BOARD OF COUNTY COMMISSIONERS

January 31, 2017 – 3:30 PM
Commissioners Hearing Room, Third Floor
Boulder County Courthouse

Docket BVCP-15-0001: Boulder Valley Comprehensive Plan Major Update

STAFF PLANNERS:
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I. INTRODUCTION

A. Purpose

The Jan. 31, 2017 Board of County Commissioners (BOCC) public meeting will focus on the following three topics:

1. **Key policy choices related to land use and jobs-housing balance.** Staff will provide background and updates related to recent analysis on scenarios, results from a second survey, directions toward land use changes, and city decision-makers' input on housing and land use policy alternatives. In addition, staff will provide a brief summary of efforts to update the remaining policy sections of the BVCP, and identify steps toward completing the overall draft plan. Action requested: None. Study session only. No public testimony will be taken.
2. **CU South site suitability.** Staff will provide background on recent site suitability studies and exploration of appropriate land use for the property and issues to address. Action requested: None. Study session only. No public testimony will be taken.
3. **3261 3rd Street land use map change, decision to reconsider.** Staff requests that BOCC make a determination to reconsider a previous land use designation change decision for this property due to a change in circumstances related to the

location of the blue line (Land Use Change Request #29). Action requested: Decision. No public testimony will be taken.

BOCC feedback on items 1 and 2 will help inform an initial draft of the plan to be presented to decision makers starting in March, with adoption anticipated by May 2017.

B. Background

The BVCP is the community's plan for the future. Its policies are intended to guide decisions about growth management, development, preservation, environmental protection, economic development, affordable housing, culture and the arts, urban design, neighborhood character and transportation. The Land Use and Area I, II, III Maps define the desired land-use pattern and location, type, and intensity of development. Despite its 15-year horizon, the BVCP is updated every five years to respond to changed circumstances or evolving community needs and priorities. As changes to the plan are proposed, it is important to ensure that the community's core values expressed in the plan remain intact.

The county's BVCP-15-0001website includes information related to relevant Planning Commission and BOCC meetings, links to public comments received related to this docket, and other key information related to the docket. The city's project webpage (www.bouldervalleycompplan.net) contains up-to-date information about the project schedule, foundational materials, and current drafts prepared over the past 18 months. Those resources can be found under "Key Resources and Maps" or through the following links:

- **Trends Report**. *Link here for the Trends Report*.
- **2040 Projections**. *Link here for Projections*.
- **10 Subcommunity and Regional Fact Sheets**. *Link here to access Fact Sheets*.
- **Interactive 3D mapping**. *Link here for City of Boulder story board map*.
- **2016 Boulder Community Profile.** *Link here for profile*.
- **2016 Affordable Housing Trends.** *Link here for housing trends*.

All public comments received related to the BVCP are available here: http://www.bouldercounty.org/property/build/pages/lubvcp150001.aspx#PublicComment

C. Questions for BOCC

City and county planning staff developed questions that are important to answer as part of the update process. Some of the questions pertain to changes to joint policies or the Land Use Map and are subject to four body review. For those questions, the BOCC's responses will provide direction to staff, and the BOCC will have decision making authority over the changes to the plan that result. The questions that pertain to Area I, annexation, or city-oriented policies, however, are subject to two body review. For those questions, the BOCC's responses will provide feedback to the city as it makes its decisions, both now and in future processes.

Does BOCC agree with moving forward with the following?

1. **Land Use Related Map or Policy Changes?** (pp. 3-15 and Attachments A, B)
    a. Expand opportunities for housing in light industrial areas.

   b. Expand opportunities for housing in the Boulder Valley Regional Center and 28th Street while slightly reduces some nonresidential potential.
   c. Extend the 2015 building height modification ordinance.
   d. Following plan adoption: amend the Land Use Code and develop area plans for neighborhood centers, as well as other approaches and pilots (noted on pp. 10-11).

2. **Draft Key Policies for Plan?** (pp. 3-15 and Attachments A, B)
   a. Community Benefit (*new policy*)
   b. Jobs:Housing Balance (Non-residential growth management) (*modified policy*)
   c. Affordable Housing for Change in Zoning (*new policy*)
   d. Subcommunity and Area Plans (*modified descriptions and criteria*)

Does BOCC have feedback on the following:

3. **CU South**. (pp. 15-17 and Attachment C)
   a. The different areas on the site and their suitability for conservation or development, based on the Site Suitability Analysis and other information?
   b. The list of issues to address before or during annexation?

D. Organization of Report

This report is organized as follows:

Section/Attachment	Description	Pages
Section I	Introduction	1-3
Section II	Key Policy Choices related to Land Use and Jobs:Housing Balance	3-15
Section III	CU South Site Suitability	15-17
Section IV	Additional Policy Updates and Integration	17-20
Section V	Next Steps for Plan Draft	20
Section VI	Request Approval to Initiate Reconsideration Process for 3261 3rd St. Public Land Use Change Request	21-22
Attachment A	2016 BVCP Survey Report	A1-A55
Attachment B1	Map of Areas Being Studied	B1
Attachment B2	Land Use Descriptions and Summary of Changes	B2-B13
Attachment B3	Land Use Scenarios Analysis, Including Centers and Industrial Principles	B14-42
Attachment C	CU South Site Suitability Analysis	C1-C76

II. KEY POLICY CHOICES RELATED TO LAND USE AND JOBS:HOUSING BALANCE

Staff will present results and field questions related to analysis of key policy choices regarding land use and the jobs:housing balance. This will start with an overview of efforts to gather input from the public and decision makers, and a summary of findings from the 2016 BVCP Survey (see survey report, **Attachment A**).

A. Overview of Community Engagement Efforts and Efforts to Gather Input from City and County Decision Makers

The overview summary and metrics for the community engagement and board and council events held during Phase 3 of the project (through the end of 2016) is available here on the project webpage. The range of engagement opportunities included meetings with organizations, city and county-hosted events, online information, a second BVCP survey and other targeted outreach. The recent community events and meetings were geared around discussing plan areas of focus (i.e., design, housing, jobs and housing balance, possible land use changes, livability, and other policies). Links to all the summaries of each event and organization input can be found here. A second survey has also provided valuable input regarding the land use and housing topics and is summarized below. At previous sessions, both City Council and Planning Board have reviewed and given feedback as well. The board, in particular, met throughout the fall (in reverse chronology: Dec. 15, Oct. 20, Sept. 15, Aug. 29 and 25, and July 28), and gave input and feedback on the draft policies, land use, and scenarios. Planning Commission and Board of Commissioners have also given feedback; both bodies discussed these issues at meetings in June, 2016 and Planning Commission had further discussion of these issues in Oct., Nov. and Dec. of 2016.

B. Survey Summary

With guidance from the process committee, the city and county issued a second survey about the BVCP land use and policy topics to help guide and inform changes to the plan, focusing on topics of non-residential land use, options for future housing, building heights, neighborhood improvements, and other related topics.

For this second survey, 623 people responded to invitations mailed to 6,000 households within city limits and in Area II, resulting in an 11.1 percent net response rate. The 95 percent confidence interval (or margin of error) is approximately +/- 3.9 percentage points. By comparison, the 2015 survey had a 16.8 percent response rate and +/- 3.2 confidence interval.

To ensure that the results are representative of Boulder demographic characteristics, the consultant weighted the raw survey data to match the Boulder Valley's adult population demographic profile by age and housing tenure (own vs. rent), based on census data. Weighting survey data is a standard practice with the objective to fine-tune the specific answers to the survey. Most of the responses are similar or somewhat amplified after the weighting is applied, so they do not change conclusions. For example, the unweighted results were similar regarding options presented about adding housing, but the weighted results were somewhat more supportive. **Attachment A** contains the full Survey Report, whereas the next few pages contain a summary of key findings. Note that figure references in this section of the report refer to figures presented in Attachment A.

Key Findings Regarding Policies and Land Use Choices

1. **General consistency with previous survey, other input**. Generally, the survey results are consistent with the 2015 survey and other community input such as from workshops and meetings with organizations, except for the slight shift toward support for reducing or slowing commercial/industrial growth potential.
2. **Support for housing, especially permanently affordable**. The strong support for

housing seen in the 2015 Survey is upheld through support for land use changes that allow for future housing, especially if the housing is permanently affordable. (See report Figure 5, reduction to commercial and industrial potential; Figure 9, overall housing potential, permanent affordable; Figure 12, changes in commercial and industrial areas; and Figure 13, housing infill.) Locations favored to change land uses to support housing include light industrial areas, neighborhood commercial centers, and the Boulder Valley Regional center.

3. **Some support to reduce commercial and industrial potential especially if to allow for housing**. Commercial and industrial potential (jobs) responses are somewhat more favorable toward limiting future potential and slowing the rate of growth than in the 2015 survey, especially if to allow more housing. (See Figure 5, reduction to commercial/industrial to support housing; and Figure 6, reducing in neighborhood centers and slowing rate.)
4. **Building height**. Respondents generally support keeping taller buildings limited to specific areas (Figure 8) and not allowing them elsewhere.
5. **Community benefits from development**. Fifty-five percent of respondents were okay with granting development such increases (44 percent of those only if additional community benefits are provided). Permanently affordable housing is the most favored benefit followed by energy efficiency improvements, open spaces, and nonprofit space or affordable commercial space.
6. **Neighborhood improvements**. Two improvements are most desired: (a) preservation of existing housing and existing character (18 percent) and (b) more affordable housing units (17 percent). Others supported transportation improvements, maintenance, and amenities. (See Figures 18 and 19.)
7. **Balanced approach**. The mixed results for some questions and open-ended comments suggest a balanced and thoughtful approach to land use changes that allow for additional intensity or growth while also focusing on character and design quality. Comments provide insight to the types of design, transportation and other livability aspects to consider.

A more detailed summary follows.

Survey Results: Commercial and Light Industrial (Non-Residential) Future Potential

Citywide

2016 respondents were split on **maintaining the current potential for additional jobs** (39 percent for maintaining; 20 percent neutral; and 40 percent opposed). The 2015 survey indicated 57 percent support for maintaining the current potential. Respondents expressed significant support for **retaining and protecting service industrial and small businesses** (84 percent). They especially favored **reducing commercial and industrial growth potential somewhat, when "also shifting potential to allow more housing"** (64 percent) and somewhat favored simply reducing the commercial and industrial growth potential (49 percent in favor, and 33 percent opposed) (See Figure 5.)

Specific Areas

Responses were split on questions regarding reducing commercial growth potential, with the most support in **Neighborhood Centers** (59 percent), split support for reducing growth in the **Boulder Valley Regional Center** (43 percent in favor and 39 opposed), and opposition to

reducing commercial potential in **industrial areas** (47 percent opposed, 32 percent support). (See Figure 6.)

A majority of respondents (60 percent) favored limiting the annual commercial and industrial rate of growth (e.g., a nonresidential growth management system).

Open-ended comments provide insight into the range of views from "stopping all future non-residential as well as residential growth" to not restraining development as it is the "fuel of the economy of Boulder." Many expressed a middle ground, including:

- Limiting growth of large office uses, taking care not to diminish support for new businesses (start-ups) or displace small local businesses.
- Converting office potential to mixed use by adding housing and retail uses.
- Addressing parking and congestion impacts (improved transit, walkability, sufficient parking).
- Supporting adding non-residential uses near / in residential areas for local serving uses (e.g., bar, café, live-work, small stores).

Survey Results: Housing Mix and Locations

Citywide
Respondents had mixed but generally supportive views about allowing additional housing potential in Boulder (52 percent), with more support for allowing additional potential only "if a substantial amount of any future housing is permanently affordable to low and middle incomes" (60 percent).

Specific Locations
Respondents were especially supportive of questions and graphics depicting potential changes in commercial and industrial areas to allow for more housing. They strongly supported **allowing more housing in light industrial areas in Gunbarrel and East Boulder** (79 percent) and **neighborhood centers** (70 percent), and support for changes in the **Boulder Valley Regional Center (BVRC)** (67 percent). The least favored option was for **residential infill** in some single-family residential neighborhoods, though a majority still supported the idea (62 percent). (See Figure 12).

As for infill types, most favored were cottage court (73 percent), duplex or duplex conversion (71 percent), with accessory dwelling units and small lot and detached alley houses following (62 percent). (See Figure 13.)

Survey Results: Neighborhood Improvements

Of the 15 ideas presented for neighborhood improvements, respondents favored two as top priorities for neighborhood improvements: first, **preservation of existing housing and existing character of the neighborhood** (18 percent) and second **more affordable housing units** (17 percent). Several other factors were more distant, including:

- better transit access and frequency (9 percent);
- more retail (shops, dining) within a 15-minute walk (7 percent);
- improved street maintenance (7 percent);
- better sidewalks, bike lanes, and pedestrian crossings (6 percent);

- plan for future of nearby commercial or mixed use areas (6 percent);
- parks, trailhead access and/or improvements (5 percent); and
- traffic calming/slowing tactics (5 percent).

Other Survey Responses

Community Benefit from Development
Overall, 41 percent of respondents indicated that development should not be allowed increases to density or height. Fifty-five percent were okay with granting development such increases – 44 percent said it should be allowed but only if additional community benefits are provided, and 11 percent said it should be allowed without additional community benefits. (See Figure 15) The highest ranking community benefit is permanently affordable housing for low and middle incomes. Following that first choice were energy efficiency improvements, open spaces, and non-profit space or affordable commercial space. (See Figure 17)

Building Height in Mixed Use and Non-Residential Areas
Respondents support maintaining and enforcing height limits, which is pertinent when the city considers the height ordinance that will expire in April 2017. Seventy-two percent of respondents do not support allowing buildings taller than three stories (up to 55 feet) in additional mixed use and commercial areas. Forty-nine percent support limiting height of buildings that are taller than three stories to specific mixed use and commercial areas and extending the ordinance that restricts height modifications. Open-ended comments focused on maintaining views, not creating "canyons of buildings," needed variation in building heights, and support for higher buildings east of Foothills Parkway. (See Figure 8)

Home Sizes
Respondents had mixed reactions to limiting the size of new homes (45 percent in favor and 31 percent opposed), and they were slightly less supportive of limiting house sizes only on larger residential lots (41 percent). About a quarter of respondents were neutral about limiting house sizes (24 percent). However, respondents were supportive of changing regulations so that larger lots could have two or three smaller homes rather than one very large home (69 percent in support).

Perceptions of Recent Growth and Change in the Community
A majority of respondents (58 percent) selected "mixed" – in some ways growth and change are heading in the right direction, in others the wrong direction. The 16 percent who thought the community is generally heading in the right direction in 2016 is a bit lower than in 2015 (23 percent then).

Quality of Life and Awareness of the BVCP
Ninety-three percent of respondents think quality of life is very good (49 percent) or good (45 percent), which is comparable to the 2015 survey. Familiarity with the plan has not changed since 2015. Fifty-five percent have no or slight awareness of the plan, and most respondents (77 percent) indicated that they have not participated in any other plan update input opportunities suggesting that the survey is a good way to hear from people who do not otherwise participate.

Additional Comments about BVCP
Responding to the question about additional comments or suggestions regarding the comprehensive plan, people re-iterated strong views on survey questions (i.e., density, transportation, building heights, etc.) and raised issues not covered including: energy, solar power, artistic installations, fiber optic and internet provision, open space, recreation and appreciation to be able to provide input into this process.

C. Analysis and Recommendations for Land Use and Key Policies

Potential BVCP Land Use Map and Description Changes

Scenarios
The scenarios A through D in **Attachment B.3** (i.e., "Possible Locations for Future Jobs and Housing," "Land Use Scenarios" and "Preliminary Housing Concepts.") explore a range and future mix of land uses (housing and nonresidential). They address community objectives around growth management, sustainability, some of the newer housing affordability goals, and the pace and amount of nonresidential growth (i.e., Scenario D). Through the fall, the scenarios evolved as a backdrop for community discussions at meetings and with organizations about the ideal land use mix and "kind of community Boulder wants to be." They also factored into citywide analysis to address implications of land use changes on housing affordability, transportation, jobs:housing balance, utilities, and other issues – to understand the tradeoffs of changing land use to support housing or other objectives. Consultants assisted in preparing analysis regarding housing and transportation.

The initial analysis shows some advantages to a land use approach that allows for new housing in centers and along corridors while also reducing future nonresidential potential, especially for jobs:housing balance. Additionally, the analysis and research indicates:

- Housing along corridors and in transit-oriented centers (Scenario B) can aid in achieving sustainability goals and community values and priorities (e.g., multi-modal transportation, emissions reduction, walkable places, great neighborhoods) while allowing for commercial centers to have a mix of uses to serve the community needs and be better designed.
- An enriched mix of housing and other amenities and services in jobs-rich industrial areas (e.g., Flatiron business park or some parts of Gunbarrel industrial areas) (Scenario C) could be positive for creating new neighborhoods and be most likely to be achievable because such lands currently have low intensity and could allow for infill or redevelopment.
- Land use changes in any commercial or industrial areas could have implications for small businesses and affordability, and staff is proposing to strengthen small business policies as suggested by Planning Board and community members, noted in revised Sec. 5, Economy.
- Other tools to address permanent affordability will be necessary to supplement land use changes that support additional housing, according to Keyser Marsten Associate's consideration of housing types and housing affordability.

The upper range of housing numbers (i.e., up to 6,160 new units in addition to the current projections or even more in the hybrid approach) may be difficult to achieve given Boulder's fairly built out condition in many commercial areas, mixed community reaction about intensification in certain areas especially near single family neighborhoods, desire for more refined area planning before making changes, and property ownership and the market realities of redevelopment and infill. Staff continues to use 3D modeling and GIS tools to understand the intensities and mix in different areas, and after Jan. 24, will do additional analysis of a more detailed "preferred scenario" or hybrid set of land use related proposals based on feedback.

Potential BVCP Land Use Related Changes

Staff seeks input from BOCC about whether and how to move forward with the following types of land use related and policy changes for the draft plan. **Attachment B.1** includes a map depicting potential land use related and policy changes based on the identified areas of focus for the update, survey results, community input, and technical analysis noted above.

The Land Use Designation Map and its descriptions guide decisions about future residential and non-residential mix and intensities. The decision-making bodies can choose to modify BVCP land use related policies or the map during a major update to address changed circumstances and/or community needs – in addition to the public request change process that occurred mostly during 2016. Such changes that translate to underlying zoning changes can affect potential for future nonresidential uses (jobs) and/or housing, as well as achieving other objectives. Some of the major objectives identified during this BVCP update that are particularly relevant regarding land use related changes are the following:

- Maintain core values (i.e., a compact urban form, protected open space and the natural environment),
- Provide for a diversity of housing types, sizes, and prices (including those affordable to middle incomes as well as low and moderate incomes) while protecting neighborhoods and livability,
- Improve transportation – access to daily needs, destinations, and transit from home and work,
- Better balance jobs and housing and mix uses to reduce vehicle trips (locally and regionally), in part by increasing housing and somewhat reducing nonresidential growth potential in certain areas,
- Address resilience and climate change, and
- Maintain a healthy economy, among other things.

The current BVCP land use policies and maps have evolved through 40+ years of thoughtful community planning. Because of that legacy and desire to maintain core values, land use related changes are not typically done in a large sweeping manner; instead, they are cautiously applied, critically analyzed according to multiple community objectives, and prepared collaboratively with the community.

Initial Staff Recommendations for the Draft Plan

Based on the analysis, survey and community input, staff is recommending a focus on potential land use related changes that would create additional future housing potential

(including additional permanently affordable housing), and in some cases reduce nonresidential potential. The focus is proposed to be:

1. Expanding opportunities for housing in light Industrial areas
2. Expanding opportunities for housing in the Boulder Valley Regional Center and 28th Street while slightly reducing potential for non-retail business uses
3. Extending the Building Height Modification Ordinance

Other recommended actions such as area planning are identified following the description of these three BVCP land use related changes. Additionally, **Attachment B.2** contains an updated draft of the Land Use Map descriptions and summary of changes for various categories. The revised section now includes a map interpretation section and refreshed descriptions. Some highlights of proposed changes to categories to support directions are noted below. The chapter may be further modified pending outcomes of land use discussions on Jan. 24.

1—Expand the Opportunities for Housing in Light Industrial Areas
Objective: Allow more housing and retail where appropriate while maintaining current nonresidential use potential. The light industrial areas, especially in East Boulder, have potential for new housing – if introduced thoughtfully. It could be possible to add housing and a richer set of amenities and services and better infrastructure while maintaining a unique character.

Approaches: Staff proposes the following approaches to address housing in light industrial areas:

a. Modify the land use description and policies for the light industrial area, and shortly after BVCP plan adoption amend the Land Use Code, Residential Development in Industrial Districts (including limited retail uses permitted) (LUC, *Sec. 9-6-3(g)*) to address more flexibility in requirements such as contiguity, mix, intensity, and consider requiring higher level of review (i.e., site review) for housing applications in industrial areas, and/or
b. Add or apply a "mixed use" light industrial category to the map for certain areas (e.g., those with larger lots in locations near open space or trails, or services). Maintain the current intensity for industrial uses (i.e., 0.5 FAR), and increase the intensity to allow housing, especially affordable, in addition to light industry, and/or
c. Pilot land use changes to allow for a mix of residential in certain light industrial areas where owners have expressed some interest, such as Flatiron Business Park.

Additional discussions, community engagement and outreach to property owners will occur to further develop the specific changes proposed (within the time constraints of the BVCP plan update this spring), and additional outreach will be essential before regulation changes.

Furthermore, accompanying and supportive policies would address community benefit, housing (requirements for additional permanently affordable housing), and small business/affordability and protection policies. The light industrial areas also need infrastructure and transportation planning.

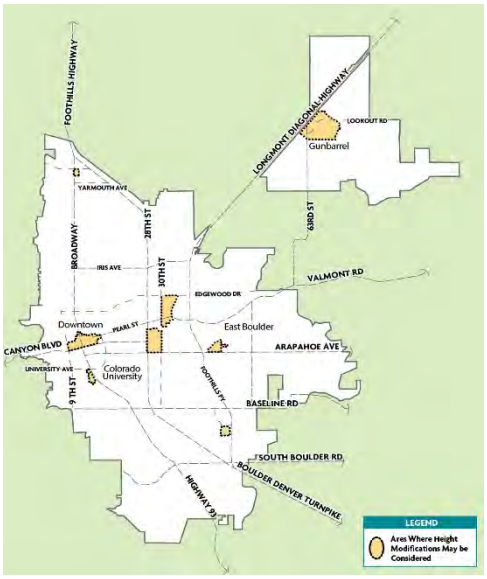
2—Expand the Opportunities for Housing in the Boulder Valley Regional Center and along 28th Street while Slightly Reducing Nonresidential Potential

Objective: Encourage or incentivize more housing opportunities and reduce nonresidential (upper floor office) potential, while maintaining retail potential. BVRC is the regional business and retail center and place for employment and services. It also has a tremendous amount of nonresidential growth potential in the General and Regional Business districts particularly along 28th and 30th Streets (i.e., over 270 acres). 28th Street commercial corridor north of the BVRC also has growth potential. These locations are ideal for encouraging housing (and permanently affordable housing) that is centrally located and part of a mix of uses. Land use conversions from nonresidential to residential could help improve the balance of jobs and housing while still maintaining a healthy economy.

Approaches: The following approaches are recommended to provide additional housing:

a. Adjust Regional and General Business descriptions to encourage more housing mix and active streets and places, and immediately following plan adoption amend the LUC zoning district use tables and mix, limiting nonresidential but not ground floor retail, but incentivizing housing, and/or
b. Apply the Mixed Use Business category to other lands within the BVRC and apply relevant zoning that encourages housing.

As with the light industrial areas additional outreach would be necessary before moving forward on land use related changes and other policies such as community benefit would be relevant.



3—Extend the 2015 building height modification ordinance (exp. Apr.).

Objective: Allow higher intensity and taller buildings in select, transit-rich areas where planning efforts have resulted in the adoption of a plan or clear policy intent, such as provision of permanently affordable housing.

Approach: The height ordinance reinforces the community's vision of an urban form that only allows taller buildings in certain locations. By extending the ordinance, modifications to the by-right height for new buildings will continue to be considered through the site review process only in these specific areas.

The renewal of the building height modifications ordinance is important because building height modifications cannot currently be considered in locations such as the BVRC or neighborhood centers or other properties of the city. Without the ordinance, the future nonresidential potential could be much higher; by extending it, a better balance of jobs and housing might be possible.

Area and Subcommunity Planning Post Plan Adoption

Council members, Planning Board and the public have been interested in area planning, neighborhood, and subcommunity planning as well as the future planning for the Broadway corridor. The following section identifies an approach to area planning for neighborhood centers.

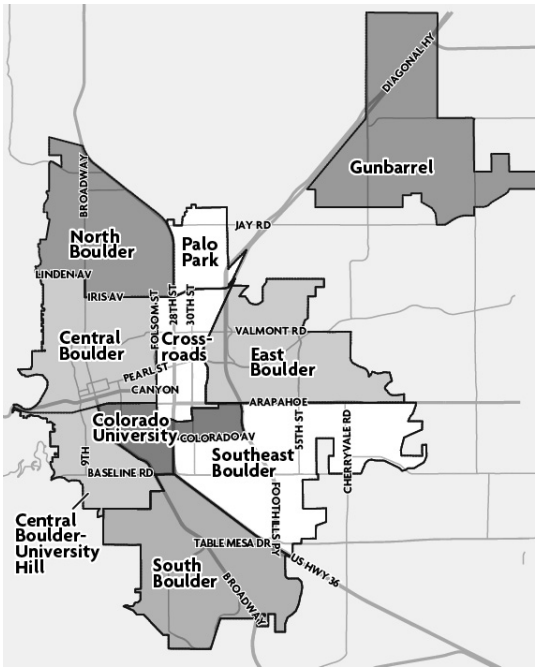
Neighborhood Centers

The survey results show interest in reducing the nonresidential potential and adding housing to neighborhood centers, and the community has expressed interest seeing better-designed places with services and amenities within walking distance. Since each center is unique, staff proposes prioritizing the area plans to be done following the BVCP adoption, and at least doing some of the work of area planning by working with localized community to define the character, scale and mix of each area and appropriate amount of infill. This would occur before recommending specific land use changes to the existing Community Business category and relevant adjacent medium and high-density residential designations. Based on surveys and redevelopment potential, the following centers are recommended for planning *(generally in order of priority)*:

a. Alpine-Balsam (underway)
b. 55th and Arapahoe
c. Meadows
d. Base Mar
e. Table Mesa

Actions Parallel with or Following BVCP Adoption

Staff will present an Action Plan concurrent with the draft plan that identifies actions to immediately follow plan adoption including but not limited to *(not necessarily in order)*:



1. **Prioritize area plans/corridor plans.** As noted above, area plans will be important to implement the community's citywide goals while addressing local needs and context.
2. **Regulatory land use changes.** The Land Use Code is the tool that includes zoning districts and standards to regulate development outcomes on particular parcels of land. Following adoption of the BVCP, some zoning districts or regulations will need to be amended to implement the desired mix, intensity and other desired characteristics of an area.
3. **Residential infill pilot/study.** The survey results showed support for the residential infill, as noted above; however, that support varied by subcommunity and by type of infill. Infill in single-family neighborhoods could achieve some affordable housing goals, but only to a small degree and would need to be done carefully to avoid negative consequences. Consequently, staff recommends continuing to work with neighborhoods to test ideas, and as recommended in the Middle Income Housing Strategy, to pilot ideas in a location that volunteers to try new approaches.

4. **Neighborhood plan pilot.** The expansion of the area plan approach and criteria to include neighborhoods (and corridors) as possible candidates is addressed as a policy change below. Planning Board suggested the idea of selecting a Boulder neighborhood to pilot neighborhood planning. Such an approach could be tested in conjunction with the residential infill pilot or separately. The area plan description change is further described below.
5. **Expand subcommunity fact sheets.** For each of the nine Boulder subcommunities (in Area I and II), staff will add a brief summary of unique characteristics and desired improvements as gleaned from the survey(s), and other outreach and engagement through the past 18 months. These fact sheet supplements would not be adopted as part of the plan to allow flexibility to update them periodically as area planning occurs.

