000	\$ 288,000	\$ 287,000	\$ 1,325,000	\$ -	\$ -		-
This project will upgrade existing and missing sidewalk sections to a Multi-Use Path along Arapahoe between Foothills and Cherryvale. It will also enhance existing transit stops and access along the corridor. This project is consistent with the Transportation Master Plan and the East Arapahoe Transportation Plan goals and is funded in part by federal grant funds. Resilience Classification: Important								
<b>Downtown Boulder Transit Station Im</b>	\$ 982,000	\$ 226,969	\$ -	\$ 755,031	\$ -	\$ -		-
This project will expand the number of transit bays along Canyon Boulevard and 14th Street and adjacent to the Downtown Boulder Transit Station. This project is in fulfillment of Renewed Vision for Transit goals and is funded in part by federal grant funds. Resilience Classification: Important								
<b>CMPI Crossing Treatments</b>	\$ 291,000	\$ 291,000	\$ -	\$ -	\$ -	\$ -		-
Project includes improvements to pedestrian and bike crossing treatments at the following locations: 15th and Iris, Aurora and Evans and 33rd and Colorado. Resilience Classification: Essential								
<b>Fourmile Canyon Creek CCS</b>	\$ 2,186,000	\$ 1,752,000	\$ 434,000	\$ -	\$ -	\$ -		-
Construction of a multi-use path underpass at 19th Street and path connections along Fourmile Canyon Creek. This project replaces a structurally deficient bridge and provides safer access to Crest View Elementary School for pedestrians and bicyclists. It also provides improved vehicular access on 19th Street, which is an emergency access route, during a major storm event. Capital tax funding is for non-flood improvements. This project is categorized as "Essential" using the Budgeting for Resilience framework.								
<b>Greenways Program Transportation</b>	\$ 682,500	\$ 97,500	\$ 97,500	\$ 97,500	\$ 195,000	\$ 97,500		97,500
This project will provide Transportation's contribution to the overall greenways program. Funding will be opportunistic and prioritized with the other funding in the Greenways CIP. These funds will be combined with funding from the Transportation and Utilities Fund. This project is for an ongoing funding program. <a href="https://bouldercolorado.gov/water/greenways-program">https://bouldercolorado.gov/water/greenways-program</a> Resilience Classification: Important								
<b>HSIP/VZ Baseline/Canyon</b>	\$ 192,243	\$ -	\$ 17,477	\$ 174,766	\$ -	\$ -		-
Improvement to existing Baseline and Canyon Creek pedestrian crossing to align with Vision Zero goals. Resilience Classification: Essential								
<b>HSIP/VZ Traffic Signal Reconstructi</b>	\$ 1,024,670	\$ -	\$ 102,467	\$ 922,203	\$ -	\$ -		-
Project: Traffic Signal Reconstruction projects to facilitate goals of Vision Zero and overall safety. Intersection locations include: Baseline/Broadway, Baseline/Mohawk, and Folsom/Pine. Resilience Classification: Essential								
<b>Intersection Safety Projects</b>	\$ 302,880	\$ 302,880	\$ -	\$ -	\$ -	\$ -		-
The Intersection Safety Projects are funded almost entirely by a grant from the Highway Safety Improvement Program (HSIP), a federal grant program for local communities to improve safety at high hazard locations. The City is a recipient of HSIP grant funds to implement safety mitigation treatments at three intersections around the City. These intersection locations are Colorado/Regent, Baseline/29th and Broadway/Rayleigh. The safety treatments to be installed at all three locations will improve safety for vehicles, bicycles and pedestrians. Resilience Classification: Essential								

# Transportation Capital

## 2021-2026 Capital Improvement Plan

<b>Low Stress Walk/Bike - Neighborhood</b>	\$ 425,000	\$ 50,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000
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This program will provide funding toward implementation of the low-stress walk/bike network including Neighborhood Green Streets.  
Resilience Classification: Important

<b>Mesa Elementary Safe Routes to Scho</b>	\$ 342,000	\$ 342,000	\$ -	\$ -	\$ -	\$ -	\$ -
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This project will improve walking and biking routes to Mesa Elementary School in the Table Mesa neighborhood by improving crossings of Lehigh and constructing a pathway near Bear Creek elementary. This project is funded in part by Safe Routes to School grant funds.

Resilience Classification: Essential

<b>Misc Development Coordination</b>	\$ 300,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000
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This ongoing funding is intended to construct infrastructure improvements in coordination with or prompted by potential private development. Throughout the year, situations arise where infrastructure improvements required in the vicinity of a proposed development should be made at the same time as the development, and for which a developer cannot be required to construct. Improvements that are typically included are bike and pedestrian, functional efficiency, safety, system preservation, and transit system improvements. This project is growth related because it addresses needs from new development. A major goal in the Transportation Master Plan is to create an integrated multimodal system and one that is supportive of land use patterns.

In the near term, the money will be used for issues that arise during the year that are small items required to be constructed as a result of development or to coordinate with a development project. The projects are not known at this time.

Resilience Classification: Essential

### Transportation

	Estimated Total	2021	2022	2023	2024	2025	2026	Projected
	Cost	Recommended	Projected	Projected	Projected	Projected		

<b>Neighborhood Speed Management Progr</b>	\$ 1,600,000	\$ 250,000	\$ 250,000	\$ 275,000	\$ 275,000	\$ 275,000	\$ 275,000	\$ 275,000
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The focus of the Neighborhood Speed Management Program (NSMP) is to reduce speeding traffic on neighborhood streets. This can improve safety and the quality of life in Boulder's neighborhoods. The NSMP is a resident-initiated process with neighbors applying to the city to enter the program. City staff works with several neighborhoods each year to identify the best speed management strategy for each location. For some neighborhoods, education and enforcement are effective tools to address speeding. Some neighborhoods also need traffic calming, which is an active

<b>Pavement Management Program</b>	\$ 29,500,000	\$ 4,775,000	\$ 4,850,000	\$ 4,850,000	\$ 4,900,000	\$ 5,000,000	\$ 5,000,000	\$ 5,125,000
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The City of Boulder's budget priorities for transportation funding are the safety and preservation of the transportation system, including maintaining all streets in a good and safe condition. The Transportation Division has established a Pavement Management Program (PMP) for Boulder's 300-mile street system, which includes inspecting and rating all streets on a three-year interval to maintain awareness of existing conditions and guide where pavement repairs will be made in future years.

The purpose of the Pavement Management Program is to provide the optimal level of funding, timing, and renewal strategies that will keep the citywide street pavement network at or above a "Good" OCI rating. The end result is that the best strategy may be to defer a costly reconstruction on one street in order to complete less expensive treatments on other streets to minimize its deterioration into a more costly type of treatment, such as reconstruction. Street treatments that may take place under this program include mill/overlay, chip-seal, and crack-fill/seal.

Resilience Classification: Essential

<b>Ped Facs Enh Missing Links Crossing</b>	\$ 750,000	\$ 100,000	\$ 115,000	\$ 125,000	\$ 125,000	\$ 135,000	\$ 150,000
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The Pedestrian Facilities budget is an ongoing funding program that includes the installation of missing sidewalk links and pedestrian crossing/safety treatments and potentially social paths and sidewalk widening improvements. The list of identified missing sidewalk links has been prioritized for construction. Crossing treatment improvements are prioritized citywide and include median refuge islands, crosswalk lighting, flashing signs, neck-downs, signing, lighting and/or pedestrian signals.

This program meets the Transportation Master Plan goal of creating an integrated, multimodal transportation system emphasizing the role of the pedestrian mode as the primary mode of travel as it is the beginning and end of every travel trip.

Resilience Classification: Essential

<b>Renewed Transit Vision - Capital EI</b>	\$ 210,000	\$ -	\$ 25,000	\$ 35,000	\$ 50,000	\$ 50,000	\$ 50,000
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This program will provide capital maintenance and upgrades to transit facilities within the city transportation network.

Resilience Classification: Important

<b>Table Mesa Multi-Modal Improvements</b>	\$ 5,500,000	\$ -	\$ 2,500,000	\$ 3,000,000	\$ -	\$ -	\$ -
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This project will upgrade the existing sidewalk along Table Mesa/South Boulder Road bridge over US-36. The sidewalk will be updated to a multi-use path for pedestrians and cyclist to improve mobility between the Park and Ride and transit stop on each side of US36. This project is consistent with Transportation Master Plan goals and is funded in part by federal grant funds.

Resilience Classification: Important

<b>TIP Local Match/TMP Implementation</b>	\$ 10,923,520	\$ 758,520	\$ 915,000	\$ 350,000	\$ 3,000,000	\$ 2,900,000	\$ 3,000,000
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This ongoing funding is for the implementation of capital enhancement projects identified in the Transportation Master Plan that will be prioritized in the current update to the master plan. This money will also be used as local match to leverage potential federal and state funding for project submitted in future years' DRCOG TIP submittal process or other funding match opportunities, developing conceptual plans for projects prior to submitting for possible external funding or for smaller high priority projects identified through the TMP process. If the city succeeds in acquiring external project funds, this money will become the city's funding match. And, in this case, new projects will be created in the CIP that will include the external funding and the city's match.

This budget item allows flexibility to be ready to implement high priority projects that are identified through the TMP update that was completed in 2019. The highest priority projects identified in the TMP that best meet the DRCOG scoring criteria are submitted to compete for federal funding. Prior to finalizing the list of projects to submit for DRCOG TIP funding, staff will work with TAB to identify the best projects and then submit the project list to council for their review prior to submitting for potential funding.

Resilience Classification: Important

<b>Traffic Signal Broadband Fiber</b>	\$ 500,000	\$ 100,000	\$ -	\$ -	\$ 200,000	\$ 200,000	\$ -
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This project will construct infrastructure to connect city traffic signal equipment with the Broadband backbone network being installed by the IT Department.

