Boulder City Council
STUDY SESSION

Tuesday
August 9, 2016
6-9 p.m.

6-8 p.m.
Review of the Draft 2017-2021
Capital Improvement Program (CIP)

8-9 p.m.
Energy Codes
Long-Term Strategy and Proposed Near Term Updates and Implementation Plan
(materials available on August 4)

Council Chambers
Municipal Building
1777 Broadway

Submit Written Comments to City Council, ATTN: Lynnette Beck, City Clerk, 1777 Broadway, P.O. Box 791, Boulder, CO 80306 or Fax to 303-441-4478 or E-mail: council@bouldercolorado.gov

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CITY OF BOULDER
STUDY SESSION

TO: Mayor and Members of Council

FROM: Jane S. Brautigam, City Manager
Bob Eichem, Chief Financial Officer
David Driskell, Executive Director of Community Planning and Sustainability (PH&S)
Maureen Rait Executive Director of Public Works
Cheryl Pattelli, Director of Finance
Peggy Bunzli, Executive Budget Officer, Finance
Jean Gatza, Senior Planner, PH&S
Milford John-Williams, Budget Analyst, Finance
CIP Peer Review Team
CIP Staff Team

DATE: August 9, 2016

SUBJECT: City Council Study Session
Review of the Draft 2017-2022 Capital Improvement Program (CIP)

PURPOSE

The purpose of this item is to present the Draft 2017-2022 Capital Improvement Program (CIP) to the City Council. The study session provides Council with an opportunity to ask questions and comment on recommended capital projects in the Draft 2017-2022 CIP prior to the City Manager's submission of the 2017 Recommended Budget to the City Council at the end of August.

BACKGROUND

Overview

The City of Boulder's Draft 2017-2022 CIP includes total funding of $454.4 million for 171 projects. 107 projects are recommended for funding in 2017, for a one year total of $61.2 million. Additional details are included below in the Financial Summary.

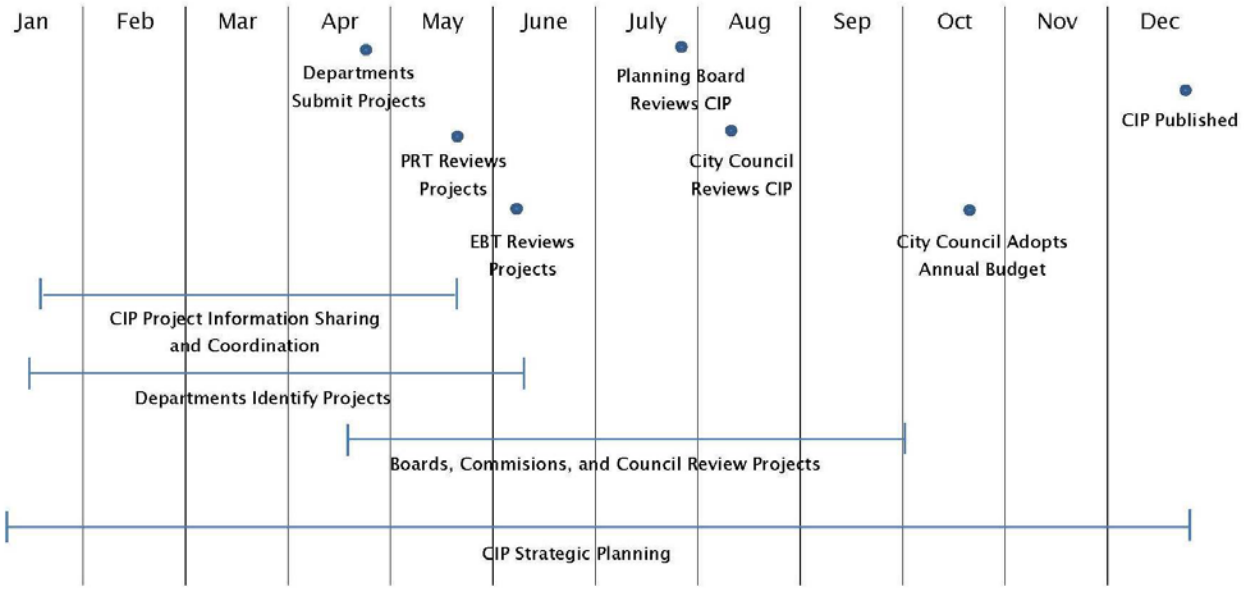
The CIP is a six-year plan for maintaining and enhancing the city's public infrastructure by correcting current facility deficiencies and constructing new service delivery infrastructure. The CIP provides a forecast of funds available for capital projects and identifies all planned capital improvement projects and their estimated costs over the six-year period. The Draft 2017-2022 Capital Improvement Program

is available at the following link: Draft 2017-2022 CIP.

The CIP document contains planned project funding summaries organized by department, project type, and fund; detail sheets for every project and program included in the plan; an interactive map illustrating the location of projects throughout the city; links to corresponding strategic or master plans, when available; and narratives describing the rationale behind project prioritization. The document is organized into five main parts: an introduction, funding summaries, highlight sections, department overviews and projects, and appendices. The highlights included are: a Capital Investment Bond projects update, information on asset assessment work being done across the city, information on Community, Culture and Safety Tax projects, information on Central Boulder long-term planning, and information on the use of Development Excise Tax (DET) and impact fee funds to support growth-related capital projects. The appendices include information on unfunded capital needs and strategies to address these needs in the future, and information on projects recommended to undergo a Community and Environmental Assessment Process (CEAP).

Projects are selected for inclusion in the CIP through a process that involves matching available resources with the identified needs and priorities of the community. **Figure 1** diagrams the annual CIP process. To create a citywide understanding of which projects are chosen for inclusion in the CIP, and to ensure individual department priorities for CIP funding are aligned with city goals, the City developed CIP Guiding Principles to shape capital planning decisions made throughout the CIP process. During this year's CIP process, the CIP Guiding Principles were reviewed and updated to better reflect the Sustainability Framework as the overarching guide to align capital investment with community priorities, and to be consistent with city financial policies. The purpose, intent and use of the CIP Guiding Principles remain unchanged. These principles can be found on page 3 of the Draft 2017-2022 CIP and are included as **Attachment A** to this memo. Every project in the Draft 2017-2022 CIP addresses at least one of these principles, and many projects address all of them.

Figure 1, Annual CIP Process



The 2017-2022 CIP continues to focus on two major areas derived from the CIP Guiding Principles (see **Attachment A**): Maintaining and Enhancing Existing Assets, and Providing Capacity and Flexibility.

Maintaining and Enhancing Existing Assets
One of the CIP Guiding Principles states that the CIP should focus on sustaining or improving maintenance of existing assets, based on consistent asset management principles and practices. Maintaining or improving existing assets maximizes the return the city gets on an investment. A total of 78 percent ($352 million) of the 6-year CIP is allocated to repair, rehabilitation, or enhancements of existing facilities. In 2017, 78 percent of proposed funding is also allocated to maintaining and enhancing existing assets. As a part of the 2017-2022 CIP strategic planning work, staff is continuing expansion of current asset inventory and assessment to a broader citywide facility and asset assessment and an ongoing process for planning, funding and scheduling necessary maintenance and replacement of capital assets. While some departments have developed detailed inventories, establishing a citywide baseline inventory is the first step of a multi-year process and progress continues to be made in numerous areas across the city, including in Parks and Recreation, Transportation, Utilities and Facility and Asset Management (FAM). Additional information regarding asset assessment work can be found in the Special Highlight on Asset Assessment section of the Draft 2017-2022 CIP.

Providing Capacity and Flexibility
The 2017-2022 CIP builds on the long-term financial planning that the city has been engaged in for several years. This can be seen in numerous ways, for example:

- Leveraged funding – such as successful attainment of hazard and mitigation grants, DRCOG/Transportation Improvement Program (TIP) funding, and public private partnerships
- Maintaining appropriate reserve levels to maintain a strong bond rating and have the ability to address emergencies and natural disasters – this is evidenced in recent bond processes and the 2017-2022 CIP maintains appropriate reserves in all areas.
- Having the ability to address emerging needs – the city's policy of using one-time funding only for one-time expenditures has served the organization well. Recent example include the city's ability to fund initial renovation needs at the Brenton Building at Alpine-Balsam, to address immediate safety and energy efficiency issues, and to cover due diligence costs related to a potential public-private partnership to develop a city-owned parking garage in conjunction with a boutique hotel development on University Hill. The proposed public partnership on University Hill would help meet council's goal of achieving year-round economic vitality on the Hill by bringing additional public parking, adding diverse commercial uses (including hotel and retail) and potentially catalyzing additional investments in the area. One-time General Fund dollars are being used during this early analysis phase. If the project does go forward, it will be included in a future CIP.
- Responding to community priorities – There are various ways in which the CIP process incorporates the flexibility to respond to evolving priorities. For example, an increase in funding levels post 2013 Flood, in response to community concern, has allowed for accelerated CIP investment to assess and address vulnerabilities in the water, wastewater and stormwater/flood management systems. The Draft 2017-2022 CIP includes funding, reprioritized from other parks project funding, to address the most critical deficiencies at the Scott Carpenter Aquatic facility.
- Working to identify new sources of revenue for new projects – along with grant funding (noted above), recent voter approved tax increases for Transportation, and the temporary Community, Culture and Safety tax measure, are providing funding for both improved maintenance and enhancements of existing assets, as well as important investment in the future of the