6. Other Policies for BVCP

Also in response to the survey results, input, and analysis, staff is exploring the following policy changes to address: community benefit, a new housing policy, jobs:housing balance, and subcommunity and area plan criteria as described below.

Design and Character - Centers and Industrial Area Principles (Sec. 2)
The packets in **Attachment B.3** describe the: (1) Boulder Valley Regional Center (BVRC), (2) Neighborhood Centers, and (3) the Light Industrial/Innovation areas depict existing conditions and policies for each type of place. They also include draft principles for future place making and present visuals of transforming the mix of land uses and urban design. The principles and visual images are intended to be added to the Built Environment section of the plan to provide guidance on how these places should evolve.

Community Benefit Policy (Sec. 1)
The Planning Board has been working on how to better define community benefit and how it relates to inclusionary housing requirements, and the community has expressed interest in the topic including through the survey. Additionally, Keyser Marsten Associates is working with the city to conduct economic analysis. Community benefit is defined broadly as a developer-provided benefit to the community above and beyond what is required, in exchange for a bonus such as additional intensity or height. Such approaches are voluntary and administered through the Land Use Code or regulations. Once the BVCP policy set the framework, further work will be necessary to amend the Land Use Code. The language below reflects input from Planning Board and is proposed to appear as a new policy in Sec. 1, following Policy 1.18 Growth Requirements.

New Policy: <u>Community Benefit</u>
Proposed language: The city will develop regulations and incentives that ensure that new development provides benefits to the community beyond those otherwise required. Any incentives are intended to improve community economic, social, and environmental objectives of the comprehensive plan. Community objectives include without limitation affordable housing, affordable commercial space, spaces for the arts, community gathering space, public art, land for parks, open space, environmental protection or restoration, outdoor spaces, and other identified social needs. Community objectives also may be identified through other planning or policymaking efforts of the city.

Jobs:Housing Balance Policy (Non-Residential Growth Management) (Sec. 1)
The mix of future housing and non-residential land use is an important consideration for this plan update. In general, the community appears to support the current policy of seeking opportunities to improve the balance of jobs and housing while maintaining a healthy economy, including reducing some future non-residential potential in exchange for housing potential. The pace of nonresidential growth is of concern to the community, as seen particularly through the results of the second survey and in comments received during the past years' engagement. Some of the interventions noted above would reduce the overall nonresidential growth potential (e.g., building height limits and converting commercial/industrial uses to housing in the BVRC). Staff recommends modifying the jobs:housing balance policy to add: "… addressing the pace of nonresidential growth" as a potential tool as noted below.

> **Revised Policy 1.19: Jobs:Housing Balance**
> Boulder is a major employment center, with more jobs than housing for people who work here. This has resulted in both positive and negative impacts including economic prosperity, significant in-commuting and high demand on existing housing. The city will continue to be a major employment center and will seek opportunities to improve the balance of jobs and housing while maintaining a healthy economy. This will be accomplished by encouraging new housing and mixed use neighborhoods in areas close to where people work, encouraging transit-oriented development in appropriate locations, preserving service commercial uses, converting business and industrial uses to residential uses in appropriate locations, improving regional transportation alternatives and mitigating the impacts of traffic congestion and addressing the pace of commercial growth.

County Planning Commission also suggested defining a metric for a jobs and housing balance.

Staff would like to hear from council about whether reinstating a nonresidential growth management system (as the city previously had in the 1990s) should be a work plan item following adoption of the BVCP.

Housing Key Policies (Sec. 7)
A revised draft of Sec. 7, Housing chapter is available as part of the plan integration section below. Addressing future affordable and diverse housing has been a major theme of this BVCP update, and the Housing Boulder and Middle Income Housing Strategy work have helped inform the emerging policies. A new policy may be necessary to aid in achieving permanently affordable housing as changes occur through zoning that create more development potential. Such a policy would work in conjunction with the community benefit policy and would ideally lead to as much permanently affordable housing as economically viable. The draft policy is as follows.

> **New Policy: Permanently Affordable Housing for Additional Intensity**
> The city will develop regulations and policies to ensure that when additional [density] is provided through changes to zoning, a larger proportion of the additional development potential [for the residential use] will be permanently affordable housing for low, moderate, and middle income households.

Staff is doing analysis on IH provisions and other housing code changes that may inform how a final policy may take shape.

Subcommunity/Area Planning Criteria and Approach
The community, Planning Board, and council have continued to discuss how to refine the Subcommunity and Area Planning section of the plan to address community and neighborhood needs and to prioritize locations for area planning. That section of the plan is suggested to be updated as follows.

Add to description of inclusionary process… in first paragraph:
- **…** Such plans are prepared through a process described below that includes residents, neighbors, business and landowners, and city (and sometimes county) departments to work together toward defining the vision, goals, and actions for an area…

Subcommunity and area plans are intended to (among many other outcomes):
- **…** Identify and prioritize community benefits from development that are a priority for the area.

Divide Central Boulder into two subcommunities:
- Central Boulder – Downtown, and Central Boulder – University Hill

Add to description of area planning:
- Note that area plans are generally of a scale that allows for developing a common understanding of the expected changes, defining desired characteristics that should be preserved or enhanced, and identifying achievable implementation methods.
- While area plans generally focus on mixed use areas of change, they may be developed for residential neighborhoods if such areas meet the criteria for selection below.

Add to criteria for selection:
- Imminence or change anticipated in the area, neighborhood, or corridor.

As noted above, staff is also working on summaries to add to the fact sheets for each subcommunity.

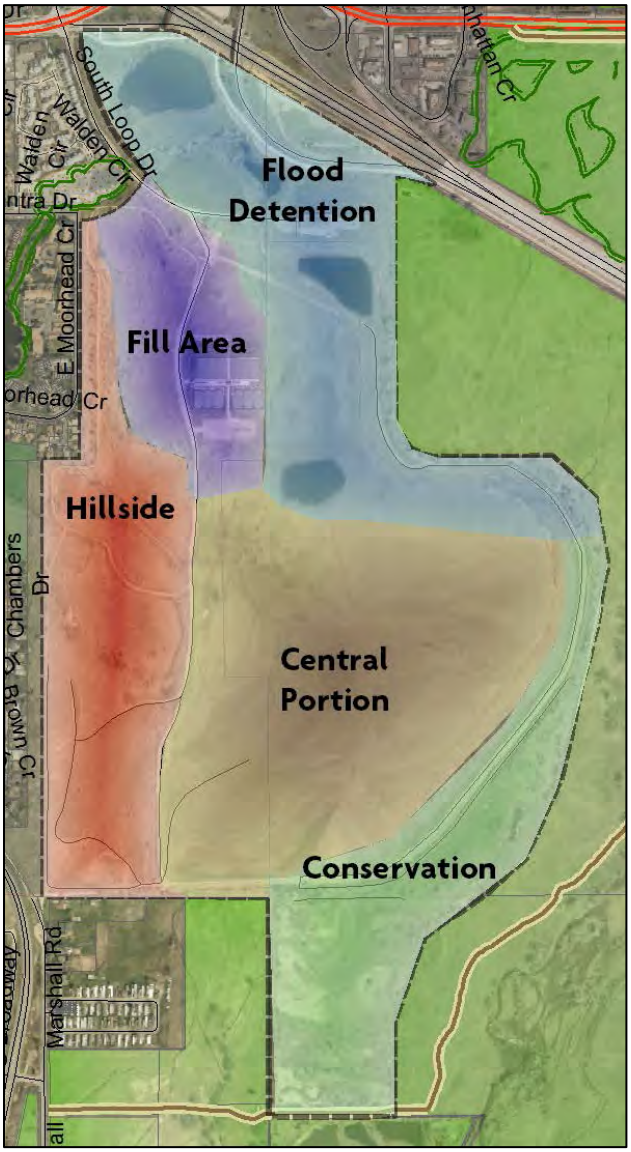
III. CU SOUTH SITE SUITABILITY

This study session is an opportunity for BOCC to provide direction to staff prior to receiving a recommendation for land use designations in March. Staff is sharing a site suitability analysis (**Attachment C** and link here), which contains information about the project and history of the site, and is requesting initial feedback about: (a) the areas of the site discussed in the Site Suitability Analysis and further explained in "Report Highlights" section below, and (b) the list of issues below.

A. Suitability Report Highlights

The suitability analysis is intended to inform a discussion about potential changes to BVCP land use designations for the CU South site and may help address issues for subsequent discussions between the City of Boulder and University of Colorado Boulder (CU Boulder). The report includes a broader analysis of conservation suitability, multimodal transportation, and utility services, and concludes with ideas about conservation and development of CU South.

The figure to the right identifies different areas on the CU South site that might merit consideration. A conservation suitability analysis suggests that the eastern perimeter and the southern wetlands have the highest ecological value and sensitivity to disturbance. The central portion of the property and portions of the western hillside have lower conservation values, making them less sensitive to disturbance and more suitable for development. About 80 acres in the northeast portion of the site are planned for regional floodwater detention and about 30 acres for an adjacent fill area; depending on final construction design, these areas may allow for conservation or development.



A supporting multi-modal transportation analysis recommends keeping the primary vehicular access to the site on South Loop Drive and secondary access along Tantra Drive in the future. Other recommendations include incorporating the northern end of South Loop Drive as a mobility hub, improving existing trails to create multi-use paths and providing new pedestrian connections to adjacent neighborhoods. Existing City of Boulder water distribution, sewer collection and treatment facilities have adequate capacity to serve some additional development on the site. Other than a potential water main extension, no major off-site improvement requirements for water or sewer are anticipated.

B. Community Interest in CU South

Interest in the future of the property remains high. The city and county have held two events for the project, including an open house in September that over 200 people attended. On Dec. 5, the city with CU hosted a second public workshop regarding the CU land use change, and about 125 community members participated in small group discussions and provided individual suggestions. Input included themes such as flood mitigation, timing of the land use designation change versus annexation, recreational uses of the site, conservation of open space, and protection of wildlife. OSBT provided input at a study session on Jan. 11, 2017.

C. CU's Plans and Intergovernmental Cooperation

The city and University of Colorado have a history of intergovernmental cooperation to achieve shared community goals. While CU has indicated it does not have immediate plans to develop the site, it has expressed interest in continuing the current athletic uses with water and sewer services. In the future, the university will explore additional athletic and academic facilities and particularly housing. CU has also expressed willingness to work with the city on flood mitigation, dedicating the northern portion of the site that council approved in 2015 as part of the South Boulder Creek Flood Mitigation study. Annexation to the city would entail an agreement between the city and CU, and any future development would require local and state review and would involve further community discussions.

D. Issues to Address at or Before Annexation

Staff has begun to compile a list of issues that may need to be addressed at or before the time of annexation, including topics such as:

Conservation and Open Space

- Arrangement of high value conservation areas
- Consideration of high value view corridors
- Trail location, design, and use

Transportation

- Perimeter access
- Internal and external transportation improvements
- Connections to public transportation and other campus locations
- Intensity of development area transportation system can handle

Utilities and Public Improvements

- Financing of Public Improvements
- Potable water, sanitary sewer and storm water services
- Use of non-treated water for irrigation
- Off-site public improvements and financing
- Floodplain management

Site and Building Design and Future Planning

- Site and building design, location height, massing and density
- Consultation for future planning

IV. Additional Policy Updates and Integration

The updated plan outline and chapters are posted on the project webpage (here) and are a work in progress reflecting input received to date. They will still need a round of editing to reduce redundancies, renumber policies, and improve clarity. A brief overview of policy updates are provided in this report. Further discussion of this topic will take place at the BOCC meeting scheduled for Feb. 23.

At its previous meetings, the City of Boulder Planning Board and Council reviewed and provided feedback on draft policy chapters noted below and an overall plan outline. Using

that feedback and input from other sources, staff prepared a public review draft for Aug. 24 and took additional public feedback and other board and commission feedback through November to align chapters with master plans and other updated information: Core Values; Natural Environment (Sec. 3); Energy and Climate (Sec. 4); Economy (Sec. 5); Transportation (Sec. 6); Community Well-Being (Sec. 8); and Agriculture and Food (Sec. 9). On Dec. 14, 2016, the Open Space Board of Trustees (OSBT) provided suggested amendments to the Natural Environment and Agriculture and Food sections and the trails policy in Sec. 8 and recommended approval to the decision making bodes. The revised drafts for those sections include those recommendations from OSBT as noted in the accompanying summaries.

Sec. 3 Natural Environment
This section focuses on policies related to the natural environment including: incorporation of ecological systems into planning, adaptive management approach, protection of natural lands, management of wildlife, water conservation, flood management, and air quality. The changes reflect updated plans since the 2010 Plan and other changes since the August draft that reflect County staff, Parks and Open Space board, Planning Commission and input from groups of community members with particular open space, environment, and soil health knowledge, as well as OSBT's recommended and approved changes. In general, the policies maintain or increase levels of protection and clarity about this section's relationship to other master plans and the city and county's respective roles in environmental protection.

Major changes include:

- A more descriptive preamble calling out features of the natural environment including the differences between policies as attributed to publicly owned versus private lands and lands in the urban context versus those that are part of the city and county open space surrounding the city.
- It also includes a policy on climate change mitigation adaptation and resilience.

Sec. 4 Energy and Climate
This section focuses on policies related to energy, sustainability, and climate with strong focus on promoting energy efficiency and renewable energy to reduce greenhouse gas emissions. The objective is to help address energy and climate goals and integrate them with other planning activities, such as decisions regarding development patterns, infrastructure, transportation, economic development, building and site design, and natural resources. It covers:

- climate action and greenhouse gas emissions
- energy conservation and renewable energy
- energy efficient land use and building designs
- waste minimization, recycling, and sustainable purchasing

Key changes include reference to work being done through the Climate Commitment and other county climate action. The Environmental Advisory Board discussed this chapter in January 2017, and for the next draft staff will address those forthcoming suggestions from the board.

Sec. 5 Economy
The policies in this section focus on providing a sustainable path for economic vitality with the understanding that Boulder's economic success also leads to challenges such as rising costs of commercial space and housing, potential displacement of existing businesses, and increasing demands for services, infrastructure and local and regional transportation. Many of the policies in this section are focused on the city. Topics include:

- Strategic redevelopment and sustainable employment
- Diverse economic base
- Quality of life
- Sustainable and resilient business practices
- Job opportunities, education, and training

Changes include:

- Focus on small businesses and affordability
- Incorporation and strengthening of resilience
- Further clarification of importance of a balanced approach to economic vitality

Sec. 6 Transportation
The policies in this section focus on the vision to create and maintain a safe and efficient transportation system that meets the goals of the Boulder Valley by providing travel choices to reduce the share of single occupant vehicular trips. These policies reflect on the need for the transportation system to be developed and managed in conjunction with the land use, social, economic, and environmental goals. Topics include:

- Complete transportation system
- Regional travel
- Funding and investments
- Integration of land use and transportation with sustainability initiatives
- Other policies

Changes include alignment with the city and county master plans and multimodal objectives; a renewed transit plan; more emphasis on regional travel; access management and parking and TDM; concurrent land use and transportation planning; complete missing links; transportation infrastructure to support 15-minute neighborhoods; mobility hubs; and emergency response.

Sec. 7 Housing
This section notes that the high cost of local housing causes many who work in the city to live outside of the city, and that the combined housing/transportation burden leaves less for other necessities making it difficult for many to participate in the community. The current working draft reflects input from Planning Board, Planning Commission, community members and organizations, and city and county staff. Topics include:

- Support for community housing needs
- Preserving and enhancing housing choices
- Advancing and sustaining diversity
- Integrating growth and community housing goals

Other changes emphasize the trends, particularly related to middle-income housing and need to provide a diversity of housing types and price ranges and goals to increase market rate affordable units as well as permanently affordable units.

Sec. 8 Community Well-Being
The policies in this chapter focus on the general health and wellbeing of the community as well as promoting civic and human rights, diversity, safety, health, service delivery, etc. Revisions and new policies were proposed based on input from city and county staff to reflect adopted plans for Parks and Recreation, Police, Fire, Resilience and Community Culture and guiding principles for the Human Services Strategy. A more detailed focus on the trails policy occurred at the Dec. OSBT meeting. The topics in this section are:

- Human services
- Social equity
- Safety and community health
- Community infrastructure and facilities, including schools, community facility needs, and parks and trails
- Arts and culture

Sec. 9 Agriculture and Food
This section focuses on agriculture, food, sustainable practices, and access to food for the community. The city and county have made significant contributions to the preservation of lands for agricultural production and the water needed to use these areas for agriculture such that most agricultural production in the Boulder Valley now occurs on city and county open space**.** This draft includes recommended changes as approved by the OSBT. The changes reflect updated plans and work since the 2010 Plan as well as a new proposed policy regarding soil health and soil sequestration that has been updated and modified based on recent input from community members and OSMP staff.

V. Next Steps for Plan Draft

- Late Mar. 2017: Draft plan
- Late Feb.-Mar.: Boards and Commissions events and additional culturally sensitive outreach
    - Open house/community event to review draft
    - Planning Board review of initial draft plan and analysis
    - CU South event
- April 11, 2017: City Council and Planning Board Study Session
- May. 12, 2017: Draft plan #2
- May. 23, 2017: First City Council Hearing (Joint with Planning Board)
    - Followed by adoption by Planning Board, then council, then county boards

Note: County meetings beyond February are still being scheduled.

VI. REQUEST APPROVAL TO INITIATE RECONSIDERATION PROCESS FOR 3261 3rd ST PUBLIC LAND USE CHANGE REQUEST

A. Summary of Request for BOCC Action

In Sep. 2016 both Planning Commission and the Board of County Commissioners voted in favor of staff's original recommendation to change the Area II/III boundary to coincide with the location of the blue line as it existed at the time the public land use change request was submitted, along with a change to an Open Space-Other designation for the area west of the proposed Area II/III boundary. The county decision makers' votes took place before the November election when voters approved amendments to the location of the blue line, and before city decision makers decided on the land use designation change for this property.

The blue line previously bisected 3261 3rd Street. The recent changes to the blue line moved it to the western boundary of the property**.** Due to this change in circumstances, staff amended the recommendation for the land use and area map change request before city decision makers decided on this matter. Changes to the original staff recommendation included:

1) A shift of the Area II/III boundary slightly westward of the original staff recommended location, which had recommended following the previous blue line.
2) A shift in the recommendation for an Open Space – Other land use designation for the Area III portion of the property to now apply to the amended Area III portion of the property.

Planning Board and City Council decided on a different version of the staff recommendation than did Planning Commission and BOCC. This land use designation change request is part of the four-body approval process and all four BVCP decision bodies (City of Boulder Planning Board and City Council, and Boulder County Planning Commission and Board of County Commissioners) must agree to the same land use change provisions in order for the changes to gain adoption. As a result, City Council requests that BOCC initiate a reconsideration process by county decision making bodies. The first step in that process is for BOCC to give approval to move forward with the reconsideration process, which is the decision before BOCC on Jan. 31, 2017. If BOCC grants approval for the reconsideration process staff will take the item to Planning Commission for reconsideration at their Feb. 15, 2017 meeting, and then to BOCC for reconsideration at a Feb. 23, 2017 meeting.

B. Additional Background and Rationale for Changes

The rationale for the amended staff recommendation follows the same rationale as the previous staff recommendation for a more logical service area boundary and maintaining the character of surrounding area. The amended staff recommendation also upholds the intent to limit development potential along the western edge. It allows the requestor a degree of flexibility in the potential future redevelopment of the property yet prevents development from occurring on the steep slope. As stated in the previous staff recommendation, should the owner pursue annexation, staff recommends limiting the following: potential for additional

building lots, overall house size and number of units. Discussion regarding the potential historic significance of the existing home on the property will occur during the annexation process as well.

For more information, see the staff report to City Council for their Dec. 13, 2016 meeting.

Thus far, the following hearings and meetings have taken place:

- *Aug 30*: Boulder County Board of Commissioners and Planning Commission joint public hearing
- *Sept. 21*: Planning Commission Deliberation and Vote
- *Sept. 27*: Board of County Commissioners Deliberation and Vote
- *Nov. 10*: City Council Public Hearing
- *Nov. 17*: Planning Board Public Hearing, Deliberation and Vote

STAFF RECOMMENDATION

Suggested Motion Language:
Staff requests Board of County Commissioners approve initiation of a reconsideration process by county decision making bodies of a decision related to land use designation change 3261 3rd St. in the form of the following motion:

Move to approve staff's request to initiate a reconsideration process for the Area II / III boundary and the land use designation change previously approved for 3261 3rd St.

Boulder Valley Comprehensive Plan
2016 Community Survey
Summary Report

January 2017

OUR LEGACY.
OUR FUTURE.

BOULDER VALLEY COMPREHENSIVE PLAN

Prepared for:

City of Boulder
Boulder County

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Table of Contents

INTRODUCTION AND METHODOLOGY

This report summarizes key findings from a random sample community online survey. This community input is intended to help guide and inform the 2015/16 update of the Boulder Valley Comprehensive Plan (BVCP), along with other feedback being gathered via other means as part of the Plan update process.

The 2016 BVCP Community Survey addressed a variety of topic areas that are important focus areas for the BVCP update, including reaction to potential land use plan changes for residential infill and non-residential, options for future housing choices, feedback on building heights, desired neighborhood improvements, developer requirements, and other related topics.

Random Sample Survey

As implied by its name, the random sample survey was conducted among a random sample of Boulder Valley residents, using a postcard invitation to take an online survey, with a one-time use password printed on the postcard to ensure data integrity.

A total of 6,000 postcard survey invitations were mailed to a random sample of Boulder Valley households in October 2016, including households located in the City of Boulder and in unincorporated Area II. All households in the Boulder Valley were intended to be included in the sample frame, regardless of voter registration status, housing tenure, or other characteristics. Residents of the CU residence halls (zip code 80310) were excluded from the sample frame based on the City's past experience of very low survey response rates, as well as past administrative challenges in getting accurate dorm resident lists.

Recipients of the postcard could call RRC Associates to have a paper copy of the survey mailed to them; a total of 12 paper surveys were sent out. The survey instructions also included a note advising Spanish speakers to seek the assistance of an English-speaking household member or friend to help them complete the survey.

Two reminder postcards were sent to non-respondents, one in mid-November and the other in early December. The original deadline to respond, December 2, was extended in the second reminder postcard to December 11. The reminder postcards helped to prompt additional responses to the online survey.

Out of 6,000 survey invitations mailed, 382 were returned as undeliverable, while 5,618 were presumed delivered. A total of 623 surveys were completed in full or part. The net response rate (after excluding undeliverable surveys) was 11.1 percent. The ***margin of error at the 95 percent confidence interval is approximately +/-3.9 percentage points***.

The raw survey data were weighted to match the demographic profile of the adult household population in the Boulder Valley by age and housing tenure (own vs. rent), based on 2010 Decennial Census and 2009-14 American Community Survey data. The objective of the weighting was to ensure that the results are representative of the Boulder Valley population on key demographic characteristics, and are intended to fine-tune the specific answers to the survey. A summary of selected respondent demographic characteristics before and after survey weighting, as compared to the Boulder Valley population profile, is included at the end of the chapter summarizing the random sample survey results. Only weighted results are summarized in this report, unless noted otherwise.

The survey questions were grouped by topic area, including familiarity with the Plan, commercial/light industrial growth policies, building height, land use plan changes, options for future housing, neighborhood improvements, developer requirements, additional comments/suggestions regarding the Plan, and respondent demographics (for grouping purposes). Many of the survey questions were introduced with extensive background information, given the complex and sometimes technical nature of the issues being evaluated. A copy of the online survey questionnaire is included in the Appendix for reference.

In several sections of the survey, respondents were given the opportunity to provide open-ended comments about survey topics. The open-ended questions were frequently asked as a follow-up to a closed-ended question, intended to elicit more detailed input related to the issue at hand, while other open-ended questions were stand-alone questions. Altogether, this comment feedback provides a valuable complement to the quantitative results from the close-ended questions; the comments provide rich context, nuance, detail and explanation. Nearly 300 pages of diverse, often lengthy and thoughtful comments were received from the random sample survey; this summary report attempts to illustrate some of the themes and flavor of some of the more general comment questions, but the reader is encouraged to read the comments in full to get a more complete sense of the richness and diversity of the feedback.

Key overall findings from the random sample online survey are summarized in the body of this report. In addition, the Appendices to this report include the following additional materials regarding the random sample survey:

- A copy of the survey questionnaire;
- Tabular summaries of the “random sample” survey results (both weighted and unweighted); and
- Verbatim comment responses to the open-ended questions.

RESULTS OF RANDOM SAMPLE ONLINE SURVEY

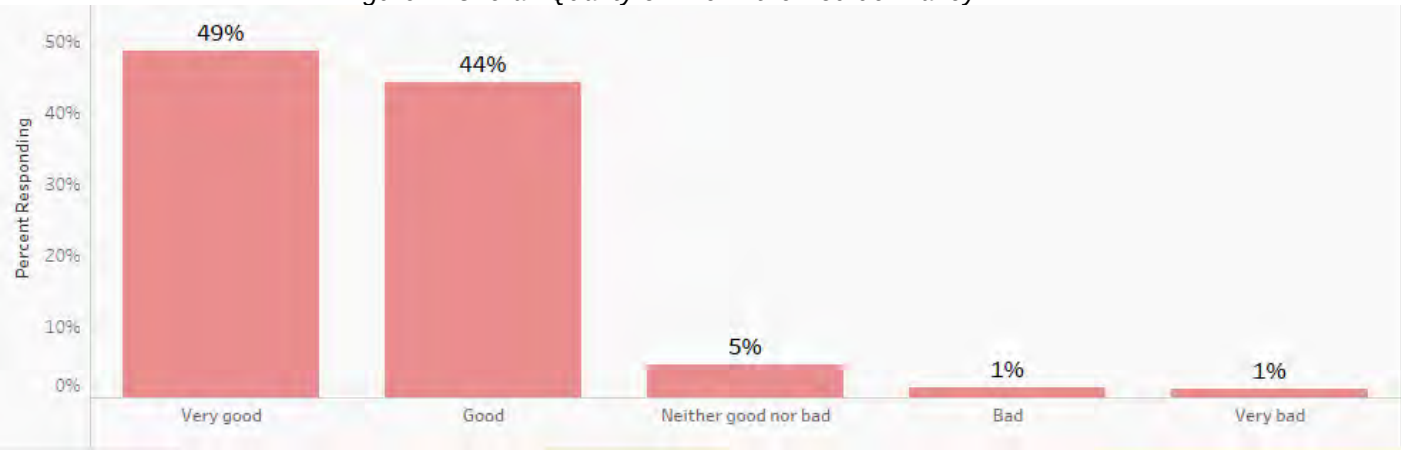
This section of the report summarizes key findings from the weighted results of the random sample online survey.

Quality of Life and Familiarity with the BVCP

This section provides a brief summary of respondents' opinions about the overall quality of life in the Boulder Valley, and their familiarity with the Comprehensive Plan and awareness of the discussions about the update now taking place.