Resilience Classification: Important

<b>CIP-Capital Maintenance Total</b>	\$ 13,557,000	\$ 1,930,000	\$ 2,405,000	\$ 2,405,000	\$ 2,255,000	\$ 2,276,000	\$ 2,286,000
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<b>Major Capital Reconstruction</b>	\$ 5,100,000	\$ 700,000	\$ 850,000	\$ 850,000	\$ 900,000	\$ 900,000	\$ 900,000
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The Major Capital Reconstruction project provides funding to repair existing transportation assets that are close to or at the end of their useful life. Repairs could be for roadway, bikeway, pedestrian or transit capital assets. This funding is primarily focused on improving the health of minor structures and bridges. This funding will provide the ability to complete the capital repairs that are not eligible for grant funding or to be used as leveraged funds for this type of project as opportunities arise.

# Transportation Capital

## 2021-2026 Capital Improvement Plan

<b>Multiuse Path Capital Maintenance</b>	\$ 2,495,000	\$ 350,000	\$ 425,000	\$ 425,000	\$ 425,000	\$ 435,000	\$ 435,000
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The City of Boulder's budget priorities for transportation funding are the safety and preservation of the transportation system, including maintaining all multi-modal corridors in a good and safe condition. The Transportation Division is charged with providing major maintenance to the off-street multi-use path network. This budget addresses activities such as replacing panels of concrete, flood proofing underpasses and re-decking pedestrian overpasses.  
Resilience Classification: Essential

<b>Ped Facilities Repair, Replace, ADA</b>	\$ 3,756,000	\$ 579,000	\$ 629,000	\$ 629,000	\$ 629,000	\$ 640,000	\$ 650,000
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This ongoing program allows for repair, replacement and construction of existing and new sidewalks and construction of access ramps. Sidewalk repair priorities have been established in the Sidewalk Repair Program and yearly funding is spent accordingly. Compliance with ADA is resulting in additional expenditures for access ramps and driveway modifications.  
This program meets the Transportation Master Plan (TMP) goal of creating an integrated, multimodal transportation system, emphasizing the role of the pedestrian mode as the primary mode of travel as it is in the beginning and end of every travel trip. The program also meets federal ADA requirements of working towards bringing sidewalks and access ramps up to the current federal standards. And, the TMP investment policies identify maintenance as the highest priority item to find.  
Resilience Classification: Essential

### Transportation

	Estimated Total Cost	2021 Recommended	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
<b>Rehab Runway &amp; Eastern Taxiway</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project includes subgrade stabilization, re-paving and re-painting of Runway 8/26 and eastern half of Taxiway Alpha. Design has begun in 2018 and construction is scheduled to begin in 2020. Runway 8/26 is the only runway for powered aircraft and essential for operations at the airport. The runway was last paved in 2001, has an approximate lifespan of 20 years, and this project was included in the 2007 Airport Master Plan CIP schedule. The project is funded 93% by federal and state grant proceeds.

<b>Sidewalk Maintenance</b>	\$ 1,506,000	\$ 251,000	\$ 251,000	\$ 251,000	\$ 251,000	\$ 251,000	\$ 251,000
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The City of Boulder's budget priorities for transportation funding are the safety and preservation of the transportation system, including maintaining all pedestrian corridors and sidewalks in a good and safe condition. The Sidewalk Maintenance budget funds the Miscellaneous Sidewalk Repair Program which shares in sidewalk repairs anywhere in the city with property owners paying for half of the repair costs for sidewalks adjacent to their property, with no out of pocket maximum for residential property owners.  
Resilience Classification: Essential

<b>Signal Maintenance &amp; Upgrade</b>	\$ 400,000	\$ -	\$ 200,000	\$ 200,000	\$ -	\$ -	\$ -
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The Signal Maintenance and Upgrade project is an on-going program that is used for the installation of new traffic signals and signal upgrades. Budgeting as a capital project at \$400,000 every four years as opposed to budgeting one-quarter of this amount every year is consistent with the project implementation, as this is approximately the cost to signalize or upgrade one intersection.

The decision to install a new traffic signal is made on the basis of a signal warrant study, which uses data collected at the study location (peak period traffic volumes and delay, accident history) to determine if the benefits of a traffic signal at that location (potential for reduced side street delay during peak periods, increased pedestrian and cyclist access, potential for reduction in right-angle accidents) outweigh the downsides (increased main street delay, increased side street delay during off-peak periods, increased pedestrian and cyclist delay during off-peak periods, potential for increase in rear-end accidents). Some locations in Boulder that have been identified as potential future signal locations are studied periodically. Other locations are studied based on requests from the community. If there are multiple locations where new signals are desired, they are prioritized based on the

Resilience Classification: Important

<b>Vision Zero Capital Projects</b>	\$ 300,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000
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This program will implement safety measures and mitigation to address hazardous intersections and crossings.

Resilience Classification: Important

<b>CIP-Capital Planning Studies Total</b>	\$ 333,333	\$ -	\$ -	\$ -	\$ 333,333	\$ -	\$ -
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<b>Airport Master Plan</b>	\$ 333,333	\$ -	\$ -	\$ -	\$ 333,333	\$ -	\$ -
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Airport Master Plan for 2024

<b>CIP-New Facility/Infrastructure Total</b>	\$ 10,215,000	\$ 950,000	\$ 5,515,000	\$ 825,000	\$ 975,000	\$ 975,000	\$ 975,000
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<b>28th St Valmont to Iris</b>	\$ 4,700,000	\$ -	\$ 4,700,000	\$ -	\$ -	\$ -	\$ -
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This is a continuation of an existing project for which we have been awarded \$4,700,000 in external grant funds to be awarded in the year 2021. This is for the 28th Street Multi-Modal Enhancements Project in fulfillment of the SH-119 Bus-Rapid Transit Corridor between Longmont and Boulder. Resilience Classification: Important

<b>Multiuse Path - Enhancements</b>	\$ 1,315,000	\$ 200,000	\$ 215,000	\$ 225,000	\$ 225,000	\$ 225,000	\$ 225,000
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This funding is an ongoing program for expanding and improving the off-street multiuse path network. The construction of multiuse path facilities is included in almost all other transportation CIP projects. This program provides additional funding for small-scope multiuse path projects and/or projects not specifically associated with other capital projects.

Projects constructed with this funding meet the Transportation Master Plan goal of developing an integrated multimodal transportation system. Projects will be consistent with the current bike, pedestrian, and transit modal plans as well as the TMP, and the projects are prioritized yearly.

Funds will be spent on implementing the confluence are park connections, including Airport to Andrus as the first connection, Valmont road as second connection priority, and 61st St as a third priority.

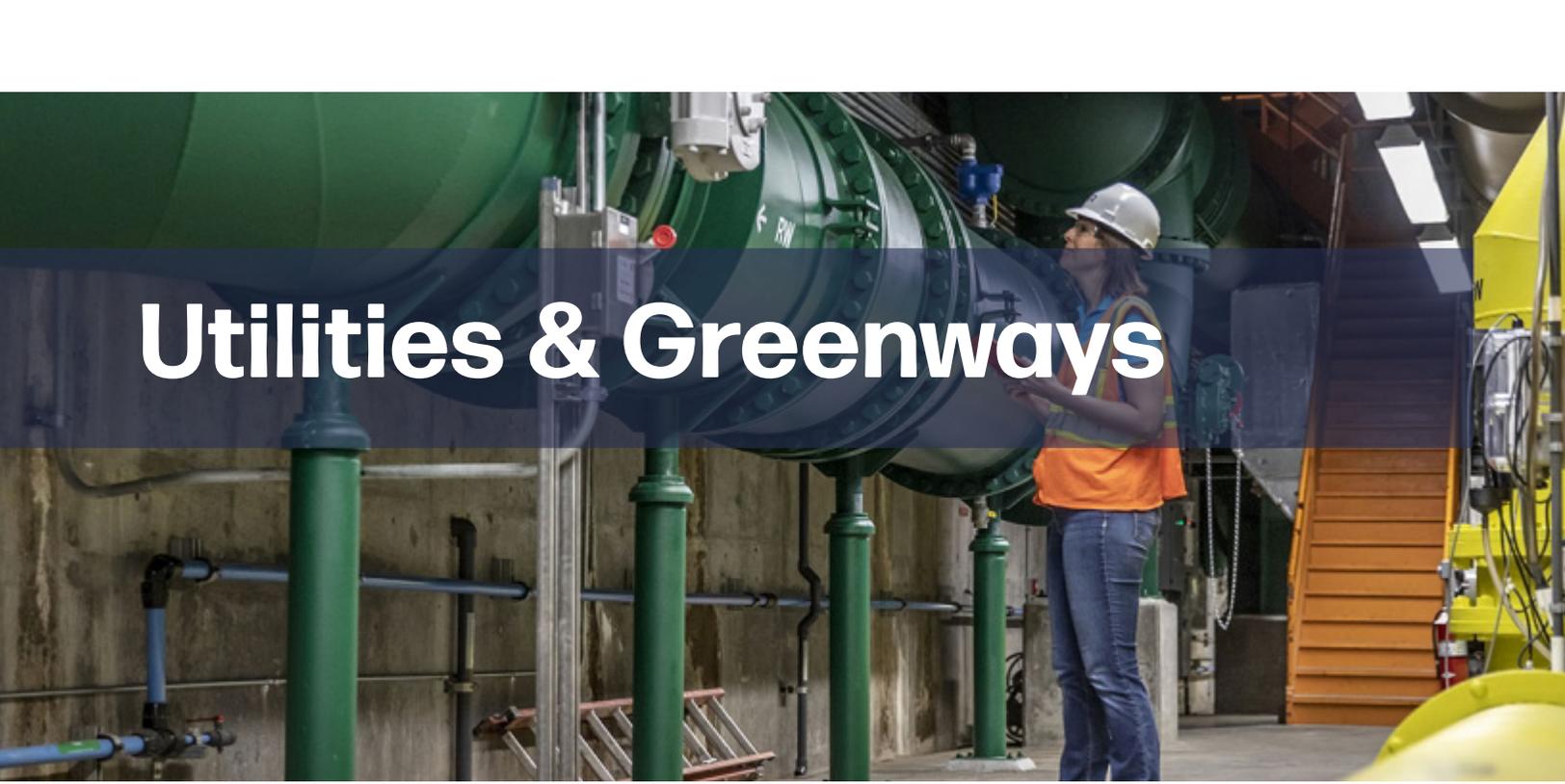
Resilience Classification: Important

<b>TIP Local Match TMP Implementation</b>	\$ 4,200,000	\$ 750,000	\$ 600,000	\$ 600,000	\$ 750,000	\$ 750,000	\$ 750,000
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This ongoing funding is for the implementation of projects identified in the Transportation Master Plan (TMP) that will be prioritized in the current update to the Master Plan. This money will also be used as local match to leverage potential federal and

state funding for project submitted in future years' Denver Regional Council Of Governments (DRCOG) Transportation Improvement Program (TIP) submittal process (the next process starts in 2018 with funding available for 2019/2020) or other funding match opportunities, developing conceptual plans for projects prior to submitting for possible external funding or for smaller high priority projects identified through the TMP process. If the city succeeds in acquiring external project funds, this money will become the city's funding match. And, in this case, new projects will be created in the CIP that will include the external funding and the city's match





# Utilities & Greenways

## Current Focus for Capital Planning and Projects in the 2021 Capital Budget

### *Water Utility*

The capital improvements focus for the Water Utility continues to be on rehabilitation and replacement of existing assets and addresses a combination of source water and treated water needs. The source water needs will include several large capital projects like the Barker Gravity Line rehabilitation. The Barker Supply system represents one of two major water supply pipelines to the Betasso Water Treatment facility. This project involves the rehabilitation of approximately 12 miles of raw water pipeline between Barker Reservoir and Kossler Reservoir and is estimated to be completed over a 12-year period. Additional source water projects include Albion Dam, and the Barker Dam Outlets works.