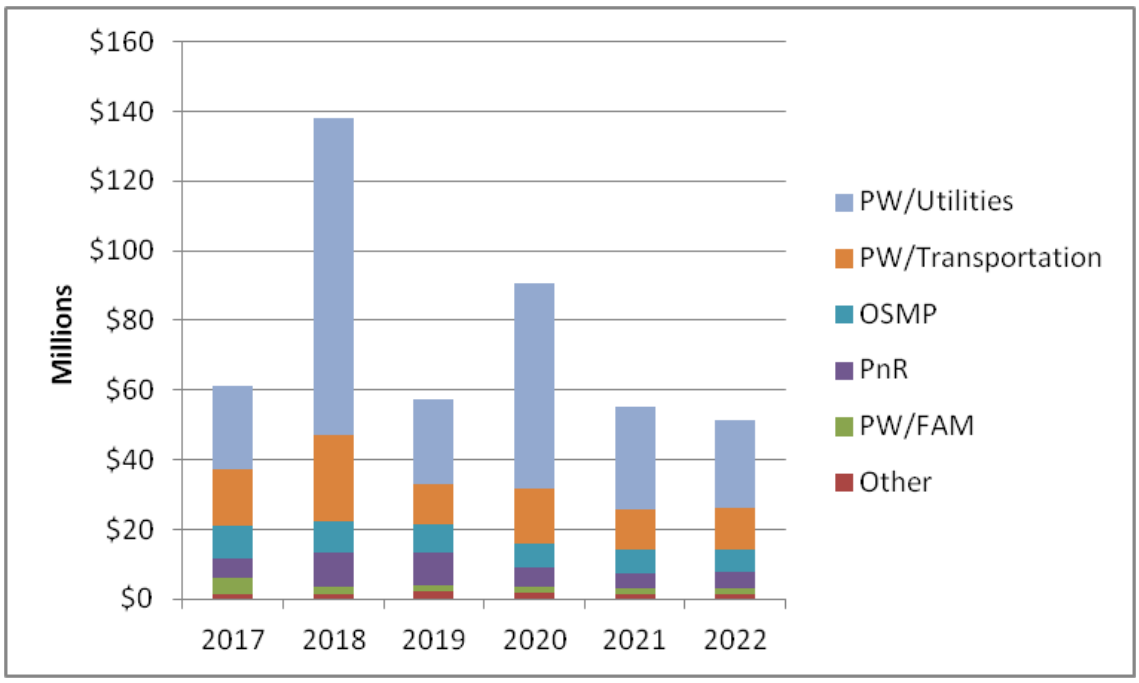
community. Another example is the use of increased property tax revenues in the General Fund, stemming from an increased assessed valuation of property in 2015, to cover the debt service on the purchase of the former Boulder Community Health-Broadway campus site. The purchase of this site, now referred to as Alpine-Balsam, provides a unique and valuable opportunity to help ensure that future redevelopment of the site fits the community's vision and goals, responds to community needs, and enhances the character of the neighborhood.

Civic Area
An update on the Civic Area parking changes is included in a separate memo as **Attachment E** to this memo

Greenhouse Gas (GHG) and Energy Use Changes with Capital Projects
In recent years, members of the Planning Board and City Council have requested information about GHG or energy use (preferably reduction achieved) when discussing the capital improvements program. Staff convened an interdepartmental team to assess the availability of data and a consistent approach that would provide meaningful information. Preliminary information was provided with the presentation of the Draft 2016-2021 CIP last year. Additional and updated information is included in **Attachment C** to this memo.

FINANCIAL SUMMARY
For 2017 through 2022, 11 departments, divisions or programs have projects funded in the CIP, totaling a $454.4 million investment over 171 capital projects. The amount of money per department varies year to year depending on the type and cost of projects recommended for funding in that year and the amount of external funding received. Many departments have dedicated revenue sources that keep CIP funding relatively constant or that allow departments to save up for larger projects over time. For example, both Open Space & Mountain Parks and Parks & Recreation have dedicated revenue sources. **Figure 2** displays the share of total 2017-2022 CIP funding by each department.

Figure 2, Funding by Department

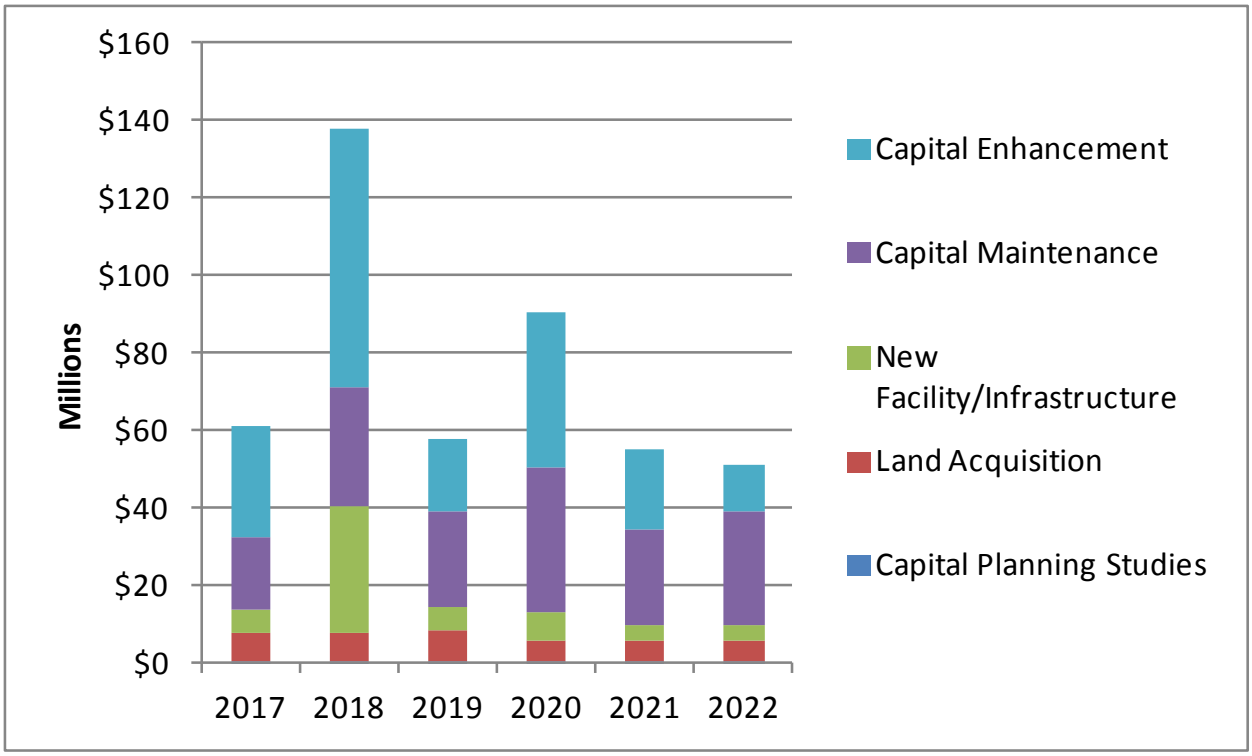


As stated above, a total of 78 percent ($353.2 million) of the 6-year CIP is allocated to repair, rehabilitation, or enhancements of existing facilities. Of the remaining CIP, 13 percent of the 6-year CIP is allocated to new construction ($60.5 million). Eight percent of the 6-year CIP is allocated to Land Acquisition ($37.9 million). The remaining $2.9 million (less than 1 percent) is for study and analysis projects. **Table 1** and **Figure 3** shows the distribution of CIP funds by project type.

Table 1, Percent Funding by Project Type

Project Type	6-year Amount	Percentage
Existing Facilities (Enhancements & Maintenance)	$353,177,614	78%
New Capital Facilities / Assets	$60,492,000	13%
Land & Asset Acquisition	$37,862,941	8%
Capital Planning Studies	$2,880,000	<1%

Figure 3, Funding by Project Type



BOARD AND COMMISSION COMMENT

Departmental advisory boards have reviewed the draft CIP related to their respective departments, and the recommendations are below. In addition, the Planning Board reviewed the

full draft CIP according to their role defined in the Charter and Boulder Revised Code, on July 28, and the Planning Board's recommendation is noted below.

Downtown Management Commission
The Downtown Management Commission (DMC) will be reviewing the Community Vitality CIP at their August 19 meeting. Information pertaining to the August 19 DCM review of the Community Vitality CIP will be provided to council after that date. The current Community Vitality CIP is unchanged from the CIP that was approved unanimously by the DCM at their July 2015 meeting.

Greenways Advisory Committee
The Greenways Advisory Committee met on May 17, 2016 and recommended approval 5-0 of the 2017-2022 Greenways Program CIP to Planning Board and City Council.

Open Space Board of Trustees
At its June 8, 2016 meeting, the Open Space Board of Trustees unanimously passed a motion approving the 2017-2022 OSMP CIP and recommended approval of the same by the Planning Board and City Council.

Parks and Recreation Advisory Board
The Parks and Recreation Board (PRAB) unanimously approved the following two resolutions in support of the BPRD 2017-2022 CIP at the March 28, 2016 meeting: a motion to approve the 2017 recommended expenditures from the Permanent Parks and Recreation Fund and a motion to approve the recommended 2017-2022 Parks and Recreation Department Capital Improvement Program (CIP).