- Overall quality of life in the Boulder Valley. Respondents answered very positively, with 93 percent indicating the quality of life in the Boulder Valley is either "very good" (49 percent) or "good" (44 percent), and small shares indicating it is "neither good nor bad" (5 percent), "bad" (1 percent), or "very bad" (1 percent). These results are nearly identical to the 2015 Comp Plan survey

Figure 1: Overall Quality of Life in the Boulder Valley



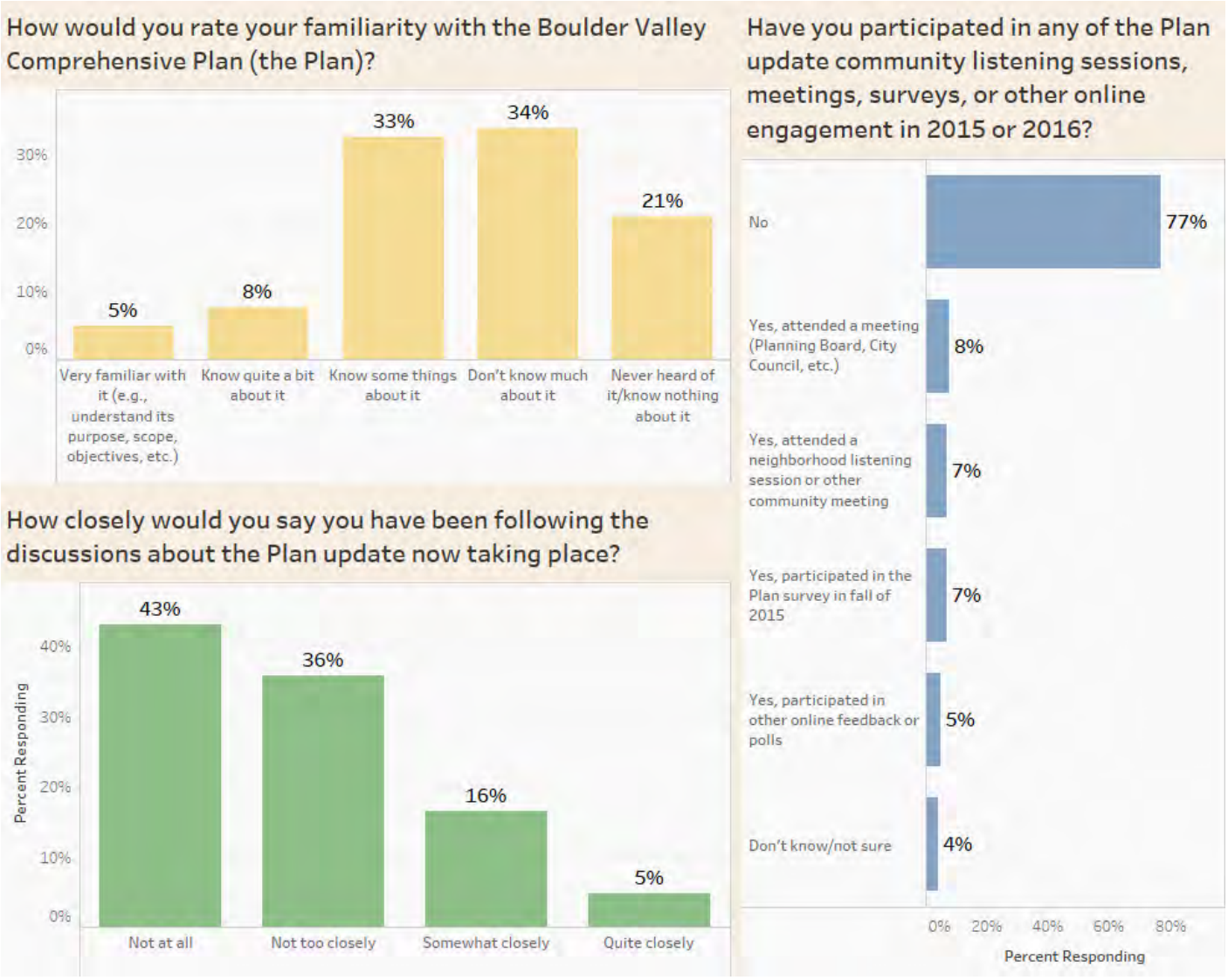
- Familiarity with the Boulder Valley Comprehensive Plan. Most respondents have a low level of familiarity with the Comprehensive Plan, with almost six in ten (55 percent) saying that they have "never heard of it/know nothing about it" (21 percent) or "do not know much about it" (34 percent). An additional 33 percent said that they "know some things about it," while 13 percent indicated they are quite knowledgeable ("know quite a bit about it" – 8 percent, or "very familiar with it" – 5 percent).

- How closely have you been following discussions about the Plan update? Consistent with their lack of familiarity with the Plan, more than three in four respondents (79 percent) indicated that they are "not at all" (43 percent) or "not too closely" (36 percent) following discussions about the Plan update. About one in six (16 percent) are

following the conversation "somewhat closely," and 5 percent are following it "quite closely."

- Prior participation in Plan update input opportunities. Three-quarters (77 percent) of survey respondents indicated that they have not participated in any other Plan update input opportunities, showing that the survey is gathering input from residents who have not done otherwise. Small percentages said they had attended a City Council or Planning Board meeting (8 percent), attended a neighborhood listening session or other community meeting (7 percent), took the 2015 Plan update survey (7 percent), or participated in other online surveys/polls (5 percent).

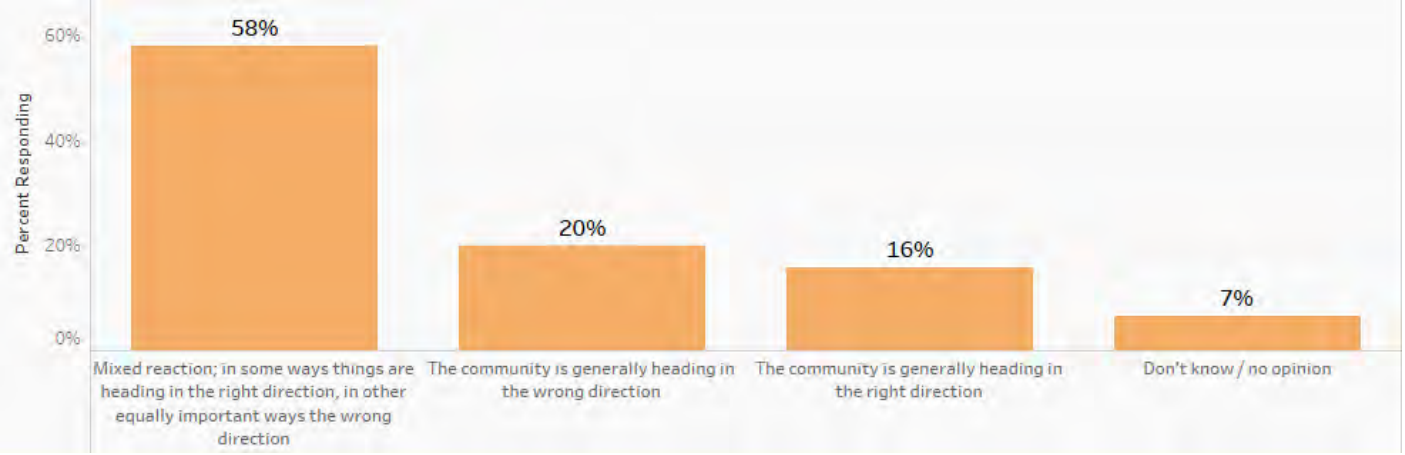
Figure 2: Familiarity with BVCP and Prior Participation in Engagement



Perceptions of Recent Growth and Change in the Community

Perception of recent growth and change in the community. Respondents were asked to share their opinion regarding the general direction the community is heading in terms of redevelopment, growth and design. Results indicate that most respondents expressed a mixed reaction (58 percent), indicating that in some ways things are headed in the right direction but in other equally important ways the wrong direction. As well, slightly more residents think that the community is generally heading in the wrong direction (20 percent) than in the right direction (16 percent). An additional 7 percent didn't know or had no opinion.

Figure 3: Perception of Recent Growth and Change in the Community



In a followup question, respondents were asked if they had any comments on their response. A total of 508 comment responses were received. Following is a summary of some of the themes and flavor of the comments, grouped by response to the "right/wrong" direction question.

- Comments by respondents who feel that the community is "generally headed in the right direction": In broad terms, the comments from those who feel Boulder is generally headed in the right direction tended to like the Open Space program, bike infrastructure, a healthy job base, and more concentration of development (so as to preserve Open Space and limit sprawl).

  On the other hand, many of those who feel that Boulder is headed in the right direction nonetheless express concern that Boulder continues to grow more unaffordable as a place to live.

  Following is a random sample of comments, for illustration (with the complete listing in the Appendix).

Table 1
*Random sample of comments of those who feel "the community is **generally heading in the right direction**"*

- *"The community is provided denser development which provides more housing, services, and opportunities to people who live and/or work here"*
- *"I like the development happening, nice buildings, good businesses moving in. We need to improve our roads, and/or build a light rail system."*
- *"Job base sustains a busy, healthy community. Entrepreneurial ideas abound, and residents have a choice of many neighborhood types. Boulder has kept itself distinct from the cities around it."*

- Comments by respondents who feel that the community is "generally headed in the wrong direction": The feedback from those who feel Boulder is generally headed in the wrong direction tended to center on too much growth, too much traffic, too many people, and too much density.

  One interesting pattern in the comments for this question was that those who think Boulder is generally headed in the wrong direction were 1.3 times more likely to provide a follow-up comment on their choice than those who think Boulder is generally headed in the right direction. Additionally, the "wrong direction" comments tended to be lengthier and cite more specifics than did the "right direction" comments, suggesting very strongly held views by persons with this opinion.

Table 2
*Random sample of comments of those who feel "the community is generally heading in the wrong **direction**"*

- *"Cost of living is too high due to high taxes."*
- *"We generally disagree with the policies of increased density. They degrade the quality of life in Boulder. Boulder has always been an expensive place to live and increased density will not change this fundamental fact."*
- *"Simple. The urbanization effort is killing the town."*
- *"Boulder is too full. Traffic is miserable. The notion of infill and that everyone will take public transit has been proven false. I've lived here for 40 years and the growth has done nothing but ruin the community, taxing resources and turning a unique city with home grown businesses into any town USA with chain stores."*

- Comments by respondents who have a "mixed reaction" about recent trends of growth and change: As noted previously, a little over half of respondents indicated a mixed reaction, with some things headed in the right direction and other equally important things headed in the wrong direction. These commenters tended to cite a combination of the themes noted above, including too much growth, but also the need for more housing for people who want to live in Boulder. The emphasis in many of these comments was in support of balanced growth, while maintaining the community/ historic feel and the surrounding open space.

Table 3
Random sample of comments by those who have a ***"Mixed reaction; in some ways things are heading in the right direction, in other equally important ways the wrong direction"***

- *"I understand that Boulder has to grow, and I like some of the new amenities in town, but I believe we are growing too fast, and there are too many big, box-like buildings going up. We need to preserve what makes this place special--the small-city feel and the view!"*
- *"Too much development of high density apartment complexes and hotels. For young workers this housing is great, however not too enticing for families. High density apartment complexes are not 'affordable.' Continue with open space acquisition and trail building, as well as bike/walk infrastructure."*
- *"Wrong direction: 1) The Coop Housing debacle continues to be on the wrong track. The message has been loud and clear - while the Coop Housing concept is a good one - there is no confidence in the community that it will be enforced (like the over occupancy ordinance that is not enforced). Until this is addressed, the ordinance will not have a chance of being successful. 2) The Civic Area Master Plan is a hodge-podge of a 'little bit for everyone' and has continued to disregard the input from organizations like Historic Boulder regarding the Atrium Building and the Bandshell. 3) Municipalization has been a disaster. The city has spent millions of (our) dollars that could have been spent on working with Xcel and also could have been spent on other important issues facing our community - such as homelessness and towards reinforcing the value of the arts."*
- *"Need more alternative transportation. Need no fossil fuels very soon. Need more support for poor children"*
- *"Right - Community is keeping unregulated growth from over running the area which makes for a relatively safe and clean community. Wrong - Government is implementing policies on the community based on ideologies and agendas that often don't reflect the best interests or wants of the people. Government vanity projects or desire to 'lead the country' are causing basic services from being intentionally ignored and costs of living and housing to be out of reach for many, including those who were raised here. Community is becoming more elitist, transient, congested and less livable for a greater portion of the community."*

- *"Boulder is getting a bit tilted toward the upper class."*
- *"Right direction; mixed use buildings. Wrong direction: not taking biking into more consideration. With more growth and the desire to reduce emissions, biking needs to be taken seriously. Ex Folsom street. That was /is a disaster for cars and bikes now. Everyone fought the Boulder creek path when that was built but can you imagine Boulder without it?!?!"*
- *"Wrong direction: Skyrocketing cost of housing and not nearly enough affordable housing options. Boulder has become increasingly exclusive and homogenous in large part because it is prohibitively expensive to live here."*
- *"I am happy with the continued expansion of open space. I am happy with the changes on Broadway a few years ago. I support widening bike paths separating them from traffic. I am unhappy with the changes to allow higher density housing near 28th and Baseline. That area only has immediate walking access to a few grocery stores and the students need to walk on narrow sidewalks along 30th. It is not designed in the spirit of Boulder where access to interesting shops/walking areas is easy! (Also there is poor public transit access to this area.) I am unhappy with the Hill hotel change as well as the high structure that replaced the Daily Camera Building. I think it should not have gotten a height extension. We should be preserving the historical commercial districts like the Hill. I believe we should be expanding public transportation in Boulder. It only regularly services certain zones. It would be absolutely amazing to include some sort of public transit that operates away from traffic. (I.e. rail, gondolas)"*
- *"Right direction: maintaining open space surrounding Boulder, and maintaining building height regulations. Wrong direction: Google is coming, which will generate problems associated with over population and gentrification (e.g., excessive traffic; high cost of living)"*
- *"We should support some quality high density living which in turn creates walking communities and leaves open space to be shared by all."*
- *"There has been an increasing emphasis on commercial development even as housing prices continue to increase. In spite of any good intentions on having bike-to-bus scenarios, this disparity between jobs, income, and housing costs are leading to an exponential increase in traffic."*

Commercial and Light Industrial (Non-Residential) Growth Potential

A series of questions asked respondents to identify their priorities and preferences related to commercial and light industrial growth and related policies. The survey presented introductory language about current plan policies, including local and regional projections for housing and job growth, and the importance of finding an "appropriate balance of used in the right locations and intensity," in advance of the various questions about those topics. This section summarizes the findings from these five questions for city-wide policies and three questions for specific areas in the City.

Following is the full text of the explanatory text regarding commercial and light industrial growth:

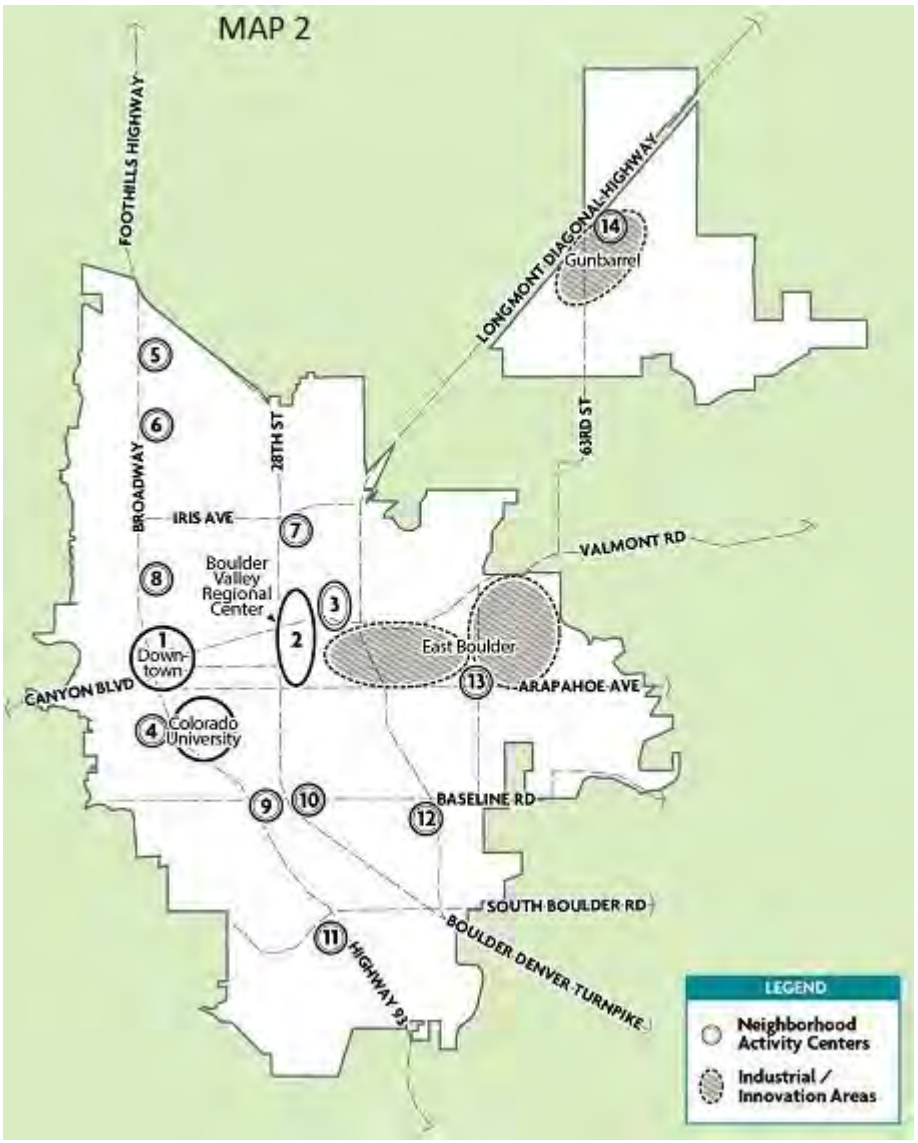
The current Plan recognizes Boulder's role as a regional employment center and identifies areas within the city to accommodate future commercial growth. Most commercial and industrial growth is projected to occur in Crossroads, East Boulder and Gunbarrel in areas designated for future "Mixed Use," "Business" and "Light Industrial."

Commercial and industrial growth provides for additional jobs, economic opportunity, and tax revenues; and conversely will increase in-commuting and create traffic congestion, additional housing demand, upward pressure on housing prices, and demands for city services.

As a result of community feedback and in light of the trade-offs related to commercial and industrial growth, the city is exploring a range of land use changes, policies, and tools to address the growing imbalance between jobs and housing generally. Please indicate your level of support or opposition for each approach to change zoning for future commercial and industrial growth potential (not to change existing commercial and industrial spaces).

Following is the map that was provided in the survey to orient respondents to the areas of interest for this question.

Figure 4: Survey Reference Map: Neighborhood Centers and Light Industrial Areas



City-wide Policies (see Figure 5)

1) Maintain the current policy for existing commercial and industrial growth potential: Reaction to maintaining the current policy for non-residential growth potential was evenly split: 40 percent opposed it, 40 percent supported it, and 20 percent was neutral.

2) Retain and protect service industrial and small businesses in light industrial areas: Strong support was observed for retaining and protecting these businesses. Eighty-four percent of respondents supported it, 12 percent were neutral, while only 4 percent was opposed.

3) Reduce commercial and light industrial growth potential: Half of survey respondents (49 percent) indicated that they support reducing commercial and light industrial growth potential. On the other hand, 33 percent opposed reducing this potential, while 17 percent was neutral.

4) Reduce commercial and light industrial growth potential somewhat, while also shifting potential to allow for more housing: Stronger support was seen for reducing commercial/light industrial growth potential when paired with allowing more potential for housing. In this scenario, 63 percent offered support, while 25 percent opposed (12 percent was neutral).

5) Adopt a non-residential growth management system: Survey respondents generally supported adopting a policy to limit non-residential growth in the City. Sixty percent was in favor, 26 percent was in opposition, and 14 percent was neutral.

Figure 5: Support/Opposition for City-Wide Potential Modifications to Commercial/Light Industrial Zoning

Policies for Specific Areas (see Figure 6)

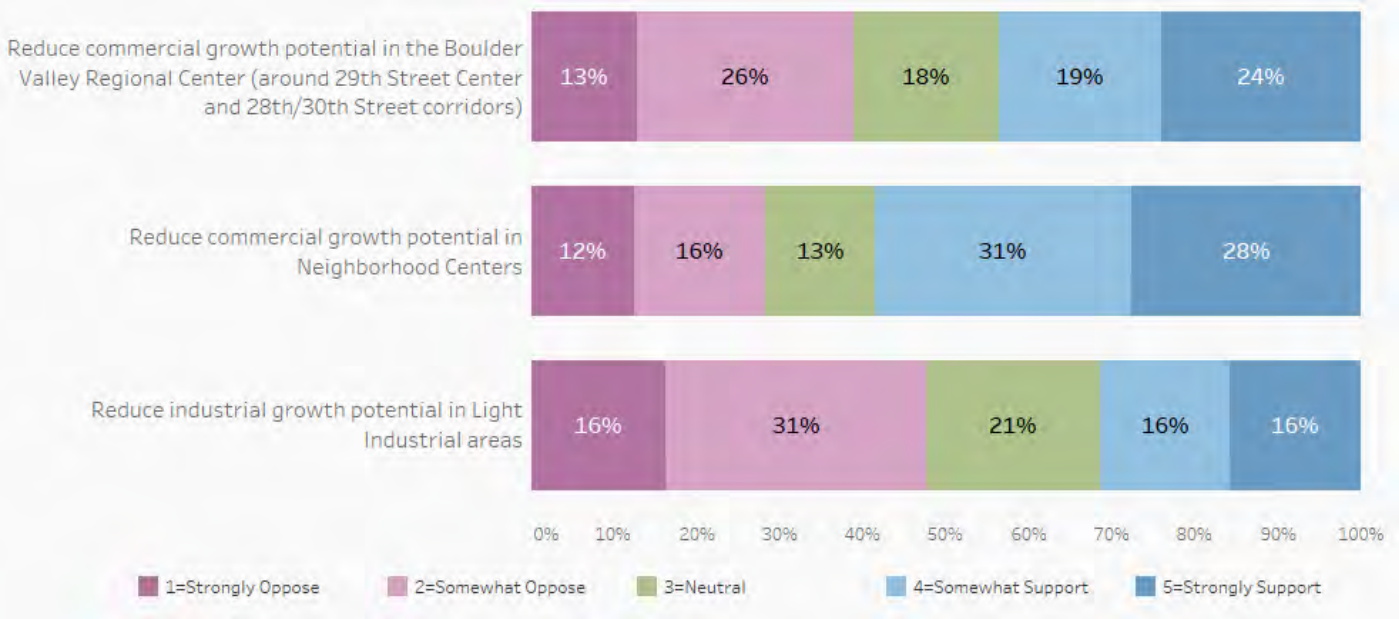
1) Reduce commercial growth potential in Boulder Valley Regional Center. Reaction to this idea was split, with 43 percent supporting, 39 percent opposing, and 18 percent neutral.

2) Reduce commercial growth potential in Neighborhood Centers. Generally, support for this idea was noted in the survey responses. Fifty-eight percent was in favor of reducing commercial growth potential in neighborhood centers, while 28 percent was opposed to this limitation and 13 percent was neutral.

   Looking at the responses to this question by the subcommunity where the respondent lives shows a general level of support across the City for reducing commercial growth potential in Neighborhood Centers. Specific results show the following patterns:
   a. Greater support is observed for residents of East Boulder (72 percent support), North Boulder (71 percent), and Gunbarrel (66 percent).
   b. Similar levels of support/opposition as compared to the overall results are seen for residents of Central Boulder-South of Arapahoe (59 percent).
   c. Greater opposition is noted among residents of Central Boulder-North of Arapahoe (40 percent oppose), Southeast Boulder (39 percent), and South Boulder (35 percent).
   d. Sample sizes in Palo Park, Crossroads, and University of Colorado were too small for this analysis.

3) Reduce industrial growth potential in Light Industrial areas. More survey participants were opposed to this potential reduction (48 percent) than were in support of it (32 percent), while 21 percent of respondents were neutral in their opinion.

Figure 6: Support/Opposition for Commercial/Light Industrial Zoning Modifications in Specific Areas



A total of 264 follow-on comments were recorded on the survey related to commercial and light industrial growth policies and zoning. A random sampling of those comments is presented below, showing a diverse set of opinions among survey respondents, but generally emphasizing the importance of balancing commercial/light industrial growth with housing units (particularly affordable units) for the workers in those developments.

Table 4
Random sample of comments: Do you have other comments about non-residential (i. e., commercial, office, light industrial) growth policies and future job growth?

- *"Allow businesses to locate in any area that pays wages that allow people to live locally."*
- *"Growth' isn't worth anything if the tradeoff is a reduced quality of life. Boulder's unemployment rate right now is 3.5% compared to 4.6% nationally, which is amazing. The worst it's been in recent years was 7.9% in 2010, compared to 9.6% nationally, and that's right after the Great Recession. We're fine on the jobs front; let's make sure Boulder stays an amazing place to live."*
- *"I think we need to keep a balance and perhaps we could think about more employment coming in agricultural ventures rather than industrial ventures."*
- *"it seems that once google committed to move to Boulder, rents and housing prices have gone through the roof. I've heard that up to 3000 employees could be moving here. Housing prices in CA are so much more costly than Boulder, and it seems landlords and owners are raising local prices to meet the CA expectations. non-residential growth should focus on small local businesses rather than encouraging large corporations to locate in Boulder. Boulder has been a great incubator for local talent and should continue to encourage that kind of growth."*
- *"No"*
- *"The development of new commercial space needs to be balanced with new housing so we don't just create a commuters and traffic nightmare."*
- *"Too much growth. Ugly buildings. Too dense, too high, with too little setbacks and green space. Too much added traffic. Ruining Boulder generally. Strong negative impact on Boulder Valley."*
- *"We obviously need job growth here, but need to manage it well, looking at the environment, parking, and traffic. Go slow."*
- *"You need to build higher, not out. Sprawl will kill Boulder. Repeal the building height limit (or increase the building height limit) and build up. Trust me, I grew up in Austin. That city is a sprawling mess. A few people losing their coveted views of the mountains is worth a better land management policy for the future. If people want to see the mountains, they can go hike out west."*

Building Height in Mixed Use and Non-Residential Areas

A section of the survey queried respondents about their opinions on building height limits and potential modifications in mixed use and non-residential areas.

Following is the full text of the explanatory text regarding building height:

The City Charter limits building heights in Boulder to a maximum of 55 feet and zoning regulations determine allowed heights for specific areas. Height modifications to allow taller buildings can be allowed through the development review process (i.e., site review). In response to community concerns about such height modifications, the city has an ordinance in place through April 2017 that limits heights taller than 35 feet (up to 55 feet) to specific areas as shown in Map 3 (those with a plan in place or that have had public process, such as Downtown, Boulder Junction, etc.).