The capital improvements focus for the treated water system includes water treatment plant (WTP) needs as well as water distribution system needs. Both the Boulder Reservoir and Betasso treatment plants have major asset management related rehabilitation project needs. The Boulder Reservoir Water Treatment Plant has a large capital rehabilitation project identified in the six-year CIP called the 63<sup>rd</sup> Street Electrical Upgrades and High Service Pump Station Replacement project. This project includes the replacement of medium voltage electrical components that are at the end of their useful life. The project also includes the replacement of the facility's six high service pumps which pump treated water from the plant into the city's water distribution system. The Betasso Water Treatment Plant recently underwent major upgrades the past two years to address aging facilities, but additional investment is still required. The six-year CIP includes four major projects to address aging infrastructure and lack of critical treatment process redundancy. These projects will address the disinfection system, the corrosion control system, the backwash system, and the raw water supply system to the facility. These four process components will likely be combined into two large capital projects.

The water distribution system needs include the ongoing small diameter water line rehabilitation program which involves the replacement of approximately four miles of pipe (1% of the system) annually. This program is funded at approximately \$3.5 million per year. In 2020, Utilities staff began a comprehensive evaluation of the water transmission system which is comprised of the system's larger pipes. This analysis will provide information on the 65 miles of the system's larger diameter pipes and will include recommendations for future rehabilitation projects.

# Utilities & Greenways Capital

## *Wastewater Utility*

The capital improvements focus for the Wastewater Utility continues to be on rehabilitation and replacement of existing assets as well as meeting current regulatory requirements. The Wastewater Utility priorities address a combination of wastewater collection system needs as well as capital projects at the Water Resource Recovery Facility (WRRF).

The 2017 Wastewater Collection System Master Plan (WWCSMP) identified four high priority (Tier 1) projects that were recommended to address larger diameter sewers with hydraulic limitations. Three of the four projects have funding identified in the six-year CIP. The largest of these projects is the realignment of the city's main interceptor sewer between 63rd Street and the WRRF. The Interceptor sewer project, which is estimated at \$45-\$50 million, has cash funding of \$10 million and has been identified for a revenue bond in 2022 for an additional \$35-\$40 million. Other high priority WWCSMP projects include the Goose Creek Trunk sewer project and the Baseline & Foothills Trunk sewer project.

The largest WRRF capital project identified in the six-year CIP involves a nutrient removal project to address effluent phosphorus regulations that are expected to be part of the upcoming CDPHE permit to meet Regulation 85. Other projects include the Process Automation System (PAS) Phase II instrumentation and controls project and a new secondary digester cover. It is anticipated that Utilities will bond approximately \$20-\$25 million in 2023 for the projects' construction phase.

The focus for the wastewater collection system will continue on the current sewer rehabilitation program with the goal of rehabilitating or replacing all vitrified clay pipe (VCP) sewers as well as addressing the system's hydraulic limitations identified in the 2017 Wastewater Collection System Master Plan (WWCSMP). The rehabilitation effort is in its fifth year of an ongoing program with a projected 20-year duration. The rehabilitation program utilizes a trenchless technology approach to line the sewers before they collapse. Those sewer pipe sections which cannot be lined are replaced by conventional construction through the open cut program.



# Utilities & Greenways Capital

## ***Stormwater & Flood Management Utility***

The capital improvements focus for the Stormwater and Flood Management Utility will address a combination of flood mitigation projects as well as storm sewer improvement projects.

Major flood mitigation projects identified in the six-year CIP include Gregory Canyon Creek, Fourmile Canyon Creek, and South Boulder Creek. The Gregory Canyon Creek Improvements project will include two phases with the first in design this year. Gregory Canyon Creek Phase I construction funding is identified in the six-year CIP in 2022 at approximately \$8 million. This project, which will provide drainageway improvements to convey the 10-year storm event. This phase will provide improvements between Arapahoe Avenue and Pennsylvania Avenue. The project's second phase is identified outside the 6-yr CIP.

The Fourmile Canyon Creek project will involve improvements at various locations between Broadway Avenue and 19th Street, Utilities staff is coordinating with Transportation staff on the design and construction funding for these projects.

The South Boulder Creek Phase I flood mitigation improvements are identified in the six-year CIP in 2024 at an estimated cost of \$66 - \$96 million. This project will involve the construction of a detention facility on the south side of Hwy US 36 to prevent flood waters overtopping the highway and will provide the protection of approximately 1,900 structures located downstream. The South Boulder Creek Mitigation Plan was completed in 2015. It is anticipated that City Council will provide direction to city staff on the level of flood protection at the June 16, 2020 meeting. Funding has been identified for the project's preliminary and final design phases in the 6-yr CIP.

Flood mitigation plans are anticipated to be completed in 2020 for Upper Goose Creek, Twomile Creek, Skunk Creek, King's Gulch, and Bluebell Creek. These plans will help identify future flood mitigation projects.

Capital improvements for the stormwater collection system will focus on expansion of the system into underserved areas and capacity improvements to address hydraulic limitations identified in the 2017 Stormwater Master Plan (SMP). Specific projects will include an expansion of storm sewer system in the vicinity of Pearl Street from 17th Street to 21st Street. The six-year CIP includes approximately \$4 million in 2021 for this project. Another high priority project involves drainageway improvements and the expansion of the storm sewer system in the upper Goose Creek basin. Open channel improvements have been identified for the reach between 19th Street and Folsom Avenue for an existing section of unimproved channel located behind the homes along Edgewood Avenue. The 2017 SMP identified the Upper Goose Creek basin as the highest Tier 1 priority. This project would involve construction of new storm sewers and the upsizing of existing storm sewers located between 4th Street and 19th Street. The open channel and storm sewer components will be combined into a single project to address localized flooding in the area. The Upper Goose Creek Storm and flood project is funded in 2024 at \$25 million.

## ***Recommended Utility Rates for 2021***

<b>Rates</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Water	7%	8%	8%	6%
Wastewater	5%	5%	5%	5%
Stormwater/Flood Management	7%	12%	12%	12%

# Utilities & Greenways Capital

## Single-Family Residential Monthly Bill Impact

	Monthly Bill 2020 Rates	Monthly Bill 2021 Rates	Monthly Difference
Water	\$41.72	\$45.05	\$3.33
Wastewater	\$37.45	\$39.32	\$1.87
Stormwater	\$17.54	\$19.64	\$2.10
<b>Total</b>	<b>\$96.71</b>	<b>\$104.01</b>	<b>\$7.30</b>

### Greenways

The primary focus of the 2021-2026 Greenways CIP is on flood mitigation, bicycle and pedestrian multi-use paths, and habitat and water quality improvements along Gregory Canyon, Skunk, Twomile Canyon, and Goose Creeks in anticipation of future major drainageway improvements along these corridors. For more information about the timing and details of these projects, please see the Utilities -Stormwater/Flood web page: <https://boulder.colorado.gov/flood/the-creeks-of-boulder-co>.

A secondary focus for the 2021-2026 Greenways CIP is for habitat restoration and streambank stabilization projects along the Greenways corridors. Many streambank areas are degraded, eroding, and in need of restoration. The loss of ash trees, due to Emerald Ash Borer (EAB), has exacerbated this situation. Restoring the degraded streambanks also improves water quality, helps restore the urban tree canopy and supports pollinators and other native species. Funding is also being allocated in 2022 for an update to the Greenways Master Plan, last updated in 2011.

### 2021 Capital Projects

#### Water Utility

- Barker Gravity Line Rehabilitation
- Barker Dam Outlet Works Rehabilitation
- Albion Dam Rehabilitation
- 63<sup>rd</sup> Street Electrical Upgrades & High Service Pump Station Replacement
- Betasso Disinfection & Corrosion Control Improvements
- Betasso Supply & Backwash System Improvements
- Large Meter & Vault Replacement project

#### Wastewater Utility

- Interceptor Sewer Realignment Project
- Goose Creek Trunk Sewer Project
- Baseline & Foothills Trunk Sewer Project
- Sanitary Sewer Annual Lining program
- Water Resource Recovery Facility (WRRF) Phosphorus Project
- Process Automation System (PAS) Phase II project
- Digester Cover Replacement

#### Stormwater & Flood Management Utility

- Gregory Canyon Creek Phase I Improvements
- Fourmile Canyon Creek Improvements (Broadway, 19<sup>th</sup> Street)
- South Boulder Creek Phase I Improvements
- Stormwater Drainage Improvements

# Utilities & Greenways Capital

## 2020 Adjustments (if applicable)

Due to unknowns related to the impact that the COVID-19 pandemic will have on Utility finances, the following 2020 projects have been put on hold as revenues will continue to be monitored.