Transportation Advisory Board
The Transportation Advisory Board (TAB) unanimously approved the recommendation of the 2017-2022 Capital Improvement Program Budget on June 13, 2016.

Water Resources Advisory Board
The Water Resources Advisory Board held a public open house in March for members of the public and the board to discuss CIP projects. The preliminary 2017 Utilities budget and 2017-2022 CIP were presented to the WRAB on April 18, 2016 as a discussion item. The WRAB hosted a public hearing and continued their discussion of the preliminary 2017 Utilities budget and 2017-2022 CIP on May 16, 2016. At the June 20, 2016 meeting WRAB hosted a public hearing during which the board voted 4-0 to recommend approval of the proposed CIP.

Planning Board
The Planning Board reviewed the draft CIP on July 28, 2016, pursuant to Charter Section 78. Planning Board's role in reviewing the CIP is to:

1. Evaluate CIP projects in the context of the long-term, "big picture" policies of the Boulder Valley Comprehensive Plan (BVCP);
2. Make recommendations on the scope, priorities, and scheduling of CIP projects;
3. Make recommendations on resolving policy issues raised by the proposed location and design of CIP projects; and
4. Make recommendations on the CIP projects that should undergo a Community and Environmental Assessment Process (CEAP) review.

The Planning Board unanimously (6-0) approved three motions related to the Draft 2017-2022 CIP as follows:

1. Recommending to City Council the 2017-2022 proposed Capital Improvement Program (CIP), including the list of CIP projects to undergo a Community and Environmental Assessment Process (CEAP), and included a friendly amendment asking that staff further address whether the South Boulder Creek mitigation project should have a CEAP or not have a CEAP, for council consideration during council's review of the CIP
2. Asking staff to evaluate how to better incorporate climate change into floodplain planning and recommending to council to consider directing staff to find a way to incorporate climate change assumptions and scenarios in determining needs for flood mitigation master plans.
3. Recommending that council consider and direct staff to study the potential of creating guidelines for CIP expenditures that encourage procurement from Disadvantaged Business Enterprises and local enterprises to promote social and economic equity and community resilience.

Follow up related to Planning Board's discussion is included as **Attachment F** to this memo. Draft minutes of the July 28 Planning Board meeting will be provided to council when they are available.

NEXT STEPS
The 2017 City Manager Recommended Budget, which includes the CIP, will be provided to council at the beginning of September and council will review the proposed budget at a study session on Sept. 13.

ATTACHMENTS
Attachment A: CIP Guiding Principles excerpted from page 3 of the Draft 2017-2022 CIP
Attachment B: CIP Definition and Criteria excerpted from page 15 of the Draft 2017-2022 CIP
Attachment C: Energy Reducing or Generating Projects
Attachment D: Follow Up Information from the CIP Tour
Attachment E: Update on Civic Area Parking
Attachment F: Follow Up information related to the Planning Board CIP discussion on July 28

CIP GUIDING PRINCIPLES

The City of Boulder develops a Capital Improvement Program (CIP) that addresses the ongoing major business needs and maintenance and repair of city assets as well as enhancements and expansion called for in the Boulder Valley Comprehensive Plan and city Master Plans. The CIP is a strategic document that assures that the municipal organization maintains a strong bond rating, implements community values, and has fiscal integrity. The city prioritizes its investments both across and within funds, based on the following guiding principles:

1. **Capital Improvement Programs should be consistent with and implement Council-accepted master plans and strategic plans.**

2. **Capital Improvements should achieve Sustainability Framework Goals:**
   - Accessible and Connected Community: improve and maintain mobility systems, infrastructure networks, and access to information
   - Economically Vital Community: provide infrastructure and amenities supporting employers and economic diversity
   - Environmentally Sustainable Community: promote natural resource and energy conservation; employ sustainable construction practices; and utilize renewable resources
   - Healthy and Socially Thriving Community: provide recreational, cultural, educational, and social opportunities that support physical and mental well-being; and facilitate inclusive community engagement
   - Livable Community: provide safe and well-maintained public infrastructure and services and enhance neighborhood livability
   - Safe Community: ensure timely response to emergencies and natural disasters; foster a climate of safety, maintaining and improving public safety and security
   - Good Governance: utilize effective and efficient use of public funds, maintaining a strong fiscal foundation; leverage external investments; promote community partnerships; and promote stewardship of human, information and physical assets.

3. **As potential capital investments are identified, the city must demonstrate in the CIP process that there are sufficient funds to operate and maintain the project or program.**

4. **Capital Improvement Programs should provide enough capacity and flexibility in our long-term planning to be able to respond to emerging, unanticipated needs.**

5. **Capital Improvement Programs should maintain and enhance the supporting city-wide "business systems", such as information and finance systems, for the city over the long term.**

6. **Capital Improvement Programs should focus on capital investments for sustaining or improving maintenance of existing assets based on consistent asset assessment principles and practices, as well as balance needed investments for enhancements or new facilities to support levels of service outlined in master plans.**

7. **Capital programming should maximize efficiency of investments demonstrated by measurable cost/benefit analyses and coordination of projects across departments within and across funds.**

City of Boulder, July 2016

CIP Definition and Criteria

Capital Improvement Program Projects

"CIP projects are any major projects requiring the expenditure of public funds (over and above operation expenditures) for the purchase, construction, or replacement of the physical assets of the community. This broad definition includes those projects that are bondable, technology infrastructure, new or expanded physical facilities as well as the land necessary for the project."

Criteria for New Capital Project:

- Projects resulting in the construction or acquisition of a new asset.
- Construction resulting in additional square footage of an existing asset.
- Projects have a discrete start and end date.
- Projects are location specific.
- Projects are typically over $50,000 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.

Criteria for Capital Enhancement:

- Construction resulting 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 $50,000 in total project cost, but do not have to be. Information Technology projects are typically over $25,000 in total project cost.
- Projects result in a durable, long lasting asset, with a useful life of at least 15 years. Information Technology projects may be as short as 5 years.

Criteria for Capital Maintenance:

- Projects result 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 $50,000 in total project cost. Information Technology projects are typically over $25,000 in total project cost.
- Projects result in a durable, lasting physical asset, with a useful life of at least 5 years. Information Technology projects may be as short as 3 years.

Criteria for Land & Asset 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 city-wide.
- Projects or programs typically include acquisitions totaling over $50,000.

Criteria for 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 capital program.
- Projects have discrete start and end date.
- Projects are typically for studies that are over $50,000 in total cost.

Energy and Emissions Impacts of Capital Projects

The proposed six-year Capital Improvement Program (CIP), including over 170 projects and roughly $450 million in investment, outlines the 6-uyear plan for maintaining and enhancing public infrastructure by correcting current facility deficiencies and constructing new service-delivery infrastructure. Capital projects have many objectives; energy use or GHG reduction potentially being an important consideration and aspect of planning and design but not always the primary focus. The following information provides an overview of the city's proactive efforts to build emissions reduction into capital and operations planning and achieve reduction goals.

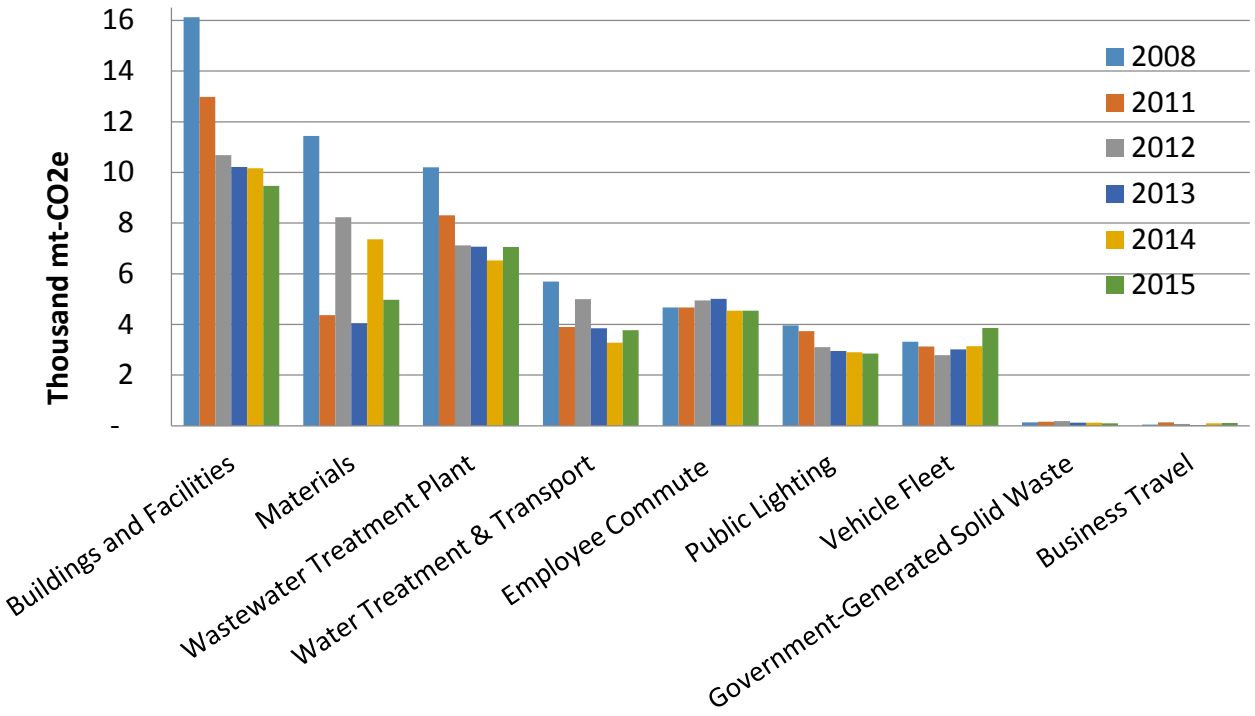
Emission Reduction Teams

In January of 2016, city leadership endorsed the implementation of a city organization-wide capacity building initiative on climate change preparation. As part of this initiative, a set of 5 emission reduction teams were established to develop strategies and policy recommendations around the five major city organization emissions reduction areas: facilities; fleet; employee commute; materials procurement; and water/waste water treatment. These groups are chartered to identify ways to meet the city's goal of 80% emission reductions by 2050 and interim goals in 2020 and 2030 associated with that goal that involve renewable electricity, local electricity generation, petroleum replacement and natural gas replacement.