Figure 7: Survey Reference Map: Areas Where Height Modifications may be Considered

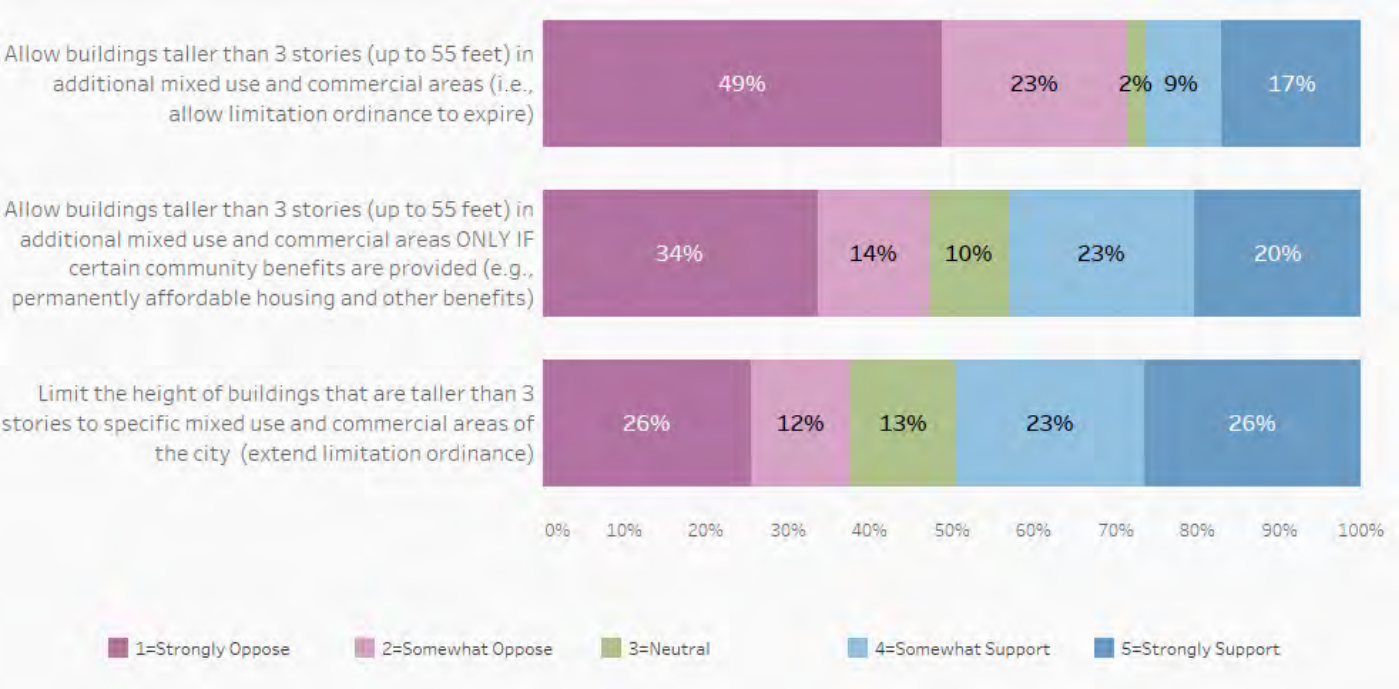
1. Allow buildings taller than 3 stories (up to 55 feet) in additional mixed use and commercial areas. Generally, respondents opposed allowing buildings up to 55 feet in additional locations in the City. Fully 71 percent survey participants were opposed to allowing these buildings in additional locations in the City, while only 26 percent was in support (2 percent neutral).

2. Allow buildings taller than 3 stories (up to 55 feet) in additional mixed use and commercial areas ONLY IF certain community benefits are provided (e.g., permanently affordable housing and other benefits). Reaction to this scenario was more balanced, though more opposed the idea (47 percent) than supported it (43 percent). Ten percent responded with a neutral opinion.

3. Limit the height of buildings that are taller than 3 stories to specific mixed use and commercial areas of the City. Limiting the location of taller buildings was supported by 49 percent of survey respondents and opposed by 38 percent. 13 percent was neutral.

   Looking at the responses to this question by the subcommunity where the respondent lives shows a mixed level of support across the City for limiting building height to specific areas of the City. Specific results show the following patterns:
   - Greater support is observed for residents of East Boulder (80 percent support) and North Boulder (67 percent).
   - Similar levels of support/opposition as compared to the overall results are seen for residents of Central Boulder-North of Arapahoe (52 percent support).
   - Greater opposition is noted among residents of Central Boulder-South of Arapahoe (48 percent opposed) and South Boulder (47 percent).
   - Support and opposition were about equally split in both Southeast Boulder and Gunbarrel (in each subcommunity, about 40 percent support and 40 percent oppose).
   - Sample sizes in Palo Park, Crossroads, and University of Colorado were too small for this analysis.

Figure 8: Support/Opposition for Building Height Options



In a follow-up question, respondents were asked if they had any comments on their response about building heights. A total of 287 comment responses were received, with a variety of feedback related to opinions of building height. Following is a random selection of comments from those received.

Table 5
Random Sample of Comments About Building Height

- *"Building heights should be increased east of Folsom or 28th, and more or less unlimited east of Foothills Parkway."*
- *"I have lived in a large city for much of my life. One of the reasons I chose to move to Boulder was its abundant natural beauty and smaller scale."*
- *"If possible, limit it so that the beautiful views of the mountains are maintained from any area in Boulder."*
- *"Leave the VIEWS!!!!""*
- *"Questions are confusing. Going higher is OK east of 28th, a bad idea downtown and west of Folsom"*
- *"The height of the new Daily Camera building is a travesty."*
- *"When taller buildings are allowed, even within the zones on map 3, larger setbacks from the road and larger sidewalks must be required. Just look at cities that do and don't require larger setbacks, you'll see the advantages to everyone, not just pedestrians."*

Housing Mix and Locations

Another survey topic was the potential for changes to the land use plan that would allow additional housing types in certain locations. This section reviews the results from the questions about housing mix and location.

Following is the full text of the explanatory text regarding housing mix and locations:

The 2015 Comprehensive Plan Survey identified a greater diversity of housing types and price ranges as the highest priority action. The shortage of affordable housing in Boulder—especially for the workforce and middle income households—was identified by the community as a critical need, and diminishing housing affordability is making it harder for Boulder to be the diverse and inclusive community it strives to be.

Future residential growth under the current Plan will result in new housing mostly in mixed use commercial areas in Central Boulder and Boulder Junction and otherwise distributed in centers designated for "Mixed Use" or "Residential Medium or High" along major corridors such as 28th Street or near Downtown. However, at the current rate of housing growth of one percent average per annum, the future housing potential will be exhausted before 2040.

Increasing the potential for housing in commercial centers, light industrial areas, or along commercial corridors such as 28th Street provides opportunities to create more permanently affordable and market rate middle income housing, contribute to diversity and social equity in the community, and better balance the future mix of jobs and housing. Conversely, such housing growth could also create additional demands for services and infrastructure (such as open space, parks, streets and utilities) and concerns of adjacent neighborhoods about compatibility and overall community character. The next few questions address housing options.

To meet future diverse housing needs, Boulder is exploring changes to the land use plan that could allow additional future housing (e.g., townhomes, rowhomes, stacked flats, live-work units) in certain locations noted below and new standards and incentives to ensure that a substantial amount of any future new housing is permanently affordable to low and middle incomes. What is your general level of support or opposition for new housing?

1. Maintain future housing potential for approximately 6,750 new housing units in Boulder (including CU dorms). Reaction was mixed to this question, with more supporting the concept (47 percent) than opposing it (34 percent), while 19 percent was neutral.

2. Allow additional housing potential in Boulder (i.e., more than the 6,750 projected units). This scenario garnered more support (52 percent) than opposition (38 percent), while only 9 percent was neutral.

3. Allow additional housing potential in Boulder only if a substantial amount of any future housing is permanently affordable to low and middle incomes. Support for this scenario (60 percent) outweighed opposition (27 percent), with neutral opinions at 13 percent.

   Looking at the responses to this question by the subcommunity where the respondent lives shows a mixed level of support across the City for allowing additional housing only if a substantial amount is permanently affordable. Specific results show the following patterns:
   - Greater support is observed for residents of East Boulder (76 percent support), Southeast Boulder (72 percent), and South Boulder (66 percent).
   - Similar levels of support/opposition as compared to the overall results are seen for residents of Gunbarrel (60 percent support). Residents of Central Boulder-North of Arapahoe were highly neutral for this question (35 percent neutral).
   - Greater opposition is noted among residents of Central Boulder-South of Arapahoe (53 percent oppose), North Boulder (40 percent).
   - Sample sizes in Palo Park, Crossroads, and University of Colorado were too small for this analysis.

Figure 9: Support/Opposition for New Housing Options

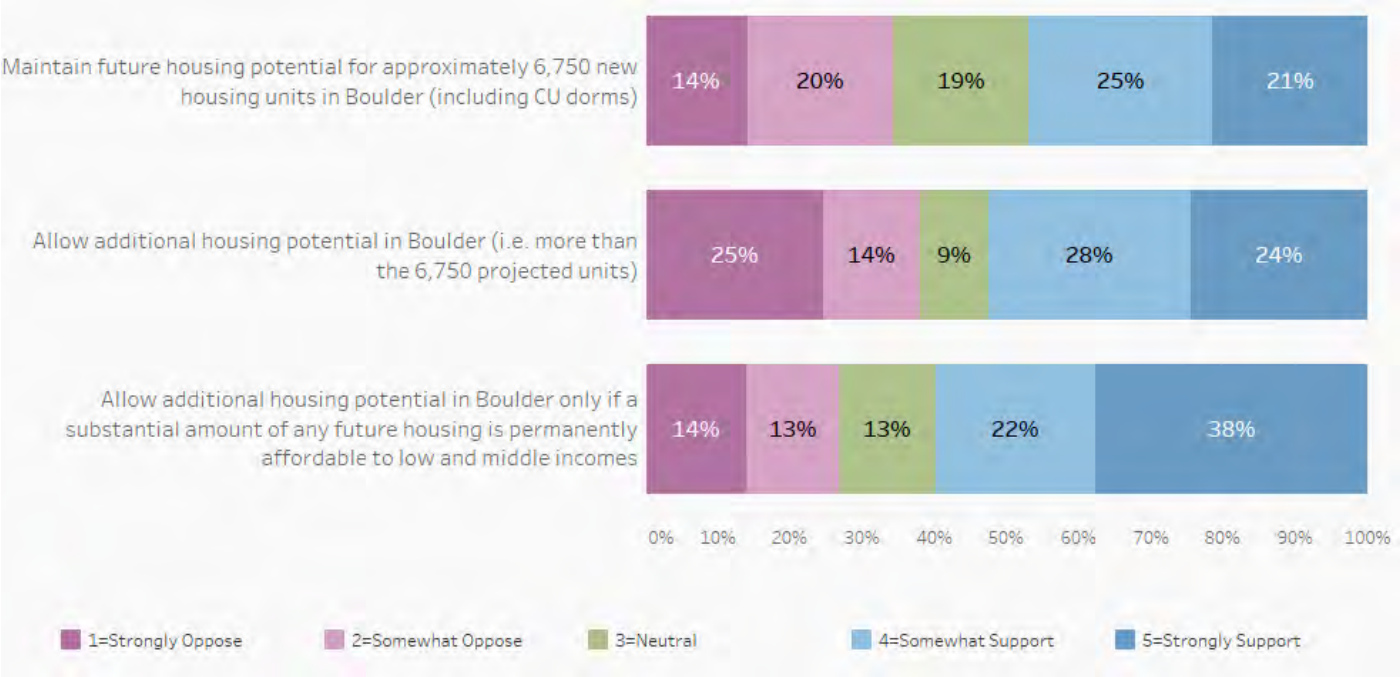


Figure 10: Example of Potential Light Industrial Changes

*Example of a **Light Industrial Area** that takes a former parking lot and warehouse building and includes an active street, ground level uses (e.g., a café/deli), improved landscape and furnishings, and a mix of uses including housing in the background*

BEFORE

Source: http://www.greenbridgerealestate.com/recentTransactions/industrial.php

AFTER

Source: StudioINSITE

Figure 11: Example of Potential Neighborhood Center Changes

*Example of **Neighborhood Center** showing active ground level and outdoor uses, live-work where housing is above retail and work space, landscaping, pedestrian features, and transitions to residential neighborhoods with smaller, lower intensity uses*

BEFORE
Source: http://www.cororealty.com/news/aldi-coming-riverstone-mill-shopping-center

AFTER
Source: StudioINSITE

Four examples of potential approaches to future housing in certain locations were queried on the survey. The responses to those four approaches are presented here.

1) Change the Boulder Valley Regional Commercial Center (29th Street Center and 28th/30th Street corridor) land uses to allow more housing such as apartments and townhomes. Respondents were generally supportive of this scenario, with 67 percent voicing their support and 23 percent registering opposition (10 percent had a neutral opinion).

2) Change land uses in Neighborhood Centers to allow for a variety of housing such as townhomes, rowhomes, and housing mixed with retail uses. A similar level of support was recorded for this idea (70 percent support), while 21 percent opposed it and 8 percent was neutral.

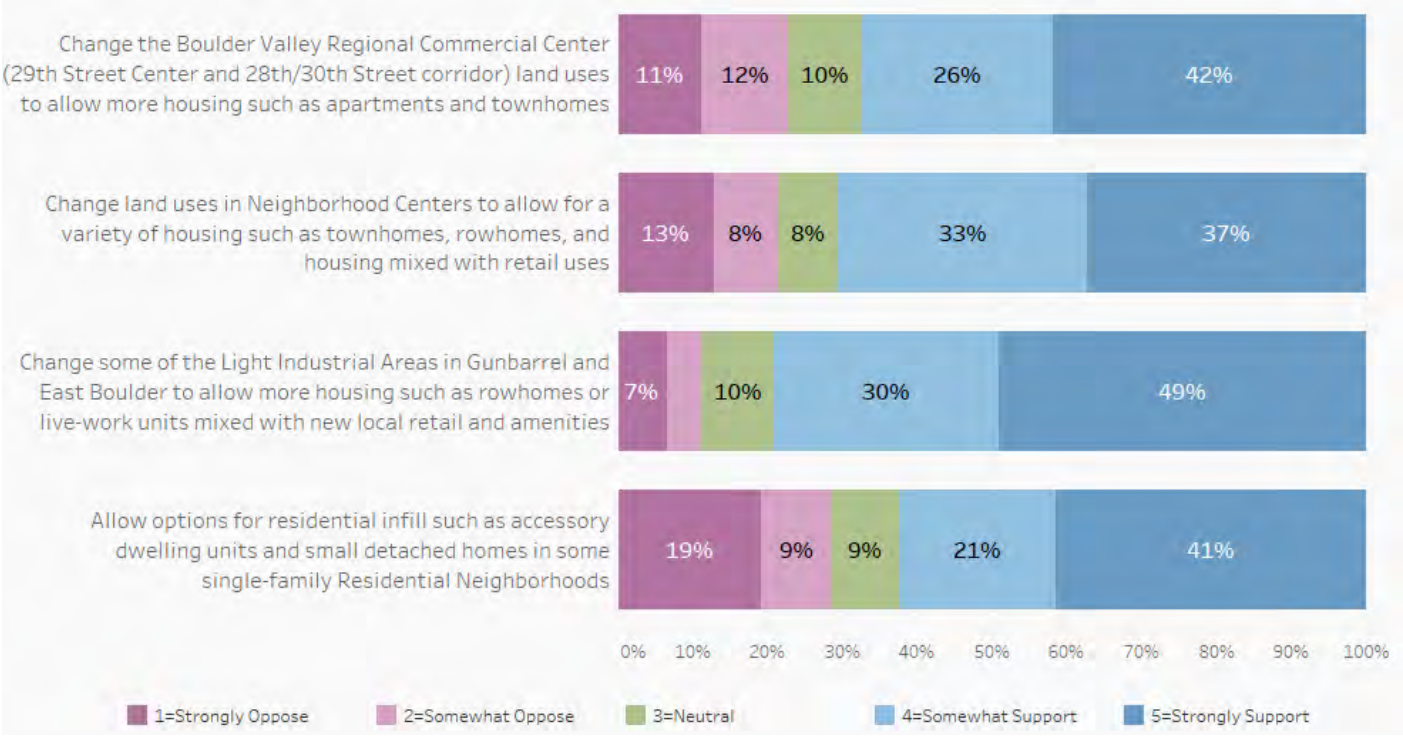
   Looking at the responses to this question by the subcommunity where the respondent lives shows a general level of support across the City for changing land uses in Neighborhood Centers. Specific results show the following patterns:
   - Greater support is observed for residents of East Boulder (84 percent support) and Central Boulder-North of Arapahoe (80 percent).
   - Similar levels of support/opposition as compared to the overall results are seen for residents of South Boulder (77 percent support), Central Boulder-South of Arapahoe (67 percent), and Southeast Boulder (65 percent support).
   - Greater opposition is noted among residents of Gunbarrel (43 percent oppose) and North Boulder (42 percent).
   - Sample sizes in Palo Park, Crossroads, and University of Colorado were too small for this analysis.

3) Change some of the Light Industrial Areas in Gunbarrel and East Boulder to allow more housing such as rowhomes or live-work units mixed with new local retail and amenities. Of the four housing approaches presented, this one had the highest level of support (79 percent). Eleven percent were opposed and 10 percent was neutral.

4) Allow options for residential infill such as accessory dwelling units and small detached homes in some single-family Residential Neighborhoods. This concept garnered the lowest level of support across the four ideas, though the majority still supported it (62 percent). Twenty-nine percent opposed residential infill and 9 percent was neutral.

   Looking at the responses to this question by the subcommunity where the respondent lives also shows a mixed level of support across the City for options for residential infill. Specific results show the following patterns:
   - Greater support is observed for residents of Central Boulder-North of Arapahoe (73 percent support) and East Boulder (71 percent).
   - Similar levels of support/opposition as compared to the overall results are seen for residents of South Boulder (65 percent support) and Southeast Boulder (63 percent support).
   - Greater opposition is noted among residents of Central Boulder-South of Arapahoe (46 percent oppose), North Boulder (43 percent oppose), and Gunbarrel (36 percent oppose).
   - Sample sizes in Palo Park, Crossroads, and University of Colorado were too small for this analysis.

Figure 12: Support/Opposition for Land Use Changes to Allow for More Housing



Options for Residential Infill

The survey presented specific ideas for potential residential infill options. The four possible options were shown with graphic images and sketches, which are included in the report below.

Following is the full text of the explanatory text regarding residential infill options:

Some residents have voiced concerns about changes to established single-family neighborhoods, such as newly-built large homes. Others have expressed a desire for changes to create more diverse housing types, such as allowing for more accessory units. The following questions explore different types of infill in neighborhoods than what current policy and regulations allow. The overall amount of square footage allowed on a lot would not be increased. The city would like to understand what options residents think are appropriate or not in single family neighborhoods. (Note: if there is support for these options, they may not be allowed in all single-family neighborhoods but would be further explored for appropriateness in select areas and regulated accordingly.)

Do you generally support or generally oppose the following types of housing options (not styles) for areas that are primarily single family, low density neighborhoods in Boulder (such as Newlands, Whittier, Wonderland Hill)? Please look first at the photos illustrating each type and then rate your level of support or opposition for that type.

1) Either Attached or Detached Accessory Dwelling Unit (ADU - a unit located on an existing single family lot, either attached to the primary unit or detached). Reaction to this option was somewhat supportive (62 percent), with 27 percent of survey participants opposed and 10 percent neutral.

   Looking at the responses to this question by the subcommunity where the respondent lives shows a general level of support across the City for attached or detached ADUs. Specific results show the following patterns:
   - Greater support is observed for residents of East Boulder (77 percent support) and Southeast Boulder (75 percent).
   - Similar levels of support/opposition as compared to the overall results are seen for residents of Central Boulder-North of Arapahoe (65 percent support), Central Boulder-South of Arapahoe (62 percent), South Boulder (61 percent support), and Gunbarrel (61 percent).
   - Greater opposition is noted among residents of North Boulder (44 percent opposed).
   - Sample sizes in Palo Park, Crossroads, and University of Colorado were too small for this analysis.

These examples show options for detached ADUs above garages.

Source: (1) www.accessorydwellings.org
(2) www.paloaltoforward.com/considering_building_a_secondary_unit_in_palo_alto

Source: StudioINSITE

2) <u>Detached alley house or small lot detached home on an existing single family lot (a separate unit on a single lot), not increasing overall amount of square footage allowed</u>. The response to this scenario showed a fairly similar reaction to ADUs, with 62 percent in support and 30 percent in opposition (9 percent neutral).

   Looking at the responses to this question by the subcommunity where the respondent lives shows a general level of support across the City for detached alley houses. Specific results show the following patterns:
   - Greater support is observed for residents of East Boulder (75 percent support), Central Boulder-North of Arapahoe (75 percent), and Southeast Boulder (71 percent).
   - Similar levels of support/opposition as compared to the overall results are seen for residents of Central Boulder-South of Arapahoe (58 percent support), South Boulder (61 percent support).
   - Greater opposition is noted among residents of Gunbarrel (45 percent opposed) and North Boulder (44 percent).
   - Sample sizes in Palo Park, Crossroads, and University of Colorado were too small for this analysis.

These examples show 1) two small houses on the same lot and 2) a small unit that is located behind the primary unit (this is larger than a standard ADU)
Source: *(1) http://www.vargasgreenan.com/sitebuilder/images/portland_open_house_514_v2-610x398.jpg*
(2) https://accessorydwellings.org/2016/05/13/satishs-adu/

Source: StudioINSITE

3) Duplex or duplex conversion (a paired set of street facing units on a single lot), not increasing overall amount of square footage. A somewhat stronger level of support was noted for this option (71 percent). Sixteen percent of respondents were opposed while 12 percent was neutral.

   Looking at the responses to this question by the subcommunity where the respondent lives shows a general level of support across the City for duplex/duplex conversion. Specific results show the following patterns:
   - Greater support is observed for residents of East Boulder (91 percent support), Central Boulder-North of Arapahoe (81 percent), and Southeast Boulder (87 percent).
   - Similar levels of support/opposition as compared to the overall results are seen for residents of South Boulder (69 percent support). Residents of Gunbarrel were highly neutral on this option (29 percent).
   - Greater opposition is noted among residents of Central Boulder-South of Arapahoe (35 percent oppose), North Boulder (28 percent).
   - Sample sizes in Palo Park, Crossroads, and University of Colorado were too small for this analysis.

These examples show 1) a stacked duplex and 2) a side by side-by-side duplex.

Source: 1) http://i1.wp.com/habitatskc.flywheelsites.com/wp-content/uploads/High-Point-2B.jpg
2: http://admblog.co.nz/density-done-well-not-just-downtown/ (Portland, OR)

Source: StudioINSITE

4) <u>Cottage court (a courtyard- oriented set of units, up to 2,000 square feet each), which could be on a larger lot or combined lots</u>. Of the four residential infill options presented, this one was the most popular. Overall, 73 percent expressed support while 15 percent was opposed. Twelve percent was neutral.

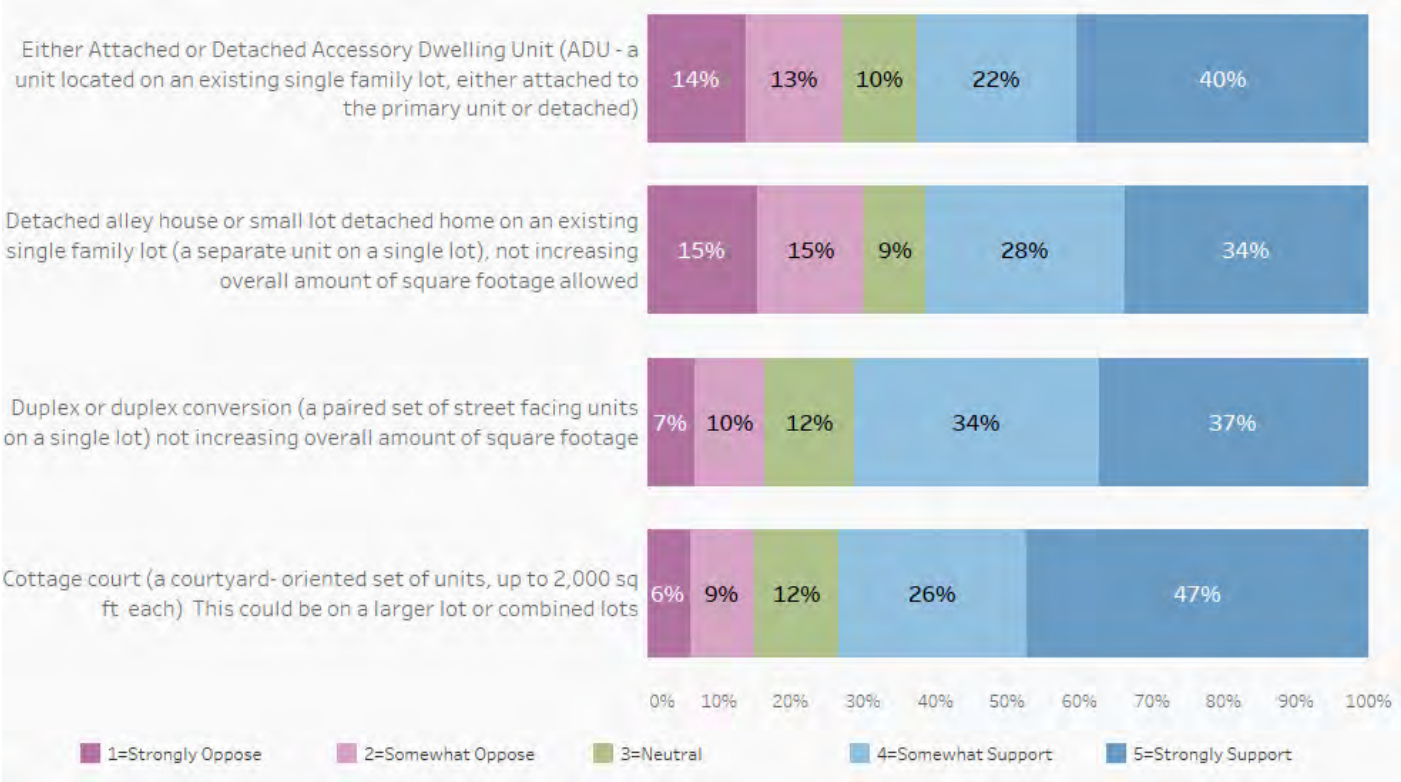
   Looking at the responses to this question by the subcommunity where the respondent lives shows a general level of support across the City for cottage court units. Specific results show the following patterns:
   - Greater support is observed for residents of Central Boulder-North of Arapahoe (89 percent), East Boulder (86 percent support), and Southeast Boulder (84 percent).
   - Similar levels of support/opposition as compared to the overall results are seen for residents of Central Boulder-South of Arapahoe (76 percent support) and Gunbarrel (69 percent).
   - Greater opposition is noted among residents of North Boulder (26 percent opposed) and South Boulder (20 percent).
   - Sample sizes in Palo Park, Crossroads, and University of Colorado were too small for this analysis.

This example shows a cluster of cottage court units.

Source: www.greenspur.com

Source: StudioINSITE

Figure 13: Support/Opposition for Residential Infill Options in Established Single-Family Neighborhoods



Survey respondents could contribute other ideas for residential infill options. Overall, 138 comments were submitted for other options, as summarized in the randomly selected comments presented below.

Table 6
Random sample of comments regarding other ideas for residential infill options

- *"Allow true mother-in-law units in SF zones. That means allow but verify annually. Family = OK"*
- *"Co Op of more than 6 persons"*
- *"Do we really want to pack all of us in here like sardines?"*
- *"I am in favor of literally any type of housing that allows for more units to decrease rent costs."*
- *"I would support infill housing STRONGLY if we had a municipal government capable of enforcing zoning"*
- *"micro units in all areas.... small housing units (no cars). Allow max units in ALL areas especially"*
- *"Opposed to all infill housing I did not buy in this community to be surrounded by infill housing. I"*
- *"some tiny house developments. We need housing diversity in style, size, type and affordability"*
- *"Tiny Houses and small houses are absolutely needed to add housing that is affordable"*

Size of Homes in Boulder

A related section of the survey asked respondents about their opinion of the size of homes in Boulder and related regulations. The introduction text to the section was as follows: *"Currently the size of new homes is limited based on the size of the lot. These regulations have a much bigger effect on smaller lots than on larger lots, which still allow for larger homes to be built. Do you generally support or generally oppose the idea of further limiting the size of future homes built in Boulder?"* Three different scenarios were presented for respondents to offer their opinions.

1) Limit future house sizes in Boulder, in general. The feedback to this question shows that many survey participants were neutral about limiting future house sizes in general (24 percent). Forty-five percent support limiting future house size and 31 percent oppose these limits.

   Looking at the responses to this question by the subcommunity where the respondent lives shows a mixed level of support across the City for limiting house size. Specific results show the following patterns:
   - Greater support is observed for residents of East Boulder (62 percent support) and North Boulder (59 percent).
   - Similar levels of support/opposition as compared to the overall results are seen for residents of Central Boulder-South of Arapahoe (48 percent support), Central Boulder-North of Arapahoe (44 percent), and South Boulder (43 percent). Southeast Boulder residents were highly neutral (29 percent).
   - Greater opposition is noted among residents of Central Boulder-South of Arapahoe (43 percent opposed, even though a higher share also supported) and Gunbarrel (39 percent).
   - Sample sizes in Palo Park, Crossroads, and University of Colorado were too small for this analysis.