- Barker Dam and Reservoir \$100,000
- Boulder Canyon Hydro Penstock Repair \$673,012
- Maxwell Hydro/Pressure-Reducing Facility \$185,000
- Meter Replacement Program \$230,000
- Silver Lake Dam \$200,000
- Source Systems Condition Assessment \$350,000
- Water Resource Recover Facility (WRRF) Digester Cover Replacement Design \$200,000
- WRRF Nutrient Compliance Study \$250,000
- WRRF Primary Clarifier Phase 1 Rehab \$115,000

## Operating and Maintenance Impacts

The Utilities CIP identifies numerous projects and programs over a moving six-year period. The CIP projects and programs typically have a minimum estimated cost of \$50,000. There are typically corresponding operational and maintenance (O&M) costs associated with new infrastructure, however, many of projects also result in a reduced maintenance burden that can offset the increased maintenance of other projects. An example of this is the sanitary sewer condition assessment program, which includes the cleaning and TV inspection of the entire sewer system. This annual program has been completed by private contractors for the last four years but will be completed by city maintenance staff beginning in 2020. Greenways habitat maintenance is routinely coordinated with Parks and Open Space maintenance staff. Major drainageway improvements are maintained by the flood maintenance staff and multi-use paths and underpasses are maintained by either Transportation or Parks maintenance, depending upon jurisdiction.

## Unfunded Projects and Emerging Needs

The city's Water, Wastewater, and Stormwater & Flood Management Utilities are enterprise funds that are funded by the rate payers who are provided city services. Enterprise funds are specifically dedicated to those services and cannot be used for other city needs. This is a different funding mechanism than the General Fund, which relies on city sales and use taxes, to fund other city departments. For this reason, Utilities may utilize a slightly different approach in explaining "unfunded projects and emerging needs". Utilities staff prioritize all capital project needs in the various funds through the master plan process and other more detailed evaluations. Projects are scheduled in the CIP based on their level of priority and can be postponed several years to minimize rate increases in a given year. Large capital projects that are funded through revenue bonds may require larger rate increases to cover the bond's debt service. All the projects in the Utilities six-year CIPs are funded if the projected future rate increases are enacted.

There are many factors currently impacting the health and condition of the Greenways system, such as tree loss due to Emerald Ash Borer, pollinator and native species decline, spread of noxious weeds, contamination from pesticide use, and soil erosion. Significant environmental changes are taking place due to climate change compounding these factors and impacting natural ecosystems. Staff believe a collaborative approach across the city and community is needed to better face these challenges. The Greenways Program will continue to partner on projects funded through other departments and incorporating the objectives of the Greenways Program.

# Utilities & Greenways Capital

## CEAP Projects

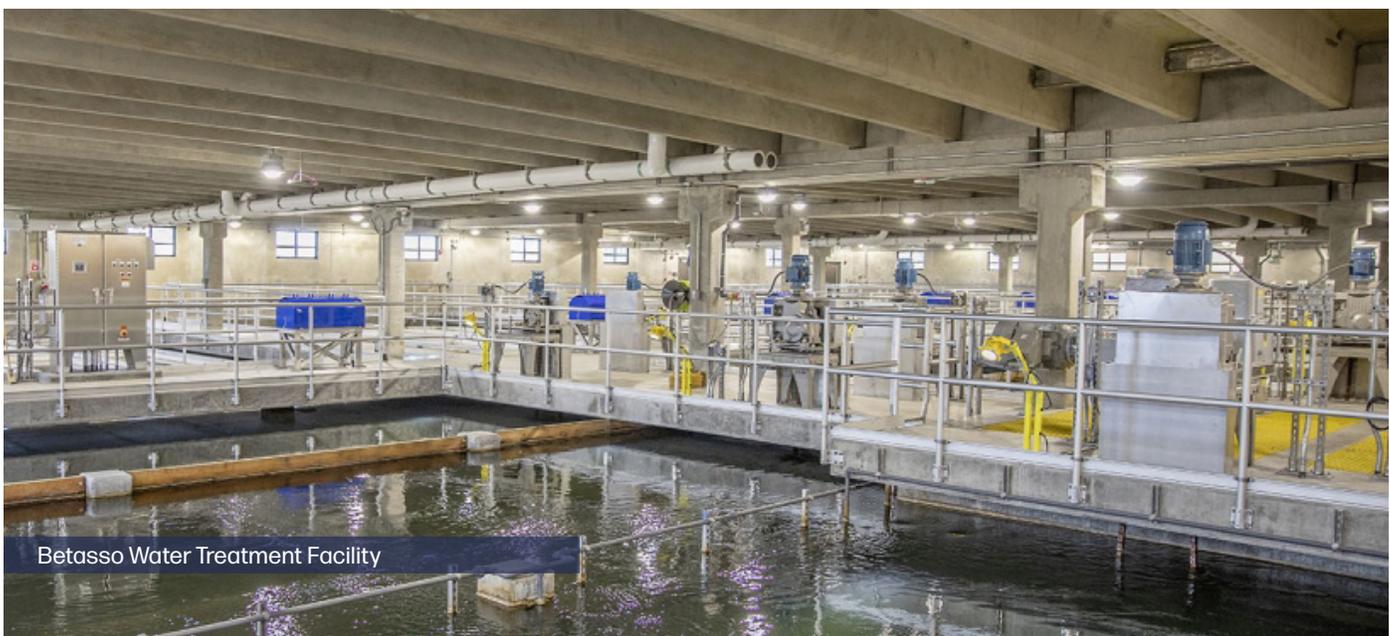
The Interceptor Sewer Realignment project is the type of project that would typically require the completion of a CEAP. Since the interceptor sewer is located in Boulder County, it has triggered the Boulder County 1041 process. The 1041 process requires a comprehensive analysis very similar to the CEAP. These requirements include an extensive alternatives analysis, environmental surveys including T&E species, wetlands, and impacts to floodplains to address the project's benefits evaluated through the lens of environmental, social, and economic impacts. The city's sanitary sewer is a 50-yr old unlined concrete pipe that is at the end of its useful life. The pipe is failing from internal corrosion, is hydraulically insufficient, and was exposed during the 2013 and 2015 flood events when Boulder Creek overflowed its banks and caused significant erosion across the interceptor sewer alignment. This project will involve the construction of approximately 2.5 miles of new large diameter pipe, and the rehabilitation of existing sections of pipe. The project's primary goals will address structural stability, increased capacity, and alignment vulnerability.

## Board Action

The preliminary 2021 Utilities budget and the 2021-2026 CIP was presented to the WRAB on May 18, 2020 and also at their June 15, 2020 meeting. A third WRAB meeting to discuss the CIP was held on July 20, 2020 where the WRAB voted 4-0 to recommend the CIP and rates. The following language was included in the motion:

The Water Resources Advisory Board recommends approval of the 2021-2026 CIP for the Water, Wastewater, and Flood & Stormwater Management Utilities including proposed rate adjustments to support 2021 revenue increases of 8% in the Water Utility, 5% in the Wastewater Utility, and 12% in the Stormwater & Flood Management Utility, for an overall rate increase of 7.5% or \$7.30 per month for average single family residential. WRAB recognizes the seriousness of recommending a double-digit increase for the Stormwater & Flood Utility in a time of great economic pain and uncertainty, but also recognizes that the initiatives supported by this Utility go directly to protecting the health and safety of our residents and cannot be compromised. WRAB also encourages Council to focus on the dollar amount increases, rather than the associated percent increases. In making this recommendation, it is important to WRAB that Utilities continues to expand the customer assistance program.

The Greenways Advisory Committee meeting is scheduled for August 18<sup>th</sup> to review the 2021-2026 Greenways Program CIP and provide a recommendation to City Council.



# Utilities & Greenways Capital

## 2021-2026 Capital Improvement Plan

### Water Utility

	Estimated Total Cost	2021 Recommended	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
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<b>Capital Program Total</b>	\$ 138,984,590	\$ 13,398,913	\$ 54,102,825	\$ 19,749,883	\$ 22,709,930	\$ 18,071,716	\$ 10,951,324
<b>CIP-Capital Enhancement Total</b>	\$ 43,602,240	\$ 3,500,000	\$ 28,750,000	\$ 1,052,476	\$ 9,899,764	\$ 250,000	\$ 150,000
<b>63rd WTF Campus Electrical &amp; HSPS</b>	\$ 20,300,000	\$ 2,000,000	\$ 18,300,000	\$ -	\$ -	\$ -	\$ -

The City owns and operates two potable water treatment facilities that supply water to customers. These are the Betasso Water Treatment Facility (BWTF) rated at 40 million gallons per day (mgd) and the 63rd Water Treatment Facility (63rd WTF) rated at 16 mgd. Initial construction of the 63rdWTF took place in 1969 to provide critical backup supply during times when BWTF is offline for repairs or emergencies. In addition, the facility is required for use of critical water rights from the western slope. Since the 63rdWTF construction, various expansion and improvement projects have been constructed to maintain service and the ability to meet more stringent regulations. Overall, the facility has provided high-level service to City water customers but is aging and needs repairs. The focus of this project is twofold: 1) replacing major power supply and electrical components on the campus and to improve their reliability and redundancy and 2) Repair and replacement (R&R) of the largest power consuming treatment process on campus called the high service pump station (HSPS). The HSPS was built in 1969 and is the sole source of supply to the distribution system from the 63rd WTF. Minor repairs have been implemented over time, but the station is now at its end of useful life. The project also contemplates converting the existing power supply of the station to a lower voltage that is less hazardous and more easily maintained.

<b>Barker Dam Outlet</b>	\$ 10,752,240	\$ -	\$ -	\$ 977,476	\$ 9,774,764	\$ -	\$ -
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This project is categorized as Essential using the Budgeting for Resilience framework. This project will provide funds for the rehabilitation/replacement of the existing outlet works system of Barker Dam. The Barker Dam outlet facilities are over 100-years old and in need of significant rehabilitation. The current configuration of the outlet gates requires that Barker Reservoir be nearly emptied to perform a thorough inspection once every 5-10 years. Reconfiguration of the outlet facilities would potentially eliminate the need to empty the reservoir for gate inspection. As currently envisioned, the project would require construction of a vertical shaft near the north embankment, inlet tunnels and one outlet tunnel, an outlet distribution facility, a pipeline to Barker Gravity Line, and valve house. The outlet facilities would provide the opportunity to develop a hydroelectric generation facility as well. Information regarding the alternative approaches will be provided as part of the Community & Environmental Assessment Process (CEAP).