These five groups have now been staffed and are underway. Each will be developing both short-term emissions reduction targets as well as an outline for a longer term strategy and policy recommendations. These recommendations will identify areas where more specific and proscriptive direction is necessary to achieve emissions reductions for department level operations and workplans. The working groups will deliver their draft plans and recommendations in November of 2016 for presentation to the organization-wide management team in December of 2016. This will provide guidance to leadership around opportunities to integrate in the 2017 CIP process.

On-going Progress Toward Energy Efficiency in City Facilities

The city continues to invest in energy efficient projects. Annual greenhouse inventories are performed and show continued decrease in the major electric uses within city operations in the categories listed on the graphic below. Emissions from materials is mainly due to concrete and asphalt use with major road projects.



In Buildings and Facilities, the city continues to monitor twenty-eight of the highest energy use city facilities on a 24-hour basis as part of the first phases of the Energy Performance Contract. Alerts are sent to maintenance staff when unusual energy use is occurring or when system failures are detected. Another phase of Energy Performance Contracts is being evaluated in 2016 for a possible 2017 energy bond request where energy savings will be used to pay for the capital investments in energy efficiency.

The city's strict building codes affect the energy /emissions of city facilities most directly when new construction or major renovations occur. Also, city facilitates are subject to the Building Performance Ordinance, which requires the following and applies to all existing buildings:

- Annually rate and report (R&R) building energy use;
- Perform energy assessments (EA) every ten years;
- Perform retrocommissioning (RCx) every ten years and implement cost effective RCx measures within two years of the study; and
- Implement one-time lighting upgrades

Key Projects in the 2017 CIP

The Brenton Building at 1136 Alpine is a new building for the city, acquired as part of the Boulder Community Health Broadway campus purchase in December 2015. With adoption by City Council of the energy reporting requirements in October 2015, reporting in June 2016 revealed this building to be rated a "1" in Energy Star out of a score of 1 to 100, with 100 being the best. That makes this building, originally constructed in the 1950s, the worst rated in the city's inventory. In the Fall 2016, the city will take occupancy of the Brenton Building and begin a major renovation to transform this building to a much higher efficiency using the latest, affordable technology.

In October of 2015, the city received a $385,000 grant from the Department of Energy to develop an energy resilience project at the city's 63rd St water treatment plant. As one of the two water treatment plant facilities serving the city, reliable operations at this plant is a critical function. During the later part of 2015 and the early part of 2016, staff and consultants conducted a preliminary feasibility assessment of the project and subsequently issued an RFP to implement the project. The final review of proposals and specification of a potential project are being completed during the summer of 2016 with a planned implementation period between September 2016 and May of 2017. If implemented, the project would add a significant bank of solar (approx. 500kW) along with battery storage and generator upgrades sufficient to enable the plant to sustain prolonged periods of grid outages without interrupting service. The solar and storage will also be used to manage the substantial demand charges that are incurred through normal operations of the facilities and could thereby significantly reduce both plant GHG emissions and overall operational costs.

Energy-Reducing Projects

Information Technology

- ***Server Hardware Replacement***: During 2016, the IT department will be completing a hardware refresh of our server and storage environment, which began in the last half of 2015. This project relies heavily on technology often referred to as server virtualization. In the past, every data server instance required a dedicated or physical server for it to operate on. Server virtualization allows you to consolidate those individual physical servers into one larger physical server capable of hosting dozens of "Guest server" instances.

  Server virtualization provides a way to substantially reduce the energy load that data centers impose on the environment – which is a substantial load as data centers consume massive amounts of power daily in server operation and data center cooling. By consolidating servers into a virtual environment, the city can eliminate tons of carbon dioxide emissions annually. Virtualization accomplishes this feat by significantly reducing the amount of power consumed by hardware infrastructure, the primary driver of the energy consumption of data centers, while fully utilizing the existing hardware's resources. Industry studies have shown that from a near-

term perspective, virtualization reduces data center energy expenditures by 10% - 40%, reinforcing that "going green" is to beneficial to ignore.

The original virtual server farm was implemented in 2010, consolidating 160 physical servers onto just 10 host servers. Today those same 10 servers currently support over 250 server guests. Our 2015/2016 project will replace the 10 physical servers and ensure that the city has sufficient capacity to host growth anticipated in the coming 5 years.

Facilities and Asset Management
Several projects in FAM's 2017—2022 CIP will achieve energy reduction, including:

- ***Brenton Building – Renovate 2 Additional Floors***: this project, along with an 2016 adjustment to base request, will add insulation to the exterior walls of the building, replace natural gas boilers with an all-electric variable refrigerant flow system, replace lighting with LEDs and overall bring its energy use intensity from 158 to less than 40.
- ***Recreation Center Major Maintenance***: this multi-year project replaces roofs, HVAC systems, hot water heaters, and repairs the pV solar systems at the three of the city's recreation centers.
- ***Municipal Service Center, Bldg A***: two projects in 2017 will replace the central air handling unit and the roof with higher efficiency systems.
- ***Misc. Facility Maintenance Projects*** – this project captures many smaller facility projects throughout the year that less than $50,000 and involve system replacements like roofs and HVAC systems with newer, more efficient systems.

Utilities
- ***Fourmile Canyon Creek project***: The proposed underpasses and multi-use path connection from Violet to 19th Street would help reduce energy use and greenhouse gas emissions by promoting non-motorized transportation.

Transportation
CIP projects that are being designed and constructed expressly to provide facilities that encourage and promote walking and biking, and reducing automobile use, includes the following:

- ***19th Street***
- ***28th Street Valmont to Iris***
- ***30h St/Colorado Bike-Pedestrian Underpass***
- ***Arapahoe Complete Street/Boulder Creek Underpass***
- ***Bikeways Facilities Enhancements***
- ***Boulder Slough Multi-Use Path***

Parks and Recreation
- ***Lighting Ordinance Implementation***: Calculations have not been done yet in terms of energy savings; these will be identified in 2016.

Energy-Producing Projects

Utilities
- ***Carter Lake Hydro***: This project will analyze potential for hydroelectric facility on the city's portion of the Carter Lake Pipeline and then design and build if preferred. Pressure available for hydroelectric generation on Carter Lake Pipeline is limited and may not ultimately be feasible. If a station were built it would likely have low generating capacity and would generate well under 100 MWh annually.

- ***Barker Dam Hydro***: This project will provide analysis prepare to develop hydroelectric potential. Previous studies have indicated potential of up to 1,500 MWh per year if hydroelectric facilities were to be developed at Barker Dam.

- ***Pearl Street Hydro***: Analyze potential for hydroelectric turbine and generator at the city's Pearl Street pressure reducing facility. Currently water pressure is reduced using a pressure reducing valve which wastes the available energy in the water. This energy will be captured to produce electricity with the addition of the turbine and generator. Hydro generation at 101 Pearl could result in up to 150 MWh per year annually.

- ***Sunshine Hydro***: Project includes rehabilitation of the Sunshine Hydroelectric Pressure Reducing Station including flow meter and rehabilitation or replacement of the existing control system. The project is located adjacent to Sunshine Canyon south of Mount Sanitas. No change in annual generation would occur as a result of this project.

Draft 2017-2022 CIP Tour Follow Up Information

A few questions asked by Planning Board or City Council members on the CIP tour on Jul. 25, were not answered at the time and staff indicated that they would follow up with the responses after the tour. Please see the questions and responses below.

Question
How many people visit Scott Carpenter Pool annually? Do non-residents pay as much as non-residents? How do we know that the additional lanes at Scott Carpenter pool will increase capacity to meet the community's anticipated needs and keep pace with our growth?
Answer
Our Aquatics Feasibility Plan (2015) documented Boulder's projected population growth as 1 percent/annum. The community is expected to age slightly with a strong and steady aquatic demand (which is already out pacing the rest of the United States)[1].
In 2014, PROS Consulting conducted a survey establishing priorities for aquatics in order to meet community needs (964 survey responses; 70 percent City of Boulder residents):

- Despite being open only May-September, Scott Carpenter Pool placed third among Boulder's five swim venues in terms of visitation.
- 63 percent of respondents reported at least one member of their household visiting a City of Boulder pool 25+ times per year or more with the vast majority visiting for lap swim and leisure activities. Demand for additional open lap swimming, as well as practice time for the community's many aquatic user groups, ranked in the top priorities from the extensive community engagement.
- Scott Carpenter receives more than 20,000 visitations each summer.