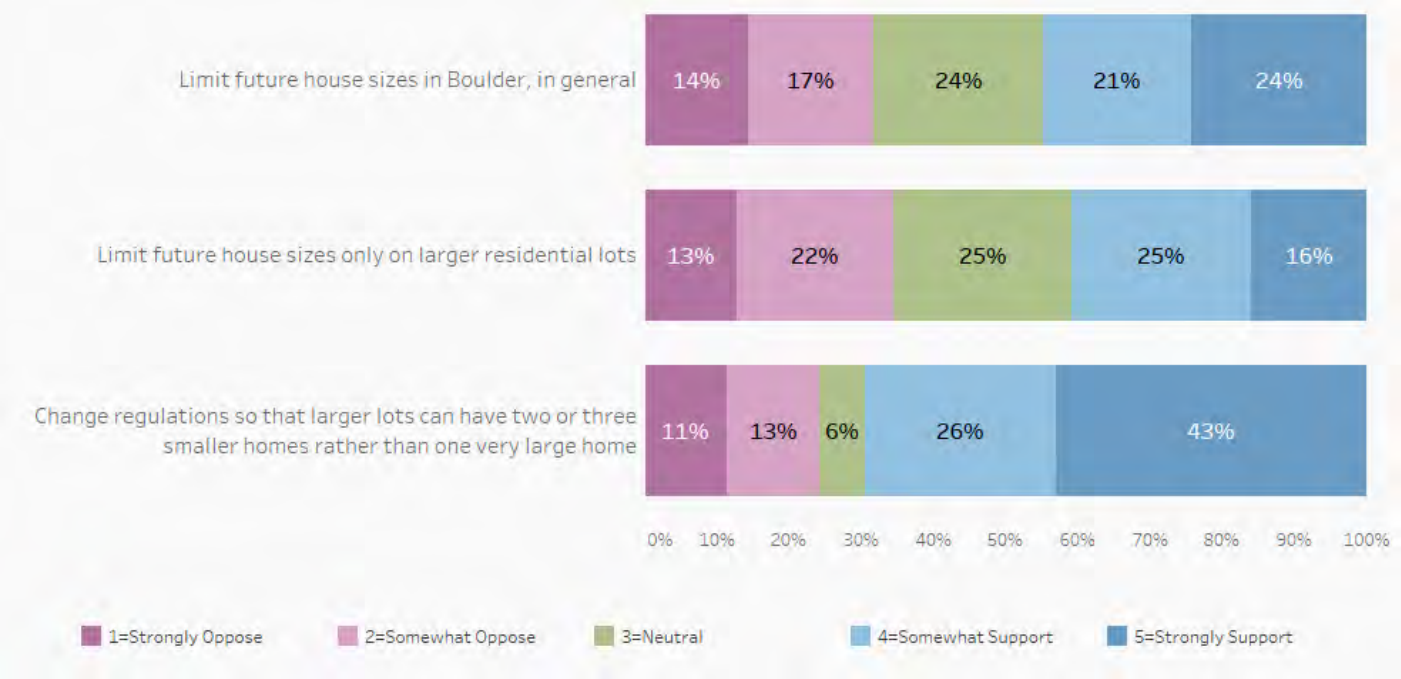
2) Limit future house sizes only on large residential lots. This tactic also elicited a high proportion of neutral responses (25 percent). Slightly more responded that they support this limitation (41 percent) than opposed it (35 percent).

3) Change regulations so that larger lots can have two or three smaller homes rather than one very large home. Two-thirds (69 percent) of respondents supported this change, while 24 percent opposed it and 6 percent were neutral.

   Looking at the responses to this question by the subcommunity where the respondent lives shows a general level of support across the City for allowing two or three smaller homes. Specific results show the following patterns:
   - Greater support is observed for residents of South Boulder (80 percent support), Central Boulder-North of Arapahoe, and East Boulder (80 percent of each).

- Similar levels of support/opposition as compared to the overall results are seen for residents of Southeast Boulder (68 percent).
- Greater opposition is noted among residents of North Boulder (38 percent oppose), Central Boulder-South of Arapahoe (35 percent) and Gunbarrel (38 percent).
- Sample sizes in Palo Park, Crossroads, and University of Colorado were too small for this analysis.

Figure 14: Support/Opposition for Restrictions on Future House Sizes



A follow-up question asked if respondents had other ideas or suggestions to address impacts on neighborhoods 157 responses were gathered, including the following as a random sample of ideas presented by survey respondents.

Table 7
Random sample of comments: Other strategies to address impacts of large houses on neighborhoods

- *"Better regulation of occupancy, configuration of new units to bring student tenants to certain neighborhoods, retirees to other neighborhoods, and families to other neighborhoods. Don't try to support all population groups with services for all groups in all areas of Boulder."*
- *"I believe the neighborhoods should have a say in what the city plans. I know they voted on this, but it is only fair!!! Especially for the people who own homes and have lived in the city for a long time. What they did on Mapleton hill, on 4th street, is an eyesore. It took away the integrity of the neighborhood by building those gigantic, ugly homes where there used to be open space. Awful! I feel for the home owners over there."*
- *"It's not the people that are the problem but the traffic associated with them. We need to not only get people out of their cars but reduce the number of vehicles per family. If we reduced cars denser neighborhoods would be acceptable."*
- *"observe what wildlife exists in undeveloped land, before deciding to wipe it all out with new buildings"*
- *"There are places in Boulder with truly giant homes, such as on Alpine and Balsam east of 19th, and in Newlands. I would like to ensure that whatever modifications to increase density (e.g. allowing more square footage on lots) is used to allow more families to live affordably, and not to let the very wealthy build even larger houses on lots than they can now."*

Community Benefit from Development

Interest exists in understanding how residents feel about granting development increases in density or height, in order to accomplish community goals.

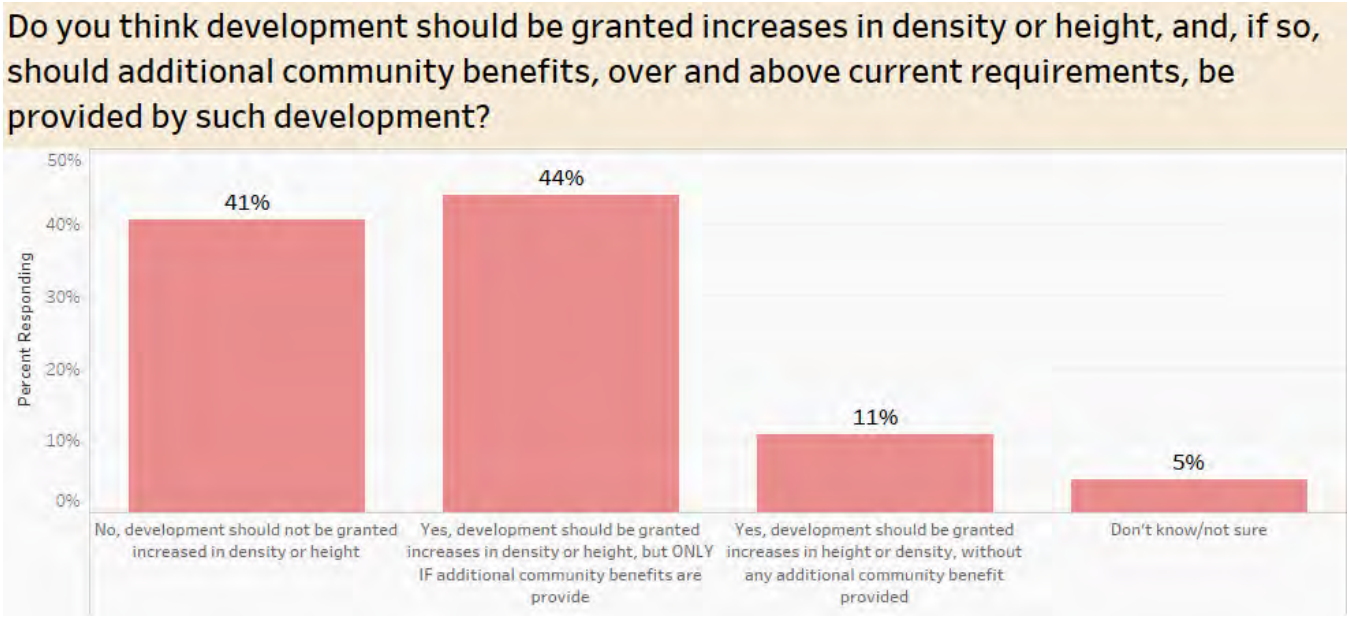
Following is the full text of the explanatory text regarding community benefit from development:

Current development criteria require projects to meet requirements and provide certain features (i.e., affordable housing, open space, energy conservation, fees to pay for infrastructure and services, multi-modal transportation options, quality design, historic resources). As part of the comprehensive plan update, the city is exploring ways to better define the additional community benefits that would be required when properties are granted increases in density through additional height or zoning changes.

Do you think development should be granted increases in density or height, and, if so, should additional community benefits, over and above current requirements, be provided by such development?

Overall, 41 percent of respondents indicated that development should not be allowed increases to density or height. Fifty-five percent were okay with granting development such increases – 44 percent said it should be allowed but only if additional community benefits are provided, and 11 percent said it should be allowed without additional community benefits. Five percent responded, "don't' know/not sure."

Figure 15: Development Increases in Height/Density and Additional Community Benefits



Those respondents who indicated that additional community benefits should be provided in exchange for height and density allowances were asked to select from a list of potential additional community benefits, above and beyond what is already required. Respondents were asked to rank up to five benefits from a list of 11 possible options.

- Most Popular Community Benefit. Far and away the top community benefit from development is additional permanently affordable housing for low and middle income households (34 percent selected it as the number one benefit). Several other benefits were less of a priority, including energy efficiency improvements beyond what is required (13 percent); additional accessible and useable open spaces (11 percent), neighborhood-serving retail and services (also 11 percent); cultural and art facilities, such as venue and performance spaces, community public art and murals (9 percent); that the development is close to a high-frequency transit corridor (7 percent).

- Top Three Community Benefits. When the top three selections are combined, the same factors remain important: additional permanently affordable housing for low and middle income households (61 percent selected it as one of the top 3 benefits desired) and energy efficiency improvements beyond what is required (41 percent) were the top two benefits desired. Other desired benefits from development that made it into the top three include additional accessible and useable open spaces (34 percent); non-profit space or affordable commercial space (30 percent), neighborhood-serving retail and services (26 percent); that the development is close to a high-frequency transit corridor (25 percent); and cultural and art facilities, such as venue and performance spaces, community public art and murals (21 percent).

- Top Three Community Benefits by Subcommunity. Some observations by subcommunity of the community benefits from development are described below.
    - Additional permanently affordable housing is more important to residents of East Boulder (72 percent chose it in their top three benefits), South Boulder (68 percent), and Gunbarrel (73 percent).
    - South Boulder (56 percent picked it in their top three) and Central Boulder-North of Arapahoe (47 percent) residents indicated that energy efficiency improvements beyond what is required was particularly important.
    - Additional accessible and useable open space is disproportionately important to East Boulder (57 percent chose it as one of their top three) and Southeast Boulder (61 percent).
    - Central Boulder-North of Arapahoe and Gunbarrel are more likely to select a non-profit space or affordable commercial space (43 and 42 percent, respectively).
    - Neighborhood-serving retail and services were disproportionately selected by North Boulder (50 percent), Southeast Boulder (36 percent), and East Boulder (33 percent).

- That the development is close to a high-frequency corridor is more important to residents of North Boulder (45 percent selected as one of top three) and Central Boulder-North of Arapahoe (32 percent).

- Top Five Community Benefits. Combining the top five selections from the list results in similar findings: 77 percent selected permanently affordable housing as one of their top five benefits, followed by energy efficiency improvements beyond what is required (51 percent); additional accessible and useable open spaces (also 51 percent); non-profit space or affordable commercial space (46 percent); that the development is close to a high-frequency transit corridor (40 percent); neighborhood-serving retail and services (38 percent); and cultural and art facilities, such as venue and performance spaces, community public art and murals (37 percent).

Figure 16: Development Benefits Desired

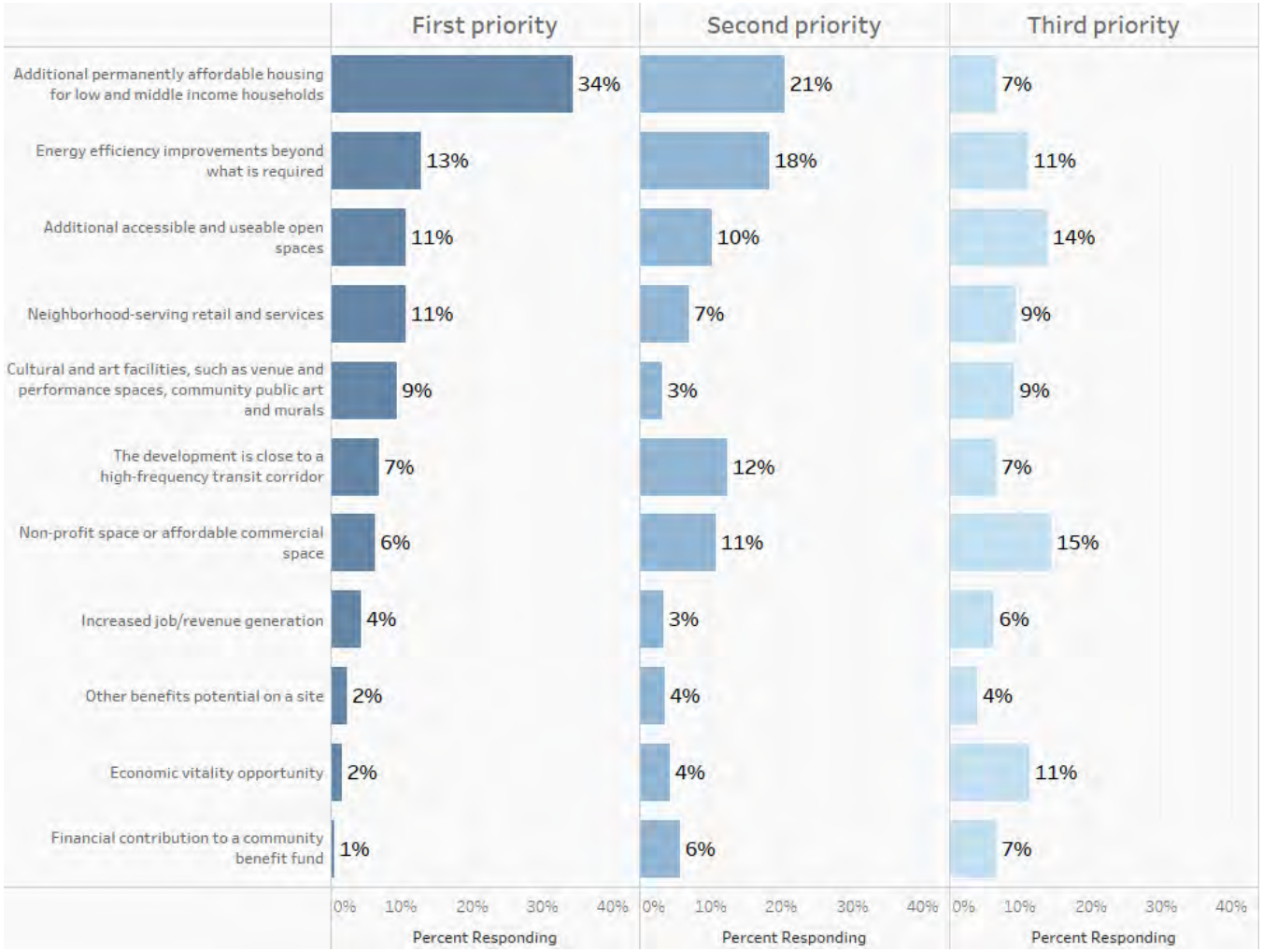
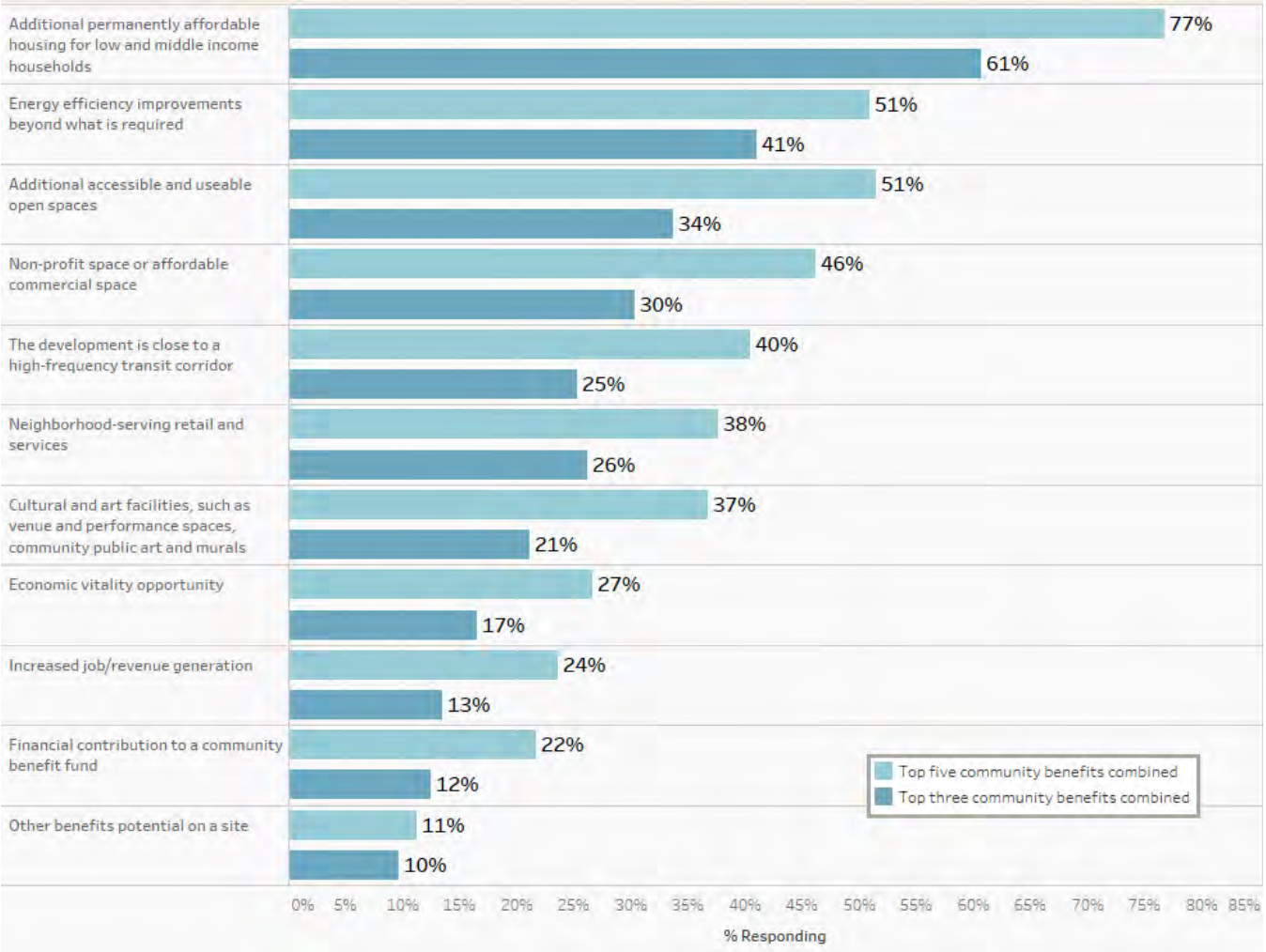


Figure 17: Development Benefits Desired – Top Three and Top Five Combined



- Additional community benefit from development. In an open-ended question following up on the development requirements question outlined above, respondents were asked what additional examples of "community benefit" are important. A total of 33 comment responses were received. Following is a random sample of comments, for illustration (with the complete listing in the Appendix).

Table 8
Random sample of comments: Other community benefits from development are important?

- *"Again, live where you work spaces are the natural way to go AND INCLUDE AFFORDABLE CHILD CARE FACILITIES. Women and families simply MUST have child care close to work. This just makes sense and eliminates family stress. Making neighborhoods creative, sustainable, restorative, and regenerative is healthy and enhances a thriving quality of life."*
- *"I don't know how realistic this is, but some sort of benefit that displaces the effects of the space on current residents. I.e. if property values go up because of the development and homeowners have to pay more property tax or landlords charge renters more in rent subsequently, there needs to be some way for the development to offset this unintended externality. And it can't just be through services like affordable spaces or through community benefits like donations or energy efficiency. It has to go directly to those affected residents so they can stay where they live."*
- *"More parking downtown"*
- *"Perhaps the requirement of additional benefits should be enforced on a project-by-project basis. Some projects might provide great benefit to the community without checking off a set list of criteria and shouldn't be disqualified from implementing increased height or density just because they don't meet a prescribed list of benefits. Also, if a developer is going to be providing many community benefits then the City should consider reducing the Impact Fees for that project, as those community benefits provided would inevitably reduce the community impacts."*

Neighborhood Improvements

One section of the survey was devoted to neighborhood issues, particularly suggestions for what might make the respondent's neighborhood better. The survey presented 15 ideas for neighborhood improvements, and respondents were asked to select and rank order up to 8 of the improvements that they would like to see in their neighborhood.

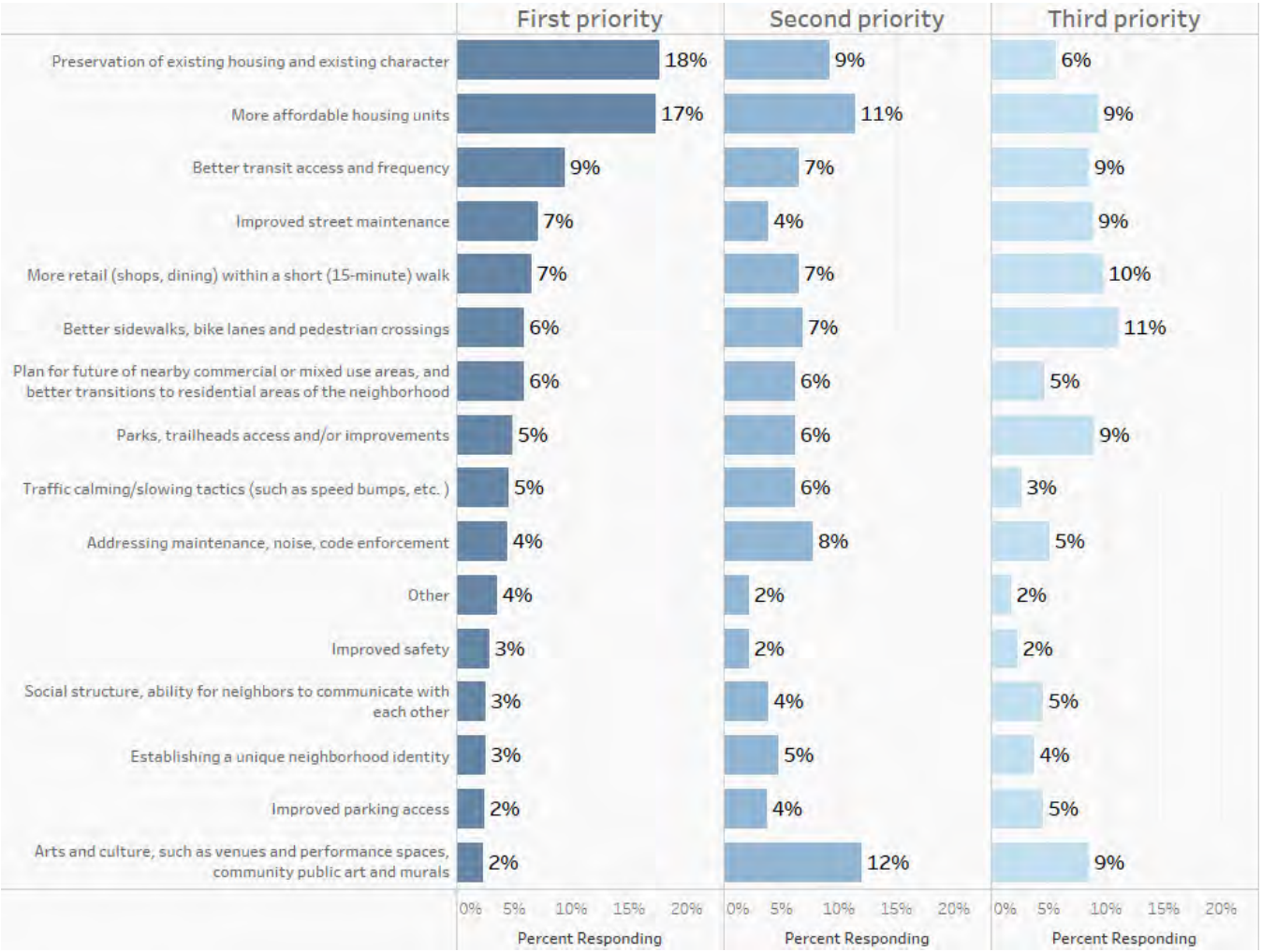
- Most Popular Neighborhood Improvement. Two factors emerged as top priorities for neighborhood improvements: preservation of existing housing and existing character of the neighborhood (18 percent selected as their top improvement) and more affordable housing units (17 percent). Several other factors were more distant, including better transit access and frequency (9 percent); more retail (shops, dining) within a 15-minute walk; improved street maintenance (each 7 percent); better sidewalks, bike lanes, and pedestrian crossings; plan for future of nearby commercial or mixed use areas (each 6 percent), parks, trailhead access and/or improvements; and traffic calming/slowing tactics (each 5 percent).

- Top Three Neighborhood Improvements. When the top three selections are combined, the same factors remain the top two: more affordable housing units (37 percent selected it as either the number one, two, or three improvement) and preservation of existing housing and existing character of the neighborhood (32 percent). Four other attributes were clustered closely together: better transit access and frequency; better sidewalks, bike lanes and pedestrian crossings; more retail (shops, dining) within a short (15-minute) walk; and arts and culture, such as venues and performance spaces, community public art, and murals (each 22 to 23 percent).

- Top Three Neighborhood Improvements by Subcommunity. Some additional analysis of the top three neighborhood improvement by Subcommunity resulted in the following observations.
    - The subcommunities that most value the preservation of existing housing and existing character are Central Boulder-South of Arapahoe (56 percent listed it as one of their top 3), Gunbarrel (51 percent), and North Boulder (45 percent).
    - Subcommunities that most value more affordable housing units are Central Boulder – North of Arapahoe (52 percent listed it as one of their top 3) and South Boulder (46 percent).
    - Southeast Boulder most wants more retail within 15-minute walk (37 percent) and plan for future nearby commercial or mixed use areas (30 percent).
    - East Boulder desires more retail within 15 minutes (49 percent) and better sidewalks, bike lanes, and pedestrian crossings (42 percent).
    - More retail (shops, dining) within a short (15-minute) walk (25 percent) and arts and culture (27 percent) are important to residents of South Boulder.
    - Addressing maintenance, noise, code enforcement is a priority for Central Boulder-South of Arapahoe (48 percent).

- Better transit access and frequency are priorities for Central Boulder-North of Arapahoe (45 percent) and Central Boulder-South of Arapahoe (43 percent).
- Gunbarrel residents were more likely to express a desire for improved street maintenance (40 percent) and for parks, trailhead access and/or improvements (36 percent).

Figure 18: Neighborhood Improvements Desired



- Top Five Neighborhood Improvements. Combining the top five selections from the list results in similar findings. The most common things that would make the neighborhood better are more affordable housing units (46 percent selected it as one of their top five improvements), followed by preservation of existing housing and existing character (38 percent); better transit access and frequency (37 percent); improved street maintenance (34 percent); arts and culture, such as venues and performance spaces, community public art and murals (33 percent); better sidewalks, bike lanes, and pedestrian crossings (32 percent); and more retail (shops, dining) within a short (15-minute) walk (30 percent).