<b>BWTF Disinfection &amp; Corrosion</b>	\$ 11,600,000	\$ 1,150,000	\$ 10,450,000	\$ -	\$ -	\$ -	\$ -
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The City owns and operates two potable water treatment facilities that supply water to customers. The vast majority of water is supplied to the City via the Betasso Water Treatment Facility (BWTF). Initial construction of the BWTF took place in 1964. Since then various expansion and improvement projects have been constructed to maintain service and the ability to meet more stringent regulations. Most recently items of highest priority were repaired in the 2016 capital improvements project. The next phase of priority repair and replacement (R&R) focuses on two main items: 1) Disinfection capacity and 2) the lime and carbon dioxide chemical feeds systems used for corrosion control. Because these two aspects of the treatment process interact and work together they are being addressed in a single combined project.

Currently regulatory driven disinfection occurs in two tanks known as clearwells. Clearwell #1 is baffled and performs most of the disinfection. Clearwell #2 is not baffled and therefore has limited capacity. Major repairs are required for Clearwell #1 in the next 5 years to repair corroded structural members and replace its interior and exterior coatings. This project focuses on baffling Clearwell #2 or adding disinfection capacity. This will help meet anticipated regulations, will add redundancy to allow for timely repairs to Clearwell #1, and provides needed system reliability improvements to meet level of service goals now through buildout. The project will also address priority repair and replacement (R&R) for the lime and carbon dioxide chemical feeds systems. These critical systems are used for conditioning treated water to prevent corrosion of pipes in the distribution system and to control of lead and copper levels for regulatory compliance.

<b>Green Lake 2 Dam</b>	\$ 350,000	\$ -	\$ -	\$ 75,000	\$ 25,000	\$ 250,000	\$ -
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This project is categorized as Essential using the Budgeting for Resilience framework. This project will provide funds for the evaluation of alternatives and design of the rehabilitation of Green Lake 2 Dam. Green Lake 2 Dam needs extensive rehabilitation to allow continued full storage of water.

<b>Lakewood Hydroelectric/PRV</b>	\$ 200,000	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ 150,000
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This project is categorized as Essential using the Budgeting for Resilience framework. The Lakewood Hydroelectric station is located on the raw water transmission system near Betasso Water Treatment Facility. This project provides ongoing enhancements of hydro-electric equipment at this location as systems age or need to be replaced.

A generator overhaul was completed in 2016 and a pressure reducing valve refurbishment is planned for 2019/2020.

<b>Wittemyer Ponds</b>	\$ 400,000	\$ 300,000	\$ -	\$ -	\$ 100,000	\$ -	\$ -
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This project is categorized as Essential using the Budgeting for Resilience framework. Wittemyer Ponds consists of multiple reservoirs planned for potential use to facilitate city water exchanges. Alternatives for improving the ponds to reservoirs will be considered for final implementation.

<b>CIP-Capital Maintenance Total</b>	\$ 92,422,350	\$ 9,388,913	\$ 24,992,825	\$ 17,537,407	\$ 12,650,166	\$ 17,311,716	\$ 10,541,324
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<b>Albion Dam</b>	\$ 10,853,761	\$ 986,706	\$ 9,867,055	\$ -	\$ -	\$ -	\$ -
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This project is categorized as Essential using the Budgeting for Resilience framework. In 2016, the reservoir underwent emergency repair at the outlet works. In 2017, a rehabilitation alternative study was issued. This project will fund the dam liner, crest and spillway repair as recommended in the Source Water Master Plan, MWH, 2008.

<b>Barker Gravity Pipeline Repair</b>	\$ 27,351,114	\$ 3,782,672	\$ 6,018,967	\$ 4,640,332	\$ 4,815,945	\$ 3,972,156	\$ 4,121,042
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This project is categorized as Essential using the Budgeting for Resilience framework. This project will provide funds for ongoing repairs to the Barker Gravity Pipeline. A rehabilitation segment was placed in 2016 and the results updated the 12-year rehabilitation cost estimates forecast for 2017 to 2028. Grout patching repairs will continue in the segments not being rehabilitated in any given year.

<b>BCH Penstock Repair</b>	\$ 6,763,783	\$ 1,274,492	\$ 1,013,472	\$ 1,054,011	\$ 1,096,171	\$ 1,140,018	\$ 1,185,619
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The BCH Penstock is a pressure pipeline that delivers water from Kossler Reservoir to Boulder Canyon Hydro. This project is categorized as Essential using the Budgeting for Resilience framework. This project will provide funds for analysis and targeted repairs for areas discovered in the inspection in 2019. An analysis will be performed on approximate remaining operational life including recommendations from metallurgical and corrosion experts. The rehabilitation project is scheduled for 12 years at approximately 850 feet per year.

<b>Boulder Canyon Hydro</b>	\$ 250,000	\$ -	\$ -	\$ 250,000	\$ -	\$ -	\$ -
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Boulder Canyon Hydroelectric – Maintenance and Inspection of the installed replacement unit (commercial operation started in 2013) and control systems. This project is categorized as Essential using the Budgeting for Resilience framework.

# Utilities & Greenways Capital

## 2021-2026 Capital Improvement Plan

Water Utility							
	Estimated Total Cost	2021 Recommended	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
<b>Distribution Waterline Replacement</b>	\$ 12,600,000	\$ -	\$ 4,200,000	\$ -	\$ 4,200,000	\$ -	\$ 4,200,000
<p>The City of Boulder Public Works (PW) Department is dedicated to maintaining and improving the quality of life in Boulder by planning for future needs, promoting environmental quality, building and maintaining municipal infrastructure, managing public investments, and protecting health and safety (PW Mission Statement). The utilities division helps meet this goal by ensuring our utility system is engineered, built, operated, and maintained according to industry best practices. One key component is ongoing replacement of treated water pipes in the system that are at the end of their useful life. Timely replacement of old piping helps limit the number and frequency of pipe breaks in the system and the risks they impart on public health, the environment, customer service and cost efficiency of utility services. As of 2020 the City's program replaces about four to five miles of pipe per year, which is approximately a 100-yr replacement frequency. Overall, the success of this program is demonstrated by the reduction of water main breaks from historic levels of &gt;100 breaks per year to current levels of &lt;40 breaks per year. Projects are prioritized through a comprehensive approach that considers overall utility reliability and redundancy, improvements required to serve the City Comprehensive Plan, City Council priorities, safety of the public and operations staff, regulations, available budget and revenues, timing of other PW projects, timing with other City department projects, and pavement management projects. The next phase of work will target pipeline replacement in 4th Avenue from Mapleton to about Linden.</p>							
<b>Hydro Facilities Rehab Program</b>	\$ 387,983	\$ 58,493	\$ 60,833	\$ 63,266	\$ 65,797	\$ 68,428	\$ 71,166
<p>This project is categorized as Essential using the Budgeting for Resilience framework. Hydro maintenance for all facilities. Misc minor items/repairs/upgrades not included in specific CIP budgets.</p>							
<b>Instream Flow Structures and Gaging</b>	\$ 40,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ -	\$ -
<p>This project is categorized as Essential using the Budgeting for Resilience framework. Boulder will install a stream gauge on Boulder Creek downstream of the Rural Ditch headgate and improve flow measurement along the reach. The stream gage will be used to measure instream flow water that Boulder is leasing to users below the headgate.</p>							
<b>Kohler Tank Yard Piping Replacement</b>	\$ 1,000,000	\$ -	\$ -	\$ -	\$ 1,000,000	\$ -	\$ -
<p>The City's potable water system includes a complex system of hydroelectric stations, pump stations, and storage tanks. These critical facilities control pressure, transfer large volumes of water across the City and provide critical water storage for use during short-term periods of high consumer demand, emergency storage for potential times of interrupted water supply, and water to meet fire flow demands. The Kohler site is especially important for water transmission as it a major hub of several of these major infrastructure system components all at the same location. Since their original construction various improvement projects have been completed to maintain service and the ability to meet more stringent regulations. The next phase of priority repair and replacement (R&amp;R) at the Kohler site focuses on yard piping replacement. This piping is old and at the end of its useful lifespan.</p>							
<b>Kossler Dam</b>	\$ 2,750,000	\$ 100,000	\$ 1,500,000	\$ 300,000	\$ 100,000	\$ 750,000	\$ -
<p>This project is categorized as Essential using the Budgeting for Resilience framework. Kossler Dam Face Rehabilitation Project was completed in 2015. Temporary repairs were constructed to the Kossler Reservoir Inlet Structure in 2017. Both the Inlet Structure and the Outlet Structure will require full rehabilitation/replacement within 10 years and is presently scheduled for 2025. Gate analysis 2021 and replacement in 2022/2023.</p>							
<b>Lakewood Pipeline</b>	\$ 384,864	\$ -	\$ -	\$ -	\$ 384,864	\$ -	\$ -
<p>This project provides funding for periodic inspection and maintenance on the Lakewood Pipeline.</p>							
<b>Large Meter Improvements Phase 1</b>	\$ 1,360,000	\$ -	\$ 1,360,000	\$ -	\$ -	\$ -	\$ -
<p>Potable water customers are billed for their water use based a network of nearly 30,000 water meters. Meters in the system are tested by the City in accordance with AWWA best practices and overall provide reliable service to City customers and Utility Billing. However, many cohorts of meters are at the end of predicted lifespan and require replacement. The majority of these meters can be replaced via in-house crews to streamline schedule and save costs. However, some of the meters are located in vaults that need to be replaced due to issues related to age, safe access for operations and maintenance, and space required for modern meter equipment. Four vaults are contemplated with this project phase including:</p> <ol style="list-style-type: none"> <li>1) Broadway &amp; Pennsylvania (CU Large Meter)</li> <li>2) Grandview &amp; 19th (CU Large Meter)</li> <li>3) Folsom Field 4-inch Meter/Vault</li> <li>4) Justice center 6th and Canyon 4-inch Meter/Vault</li> </ol>							
<b>Meter Replacement Program</b>	\$ 425,000	\$ 425,000	\$ -	\$ -	\$ -	\$ -	\$ -
<p>Potable water customers are billed for their water use based a network of nearly 30,000 water meters. Meters in the system are tested by the City in accordance with AWWA best practices and overall provide reliable service to City customers and Utility Billing. However, many cohorts of meters are at the end of predicted lifespan and require replacement. The majority of these meters can be replaced via in-house crews to streamline schedule and save costs.</p>							
<b>Silver Lake Hydroelectric/PRV</b>	\$ 250,000	\$ -	\$ -	\$ 250,000	\$ -	\$ -	\$ -
<p>The Silver Lake Hydroelectric station is located on the raw water transmission system near the Lakewood Reservoir. This project provides ongoing enhancements of hydro-electric equipment at this location as systems age or need to be replaced.</p>							
<b>Skyscraper Dam</b>	\$ 171,071	\$ 171,071	\$ -	\$ -	\$ -	\$ -	\$ -
<p>This project is categorized as Essential using the Budgeting for Resilience framework. Funding is for infrastructure evaluation and gate replacement as recommended in the Source Water Master Plan.</p>							
<b>Source Systems Condition Assessment</b>	\$ 425,829	\$ -	\$ -	\$ -	\$ -	\$ 425,829	\$ -
<p>This project is categorized as Essential using the Budgeting for Resilience framework. An assessment of the components that make up the City's source water system including a detailed inventory of all asset to determine the type of asset, structural and maintenance condition, redundancy, remaining useful life, and approximate replacement or rehabilitation costs.</p>							
<b>Source Water Rehabilitation Program</b>	\$ 1,163,947	\$ 175,479	\$ 182,498	\$ 189,798	\$ 197,390	\$ 205,285	\$ 213,497
<p>This project is categorized as Essential using the Budgeting for Resilience framework. Funding for capital maintenance for the critical source water facilities, hydroelectric, pressure reducing, and reversible pump-generator system components not identified as individual capital projects.</p>							