Type		2014	2015	2016 (to date)
Memberships	Adult Pass	3213	3440	2092
	Senior Pass	569	582	368
	Youth Pass	1135	1256	879
	Family Pass	1903	2395	1649
	Boulder Aq. Masters	6695	6625	3762
Drop-In		10138	14086	8041
Total Visitations		23,653	28,384	16,781*

*Year to Date

- Non-residents pay 25 percent more for entry punch passes and season passes along a range (based on age of entrant and type of pass).
- Early morning and evening utilization (6am-8am and 4pm-7pm Monday-Friday) are highly coveted time periods across the system (all city swim venues).

Two to four additional lap lanes alone will not address all of the City's lap swim demand. As such, in addition to proposing additional lanes for Scott Carpenter pool, the department will implement other recommendations arising from the Aquatics Feasibility plan including:

[1] National data suggests that 2-5 percent of households have a demand for lap swimming. Statistically valid survey results suggest that in Boulder, 45-50 percent of households have a demand for lap swimming.

- The development of lane allocation guidelines (underway with PRAB planned presentation in late 2016)
- The exploration of improvements to other City of Boulder swim venues
- Continued exploration of needs during the implementation of Valmont Park expansion and
- The exploration of Scott Carpenter Pool improvements including enclosure of (or retractable coverage for) the lap pool. In essence this could accommodate year-round lap swimming at this otherwise outdoor locale. The result would be an 11 percent increase in city-operated lap lanes (from 36 lanes to 40 system-wide and a 40 percent increase in existing 50-meter lap lane capacity if operated every day).

Question
How has the community been involved/engaged in development of this proposal? What additional outreach is planned?
Answer
As recommended by the City of Boulder Parks & Recreation Master Plan (2014), the department completed the previously mentioned Aquatics Feasibility Plan (2015), which included robust community engagement:

- Three leadership workshops
- Four stakeholder focus group discussions
- Four community open houses
- Related BVSD joint use agreement discussions
- PRAB involvement (continuous), including designation of a PRAB liaison who continues to play an active role in planning

As a next step, concepts would be proposed to the community along a spectrum (cost-constrained, action and vision options) – scheduled for late August 2016.

Question
How old is the pool? How deep are the wells? What is the scope of the existing amenity?
Answer

- Scott Carpenter Pool is Boulder's only 50-meter pool and one of only two city outdoor swimming pools. The facility sits within Scott Carpenter Park on Arapahoe (accessible via two existing bus routes) and is near a popular playground and the city's only 90' baseball field. Built in 1963 and at more than 50 years in use, Scott Carpenter pool, its play features and bathhouse are failing and staff recommends replacement.
- The existing amenity includes a bathhouse with entry portal/guard staff station, 6 lap lane pool (295,000 gallons) cove/slide, and deep well (100,000 gallon) – all water features are uncovered. At 8'6" deep at the springboard, the well does not meet the current industry recommendation of 11' depth for spring diving.
- The pool has been patched several times but leaks are recurring. The department is currently investigating a right field impact at the adjacent baseball field which may be connected to a Scott Carpenter pool leak.

Question
Could staff provide information on the installation of a culvert under SH119, as part of a trail from the OSMP Cottontail Trail (NW edge of Gunbarrel) over to Coot Lake?

Answer

Generally, the County is building the trail and culverts under SH119. BNSF Railroad is putting in a new Railroad bridge over Dry Creek next to SH119 (with the County paying the cost). OSMP will be installing two bridges for the trail – one over Dry Creek and one over Boulder and Left Hand Ditch, at the Cottontail Trail, near Gunbarrel. A contractor for the County has been working on the Western portion of this trial – from Coot Lake across 63rd Street, to the Railroad. This section includes the culverts under SH119. The Railroad is putting in their new bridge.

Later this summer, the County will have a contractor build the trail from SH119 to Cottontail with OSMP installing the bridges. The expected date of completion is the end of 2016 since the bridge over the ditch cannot be installed until after the water season (Nov 1).

This is a complex project that includes not only OSMP, Boulder County, BNSF Railroad, CDOT, the Boulder and Left Hand Ditch company, but also some Federal funding. There are wetlands and prairie dogs in the area also. County transportation has done the heavy lifting. OSMP put the project through the CEAP process in about 2006 and will pay for the bridges and their installation (estimated to cost $350,000).

MEMORANDUM

To: **Members of City Council**

From: Jane S. Brautigam, City Manager
Molly Winter, Executive Director, Community Vitality
Bill Cowern, Transportation Operations Engineer, Transportation Division, Public Works Department
Kathleen Bracke, GO Boulder Manager, Transportation Division, Public Works Department
Jeff Haley, Planning, Design and Community Engagement Manager, Parks and Recreation

DATE: Aug. 9, 2016

RE: Update about Civic Area Parking Changes

Executive Summary

The first phase of construction in the Civic Area will begin next month with the park improvements funded through the 2014 Community, Culture and Safety tax initiative. The first phase of construction marks a significant milestone that city staff plans to use to generate further excitement, positive momentum and community engagement for the project.

Initial construction within the Civic Area is constrained by many factors, including floodplain limits, existing parking areas, multi-use path connectivity and the need to maintain access to city services for employees and the community. These constraints will result in temporary impacts for people accessing parts of the Civic Area.

Access to all buildings will be maintained, the multi-use paths will remain open with detours and the majority of parking will remain available. Construction staging and access will require the temporary removal of 19 parking spaces in the Municipal Building parking lot during phase one of park construction with plans to reopen early in the first quarter of 2017. The next phase of construction will require the temporary removal of 5 different parking spaces in the same parking lot, and the temporary removal of 13 spaces in the row of parking along Boulder Creek in the south library parking lot off Arapahoe Avenue. These spaces are expected to be impacted until sometime in summer of 2017. All temporary parking space closures are for construction, and are in addition to the planned removal of 20 spaces to incorporate the new, enhanced park design. The city has plans in place to minimize parking impacts, including utilizing multi-access programs and satellite parking options.

For further information, please refer to the updates and web links to existing resources listed on the Civic Area webpage at https://bouldercolorado.gov/civic-area.

Purpose

This memo from city staff to the City Council outlines the plans for construction staging and access to minimize disruptions where feasible.

The purpose of this memorandum is to:

I. Provide a brief background on the Civic Area parking changes;
II. Outline effectiveness of current parking changes;
III. Outline the temporary construction impacts to parking; and
IV. Summarize outreach and education efforts about the Civic Area construction impacts.

I. Background on Civic Area Parking Changes

From the inception of the Civic Area Master Plan, planners identified the likely need to remove some parking spaces in the park-at-the core area to meet floodplain regulations and improve visibility and safety for pedestrians and bicyclists while also meeting specific park design goals to create a more enjoyable visitor experience. From the beginning, staff has worked to strike a balance among the design, flood, public hazard and safety needs and the desire to increase access to the Civic Area. The larger vision reflected in the Civic Area Master Plan calls for increased access programs for both visitors and city employees, in conjunction with movement of some park-at-the core parking spots to be later redistributed in the bookend areas of the Civic Area. Therefore, future planning for the development of the east and west bookend areas will include multi-modal access strategies and additional parking access in subsequent project construction phases.

On Nov. 10, 2015, City Council approved the park development plan that could result in the removal of up to 45 parking spaces out of the park-in-the-core area. This plan included a commitment to create a new parking strategy and increased transportation demand management (TDM) programs to support travel options for getting to the park, the library and civic area buildings.

The first step of the parking strategy has occurred (as illustrated in **Attachment A)** with comprehensive management of the parking lots, and the city has implemented access programs that have made it even easier for people to get to this central area without having to park in the current lots. These programs have been informed by initial baseline data and by data collected throughout the first half of the year as changes were made incrementally.

The goal envisioned by the Civic Master Plan is that access to the park will be increased with parking to be redistributed to bookend areas in order to repurpose land for the park-at-the-core enhancements. City staff remains confident that this project is creating a space that is more usable, attractive and inviting, sensitive to flood concerns AND that will remain accessible throughout the process.

Staff announced the Civic Area parking lot changes in early November 2015.

To briefly review, there are three primary reasons for the parking changes:

1. To support design changes that will make the Civic Area a more vibrant and welcoming gathering spot for the community (as part of the Community, Culture & Safety projects);

2. To improve access to the library and other city services housed in the Civic Area; and

3. To enhance and support the use of multi-modal travel options by city employees.

In April, staff gave an overview of the first quarter data results of the parking management strategies implemented in conjunction with the January parking changes. Staff also notified City Council and various boards and commissions that approximately 20 spaces, located on the east end of the parking lot adjacent to the Municipal Building, north of Boulder Creek, would be removed to be eventually redistributed in the bookends during future construction phases. The repurposed land gained from the removal of the 20 spaces will accommodate the new, enhanced design of the park, which will provide additional benefits for visitors. Those benefits specifically include a realignment of the Boulder Creek Path for the safety of park users, and to reduce conflicts between pedestrians and cyclists, which were frequently noted during the community involvement portion of the design phase.