Figure 19: Neighborhood Improvements Desired – Top Three and Top Five Combined

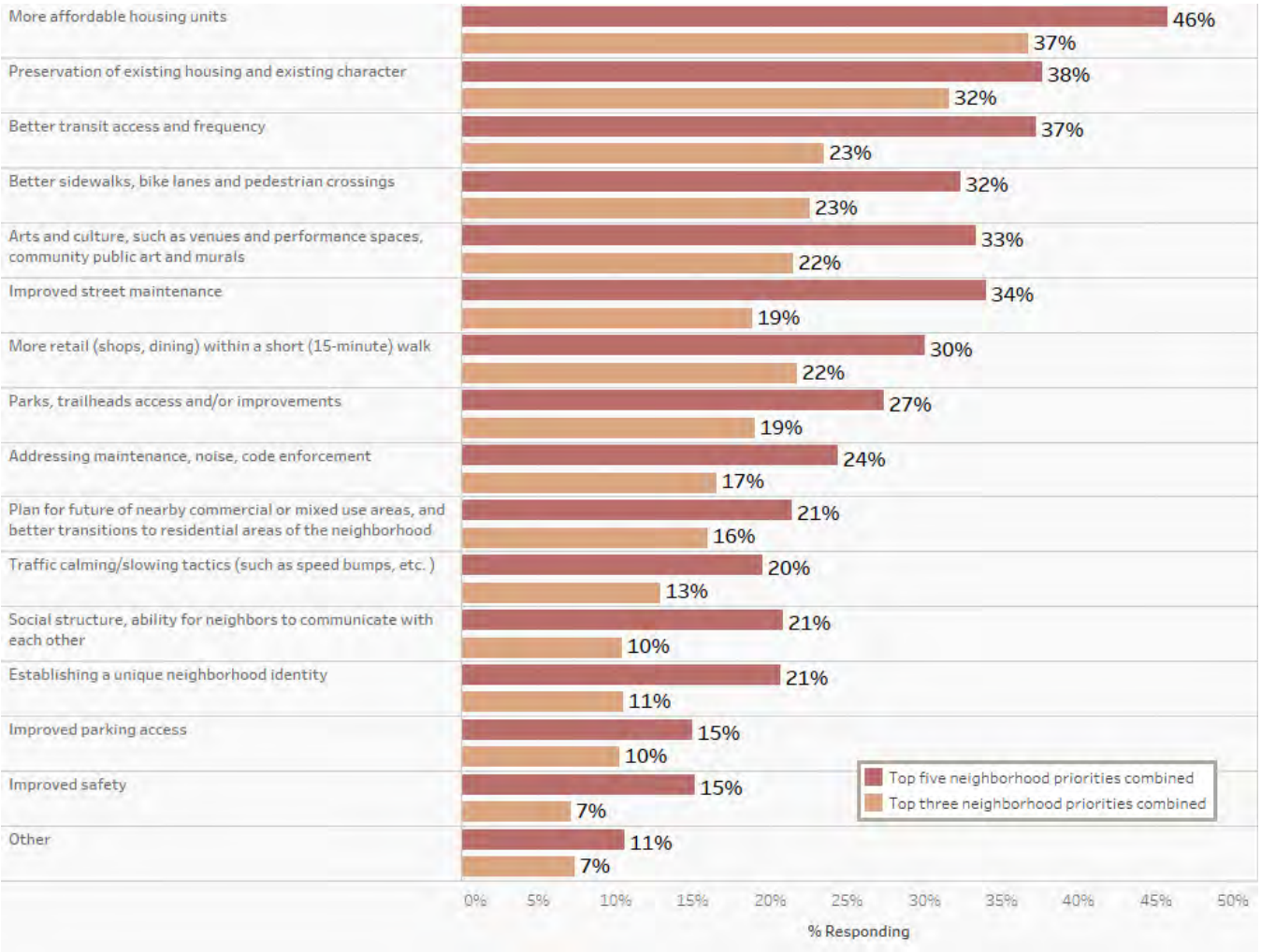


Table 9
Random sample of comments: Other ideas for neighborhood improvements

- *"A community house or meeting place with some indoor rooms for winter would be nice."*
- *"Connect a bike trail to Gunbarrel"*
- *"Goose Creek has several LARGE TREES that will fall soon and need to be taken down. WHEN they fall the power lines will come down and yards/houses could be damaged. Also, the creek needs to be cleaned up from trash and debris as well as the drain outlets need to be improved and/or repaired."*
- *"In Old North Boulder that are ball fields that sit empty 90% of the time. That space should be used more. Also, Boulder makes sure the streets are plowed at the expense of the bike lanes and the sidewalks are never cleared. No wonder no one walks anywhere. Why should the city plow the streets and not the sidewalks?"*
- *"More street lighting on side streets. Add sidewalks to these streets. (east Gunbarrel.) This is part of the improved safety category."*
- *"Repeal the solar sun ordinance."*
- *"We live on a RTD route, near empty buses go past all the time with one or two riders. Why have huge buses in our neighborhoods with so few riders? Speeding drivers on our street continue to be a problem with little enforcement from BPD. Also we live between two elementary schools (what could possibly go wrong?)."*

Additional Comments or Suggestions Regarding the Plan

The final question on the survey asked if respondents had any additional comments or suggestions to offer regarding the Plan. A total of 245 comments were received, many of which were comparatively lengthy and detailed. Respondents most commonly took this question as an opportunity to state or re-emphasize concerns that the Plan should address. Many themes apparent in other survey results were reiterated, including concerns regarding ***housing affordability, transportation, growth and change, neighborhoods, open space, and so on. Following is a random sample of the comments for illustration, with the complete listing including in the Appendix.

Table 10
*Random sample of comments: "Do you have any additional comments or suggestions that you would like to offer regarding the Bou**lder Valley Comprehensive Plan?"***

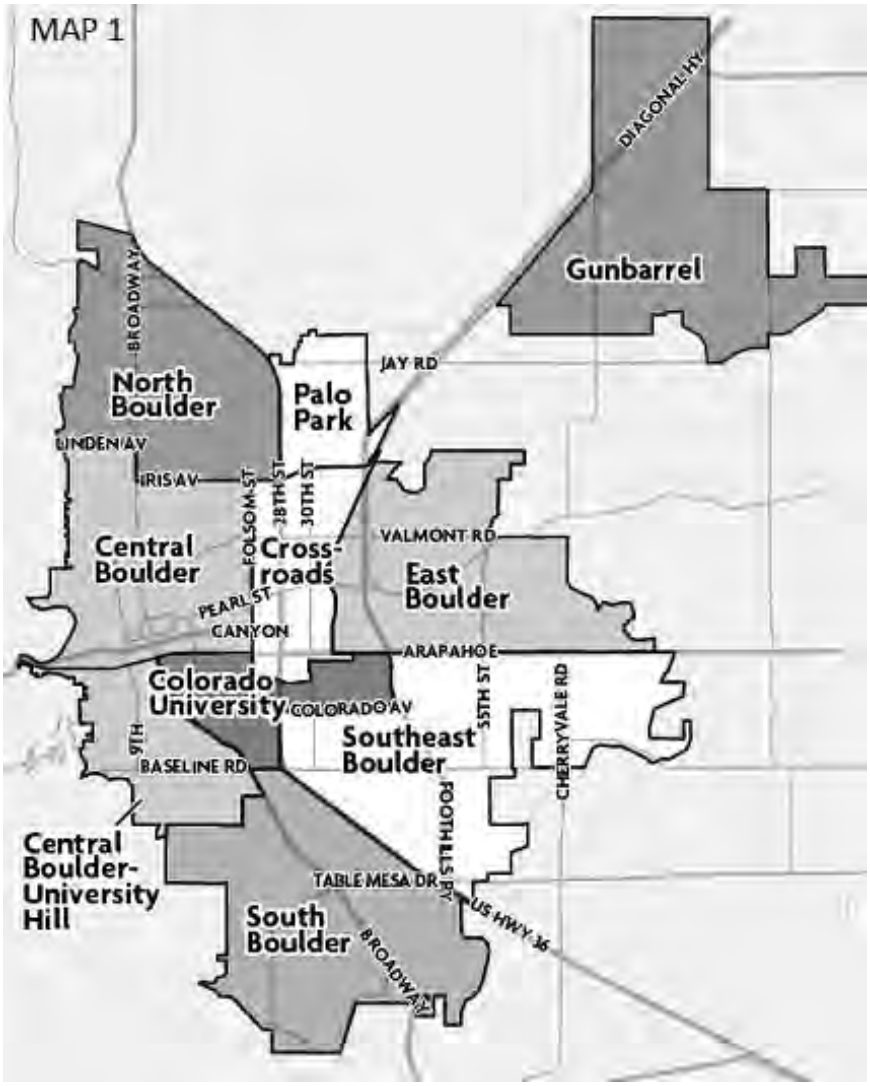
- *"Boulder cannot grow forever. Back in the 1970's it was generally agreed upon that the maximum population that Boulder could sustain without compromising the quality of life was 100,000. We went beyond that in the year 2000 and, as a result, the quality of life has indeed been deteriorating. Shoehorning in more people and jobs isn't going to make it any better. Growth, even under restraint, over time is a place called Manhattan. Is life any better or more affordable there?"*
- *"Employers in Boulder should pay wages so that their employees can live in a walkable radius of their location. This would eliminate the need for 'affordable' housing."*
- *"I don't think the BVCP should ignore the fast growth of CU as a pressing factor in our city pressures for development, housing and jobs balance, traffic, and so forth. That it is pressing for a hotel at Broadway and University is a reflection of its hubris. Can pressures be brought to bear on this concern?"*
- *"I wish this addressed Boulder County as well as the city. Most growth will be outside the city limits, and there is more to be lost and gained there."*
- *"Lack of affordable housing and increased urban growth have made my husband and I decide to leave the area within a couple of years when he retires from CU."*
- *"No more money for open space until the city parks are improved. Pearl street is very unfriendly to the handicapped, ie wheelchair and mobility scooters. also unsafe due to panhandlers."*
- *"Please no height restriction changes. Density is hard to deal with because of the additional traffic. These roads were built for traffic of 40 yrs ago."*
- *"Thanks for doing the survey."*

- *"This is a better questionnaire than previous ones but for many of the choices I wanted to better qualify my answers. For example: ADUs for existing homeowners' family, but not everywhere especially not for student housing. The choices were not fine grained enough. CU is adding to our problems. Let them provide housing on campus. Only a partial push poll which is an improvement. Keep it up. You can do better."*
- *"When i moved to Boulder in 2010, i was pleasantly surprised at how happy people are/were here. I had lived in Chicago and DC previously. Both cites have high populations, traffic and density. These things make people stressed and unhappy. I don't think you realize what you are doing (the unintended outcomes of changing Boulder) and when you do....in 10 or 20 years, it will be too late to turn things back. SO THINK VERY CAREFULLY. Are you only thinking about the quantity of life here or are you also thinking about quality. If you are thinking also of quality, you will need to get more psychologists types. Larger populations destroy a sense of community. How can you retain this sense of community? This is harder than just looking at increasing the number of housing units."*

Respondent Demographics

This section of the report summarizes the demographic characteristics of respondents to the random sample, invitation-only survey. As noted in the Methodology section, the raw survey data were weighted to match the demographic profile of the household population in the Boulder Valley by age and housing tenure (own vs. rent), based on 2010 Decennial Census and 2009-14 American Community Survey data. A description of weighted demographic profile is provided below, followed by graphical illustrations of the results.

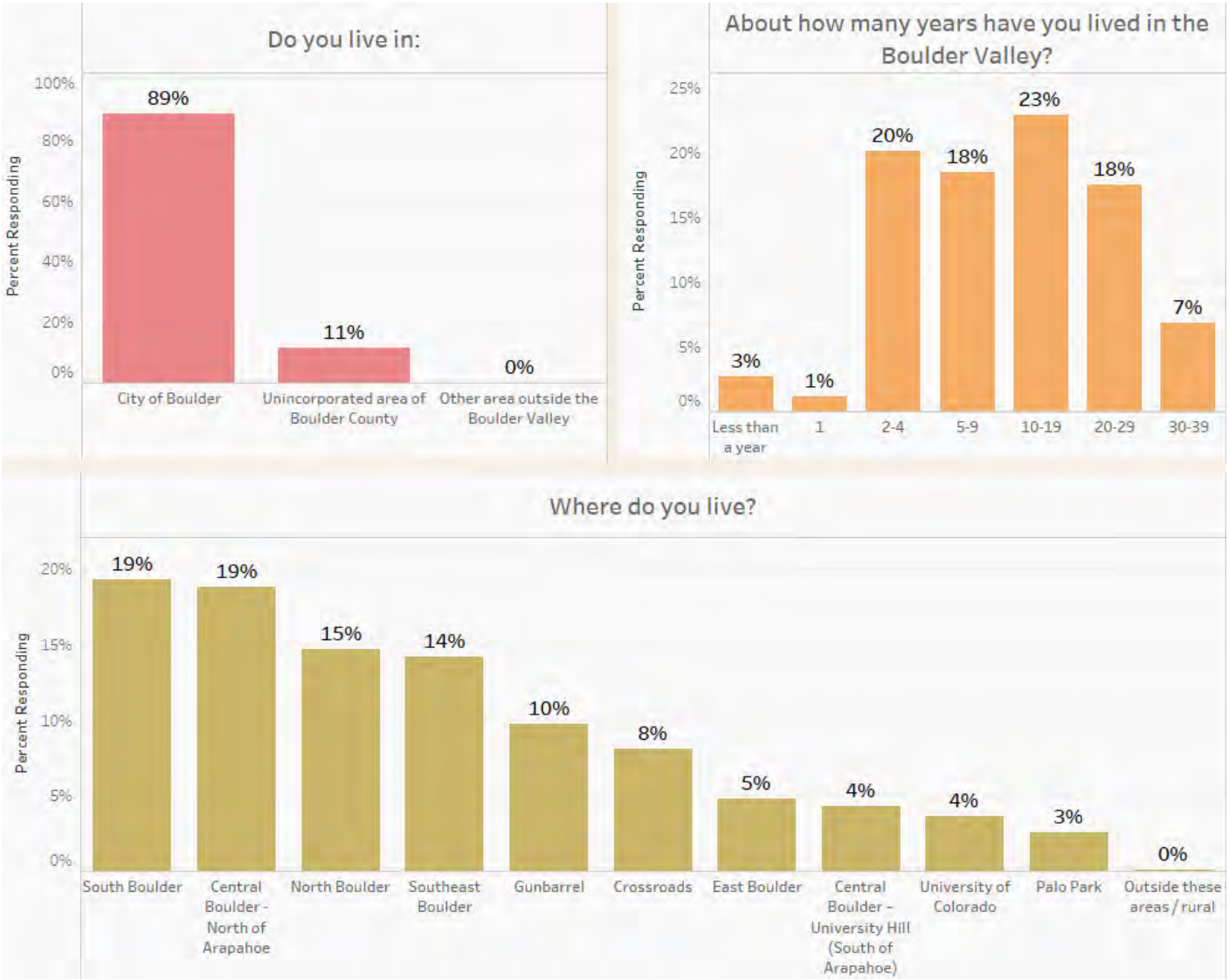
- Subcommunity: Nineteen percent of respondents live in Central Boulder – North of Arapahoe, another 19 percent live in South Boulder, while 15 percent in North Boulder, 14 percent in Southeast Boulder, and 10 percent in Gunbarrel. Smaller shares of respondents reside in Crossroads (8 percent), East Boulder (5 percent), University of Colorado (4 percent), Palo Park (3 percent), and other areas/rural (less than 1 percent). The map that was included in the survey accompanying this question is shown below.



- Place of residence (city/county): The majority of respondents live in the City of Boulder (89 percent), with a minority residing outside the city limits in unincorporated Boulder County (11 percent).

- Years living in the Boulder Valley. Respondents had lived in the Boulder Valley for a diverse range of time, from less than a year to more than 40 years. The average length of residency was 16.2 years, with a median of 12 years.

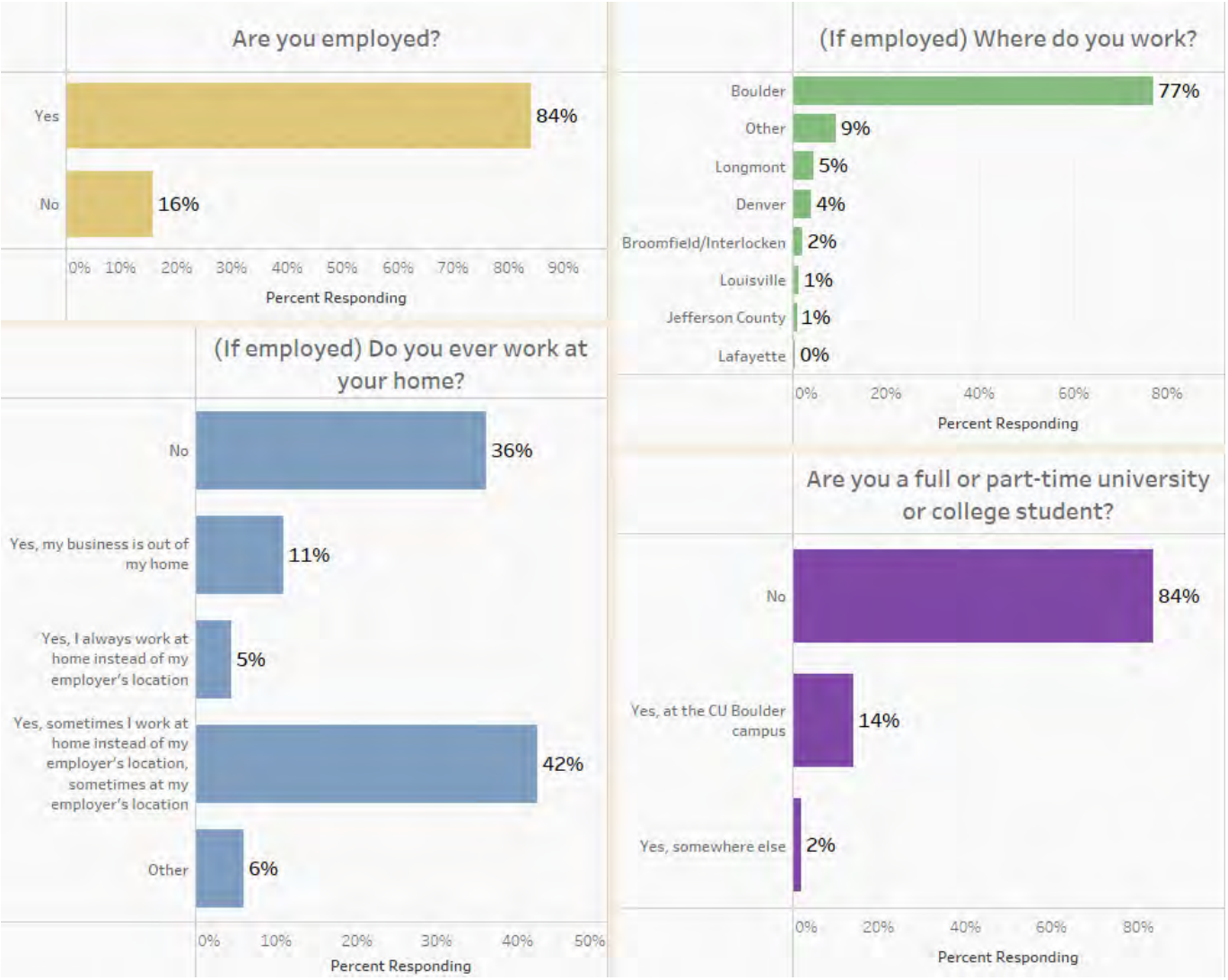
Figure 20: Place of Residence



- Employment status. Five out of six survey respondents (84 percent) are employed, while 16 percent are not employed. Among those who are employed, most work in Boulder (77 percent), with 23 percent working in array of other communities (including Longmont, Denver, and other locations). Fully 58 percent of those employed work at home at least some of the time (including 42 percent who work partly at home and partly at their employer's location, 11 percent who run a business out of their home, and 5 percent who always work at home instead of their employer's location), while only 36 percent never work at home.

- University/college students. Fourteen percent of survey respondents are students at CU, 2 percent are university/college students elsewhere, and 84 percent are not university/college students. Note that students living in the CU residence halls were intentionally omitted from the survey sample.

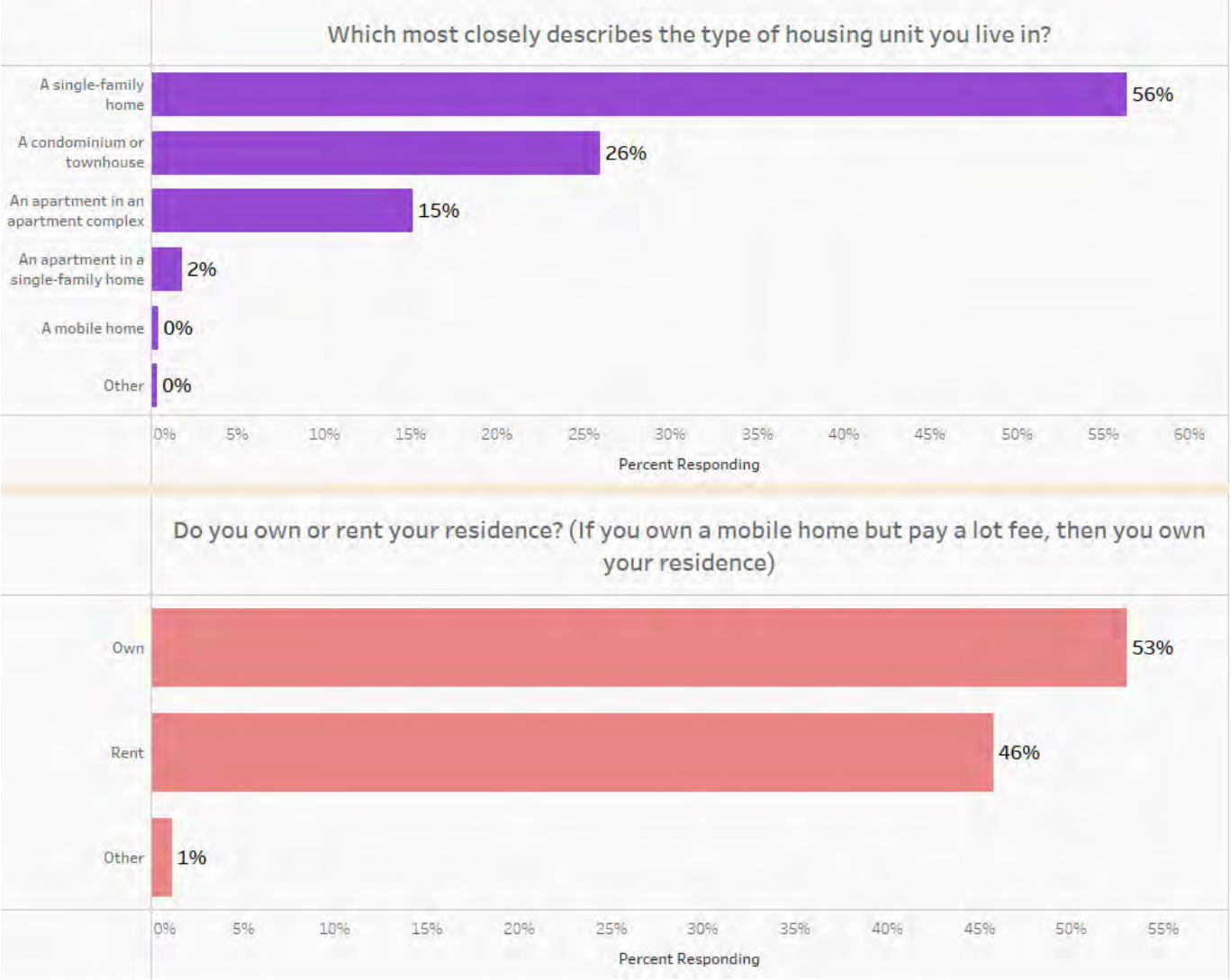
Figure 21: Employment Characteristics and Student Status



- Type of residence. More than half of respondents live in a single family home (56 percent), while most of the others live in a condo/townhome (26 percent) or an apartment (including 15 percent in an apartment complex and 2 percent in an apartment in a single-family home). Small shares live in other housing types, including a mobile home or other living accommodations.

- Housing tenure. A little more than half of respondents own their residence (53 percent), and a little less than half are renters (46 percent).

Figure 22: Housing Characteristics

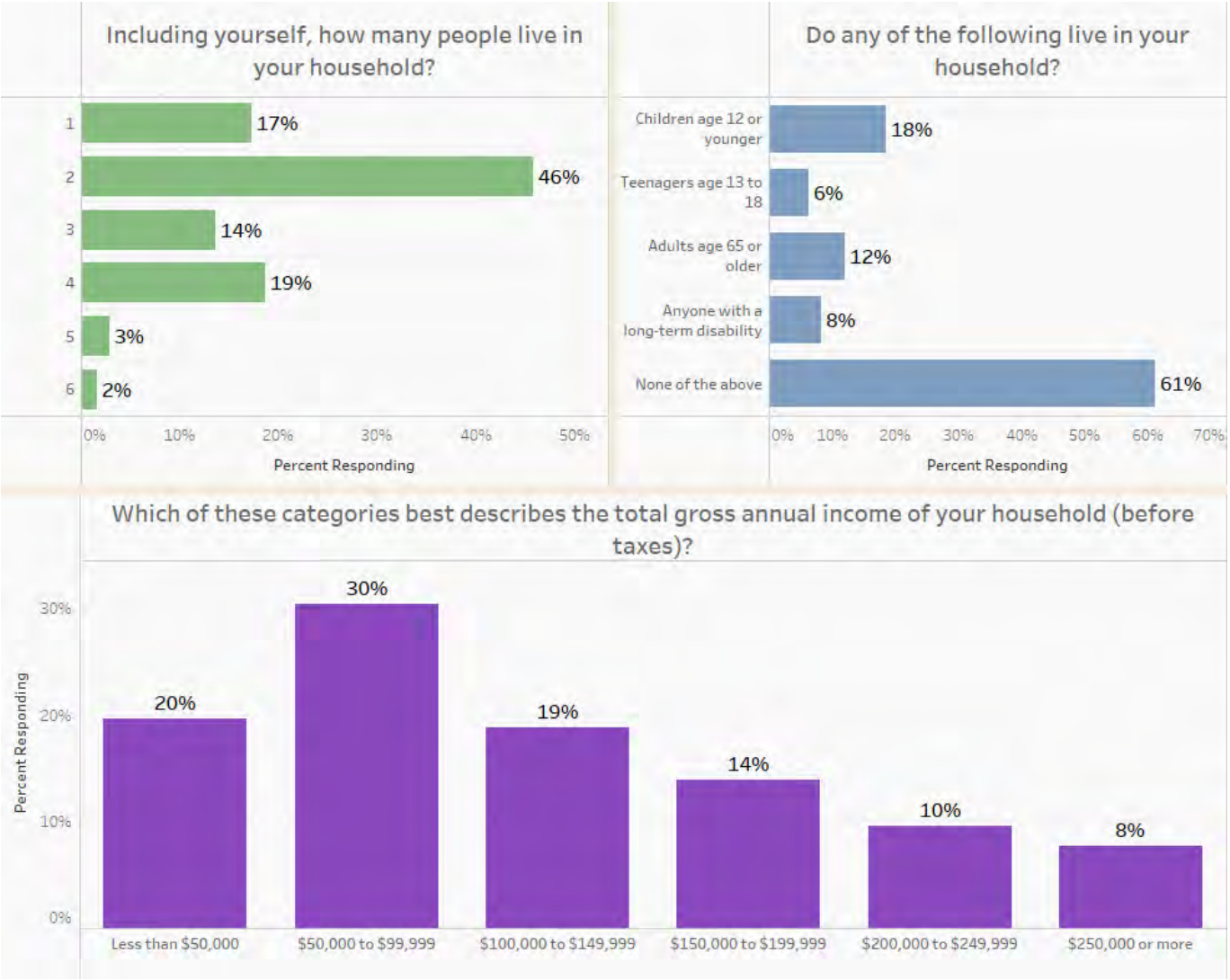


- Household size. The average household size was 2.5 persons, with 17 percent living in one-person households, 46 percent in two-person households, 14 percent in three-person households, 19 percent in four person households, and 5 percent in five or more person households.