# Utilities & Greenways Capital

## 2021-2026 Capital Improvement Plan

### Water Utility

	Estimated Total Cost	2021 Recommended	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
<b>Transmission System R&amp;R Program</b>	\$ 21,500,000	\$ 1,500,000	\$ -	\$ 10,000,000	\$ -	\$ 10,000,000	\$ -
<p>The City owns, operates, and maintains an extensive, 65-mile potable water transmission system (i.e., pipes greater than 12-inches in diameter). This system has a replacement value of \$350M or about 20 percent of the value of the treated water system overall. The transmission system is of high importance because it supplies the vast majority of water to the system and has limited valving to isolate segments for repairs and/or emergency response. Historically, the City water transmission replacement program has been very limited as this portion the system has been relatively high functioning with few pipe breaks. Overall, the transmission pipe system has provided acceptable service to City customers but is at a point where reinvestment is needed to address aging infrastructure and to prevent and minimize pipe breaks and/or emergency scenarios. Furthermore, over the past 10-20 years City water demands have "grown into" the capacity of the system that previously could be used for redundancy. A formal Water Transmission Study is ongoing at this time recognizing the transmission system is aging and in need of a prioritized plan for reinvestment. The study is evaluating various key components of the transmission system to maintain high-quality service and flexibility for operations, maintenance, and emergency scenarios now through buildout. Funding is established in this budget cycle to launch and maintain a replacement program to stay on top of aging infrastructure issues.</p>							
<b>Treated Water Misc. R&amp;R</b>	\$ 2,100,000	\$ 350,000	\$ 350,000	\$ 350,000	\$ 350,000	\$ 350,000	\$ 350,000
<p>The City of Boulder owns and operates a complex treated water utility system valued at approximately \$1.7 billion. Overall, these facilities provide high-level service to City water customers, but various components of the system need ongoing repairs and miscellaneous other improvements to address aging infrastructure, equipment obsolescence, and safe/reliable operations. The purpose of this project is to repair or replace miscellaneous capital assets or components within the treated water system as needed throughout the year. This project primarily involves selection and purchase of equipment per typical City purchasing policies.</p>							
<b>Utility Billing Computer System</b>	\$ 125,000	\$ 125,000	\$ -	\$ -	\$ -	\$ -	\$ -
<p>The existing Utility Billing Computer System is aging and needs updates. This project will upgrade the system.</p>							
<b>Water Mains In-House R&amp;R Program</b>	\$ 2,400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000
<p>The City of Boulder Public Works (PW) Department is dedicated to maintaining and improving the quality of life in Boulder by planning for future needs, promoting environmental quality, building and maintaining municipal infrastructure, managing public investments, and protecting health and safety (PW Mission Statement). The utilities division helps meet this goal by ensuring our utility system is engineered, built, operated, and maintained according to industry best practices. One key component is ongoing replacement of treated water pipes in the system that are at the end of their useful life. Timely replacement of old piping helps limit the number and frequency of pipe breaks in the system and the risks they impart on public health, the environment, customer service and cost efficiency of utility services. As of 2020 the City's program replaces about four to five miles of pipe per year, which is approximately a 100-yr replacement frequency. This project focuses on the components of these efforts most effectively performed by in-house City crews. Projects are prioritized through a comprehensive approach that considers overall utility reliability and redundancy, improvements required to serve the City Comprehensive Plan, City Council priorities, safety of the public and operations staff, regulations, available budget and revenues, timing of other PW projects, timing with other City department projects, and pavement management projects.</p>							
<b>Watershed Improvements</b>	\$ 120,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ -	\$ -
<p>This project is categorized as Essential using the Budgeting for Resilience framework. General Watershed improvements for critical as recommended in the 2009 Source Water Master Plan. This project funds ongoing improvements to facilitate continued reliable operation of the watershed source water storage and delivery system. Fund augmentation needs will be assessed at the end of 2019.</p>							
<b>CIP - CAPITAL PLANNING STUDIES</b>	\$ 1,600,000	\$ 350,000	\$ 150,000	\$ 1,000,000	\$ -	\$ 100,000	\$ -
<b>Kohler Hydro/PRV Facility</b>	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ 50,000	\$ -
<p>This project is categorized as Essential using the Budgeting for Resilience framework. The Kohler facility is a treated water pressure reducing and hydroelectric facility located below Betasso Water Treatment Facility. This project is an update to the complete overhaul of the pump valves (2019/2020) which includes: disassembly, inspection, repair and reassembly.</p>							
<b>Maxwell Hydro/PRV Facility</b>	\$ 150,000	\$ 100,000	\$ -	\$ -	\$ -	\$ 50,000	\$ -
<p>This project is categorized as Essential using the Budgeting for Resilience framework. The Maxwell facility is a treated water pressure reducing and hydroelectric facility located below Betasso Water Treatment Facility. This project is to completely replace the pump control valve.</p>							
<b>Sunshine Hydroelectric/PRV Facility</b>	\$ 150,000	\$ -	\$ 150,000	\$ -	\$ -	\$ -	\$ -
<p>The Sunshine facility is a treated water pressure reducing and hydroelectric facility located below Betasso Water Treatment Facility. This project will inspect and rebuild the turbine.</p>							
<b>Treated Water Hydro Study</b>	\$ 250,000	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ -
<p>This project is categorized as Essential using the Budgeting for Resilience framework. The City's potable water system includes two (2) mountain-to-town hydroelectric stations, two (2) in-town hydroelectric facilities, two (2) "reverse pump stations" integrated with the two in-town hydroelectric stations, and three (3) pump stations. There is one (1) stand-alone pressure reducing valve (PRV) station and each of the hydroelectric and system pump stations are equipped with co-located PRVs as well. These facilities serve the primary purpose of controlling pressure and transferring water between the City's three pressure zones in a cost-efficient and safe manner. These facilities have provided acceptable service to City customers but have required ongoing and consistent reinvestment to address aging infrastructure, surge mitigation, or operational issues related to pressure management. Many components of the system are now at a critical point in their life cycle whereby potentially large investments are needed to continue reliable service and to meet City level of service goals now through buildout. The purpose of this study is to confirm the most cost-efficient options for all treated water hydroelectric stations and their adjacent pressure controlling infrastructure. The project includes conceptual-level design for the preferred alternative for yard piping and PRV system at the Sunshine Hydro Campus.</p>							
<b>Water System Master Plan &amp; COS</b>	\$ 1,000,000	\$ -	\$ -	\$ 1,000,000	\$ -	\$ -	\$ -
<p>Utilities Engineering (UE) implements long-term utility planning processes to develop and prioritize projects within the Capital Improvement Program (capital projects), identify and plan utility improvements needed now and through buildout of the Boulder Valley Comprehensive Plan, and document implications for utility rates. As part of this planning process, the UE team periodically executes holistic, long-range master plans to catalogue infrastructure and funding needs anticipated in the water system (source water to customer meters) now and through buildout. The City's current master plan dates back to 2011 and an update is necessary. The purpose of this project is to update the master plan for the water fund as a whole (both source water and treated water systems) and to integrate a Cost of Service study (COS) to confirm appropriate revenue and rate needs near- and long-term as required for financial sustainability of the utility.</p>							

# Utilities & Greenways Capital

## 2021-2026 Capital Improvement Plan

### Water Utility

	Estimated Total Cost	2021 Recommended	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
<b>CIP-New Facility/Infrastructure Total</b>	\$ 1,360,000	\$ 160,000	\$ 210,000	\$ 160,000	\$ 160,000	\$ 410,000	\$ 260,000
<b>Barker Dam Hydroelectric</b>	\$ 150,000	\$ -	\$ 50,000	\$ -	\$ -	\$ -	\$ 100,000
This project is categorized as Essential using the Budgeting for Resilience framework. Analysis and develop hydroelectric potential if preferred as recommended in the Source Water Master Plan, MWH, 2008/2009.							
<b>Carter Lake Hydroelectric</b>	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ 250,000	\$ -
Analyze potential for hydroelectric facility on the city's portion of the Carter Lake Pipeline and then design and build if preferred. This project is categorized as Essential using the Budgeting for Resilience framework.							
<b>NCWCD Conv - Boulder Feeder Canal</b>	\$ 960,000	\$ 160,000	\$ 160,000	\$ 160,000	\$ 160,000	\$ 160,000	\$ 160,000
NCWCD Conv - Boulder Feeder Canal point source drainage inflow improvements on a priority basis.							