However, in order to realize the long-term future benefits of the new, enhanced park design, there will be access challenges in the near term, specifically during the first phase of park construction. Due to short-term construction needs, temporary parking reductions beyond the designed 20 removed spaces will be necessary. The number of temporary spaces to be used for construction purposes and the phasing of those removals is outlined in section III of this memo.

The design plan approved by City Council last November gave city staff the flexibility to remove up to 45 spaces, if needed. Based on additional analysis, staff has determined that no further parking reductions beyond the already planned removal of the 20 spaces will be needed in the park-at-the-core. This determination was based both on the contractor's final design plans of the first phase of park improvements and on current utilization data, which will be discussed more in section II of this memo.

II. Effectiveness of Parking Changes

Prior to the announcement of the Civic Area parking changes last November, staff initiated several pilot programs to offer alternatives to city employees who typically park in Civic Area lots. The TDM pilot programs ask the volunteer participants to use an alternative form of transportation to and from work on certain days of the week.

The TDM pilot programs include the following features:

I. A concierge service for trip planning assistance;
II. A $1/day parking cash-out incentive; and
III. Satellite parking locations

Satellite parking locations include the traditional CDOT and RTD Park-n-Ride lots along state highway corridors (US 36 and SH 119). In addition, new satellite parking locations have opened at the Eco Cycle/Resource Yards at 6400 East Arapahoe and at the garage at Alpine and Broadway (formerly the Boulder Community Hospital).

Each city employee pilot program participant has been asked to complete a pre- and post-survey, as well as travel diaries, to track which travel modes he or she uses. Based on the results from these evaluation steps, the TDM programs will be adjusted as needed. For example, if the city employee demand for the new satellite parking lot increases, the city will consider opening up more spaces at these areas to accommodate more downtown city employees.

Data collection from the second quarter of the year has been analyzed in comparison to baseline data and the first quarter 2016 results. It is clear the parking management changes and TDM strategies for city employees have made a significant improvement in operations. This is demonstrated in comparing data from initial findings in November/December of 2015 to the data collected twice in 2016. The latest data shows overall conditions this summer were comparable to last winter despite an anticipated increase in demand during the busy summer. However, there are many variables in the results of the data depending on the time of day, parking locations and corresponding events and programs occurring within the Civic Area, which are explained in the bullet points below. Because of these variable results, staff will continue observing and analyzing the effectiveness of the parking management and TDM programs in order to adapt to any changes.

Some of the key outcomes of the data include:

- Average peak parking utilization in the Civic Area lots increased during the summer to 79 percent, approximately the same as it was in November/December 2015; this likely would have been higher before the parking changes were made.
- Average peak parking utilization at the Library lot spiked to 91 percent. This was at approximately 11 a.m. and was likely due to a specific event or program. Interestingly, parking utilization numbers during the other times of the day remained much lower than before the parking changes were made last year.
- Average peak parking utilization at the Municipal lot remained high, at close to 90% percent.
- The number of city employees parking in the downtown dropped substantially in the summer (a 24 percent drop on average and an 18 percent drop during the peak period). This might be due to parking availability in the surrounding neighborhood that became much more available after students left for the summer.
- Parking in the neighborhood south and west of the Civic Area increased by approximately 5% following the parking management changes earlier this year. Parking utilization in the neighborhood dropped substantially in the summer, but this is most likely due to students leaving.
- Parking in the satellite parking lot at Alpine Balsam increased to an average of 18 city employees per day.

Staff compiled the results from city employee feedback and surveys, and found that while the changes in parking management and the new TDM programs have not resulted in statistically

significant differences in how employees commute to work, the measures have resulted in many other positive outcomes. For example, employee feedback shows:

- Most Civic Area employees find it easier to park as a result of the new parking management and TDM measures;
- Many see the parking cash out program as an important financial benefit; and
- The satellite parking works for some employees.

If warranted, staff could implement additional TDM measures for city employees to further enhance the program. These include expanding the Eco Pass benefit to seasonal and contract employees and increasing the monthly vanpool rebate to $40. Also, this fall, the city's Employee Transportation Coordinator (ETC) program will focus on increasing vanpooling. This additional benefit will make it more attractive to employees who cannot vanpool full time due to work and personal schedules. In addition, consideration will be given to increasing the daily parking cash out incentive during the peak construction period.

While the TDM programs for City of Boulder employees have demonstrated a shift in parking utilization in the Civic Area, staff will also be considering the multi-modal options for the public and visitors. It is anticipated that the park improvements will attract additional demand to the area, which will require new strategies and programs for visitors. A visitor survey is being conducted this summer, which will produce data on the access needs and desires of the public. This information will be instrumental in designing and implementing public access options to accommodate the increase in visitor demand. City staff recognizes the importance of designing these programs to meet the anticipated increase in park use.

City staff will continue to monitor the feedback and effectiveness of the parking changes and TDM strategies each quarter throughout 2016 and during the construction phase of the park improvements. Staff will continue to update City Council about the results and make recommendations about potential program changes. Additional updates to the boards and commissions will also be presented, as needed.

III. Temporary Construction Impacts to Parking

Phase One Construction and Logistics Plan

September 2016 (approximate): Beginning in September 2016, construction activities will focus primarily north of the creek. One of the initial tasks involves substantial earthwork for the new bridge to be built over Boulder Creek for the 11th Street spine, and contractors need access for equipment and materials to the site. Given these tasks and due to floodplain regulations, construction staging and access will require the temporary removal of 19 parking spaces in addition to the permanent removal of 20 spaces. These parking impacts are illustrated in **Attachment B.** The result is a total reduction of 39 spaces in the north Municipal Lot adjacent to the Municipal Building. During this first phase, some demolition work will occur north and south of the creek near the western pedestrian bridge. This demolition work will be completed by September 23 to allow for safe access across the western bridge in time for the Jaipur Literary Festival which is scheduled from Sept. 24 to Sept. 25.

Phase Two Construction and Logistics Plan

Part 1: October 2016 – late January/early February 2017 (approximate)

The next phase of construction will begin after the Jaipur Literary Festival and result in the closure of a much larger construction footprint in the Civic Area. These construction impacts are illustrated in **Attachment C1.** It is anticipated to last into the early first quarter of 2017 and will continue to require the use of the same 39 spaces in the north Municipal Lot adjacent to the Municipal Building for construction. Once this phase of work is complete in early 2017, 19 spaces will be reopened for use.

Part 2: Late February/early March 2017 (approximate)

The 19 spaces that where temporarily closed for construction will reopen in late January after the installation of parking lot utilities and the delivery of the new 11th St. Spine bridge sections. During this time period, construction will now require the temporary closure of 5 different parking spaces in the Municipal Building lot (now located on the south end of the lot.) The 20 permanently closed spaces continue to be used for construction work, later to be incorporated into part of the permanent redesign, for a total of 25 closed spaces during this time period.

The contractor is also anticipating the need to utilize approximately 13 spaces in the row of parking along Boulder Creek in the south library parking lot off Arapahoe Avenue as construction activities begin south of the creek. The parking spaces in the section south of the creek are needed to place equipment and construction materials on the existing parking area to meet flood regulations for construction activities within a floodplain. These parking impacts are illustrated in **Attachment C2.**

Phase Three Construction and Logistics Plan

April 2017 through August 2017 (approximate)

During this phase, all parking closures remain the same as those closures in place at the end of phase two. However, the construction footprint will be different, with the new, enhanced 11th Street Spine Bridge open while the old bridge on the east end of the park is removed permanently. Additional construction work will be shifted north of a new temporary bike and pedestrian path. Parts of this path will later be used in the final path configuration. It is anticipated that this configuration will be in effect for the remainder of the project. The parking lot configuration for Phase Three of the project is shown in **Attachment D.**

Handicap Parking and ADA Access

In all phases of the construction work, handicapped spaces will be relocated out of the closure zone and moved to the spaces in the Municipal Building Parking lot that remain closest to the Municipal Building. Also, an additional handicapped parking space is being added to the eastside of 11th Street, just north of Canyon Boulevard to allow an additional option close to the Municipal Building.

Additional Measures to Mitigate Access Challenges

In addition to the long-term parking alternatives mentioned previously in the memo, staff is working to implement additional measures to mitigate parking challenges during construction through the following measures:

- Parking will remain open and accessible in the south library lot, and pedestrians/cyclists can access the Municipal Building by crossing the current bridge over Boulder Creek.

- The work will be taking place in the fall and winter months, which is typically the least busy times of the year for the park, and parking demand is lowest.

- Creating additional accessible parking spaces along 11th Street, north of Canyon and adjacent to the mid-block crossing to the Municipal Building.

- Providing parking lot ambassadors during construction to assist people with finding parking, information, and overall customer service. (More information on the Parking Ambassador Program can be found in section IV.)

- As previously mentioned in section II, provide enhanced incentives for city employees to use satellite parking, parking cash out, and other TDM programs during Phase One of construction, likely through the end of the year.

- Promote positive benefits of covered parking at the Alpine/Balsam parking structure and move city vehicles parking in the structure to the roof top; this will increase covered parking availability for employees.

- Based on the feedback from the user survey, the public's access needs will be analyzed, and strategies and programs will be developed and implemented to meet the challenges caused by the construction work.