- Household composition. Twenty-five percent of respondents have children 18 and under living in their household (including 18 percent with children age 12 or younger and 6 percent with teenagers age 13 to 18). Twelve percent indicated the presence of adult(s) aged 65 or older at home, and 8 percent of households include someone with a long-term disability.

- Annual household income before taxes. About two-thirds of households indicated a household income level of $150,000 or less: 20 percent earning less than $50,000, 30 percent in the $50,000 to $99,999 range, and 19 percent in the $100,000 to $149,999 range. Additionally, 14 percent earn $150,000 to $199,999 annually, with 10 percent in the $200,000 to $249,999 range and 8 percent earning $250,000 or more.

Figure 23: Length of Residence, People in Household, and Household Income



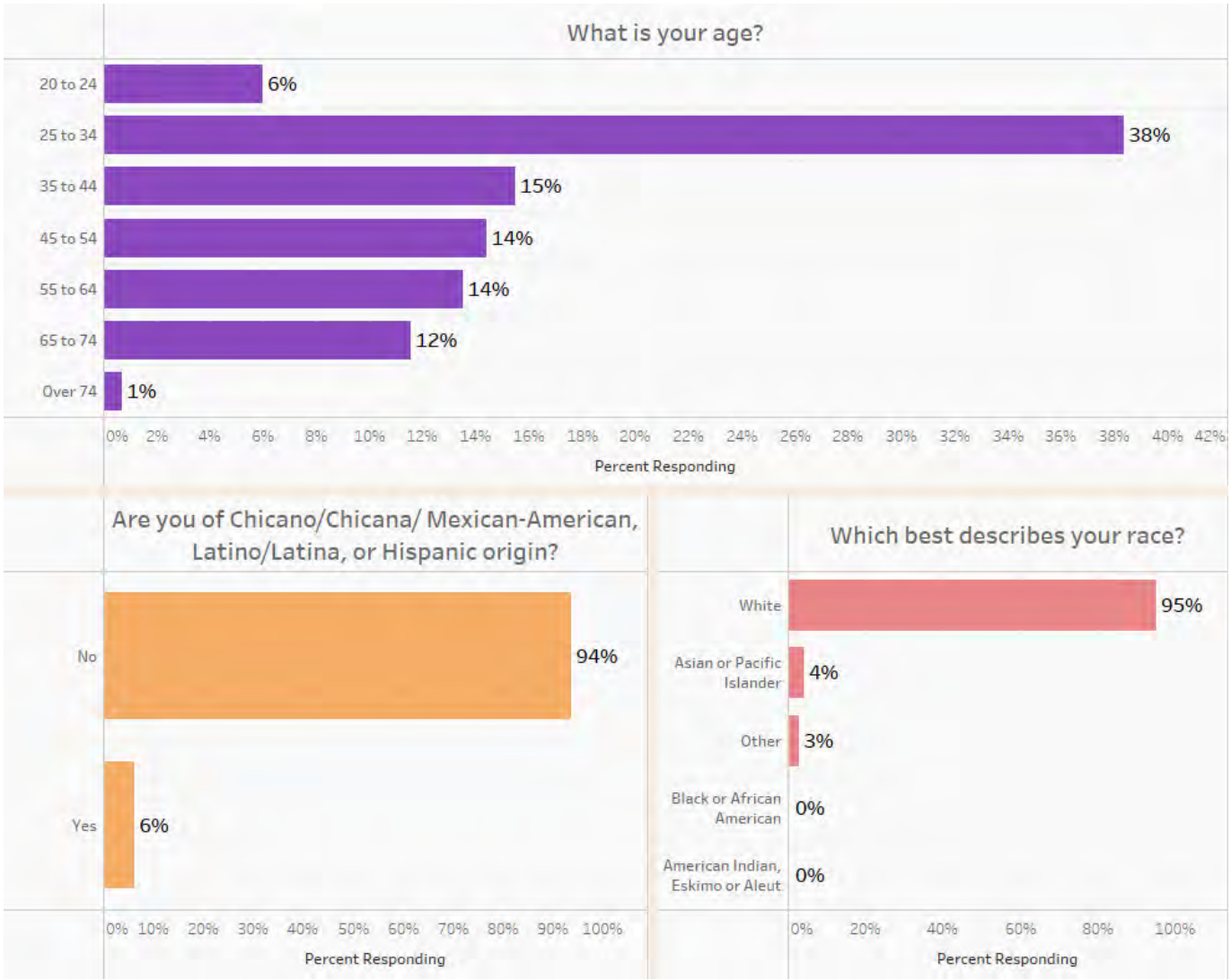
- Age. The age distribution of survey respondents includes 6 percent aged 20 to 24, 38 percent age 25 to 34, 15 percent aged 35 to 44, 14 percent aged 45 to 54, 14 percent aged 55 to 64, 12 percent aged 65 to 74, and 1 percent aged 75 or older. The average age is 43 years and the median age is 40 years.

- Race. The majority of survey respondents are white (95 percent), with 4 percent Asian or Pacific Islander and 3 percent other.

- Hispanic origin. Six percent of respondents are of Chicano/Chicana/Mexican-American, Latino/Latina, or Hispanic origin.

- Gender. Finally, the gender distribution is equally split, at 50 percent female, 50 percent male.

Figure 24: Demographic Characteristics



Respondent Demographics Before and After Survey Weighting

As described in the methodology, the raw survey data were weighted to match the demographic profile of the adult household population in the Boulder Valley by age and housing tenure (own vs. rent), based on 2010 Decennial Census and 2009-14 American Community Survey data. The objective of the weighting was to ensure that the results are representative of the Boulder Valley population on key demographic characteristics. A summary of selected respondent demographic characteristics before and after survey weighting, as compared to the Boulder Valley population profile, is included below. Only weighted results are summarized in this report, unless noted otherwise.

Table 11
Respondent Demographics (Weighted and Unweighted), Compared to Boulder Valley Population

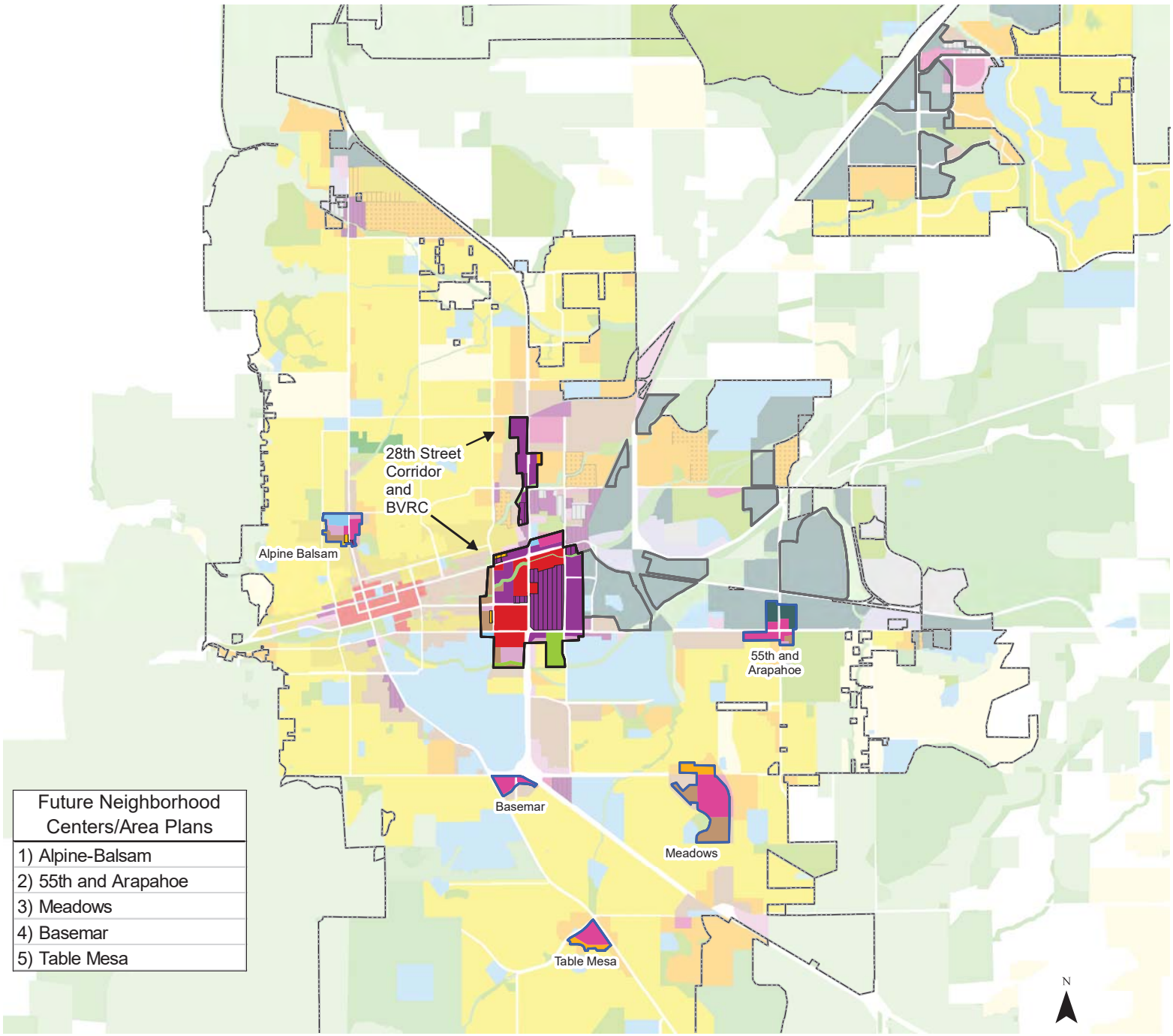
AGE (adult population)	Population target	Unweighted results	Weighted results
20 to 34	44.8%	9.8%	44.4%
35 to 44	15.5%	16.7%	15.5%
45 to 54	14.6%	22.8%	14.4%
55 to 64	13.1%	29.7%	13.5%
65+	12.0%	21.0%	12.3%
Total	*100.0%*	*100.0%*	*100.0%*
AGE (adult population)	Population target	Unweighted results	Weighted results
Owner-occupied households	53.1%	87.2%	53.0%
Renter-occupied households	46.9%	11.6%	45.8%
Other	n/a	1.2%	1.2%
Total households	*100.0%*	*100.0%*	*100.0%*

The weighted results versus the unweighted results showed very close similarities for size of household, location of employment, Latino/a ethnicity, race, and gender. Weighted results showed a higher proportion of renters, employed persons, those living in a condo or apartment, students, those with an income less than $100,000, and those living in the Boulder Valley less than ten years, as compared to the unweighted results. The weighting process clearly brought the respondent profile more in alignment with the known characteristics of the residents of the area of interest (Area I and II).

~*~*~*~*~*~*~*~*~*~*~*~

Attachment B1: Map of Areas Being Studied

BVCP Land Use:
Study Areas



Future Neighborhood Centers/Area Plans
1) Alpine-Balsam
2) 55th and Arapahoe
3) Meadows
4) Basemar
5) Table Mesa

Land Use Codes

No Land Use Designation

Residential

- Very Low Density Residential
- Low Density Residential
- Manufactured Housing
- Medium Density Residential
- Mixed Density Residential
- High Density Residential

Business

- Community Business
- General Business
- Service Commercial
- Transitional Business
- Regional Business

Industrial

- Community Industrial
- General Industrial
- Light Industrial

Mixed Use

- Mixed Use Business
- Mixed Use Industrial
- Mixed Use Residential

Open Space and Mountain Parks

- Open Space, Acquired
- Open Space, Development Rights
- Open Space, Other

Other

- Agricultural
- Park, Urban and Other
- Public
- Environmental Preservation

The information depicted is provided as a graphical representation only. While source documents were developed in compliance with National Map Accuracy Standards, the City of Boulder provides no guarantee, express or implied, as to the accuracy and/or completeness of the information contained hereon.

Map produced by the City of Boulder Planning and Development Services Information Resources Group. For information call (303)441-1880 or visit us on the web at http://www.bouldercolorado.gov.

1/13/2017
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Land Use Map Descriptions

Draft/Work in Progress– Jan. 12, 2017

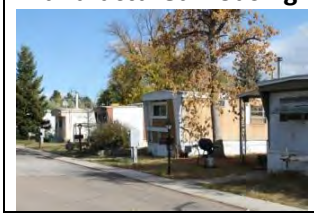
The Boulder Valley Comprehensive Plan BVCP ~~P~~ Land Use Map ~~provides a sketch~~ depicts a plan of ~~the~~ the desired land use pattern in the Boulder Valley, and this chapter includes the land use designations that describe the characteristics, locations, and uses for each category on the map. ~~Land use categories include residential, business, industrial, public/semi-public, open space, and park use.~~ The map also shows the location and functional classification of roads. ~~The following descriptions are meant to be used in interpreting the map.~~

The following is included to assist in map interpretation.

A. The land use designations are meant to accompany and interpret the Land Use Map which sets forth a basic framework and guide for future land use and transportation decisions and should be used in conjunction with the policies, figures, and principles shown in the Built Environment chapter.
B. The land use designations should be used to guide future zoning decisions. Specific zoning dictates the development standards for specific properties and may be changes as part of a general rezoning of the city or through the adopted rezoning process in the land use code.
C. Amendments to the map and these designations will be in accordance with the Amendment Procedures in this plan.
D. Subcommunity and local area planning may help to tailor the citywide maps and descriptions to the more focused areas of the community.

(Note: A collage of photos will be added for the next draft to depict each category.)

Land Use Designations

Land Use Category	Abbr.	Characteristics and Uses	BVCP Density/ Intensity
Residential Categories		Residential land uses ~~areas~~ on the ~~Boulder Valley Comprehensive Plan~~BVCP Land Use Designation Map, for the most part, reflect the existing land use pattern or current zoning for an area. Many ~~of the~~ residential~~–~~ areas developed in the city and the county over the last ~~30~~40 years are characterized by a mixture of housing types ranging from single-family detached to ~~cluster and patio homes,~~ townhouses and apartments. A variety of housing types will continue to be encouraged in developing areas~~ during the planning period of the Comprehensive Plan~~. Residential densities ~~under the Comprehensive Plan~~ range from very low~~density (two units or less per acre); low density (two to six units per acre); medium density (six to 14 units per acre);~~ to high density ~~(more than 14 units per acre)~~. It is assumed that variations of the densities on a small area basis within any particular designation may occur ~~within any particular classification~~, but an average density will be maintained for the designation ~~for that classification~~. ~~I~~With i~~I~~n certain residential areas, there is also the potential for limited small neighborhood shopping facilities, offices or services through special review.	
Very Low Density Residential  *Note: other images to be added*	VLR	**Characteristics and Locations:** Very Low Density Residential tends to have larger lots and more rural characteristics. ~~Most~~Many of these areas are located in Unincorporated Boulder County in the Area III – Rural Preservation Area or Area II and may not have urban services. There are ~~a few~~several areas in North Boulder and East Boulder within the city limits designated VLR. **Uses:** Consists predominantly of single family detached units and related agricultural uses.	2 du/ac. or less
Low Density Residential 	LR	**Characteristics and Locations:** Low Density Residential is the most prevalent land use designation in the city, covering the primarily single family home neighborhoods including the historic neighborhoods and Post-WWII neighborhoods. **Uses:** Consists predominantly of single family detached units.	2 to 6 du/ac.
Manufactured Housing 	MH	**Characteristics and Locations:** This designation ~~is~~ applies~~d~~ to existing ~~mobile home~~manufactured housing parks. The intent is to preserve the affordable housing provided by the existing mobile housing~~me~~ parks and allow for future affordable housing. **Uses:** Consists of manufactured housing units.	Var.

Land Use Category	Abbr.	Characteristics and Uses	BVCP Density/ Intensity
Medium Density Residential 	MR	**Characteristics and Locations:** Medium Density Residential is characterized by a mixture of housing types-. Medium density areas are generally situated near neighborhood and community shopping areas or along some of the major arterials of the city. **Uses:** Consists of a mix of housing types ranging from single-family detached to attached residential units such as townhomes, multiplexes, and some small lot detached units (e.g., patio homes), not necessarily all on one site.	6 to 14 du/ac.
Mixed Density Residential 	MXR	**Characteristics and Locations:** Mixed density areas surround ~~the~~ downtown in the Pre-World War II older neighborhoods and are located in some areas planned for new development. Additionally, in older downtown neighborhoods that were developed with single family homes but for a time were zoned for higher densities, a variety of housing types and densities are found within a single block. The city's goal is to preserve the current neighborhood character and mix of housing types, and not exacerbate traffic and parking problems in those older areas. Some new housing units may be added. ~~The average density in the downtown neighborhoods designated mixed density is in the medium density range (six to 14 units per acre). The mixed density designation is also applied in~~ For ~~some~~ areas ~~planned~~ designated for new development (outside of the Pre-WWII neighborhoods), ~~where~~ the goal is to provide a substantial amount of affordable housing in mixed density neighborhoods that have a variety of housing types and densities. **Uses:** Consists of Single family, multi-family residential units. May include some complimentary uses implemented through zoning.	For older areas: 6 to 14 du/ac. For newer areas: 6 to 18 du/ac.
High Density Residential 	HR	**Characteristics and Locations:** The highest density areas are generally located close to the University of Colorado, in areas planned for transit-oriented redevelopment, and near major corridors and services. **Uses:** Consists of attached residential units, apartments. May include some- complimentary uses implemented through zoning.	More than 14 du/ac.

Land Use Category	Abbr.	Characteristics and Uses	BVCP Density/ Intensity
Mixed Use Residential 	MUR	**Characteristics and Locations:** Mixed Use-Residential development ~~may be deemed appropriate and~~ will be encouraged in those areas identified as appropriate for a mix of uses, and where residential character will predominate. ~~some residential areas. These areas may be designated Mixed Use-Residential.~~ Specific zoning and other standards and regulations will be adopted which define the desired form, intensity, mix, location and design characteristics of these uses. **Uses:** ~~In these areas, r~~Consists predominantly of r~~R~~esidential ~~character~~ uses. ~~will predominate, although n~~ Neighborhood scale retail and personal service uses will be allowed.	Add?
Industrial Categories		The land use plan ~~projects~~ includes four ~~classifications~~ types of industrial use within the Boulder Valley: **General, Community, Light,** and **Mixed Use-Industrial**.	
General Industrial *Note: other images to be added*	GI	**Characteristics and Locations:** The General Industrial designation~~classification~~ is shown where the ~~more intensive and heavy~~ industries are located or planned. **Uses:** Consists of more intensive manufacturing and may include outdoor storage and warehouses.	
Community Industrial 	CI	**Characteristics and Locations:** ~~The Community Industrial classification~~This designation is shown for those areas where ~~the predominant~~community industrial uses provide a direct service to the planning area~~. These uses often have ancillary commercial activity and~~ and are essential to the life of the Boulder community. **Uses:** Consists of ~~These uses include~~ smaller scale community serving industries (such as auto-related uses, small printing operations, building contractors, building supply warehouses, small manufacturing operations). ~~and similar uses.~~ May include some ancillary commercial activity.	

Land Use Category	Abbr.	Characteristics and Uses	BVCP Density/ Intensity
Light Industrial 	LI	**Characteristics and Locations:** ~~The industrial uses considered as 'Light' on the Comprehensive Plan are . These uses are~~Light Industrial uses are concentrated primarily in 'industrial parks' located within the Gunbarrel area along the Longmont Diagonal, and ~~along~~north of Arapahoe Avenue between 33rd and 63rd~~55th~~ streets. **Uses:** Consists p~~P~~rimarily of research and development, light manufacturing and assembly, media and storage, ~~large scale printing and publishing, electronics, technical companies,~~ or other intensive employment uses.	
Mixed Use Industrial 	MUI	**Characteristics and Locations:** ~~Mixed Use Industrial development may be~~~~This use~~Mixed Use Industrial ~~may be deemed appropriate and~~ will be encouraged in some industrial areas ~~where the industrial character will predominate~~. ~~Housing compatible with and appropriate to the industrial character will be encouraged and may be required. Neighborhood retail and service uses may be allowed.~~ Specific zoning and other standards and regulations will be adopted which define the desired form, intensity, mix, location and design characteristics of these uses. **Uses:** Consists of light Industrial uses will predominate and neighborhood retail and service uses may be allowed. Housing compatible with and appropriate to the industrial character will be encouraged and may be required.	
Business Categories		Within the Boulder Valley there are ~~five~~ six categories of business land use, based on the intensity of development and the particular needs of the residents living in each subcommunity. They ~~five categories~~ are: **Regional, Mixed Use-Business, General, Community, ~~General,~~ Transitional** ~~and Mixed Use-Business,~~ **and Service Commercial**.	
Regional Business  *Note: other images to be added*	RB	**Characteristics and Locations**: The two major Regional Business areas of the Boulder Valley are the Downtown and the Boulder Valley Regional Center ~~Crossroads Area~~ serving the entire Boulder Valley ~~and neighboring communities~~. These areas will remain the dominant focus for regional business activity. Street activation and a mix of uses is encouraged as the areas are refurbished. **Uses:** ~~Within these areas are located the mM~~Consists of major shopping facilities, offices, financial institutions, and government and cultural facilities are within these areas. Housing compatible with the surrounding business character and as a transition to other residential areas will be encouraged and may be required.	Most intense of the business categories

Land Use Category	Abbr.	Characteristics and Uses	BVCP Density/ Intensity
Mixed Use Business 	MUB	**Characteristics and Locations**: Mixed Use -Business development ~~may be deemed~~may be appropriate and will be encouraged in some business areas~~. These areas may be designated Mixed Use Business where business or residential character will predominate~~. (Generally, the use applies to areas around 29th Street, as well as North Boulder Village Center, the commercial areas near Williams Village, and other parcels around Pearl, 28th and 30th.) Specific zoning and other standards and regulations will be adopted which define the desired form, intensity, mix, location and design characteristics of these uses. **Uses:** Consists of business or residential uses. Housing and public uses supporting housing will be encouraged and may be required.	
General Business 	GB	**Characteristics and Locations**: The General Business areas are located, for the most part, at junctions of major arterials of the city where intensive commercial uses exist (e.g., on 28th St., 30th St., and Pearl). ~~The plan proposes that~~ Tthese areas should continue to be used without expanding the strip character already established. **Uses:** Consists of a mix of business uses. Housing may be appropriate.	
Community Business 	CB	**Characteristics and Locations**: ~~A~~ Community Business areas areis the focal point for commercial activity serving a subcommunity or a collection of neighborhoods. Theyse are designated to serve the daily convenience shopping and personal service needs of ~~the local populations~~nearby residents and workers and support the goal of walkable communities. **Uses:** Consists predominantly of commercial business uses with convenience shopping and services and some offices. ~~Offices within the Community Business areas should be designated specifically for residents of the subcommunity.~~ Where feasible, multiple uses will be encouraged. ~~within these centers.~~	generally < 150,000 to 200,000 sf.
Transitional Business 	TB	**Characteristics and Locations**: The Transitional Business designation is shown at the intersection of and along certain major streets. These are areas usually zoned for less intensive business uses than in the General Business areas, and they will often provide a transition to residential areas. **Uses:** Consists of a mix of uses including housing.	

Land Use Category	Abbr.	Characteristics and Uses	BVCP Density/ Intensity
Service Commercial 	SC	**Characteristics and Locations**: Service Commercial areas ~~provide a wide range of community and regional retail and service uses generally not accommodated in core commercial areas and which~~ generally require automotive access for customer convenience and the servicing of vehicles. **Uses:** A wide range of community retail and service uses generally not accommodated in other commercial areas.	

Open Space Categories		Open Space designations include the following three categories: **Acquired Open Space**, **Open Space with Development Restrictions**, and **Other Open Space**. Open Space designations are not intended to limit acquisition~~,~~ but to be indicative of the broad goals of the open space program. Other property that meets Open Space purposes and functions should be considered and may be acquired. Open Space designations indicate that the long-term use of the land is planned to serve one or more open space functions. However, Open Space designations may not reflect the current use of the land while in private ownership.	
Open Space, Acquired	OS-A	Land already acquired by the city or Boulder County for open space purposes	
Open Space, Development Rights (or Restrictions)	OS-DR	Privately owned land with existing conservation easements or other development restrictions	
Open Space, Other	OS-O	Other public and private land designated prior to 1981 that the city and county would like to preserve through various preservation methods including but not limited to intergovernmental agreements, dedications or acquisitions. *Note: Add interpretation language to aid in development review in Area I, especially for linear features that are intended to align with water features or ditches.*	
Other Categories			
Agricultural	AG	**Characteristics and Uses:** An Agriculture land use designation identifies land in the Service Area that is planned to remain in agricultural use. Given the urban nature of Boulder, the designation will be used rarely. Uses that are auxiliary to agriculture, such as a home, a barn and outbuildings and the incidental sales of farm or horticultural products are expected on land with this designation.	

Park, Urban and Other	PK-U/O	**Characteristics and Uses:** Urban and Other Parks includes public lands used for a variety of active and passive recreational purposes. Urban parks provided by the city include pocket parks, neighborhood parks, community parks and city parks as defined in the *Parks and Recreation Master Plan*. The specific characteristics of each park depend on the type of park, size, topography and neighborhood preferences. *(Note: suggest moving the following language to Sec. 8)* *Neighborhood parks typically provide a children's playground, picnic facilities, benches, walkways, landscaped areas and multi-use open grass areas. Other park uses may include recreational facilities such as basketball or tennis courts, community gardens and natural areas. There are three community park sites (Harlow Platts, East Boulder and Foothills) that are fully or partially developed. Large multi-use city parks are planned for two locations: 1) the Valmont Park site and 2) the Area III - Planning Reserve site, which will be held to meet future recreational needs. The Boulder Reservoir is a regional park that provides opportunities for fishing, swimming, boating, picnicking, etc. Other public recreational facilities, including city recreation centers, a golf course, swimming pools, ballfields, and the Eldorado Canyon State Park are also included in this category.*	
Public / Semi-Public	PUB	**Characteristics and Location:** Public/Semi-Public land use designations encompass a wide range of public and private non-profit uses that provide a community service. They are dispersed throughout the city. **Uses:** This category includes municipal and public utility services (e.g.,~~such as~~ the municipal airport, water reservoirs, and water and wastewater treatment plants). ~~Public/Semi-Public~~It also includes: educational facilities ~~, including (~~public and private schools and the university); government offices such as city and county buildings, libraries, and the jail; government laboratories; and nonprofit facilities (e.g., ~~such as~~ cemeteries, places of worship~~churches~~, hospitals, retirement complexes), and may include other uses as allowed by zoning.	
Environmental Preservation	EP	The Environmental Preservation designation includes private lands in Areas I and II with environmental values that the city and county would like to preserve through a variety of preservation methods including but not limited to intergovernmental agreements, dedications, development restrictions, rezonings, acquisitions, and density transfers.	
Natural Ecosystems Overlay		~~In order t~~To encourage environmental preservation, a Natural Ecosystem overlay is applied over ~~Comprehensive Plan Land Use Designations~~land use designations throughout the Boulder Valley ~~Planning Area~~. Natural ecosystems are defined as areas that support native plants and animals or possess important ecological, biological or geological values that represent the rich natural history of the ~~Boulder V~~valley. The ~~Natural Ecosystems~~ overlay also identifies connections and buffers that are important for sustaining biological diversity and viable habitats for native species, ~~for~~ protecting the ecological health of	

		certain natural systems, and ~~to~~ buffering potential impacts from adjacent land uses. A Natural Ecosystems overlay will not necessarily preclude development or human use of a particular area or supersede any other land use designation but will serve to identify certain environmental issues in the area. The overlay will serve to guide the city and the county in decisions about public acquisition, purchase of development rights or conservation easements, promotion of private land conservation practices, density transfers, rezonings, development review, annexations and initial zonings, rezonings, service area boundary changes, and subcommunity and departmental master planning. A description of the criteria used to identify lands suitable for a Natural Ecosystems designation can be found in the environmental resources element of the plan on the web at: *www.bouldervalleycompplan.net.*	

Land Use Map Designations – Summary of initial Changes

Jan. 13, 2017

This section focuses on updates to the land use descriptions including input from the Planning Board to date. The edits to the chapter include proposed organizational changes to improve legibility as well as more substantive suggested changes to be consistent with the Land Use Code or with goals emerging from this plan update, such as to encourage housing in commercial or industrial areas. Proposed changes are noted below by section.