### Wastewater Utility

	Estimated Total Cost	2021 Recommended	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
<b>Capital Program Total</b>	\$ 117,354,642	\$ 14,694,831	\$ 55,245,893	\$ 28,923,000	\$ 5,690,918	\$ 5,860,000	\$ 6,940,000
<b>CIP-Capital Enhancement Total</b>	\$ 28,723,918	\$ 2,550,000	\$ 2,090,000	\$ 22,523,000	\$ 230,918	\$ 250,000	\$ 1,080,000
<b>Lower Goose Creek Trunk Sewer Repl</b>	\$ 4,300,000	\$ 1,000,000	\$ -	\$ 3,300,000	\$ -	\$ -	\$ -
One of four Tier One (highest priority) projects identified in the 2016 Wastewater Collection System Master Plan Update, the Goose Creek Trunk Sewer Replacement Project will address structurally deteriorated sections of trunk sewer and improve the ability of this sewer to handle wet weather flows.							
<b>Meter Replacement Program</b>	\$ 315,000	\$ 75,000	\$ 240,000	\$ -	\$ -	\$ -	\$ -
This project is for replacing aging water meters that are used for customer billing and usage information. There are currently over 28,000 meters in the system, and most of them are reaching the end of their useful life at 15 – 20 years old. This project provides funding for a large meter (greater than 2 inch) replacement on an ongoing basis. These meters are tested annually and will be repaired or replaced as needed. The small meter (less than 2 inch) program will begin in 2022 and aim to replace all small meters within 10 years.							
<b>Water Resource Recovery Pumps</b>	\$ 375,000	\$ 75,000	\$ 150,000	\$ -	\$ -	\$ 150,000	\$ -
The existing pumps at the Boulder Water Resource Recovery Facility require rehabilitation. This project will fund the upgrade of those pumps on a recurring basis. The highest priority assets will be funded each cycle.							
<b>WRRF Activated Sludge</b>	\$ 230,918	\$ -	\$ -	\$ -	\$ 230,918	\$ -	\$ -
This project will fund the scheduled rehabilitation of the Boulder Water Resource Recovery Facility's mechanical aeration system, which is a critical system supporting the microbiological process. Specifically, this money is for a preventative maintenance service through a qualified third-party. The typical agreements are 5-years and we pay in advance for annual services.							
<b>WRRF Instrumentation/Control</b>	\$ 2,500,000	\$ 1,400,000	\$ -	\$ -	\$ -	\$ 100,000	\$ 1,000,000
This project will fund the rehabilitation and/or replacement of instrumentation & control (I&C) facilities at the Boulder Water Resource Recovery Facility. These recommendations are based on the 2013 Process Automation System (PAS) Strategic Plan. The PAS Strategic Plan identified \$6,000,000 worth of I&C improvements to be completed over 10 years.							
<b>WRRF Permit Improvements</b>	\$ 1,780,000	\$ -	\$ 1,700,000	\$ -	\$ -	\$ -	\$ 80,000
The Boulder Water Resource Recovery Facility requires improvements and new facilities as required by Federal and State regulation to improve effluent quality, as identified by the State of Colorado Discharge Permit System (CDPS) Permit. This project addresses necessary improvements to remove phosphorus.							
<b>WRRF Permit Improvements - Proj. Bo</b>	\$ 19,223,000	\$ -	\$ -	\$ 19,223,000	\$ -	\$ -	\$ -
The Boulder Water Resource Recovery Facility requires improvements and new facilities as required by Federal and State regulation to improve effluent quality, as identified by the State of Colorado Discharge Permit System (CDPS) Permit. This project addresses necessary improvements to remove phosphorus.							
<b>CIP-Capital Maintenance Total</b>	\$ 88,630,724	\$ 12,144,831	\$ 53,155,893	\$ 6,400,000	\$ 5,460,000	\$ 5,610,000	\$ 5,860,000
<b>Collection System Monitoring</b>	\$ 900,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000
This project provides funds for monitoring of the City's wastewater collection system. Flow monitoring informs capital project design and provides useful information about the impact of rainfall							
<b>Condition Assessment Program</b>	\$ 5,540,000	\$ 730,000	\$ 890,000	\$ 920,000	\$ 960,000	\$ 1,000,000	\$ 1,040,000
The Wastewater Utility Condition Assessment Program is intended to provide an ongoing comprehensive cleaning and assessment of the city's sanitary sewer collection system. There are approximately 370 miles of sanitary sewer pipe in the collection system.							
<b>Interceptor Sewer Realignment</b>	\$ 48,075,000	\$ 3,600,000	\$ 44,475,000	\$ -	\$ -	\$ -	\$ -
The City's existing main sanitary interceptor sewer is at the end of its useful life and is hydraulically insufficient. The interceptor is unlined concrete pipe that is corroding and was exposed during the 2013 flood and 2015 rainstorm. This project is for the re-alignment of the interceptor sewer and rehabilitation of the existing interceptor sewer and will aim to satisfy three primary goals: structural stability, increased capacity and decreased flood vulnerability. Since the project will occur within unincorporated Boulder County, a 1041 (Areas and Activities of State Interest) is required for the project. The county's 1041 process is similar to the city's CEAP process so CEAP is marked below.							
Project estimate increased from \$30M to \$48M based on preliminary design and 1041 process.							

# Utilities & Greenways Capital

## 2021-2026 Capital Improvement Plan

<b>Inverted Siphon Replacement</b>	\$ 3,800,000	\$ 300,000	\$ 3,500,000	\$ -	\$ -	\$ -	\$ -
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Of the 370 miles of sanitary sewer in the city's wastewater collection system, there exists only one inverted siphon. This feature conveys wastewater flow from the majority of Gunbarrel underneath Boulder Creek on the property of the Boulder Water Resource Recovery Facility.

The existing ductile iron siphon was installed in 1976. The 2019 wastewater condition assessment program identified two issues: internal pipe corrosion and the inability to effectively clean and maintain the pipe.

This project will replace the inverted siphon and will allow for future integration of flows that are currently conveyed over Boulder Creek via an elevated pipeline from east Gunbarrel.

<b>Sanitary Sewer Manhole Rehab</b>	\$ 1,740,000	\$ 260,000	\$ 270,000	\$ 280,000	\$ 300,000	\$ 310,000	\$ 320,000
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This project provides for the rehabilitation and improvement to the existing wastewater manholes that are part of the city's wastewater collection system. The program is funded at \$200,000 per year (2018) escalated by an inflation index for future years.

The asset condition assessment shows the need for increased funding to meet system needs. Escalation in program funds begins in 2021.

### Wastewater Utility

	Estimated Total Cost	2021 Recommended	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
<b>Sanitary Sewer Rehabilitation</b>	\$ 22,300,000	\$ 3,400,000	\$ 3,500,000	\$ 3,600,000	\$ 3,800,000	\$ 3,900,000	\$ 4,100,000

This project provides for the rehabilitation and improvement to the existing sanitary sewer piping of the city's wastewater collection system. The program is funded at approximately \$2,500,000 per year (2014) escalated at 4% annually in order to rehabilitate the entire system in approximately 20 years. The objectives of rehabilitation are to prevent pipe failure, improve system hydraulics, reduce infiltration of groundwater, and reduce ongoing maintenance needs.

<b>Utility Billing Computer System</b>	\$ 62,500	\$ 62,500	\$ -	\$ -	\$ -	\$ -	\$ -
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The existing Utility Billing Computer System is outdated and needs updated. This project will update the system.

<b>WRRF Digester Cleaning</b>	\$ 142,331	\$ 142,331	\$ -	\$ -	\$ -	\$ -	\$ -
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The Boulder Water Resource Recovery Facility has a primary and secondary digester. This project is to provide cleaning on a 10-year cycle. The last time the primary was cleaned was 2012, and the secondary was cleaned in 2014.

<b>WRRF Digester Complex</b>	\$ 3,250,000	\$ 3,250,000	\$ -	\$ -	\$ -	\$ -	\$ -
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This project is to replace the Water Resource Recovery Facility secondary digester floating cover. The cover has tipped and failed on several occasions in recent years taking the system offline and limiting its ability to handle gas and interrupting wastewater treatment.

<b>WRRF Primary Clarifiers</b>	\$ 770,893	\$ -	\$ 70,893	\$ 700,000	\$ -	\$ -	\$ -
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The Water Resource Recovery Facility's primary clarifiers are concrete circular settling tanks with rotating steel mechanisms to separate solids from the water. They are located after the headworks and before the aeration basins (biological process). The mid-term rehabilitation in 2023 will recoat the rotating mechanisms. The long-term replacement in 2029 will replace mechanisms, drives, walkway bridges, and effluent weirs, baffles, and launders.

<b>WRRF Rehabilitation</b>	\$ 1,500,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000
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The Wastewater Utility Asset Management Planning Tool identified miscellaneous rehabilitation projects not identified in master plan documents. This funding could be for one project or several smaller projects.

<b>WRRF Secondary Clarifiers</b>	\$ 550,000	\$ -	\$ 50,000	\$ 500,000	\$ -	\$ -	\$ -
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Secondary clarification is an essential unit process of the overall treatment system at the Boulder WRRF. Similar to the primary clarifiers, the internal componentry is submerged in wastewater and needs repair and rehabilitation periodically, and eventual replacement. This project is to repair the internal mechanism to provide full-utilization of the asset.