IV. Outreach and education efforts

Prior to the CIP study session on Aug. 9, city staff will provide a visual demonstration to City Council members about the phase one parking impacts. During this demonstration, parking cones will be placed in the Municipal Building parking lot to convey the size and scope of the closure area. Staff will be available for questions and discuss the strategies that will help mitigate the temporary impacts.

The following bullet points below list the outreach efforts that have taken place beginning with the Civic Area parking changes that went into effect in January.

- An initial news release was distributed to media, city employees and council members on Nov. 9, 2015;
- A coordinated public outreach campaign included updates to the city's Civic Area website, e-newsletters for Civic Area, City Planning, and the Library subscribers;

- standardized and personal email responses to community members, city employees and boards and commission members with questions about the changes; and the posting of public poster maps in city buildings and surrounding businesses in the Civic Area;
- Information about the parking changes were shared with surrounding facilities, including discussions with Alfalfa's Market, the Presbyterian Manor senior housing facility, Mustard's Last Stand, and other downtown Boulder businesses and organizations;
- Internal meetings were held with city staff at work sites throughout the Civic Area campus to explain the parking changes; and
- Message training with front desk staff took place at many of the city facilities in the Civic Area, which included the option for staff to distribute educational materials and handouts summarizing changes; and
- Boulder 8 aired a segment about the parking changes during the Dec.18, 2015 broadcast of Inside Boulder News. This update was also distributed on the city's social media platforms.

A number of outreach efforts are in the final development phase and will be rolled out the next few weeks. These efforts include the following items:

- In addition to signage that shows renditions of the enhanced Civic Area park and signs that indicate the project is funded through the Community, Culture & Safety tax, signs will be installed at both Main Library and New Britain Building parking lot along Arapahoe Avenue and at the Municipal Building/North Library lot on Canyon Boulevard. These will inform customers of the new parking options and include illustrated maps showing which parking areas are closed due to construction;
- A special construction edition of the Civic Area Newsletter will be sent out in late August/early September to e-mail subscribers. This will feature maps and information about the parking changes. Similar information will be provided in specific department newsletters that target different audiences;
- Updated information and construction project specific city webpages have been developed and continue to be updated, including the main Civic Area landing webpage, a new Civic Area Park Construction webpage, a Civic Area Parking webpage, the Parks & Recreation Civic Area Central Park webpage, the Library website and an internal communications website for city employees;
- Boulder 8 will air an updated segment about construction plans, which will include information about the parking changes;
- A robust outreach campaign is planned to promote an upcoming event to celebrate the beginning of park construction. Promotion of the event will also include reminders about parking changes due to construction. More specific information about the event, including invitations to City Council members and Boards and Commission members, will be forthcoming. The event will help build excitement about the Civic Area changes by prominently featuring community kids who have previously submitted design ideas and/or who will directly benefit from many of the new planned park amenities.

Finally, following the positive response to a Parking Ambassador Program that the city created in early 2016 to assist with January parking changes, city staff will again station part-time employees in the Municipal lot, and possibly other Civic Area lots, depending on demand. As previously mentioned in section III, the ambassadors will answer questions from visitors who

need assistance or immediate information about the parking configuration changes. The ambassadors will also distribute educational materials to first-time parking customers, suggest alternative Civic Area parking options to visitors during peak parking times, and answer access questions related to construction closures.

For further information about Civic Area Parking changes, please contact Molly Winter, winterm@bouldercolorado.gov, Bill Cowern, cowernb@bouldercolorado.gov, or Kathleen Bracke, brackek@bouldercolorado.gov.

For further information about the construction of the Civic Area Park improvements, please contact Jeff Haley, haleyj@bouldercolorado.gov, or Jim Winchester, winchesterj@bouldercolorado.gov.

Attachment A: Poster Map
Attachment B: Phase One Parking Impacts
Attachment C1: Phase Two Parking Impacts
Attachment C2: Phase Two Parking Impacts
Attachment D: Phase Three Parking Impacts

Attachment A : Poster Map

Public Parking Changes Effective January 2016*

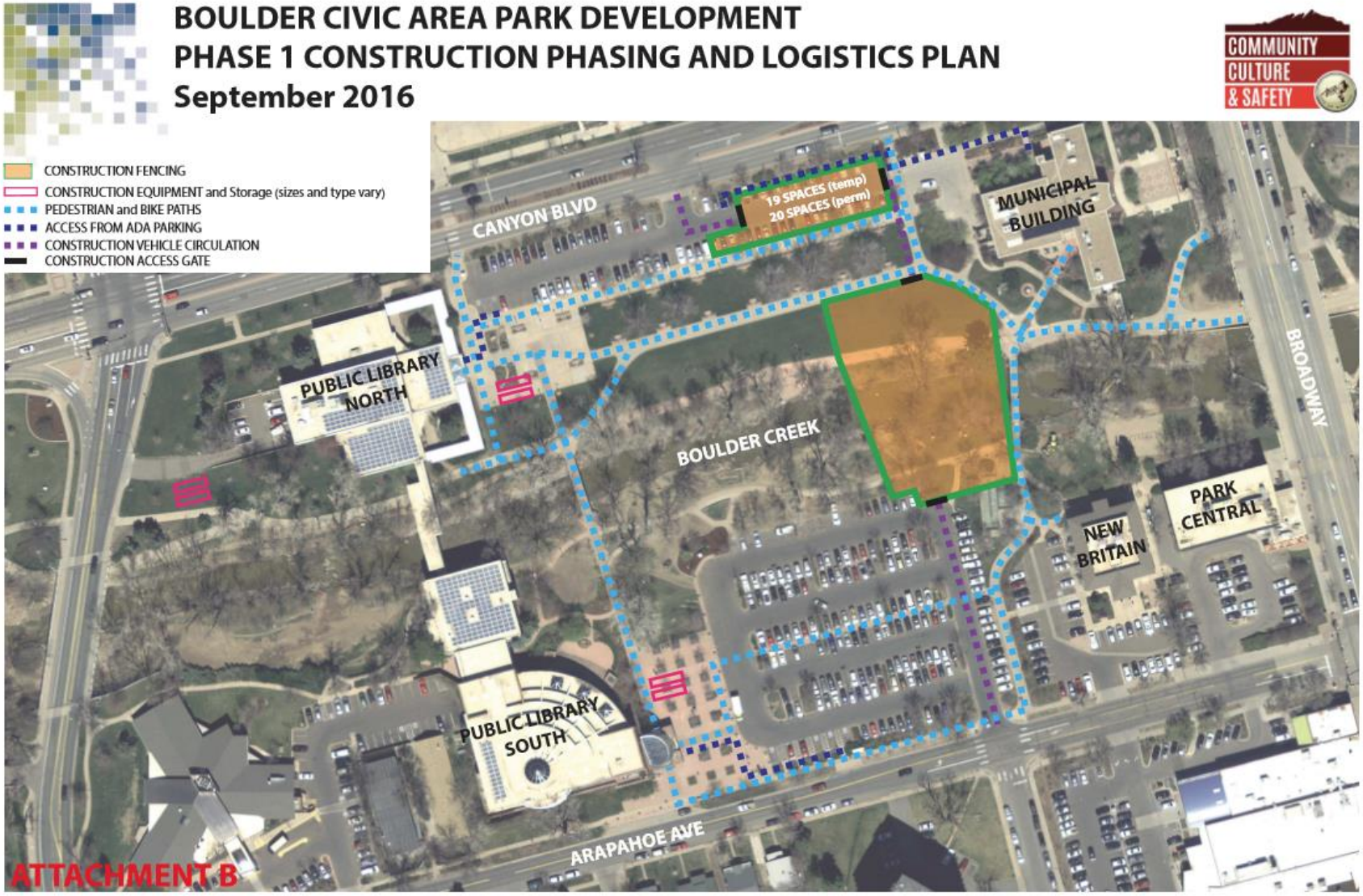
To improve access to public parking, the City of Boulder is launching a new parking program in the Civic Area.

- **NEW:** Spaces in RED LOTS, which include (1) Library (Arapahoe Ave.), (2) Municipal Building/North Library (Canyon Blvd.) and (3) New Britain will become SHARED spaces for both the public and city employees. Shared spaces in RED LOTS feature free parking the first 90 minutes with the option to pay for an additional 90 minutes.
- **NEW:** Spaces in PURPLE, which include (4) Park Central lot and the eastern portion of the (2) Municipal Building/North Library lot remain for public parking only, but will include the same availability as RED LOTS: 90-minutes free + 90-minutes paid.
- **NEW:** Shared spaces in both RED and PURPLE lots will require the public to enter your license plate into pay station kiosks located in all lots.
- **NEW:** No more than three hours per parking session in a calendar day in RED and PURPLE lots except for city employees displaying valid daily paid parking permits. Visitors may park in Civic Area lots more than once per day but will only receive up to 90 minutes of free parking on the first visit and time cannot exceed three hours per parking session. Return parking for a new parking session will be charged at a rate of $1.25/hour for credit card or 25 cents/ 12 minutes for coin.
- Visitors who need to park for more than three consecutive hours may utilize the public parking garages (in ORANGE) located north of the Civic Area. Downtown garage rates apply.
- Managed parking hours will run from 9 a.m. to 7 p.m. Monday to Friday, with Saturday and Sunday free.
- There will be NO CHANGES to (5) Senior Center parking lot (in TURQUOISE. Parking will remain available to seniors.
- To help customers with these changes, city parking ambassadors will be stationed in one or more parking lots in January 2016 to assist drivers with questions and use of the new pay station kiosks.

* Up to 45 spaces total will be removed from Lots 1 & 2 starting in Summer 2016 to accommodate Civic Area construction and long-term park changes. Further information about exact timing and schedule of parking spot removal will be forthcoming.

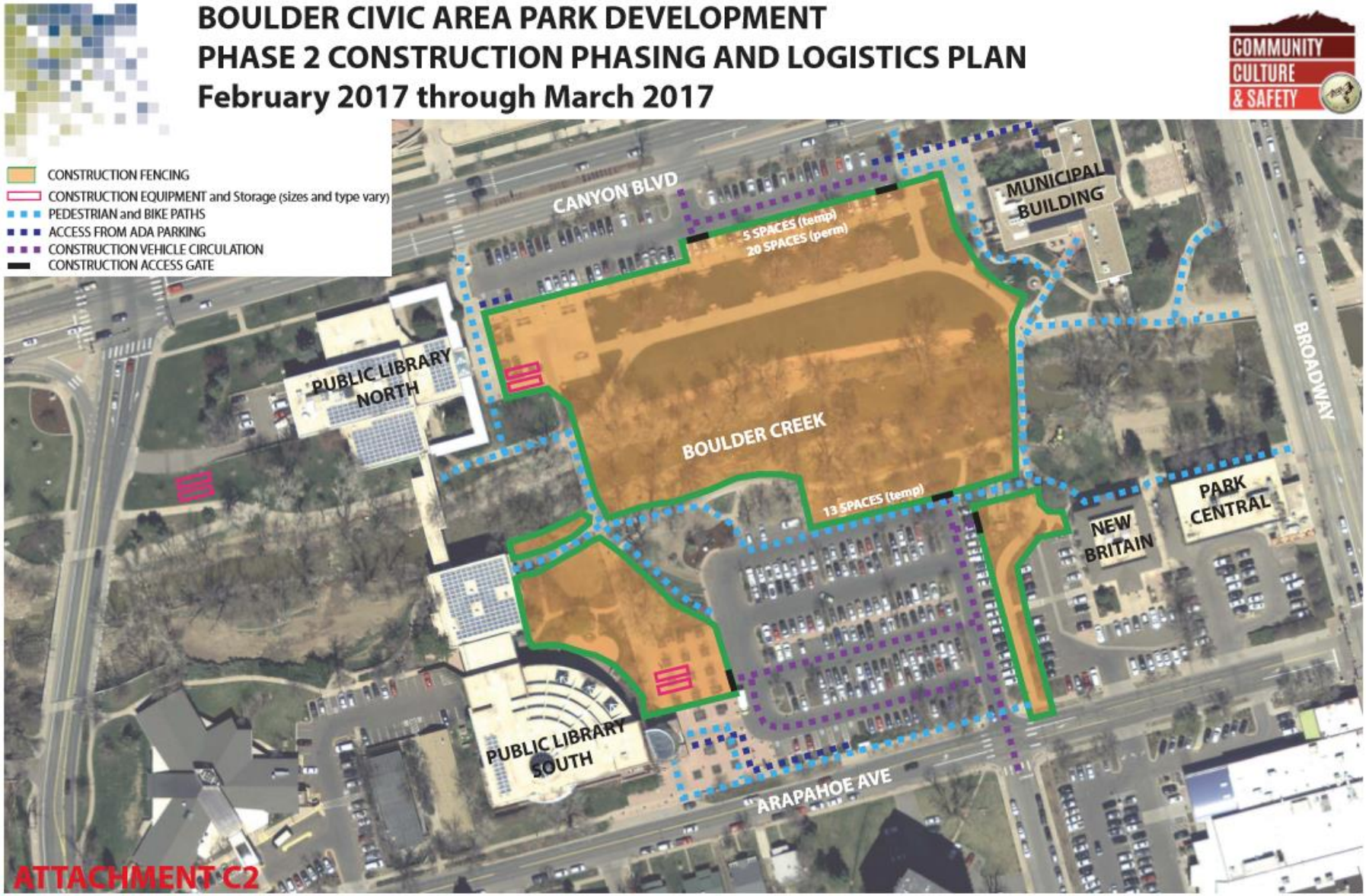
For more information please visit: https://bouldercolorado.gov/civic-area Updated 12-10-2015

Attachment B: Phase One Parking Impacts



Attachment C1: Phase Two Parking Impacts

Attachment C2: Phase Two Parking Impact



Attachment D: Phase Three Parking Impact

BOULDER CIVIC AREA PARK DEVELOPMENT
PHASE 3 CONSTRUCTION PHASING AND LOGISTICS PLAN
April 2017 through August 2017

COMMUNITY CULTURE & SAFETY

Draft 2017-2022 CIP – Follow Up to Planning Board Review

At its July 28 meeting, Planning Board reviewed the Draft 2017-2022 CIP. A number of items came up during the discussion, resulting in three motions from the Planning Board. Preliminary follow up and additional information related to some of these items is provided below. Additional information on a feedback loop over time for future updates to the development excise tax and impact fee study will be provided at a later date.

Further address whether the South Boulder Creek mitigation project should have a CEAP or not have a CEAP.

In the City Plans and Projects Handbook the purpose of a CEAP is "to assess potential impacts of conceptual project alternatives in order to inform the selection and refinement of a preferred alternative." A flood mitigation plan (master plan) for South Boulder Creek was accepted by Council in 2015 that recommended three phases of improvements. The plan was initiated in 2010 and evaluated numerous alternatives and involved an extensive public process that included several public hearings with the Open Space Board of Trustees and Water Resources Advisory Board and a council study session over this multi-year timeframe.

The Phase I improvements, which are currently shown in the CIP to be funded in 2018, involve the construction of a regional stormwater detention facility located on CU South Campus and within CDOT right of way. The recommended Phase I concept was refined through a vetting of several sub-alternatives and corresponding analysis of likely social and environmental impacts. The analysis that was used to reach consensus on the Phase I concept included all of the evaluation required in a CEAP. The results of this analysis are documented in the accepted master plan and can be reviewed online at https://bouldercolorado.gov/flood/south-boulder-creek-flood-mitigation-planning-study. The city will also continue to reach out to the community through the preliminary and final design process, as well as during the construction of the project.

In addition, as part of the Boulder Valley Comprehensive Plan and annexation process, a site suitability analysis is currently being conducted for the CU South Campus property to evaluate resources and impacts of development on adjacent properties. This information will be used to inform future development of the site and also the design features of the South Boulder Creek regional stormwater detention facility project. The process has, and will involve the impacted neighborhoods and stakeholders. For more information about the annexation process, visit the webpage at: https://bouldercolorado.gov/bvcp/cu-south.

For these reasons, staff does not believe that conducting a CEAP for the recommended Phase I improvements for South Boulder Creek will add value. It is however, recommended that Phases II and III of the plan have a CEAP conducted as these phases have not been vetted to the same extent.

Evaluate how to better incorporate climate change into the floodplain planning and find a way to incorporate climate change assumptions and scenarios that are used to determine needs for flood mitigation master plans.

There is currently a lack of certainty around the impacts of climate change on flooding in our region. It is unclear whether flooding events will occur more frequently or be more extreme. As a result, the Urban Drainage and Flood Control District (UDFCD) and FEMA have not changed the hydrologic assumptions used to map floodplains and develop corresponding flood mitigation measures for the Front Range,

including the Boulder area. The following excerpt from a recently published paper on this topic from Wright Water Engineers and UDFCD summarizes this well:

> 'While global and regional climate models are generally consistent in projections of future increases in average temperatures, hydrologic effects of climate change are far less certain and range from decreases to increases in annual and seasonal precipitation. The natural variability of hydrology and the short period of record of available data make it very difficult to detect trends (if any) in long-term precipitation due to changes in climate. In addition, urban flood events and infrastructure design are usually governed by short-duration rainfall events rather than season or annual averages. At this point in time, there are insufficient data to reliably forecast changes in intensity-duration-frequency estimates used to define design storms, especially for less-frequently occurring events that are of most concern for flooding.' (link to this full document: http://udfcd.org/wp-content/uploads/uploads/resources/technical%20papers/Climate_Change_and_the_Urban_Drainage_System.pdf)

The need is recognized, however, to develop and maintain floodplains that provide to the maximum extent possible a high degree of resilience to potential future hydrologic changes associated with climate. The city considers a full range of flood mitigation alternatives during both the master planning and CEAP phases of flood mitigation projects. Designing systems that are more resilient and provide more free board for uncertain future flood flow conditions are presented for consideration to the public and decision makers including the associated anticipated costs and benefits.

Study the potential of creating guidelines for CIP expenditures that encourage procurement from Disadvantaged Business Enterprises and local enterprises to promote social and economic equity and community resilience.

Currently the City of Boulder procurement policy does not specifically address Disadvantaged Business Enterprises (DBE), though it does include a preference for Colorado companies, if quality and price are equal to that of the other bidders.

Some of the city's grantors, such as FEMA and CDOT, do have procurement policies related to DBEs. For projects being funded from these sources, the grantor typically provides the city with language and award processes, which the city uses in the associated procurement processes.

If desired, staff could study this and bring back further information and analysis to council. It would be useful to understand specific goals and desired outcomes, as well as impacts to the process, businesses, and cost implications.