# Utilities & Greenways Capital

## 2021-2026 Capital Improvement Plan

Stormwater & Flood Management Utility							
	Estimated Total Cost	2021 Recommended	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
<b>Capital Program Total</b>	\$ 139,075,927	\$ 9,285,391	\$ 14,345,078	\$ 7,272,982	\$ 96,672,471	\$ 4,806,821	\$ 6,693,185
<b>CIP-Capital Enhancement Total</b>	\$ 122,166,042	\$ 6,682,674	\$ 11,704,853	\$ 4,529,548	\$ 93,812,500	\$ 1,836,851	\$ 3,599,616
<b>2017 MP -Wonderland Creek 1 Stm Sew</b>	\$ 386,896	\$ 386,896	\$ -	\$ -	\$ -	\$ -	\$ -
The storm sewer system in Broadway between Fourmile Canyon Creek and Wonderland Creek requires improvements. This project expands the storm sewer system in this area to provide a sufficient level of service.							
<b>Boulder Creek Flood Mitigation</b>	\$ 684,285	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 684,285
The Boulder Creek Restoration Plan was accepted by City Council in February 2016 and identified various improvements along Boulder Creek and Boulder Slough. This project will provide funds							
<b>East Pearl</b>	\$ 3,862,873	\$ 3,862,873	\$ -	\$ -	\$ -	\$ -	\$ -
The storm sewer system in Downtown Boulder along Pearl Street from 16th Street to 21st Street requires improvements. The master plan project expands the storm sewer system in this area to provide a sufficient level of service.							
<b>Fourmile Misc Flood Mitigation</b>	\$ 427,965	\$ -	\$ -	\$ -	\$ -	\$ 202,775	\$ 225,190
This project provides funding to add an additional culvert at Broadway in conjunction with the Broadway reconstruction project. It will be used for general flood mitigation efforts along the drainage in future years. This project is categorized as "Essential" using the Budgeting for Resilience framework.							
<b>Greenways Program - Flood fund</b>	\$ 585,000	\$ 97,500	\$ 97,500	\$ 97,500	\$ 97,500	\$ 97,500	\$ 97,500
This funding will provide Utilities contributions to the overall Greenways Program. Funding will be prioritized with other funding in the Greenways CIP. These funds will be combined with funding from the Transportation Fund. This project is for an ongoing funding program. This project is categorized as "Important" using the Budgeting for Resilience framework.							
<a href="https://boulder.colorado.gov/water/greenways-program">https://boulder.colorado.gov/water/greenways-program</a>							
<b>Greenways Program-Lottery Fund</b>	\$ 906,402	\$ 151,067	\$ 151,067	\$ 151,067	\$ 151,067	\$ 151,067	\$ 151,067
The funding will provide Lottery funds contributions to the overall greenways program. Funding will be opportunistic and prioritized with the other funding in the Greenways CIP. These funds will be combined with funding from the Transportation and Utilities Fund. This project is for an ongoing funding program.							
<a href="https://boulder.colorado.gov/water/greenways-program">https://boulder.colorado.gov/water/greenways-program</a>							
<b>Gregory Creek Flood Mitigation</b>	\$ 9,225,219	\$ -	\$ 8,224,574	\$ -	\$ -	\$ -	\$ 1,000,645
A flood mitigation plan for Gregory Canyon Creek was approved by City Council in December 2015. The plan identified various improvements, primarily involving replacement of culverts to increase the conveyance capacity of the channel to carry a 10-year storm event. This project is categorized as "Essential" using the Budgeting for Resilience framework.							
<a href="https://boulder.colorado.gov/flood/gregory-canyon-creek-flood-mitigation-study">https://boulder.colorado.gov/flood/gregory-canyon-creek-flood-mitigation-study</a>							
<b>Local Drainage Improvements</b>	\$ 6,546,407	\$ 986,949	\$ 1,026,427	\$ 1,067,484	\$ 1,110,183	\$ 1,154,591	\$ 1,200,774
This capital project provides funds to improve local drainage problems which are small enough to be outside of the scope of a master planning effort. Most work funded by this program is intended to address system deficiencies highlighted through customer complaints. Funding is also used to supplement the storm sewer rehabilitation program.							
<b>South Boulder Crk Flood Mitigation</b>	\$ 72,000,000	\$ 1,000,000	\$ 2,000,000	\$ 3,000,000	\$ 66,000,000	\$ -	\$ -
This project is to mitigate flooding in the West Valley from South Boulder Creek based on recommendations in the 2015 South Boulder Creek Flood Mitigation Plan. This project eliminates overtopping of US36 during a 100-year storm event and greatly reduces downstream flood risks. This project is the initial phase and includes construction of a regional flood detention pond located just south of US36. It is anticipated that bond proceeds will be used to fund construction.							
<b>Stormwater Quality Improvements</b>	\$ 1,309,282	\$ 197,390	\$ 205,285	\$ 213,497	\$ 222,037	\$ 230,918	\$ 240,155
This program will fund stormwater quality projects as identified in the Stormwater Master Plan and the stormwater quality engineering staff to improve water quality in Boulder Creek and its tributaries. This funding can be used for multiple efforts such as infrastructure maintenance, installation and planning studies.							
<b>Upper Goose Creek</b>	\$ 26,231,713	\$ -	\$ -	\$ -	\$ 26,231,713	\$ -	\$ -
There is extensive localized flooding in the upper Goose Creek basin. This project would enlarge the channel to provide increased capacity between 19th Street and Folsom Street in order to construct storm sewer improvements in the upper basin.							
<b>CIP-Capital Maintenance Total</b>	\$ 12,371,043	\$ 1,918,432	\$ 1,928,569	\$ 2,003,312	\$ 2,090,244	\$ 2,169,454	\$ 2,261,032
<b>Drainageway Maintenance/Enhancement</b>	\$ 3,580,000	\$ 540,000	\$ 560,000	\$ 580,000	\$ 610,000	\$ 630,000	\$ 660,000
The Drainageway Maintenance/Enhancement fund is intended to provide for larger maintenance related projects along the city's 16 major drainageways. This funding will address ongoing sediment removal efforts as well as large scale vegetation removal along the drainageways including efforts relating to the city's Emerald Ash Bore (EAB) removal program. This work will be performed by qualified private contractors. This project is categorized as "Essential" using the Budgeting for Resilience framework.							
<b>Storm Sewer Rehabilitation</b>	\$ 4,364,272	\$ 657,966	\$ 684,285	\$ 711,656	\$ 740,122	\$ 769,727	\$ 800,516
The program provides funds for the rehabilitation or replacement of existing storm sewers that have reached the end of their useful life.							

# Utilities & Greenways Capital

## 2021-2026 Capital Improvement Plan

### Stormwater & Flood Management Utility

	Estimated Total Cost	2021 Recommended	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
<b>Transportation Coordination</b>	\$ 4,364,272	\$ 657,966	\$ 684,285	\$ 711,656	\$ 740,122	\$ 769,727	\$ 800,516

This program will fund the reconstruction of existing storm sewers, the construction of new storm sewers and water quality improvements as part of on-going Transportation Division improvement projects. This project is for an ongoing funding program.

<b>Utility Billing Computer System</b>	\$ 62,500	\$ 62,500	\$ -	\$ -	\$ -	\$ -	\$ -
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This project is for the future upgrade of the Utility Billing Computer System

<b>CIP-Land Acquisition Total</b>	\$ 4,538,843	\$ 684,285	\$ 711,656	\$ 740,122	\$ 769,727	\$ 800,516	\$ 832,537
<b>Preflood Property Acquisition</b>	\$ 4,538,843	\$ 684,285	\$ 711,656	\$ 740,122	\$ 769,727	\$ 800,516	\$ 832,537

This project provides on-going funding for the purchase of properties from willing sellers in areas prone to flooding especially the city's high hazard regulatory area. The city periodically updates its flood mapping to reflect changing conditions and improvements in flood modeling. The highest risk properties are identified and prioritized for purchase, based on updated mapping for each of the drainageways. This project is categorized as "Important" using the Budgeting for Resilience framework.

The project is for an ongoing funding program. Funding has been escalated to reflect inflation.



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# CEAP

Project planning and design for major capital projects takes a project outlined in a master plan and provides more detailed assessment to determine location, function, and design alternatives and preferred approaches. The process for review and approval of individual projects is identified in the annual CIP and budget approval process. At this time, various processes may be identified for a specific project.

- **Concept Plan and Site Review:** Concept Plans and Site Plans are reviewed by the interdepartmental staff Development Review Committee, departmental Advisory Boards, Planning Board, and City Council (call-up option).
- **Community and Environmental Assessment Process (CEAP):** The CEAP provides a framework for balanced and thoughtful consideration of environmental and social issues in the preliminary planning and design of capital projects. It also provides a forum for public discussion of broad level project issues relative to master plans and overall community goals. It is a tool to aid in the development and refinement of project design and impact mitigation options.
- **Project-Specific Community Process and Design:** Many projects are not required to go through concept and site review and would not benefit from a CEAP process. These typically have a project-specific design and public process to efficiently and appropriately identify community needs, concerns, and preferences. Many projects have been assessed through facility studies, area or facility planning processes, mitigation plans, or other studies. The processes are collaborative with multiple city and/or county departments.



# CEAP

## Projects Recommended for a CEAP

The [Appendix](#) to Title 2 of the Boulder Revised Code instructs that major capital improvement projects should be handled in accordance with the City Plans and Projects Handbook, dated November 2007. As such, a list of projects identified to undergo a CEAP is provided with the annual capital budget.

CEAP reviews are prepared when projects are in the site location and facility design phase. The primary purpose of the CEAP is to encourage the consideration of potential social and environmental impacts in planning and decision-making and, ultimately, to arrive at actions that achieve the objectives of the project with the fewest impacts. The intent of the CEAP is to make project planning more efficient by considering issues in advance of implementation.

CEAP findings are submitted by departments to their respective advisory board for review as part of CIP project approval. For those departments that do not have an advisory board, the Planning Board is responsible for reviewing CEAP findings as part of project approval. Council has the opportunity to call up projects for their review and approval. For those departments that do not have an advisory board, Planning Board is responsible for reviewing CEAP findings as part of project approval. The following capital improvement projects included in the 2020-2025 CIP were recommended to complete a Community and Environmental Assessment Process (CEAP).

### *Transportation*

**Downtown Boulder Transit Station Improvements:** This project will expand the number of bays along Canyon Boulevard and 14th Street, adjacent to the Downtown Boulder Transit Station. This project is in fulfillment of the Renewed Vision for Transit goals and is funded in part by federal grant funds.

**Arapahoe Multi-Use Path/Transit Enhancements:** This project will upgrade existing and missing sidewalk sections to multi-use along Arapahoe between Foothills and Cherryvale. It will also enhance existing transit stops and access along the corridor. This project is consistent with the Transportation Master Plan and the East Arapahoe Transportation Plan goals and is funded in part by federal grant funds.

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