Note: The section will also include a collage of photos representative of each type of use.

Introduction/General

- Includes new language to aid in map interpretation.
- Formats the chapter into a table to clarify descriptions and intent of each category.

Residential Categories

Very Low Density Residential

- Adds a description of where VLDR typically occurs – in Area III but also some within city limits.

Low Density Residential

- Adds a description of this predominant type of residential in the city.

Manufactured Housing

- Notes intent to provide for future affordable housing.
- *Question: Should this also identify flexibility for the future to allow for affordability?*

Medium Density Residential

- Adds description to be consistent with intent and how regulations apply – to achieve a mix of housing types throughout the district rather than one uniform type
- Adds language to allow some limited small commercial where appropriate near an arterial or collector street.

Mixed Density Residential

- Adds language to consist of a mix of housing types versus just one type.
- Adds language included some complementary uses as implemented through zoning.

High Density Residential

- Adds language to note that some complementary uses may be appropriate, as consistent with regulations.

Mixed Use Residential – No significant changes

Industrial Categories

General Industrial

- Adds list of uses that are generally consistent with the industrial manufacturing zoning district.

Community Industrial

- Adds note about "ancillary commercial activity" to be consistent with uses and intent.

Light Industrial

- Notes change to location, as the current designation stretches east to 63rd Street.
- Adds uses to be consistent with more contemporary light industrial uses (striking large scale printing and noting assembly, media and storage).
- *Note: This definition might further change to reflect outcomes of the land use changes to accommodate housing, or if some of the light industrial areas are redesignated to Mixed Use Industrial.*

Mixed Use Industrial

- Adds uses to be consistent with more contemporary light industrial uses (striking large scale printing and noting assembly, media and storage).

Business Categories

Regional Business

- Notes changes to reflect the newer terminology for the "Boulder Valley Regional Center" instead of Crossroads.
- Adds language to encourage street activation.
- Adds language to encourage and possibly require housing.
- *Note: May be further modified depending on outcomes of land use discussions.*

Mixed Use Business

- Adds a note about locations where the category applies.

General Business

- Adds language about future goals – including housing and references the Built Environment section principles for Regional Centers.
- *Note: May be further modified depending on outcomes of land use discussions.*

Community Business

- Adds language about walkable communities.

- *Note: May be further modified depending on outcomes of land use discussions.*

Transitional Business

- States that the commercial character of these areas should not expand and that a mix of uses including housing is appropriate.

Service Commercial – No significant changes

Open Space Categories

Open Space Acquired – No changes

Open Space Development Rights

- Minor change to clarify it applies to "existing" conservation easements.

Open Space, Other

- *Note: need interpretation language especially for linear OS-O.*

Other Categories

Agricultural – No changes

Park, Urban and Other

- *Note: Recommends moving the descriptive park language to Sec. 8.*

Public/Semi-Public – no changes

Environmental Preservation – no changes

Natural Ecosystems Overlay – no changes

- *Note: The Natural Ecosystems Overlay maps should be updated with current data and GIS information before the next major plan update.*

NOV. 2016

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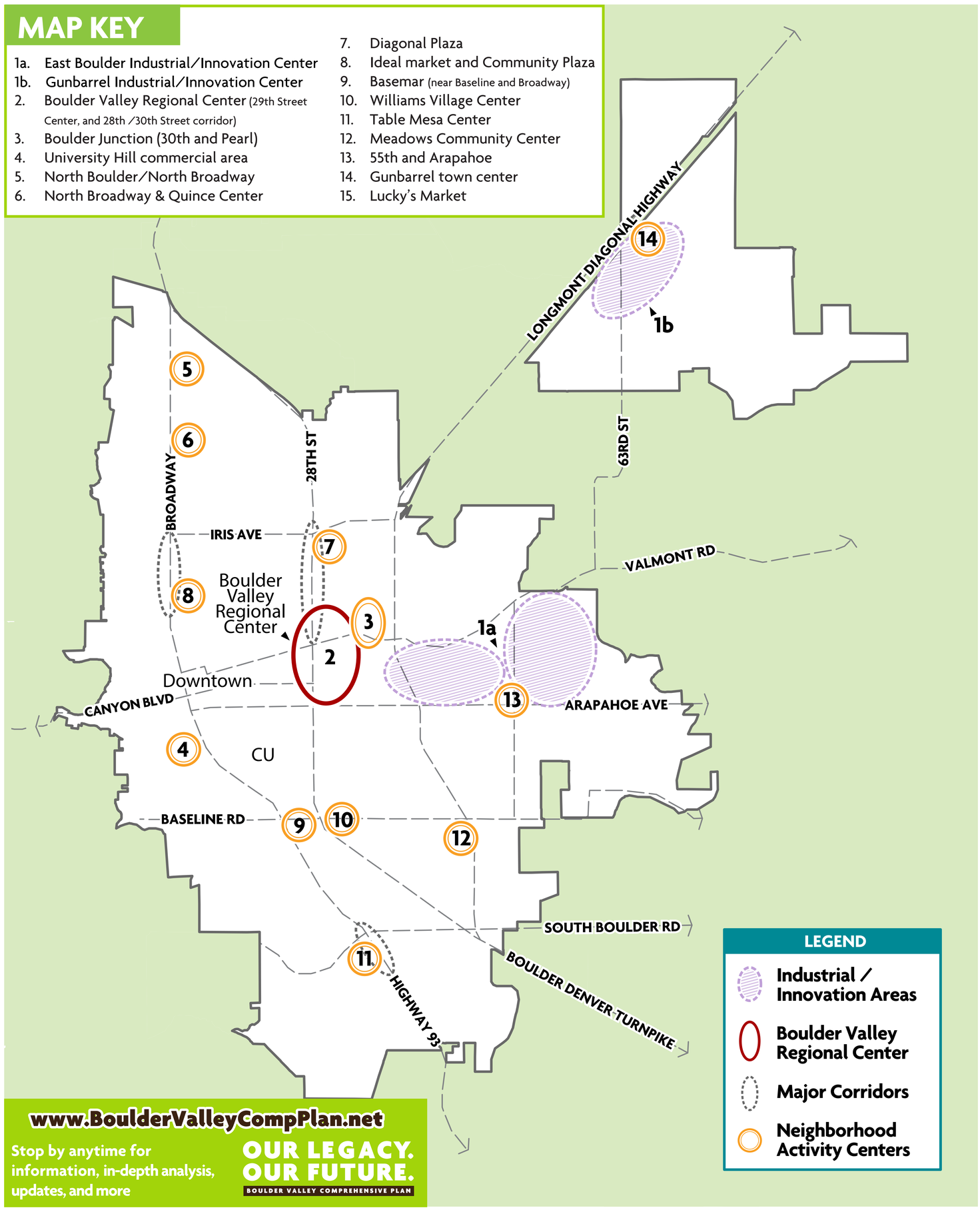
POSSIBLE LOCATIONS FOR FUTURE JOBS AND HOUSING

Most future jobs and housing may occur in four types of places:

- Major Corridors
- Regional Activity Centers
- Neighborhood Activity Centers
- Industrial/Innovation Areas

The generalized location and distinct characteristics of each of these types of places are defined below.



INDUSTRIAL/INNOVATION AREAS

- Located in East Boulder, along Arapahoe between 33rd and South Boulder Creek, and in Gunbarrel along the Diagonal
- Classified as Light Industrial on the Land Use Designation Map and has Industrial General (IG) Zoning designed for "research and development, light manufacturing, larger scale printing and publishing, electronics, or other intensive employment uses" and "industrial parks" according to the 2010 plan
- Accessible by vehicles but are not particularly accessible by transit
- Strong regional connection to the city's greenway system, particularly in East Boulder, making the area accessible for bicycles and pedestrians
- More auto-centric and less walkable/bikeable within these areas due to the disconnected street grid

BOULDER VALLEY REGIONAL CENTER

- Serves as a regional commercial destination with goods and services to meet the needs of the community
- Located in Boulder's Crossroads area along the highways and arterials and is accessible by vehicle, transit, and for pedestrians and bicycles locally and regionally
- Classified as General, Regional, and Mixed Use Business on the Land Use Designation Map and generally has Business Regional (BR-1) Zoning with the highest level of commercial
- Contains the regional mall, some larger big box commercial uses, a multitude of other restaurants and retail, offices, and some residential and is over 200 acres in size

MAJOR CORRIDORS

- Varied in use. May be commercial transitioning to mixed-use or medium density housing
- Served by high frequency transit connecting the centers
- Fairly walkable/bikeable in most locations
- Abutting established neighborhoods
- Examples: 28th Street, Broadway

NEIGHBORHOOOD ACTIVITY CENTERS

- Serve as a focal point for neighborhoods. They provide goods and services to meet the day-to-day needs of nearby residents, workers, and students
- Located throughout Boulder, generally along major corridors
- Accessible from surrounding areas by vehicle, walking, bike, and transit
- Generally classified as Community Business on the Land Use Designation Map and have Business Commercial (BC-1 and BC-2) Zoning
- Have distinct identities and are important to the nearby neighborhoods
- Sometimes contain community services and functions such as libraries, or public spaces
- Generally, do not include housing; and
- Range in size from small locally serving commercial to larger grocery stores or anchor stores. Total area ranges from 4-acres (Willows Shopping Center) to 30+ acres (Meadows)

About Established Neighborhoods

- Places where people live and with most of the community's housing
- May contain some services, public spaces, parks, other community facilities
- Heart of the community- varied and distinctive, includes:
- Historic and pre-World War II housing organized around a street grid pattern in and near downtown
- Post World War II neighborhoods with a curvilinear street and cul de sac pattern, and
- Neo-traditional, New Urbanist neighborhoods that contain a mix of housing types and more compact street design

Most changes will occur outside of established neighborhoods. However, some limited housing will continue to occur in neighborhoods as retrofits or built on individual lots.

LAND USE SCENARIOS

NOV. & DEC. 2016

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The land use scenarios are illustrations to test different ways of achieving community objectives.

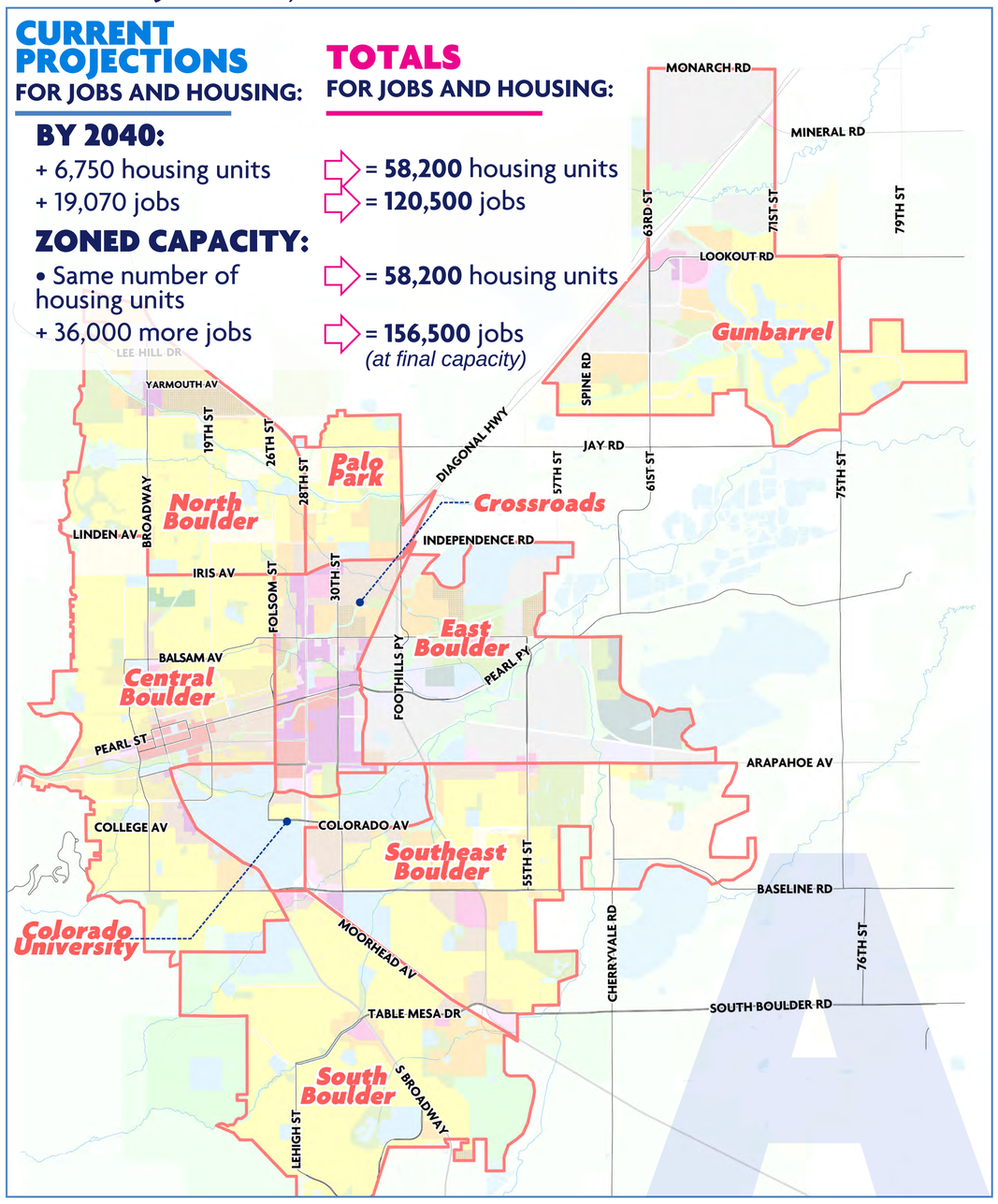
They can be blended to achieve different goals. The scenarios incorporate input received throughout the plan update and are intended to contribute to sustainability goals such as:

- Maintaining a compact form and protecting open space and the natural environment;
- Providing a diversity of housing types, sizes and prices (including those affordable for middle incomes) while protecting neighborhoods;
- Better balancing jobs and housing and mixing uses to reduce vehicle trips (regionally and locally);
- Improving access to daily needs, destinations, and transit from home or work;
- Reducing greenhouse gas emissions and expanding renewable energy;
- Minimizing fiscal impacts of land use changes on revenues and cost of services; and
- Maintaining economic vitality, employment diversity, and small businesses.

The analysis is under separate cover. Generally, additional housing is not projected in established single family neighborhoods in these scenarios.

In 2015, the city and its service area had an estimated 51,450 housing units (116,840 people) and 101,430 jobs. Job estimates and projections are based on nonresidential development potential. Colorado's Front Range has been in a period of growth since the recession in the late 2000s, and demographers expect the region to grow from 2.8 million people in 2016 to 4 million by 2035.*

EXISTING HOUSING UNITS: 51,450
EXISTING JOBS: 101,430



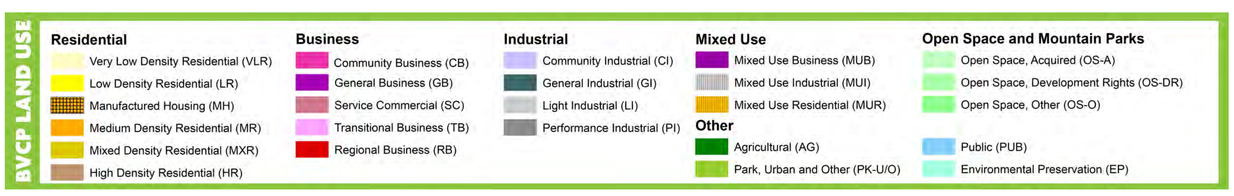
SCENARIO A: Current Land Use Policy

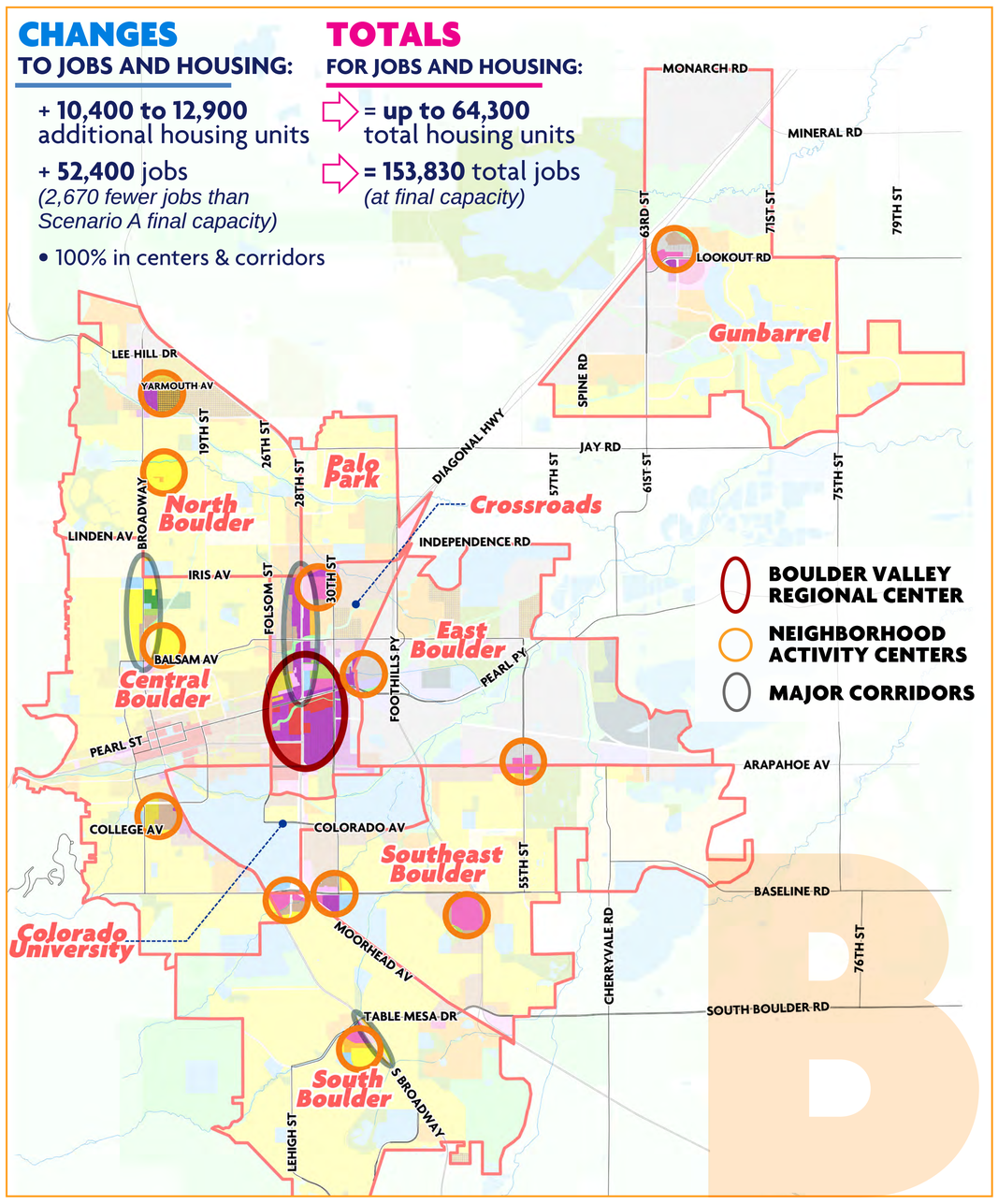
This scenario continues the current land use plan and projections for future jobs and housing, with more potential for jobs than for housing.

6,750 new housing units (including over 1,000 units in CU dorms) and 19,070 new jobs are projected by 2040. Beyond 2040, the city has nonresidential capacity for an additional 36,000 jobs and no remaining capacity for housing units.

What current policy leads to:

- **Compact Community Footprint**. Maintain a community with a defined community edge and protect the surrounding open space. The community is relatively built out. Development occurs as infill and redevelopment according to the land use plan and zoning, not as outward expansion. *This is true for all the scenarios.*
- **Future Jobs and Housing Balance.** Job capacity (based on zoning for non-residential uses) exceeds that for housing which will further imbalance jobs and housing and make it difficult to accommodate housing affordability and transportation goals.
- **Established Neighborhoods and Areas of Change.** Most of the potential for residential units is located in either mixed use or medium/high density residential zoning districts in the Crossroads subcommunity and along major commercial corridors and in centers. Most single family neighborhoods will not see major changes but may see some new residential units on scattered parcels or home renovations. The Boulder Valley Regional Center may see additional offices and commercial uses and little housing.
- **Transportation.** Relative to the other scenarios, the current policy may yield higher vehicle miles travelled (VMT) per resident and employee.
- **Fiscal and Economic Impacts.** May produce a net positive fiscal impact due to emphasis on job growth.





SCENARIO B: Current Land Use Policy + Housing in Centers and Corridors

This scenario accommodates more housing variety than Scenario A in the Boulder Valley Regional Center, neighborhood commercial centers, and along some of the major corridors, such as 28th Street, while slightly reducing commercial/offices in those areas.

Initial analysis suggests this scenario, compared with the current policy, might lead to outcomes such as:

- **Additional Housing in Centers and Commercial Corridors.** Allows for diverse and "missing middle" housing types (e.g., townhomes, rowhomes, apartments, live-work, etc.) that may be made affordable to low, moderate, and middle incomes. New attached housing types would be primarily in centers and along commercial corridors, outside of established low density neighborhoods.
- **Future Jobs and Housing Balance.** Improves the jobs:housing balance.
- **Transportation.** Increases mixed use and housing where it is accessible to services, destinations, and transit. More than three-quarters of new housing units are concentrated in walking distances of transit. May reduce VMT per resident and employee relative to Scenario A.
- **Fiscal and Economic Impacts.** May produce a net negative fiscal impact, however, fiscal impacts of residential development vary depending on the circumstance. Non-residential development often generates tax revenues while typically placing less demand on city services than do residents. Infill often produces more positive fiscal results than expanding the urban footprint.

What might it take to accomplish?

- **Changes to land use designations** Change designation descriptions or apply new categories (i.e. Community Business, Mixed Use Residential, General Business) describing intended mix of uses in the commercial centers (e.g., 70% commercial/30% residential, including townhomes, rowhomes and live/work).
- **Policies and regulatory changes to address land use changes, intensity, incentive-based zoning** to achieve affordable housing (underway) and address community benefits
- **Followed by Changes to Land Use Code or new districts** (BC-1, BC-2, BR-1). Standards regarding the mix, intensity, and functions. Incentivize or require new affordable housing.
- **Additional guidelines or principles** describing character of centers and corridors and transitions.
- **Additional local area planning may be necessary.**

* The scenarios are based off the official projections completed as part of the BVCP foundations work in 2015. For 2016 data on housing units and jobs, please refer to the Boulder Community Profile: www.bouldercolorado.gov/business/community-profile.

LAND USE SCENARIOS

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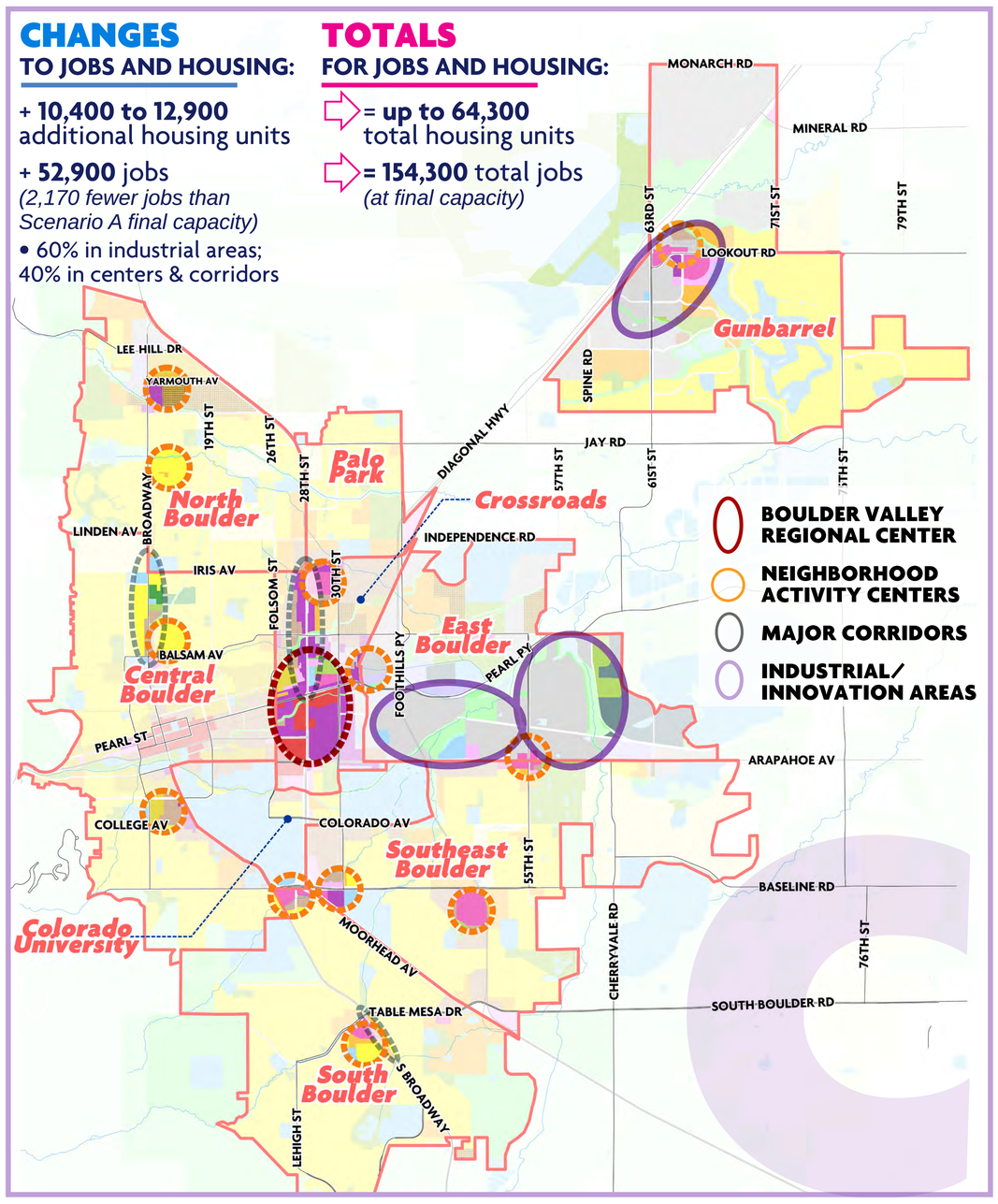
www.BoulderValleyCompPlan.net
Stop by anytime for information, in-depth analysis, updates, and more
OUR LEGACY. OUR FUTURE.
BOULDER VALLEY COMPREHENSIVE PLAN



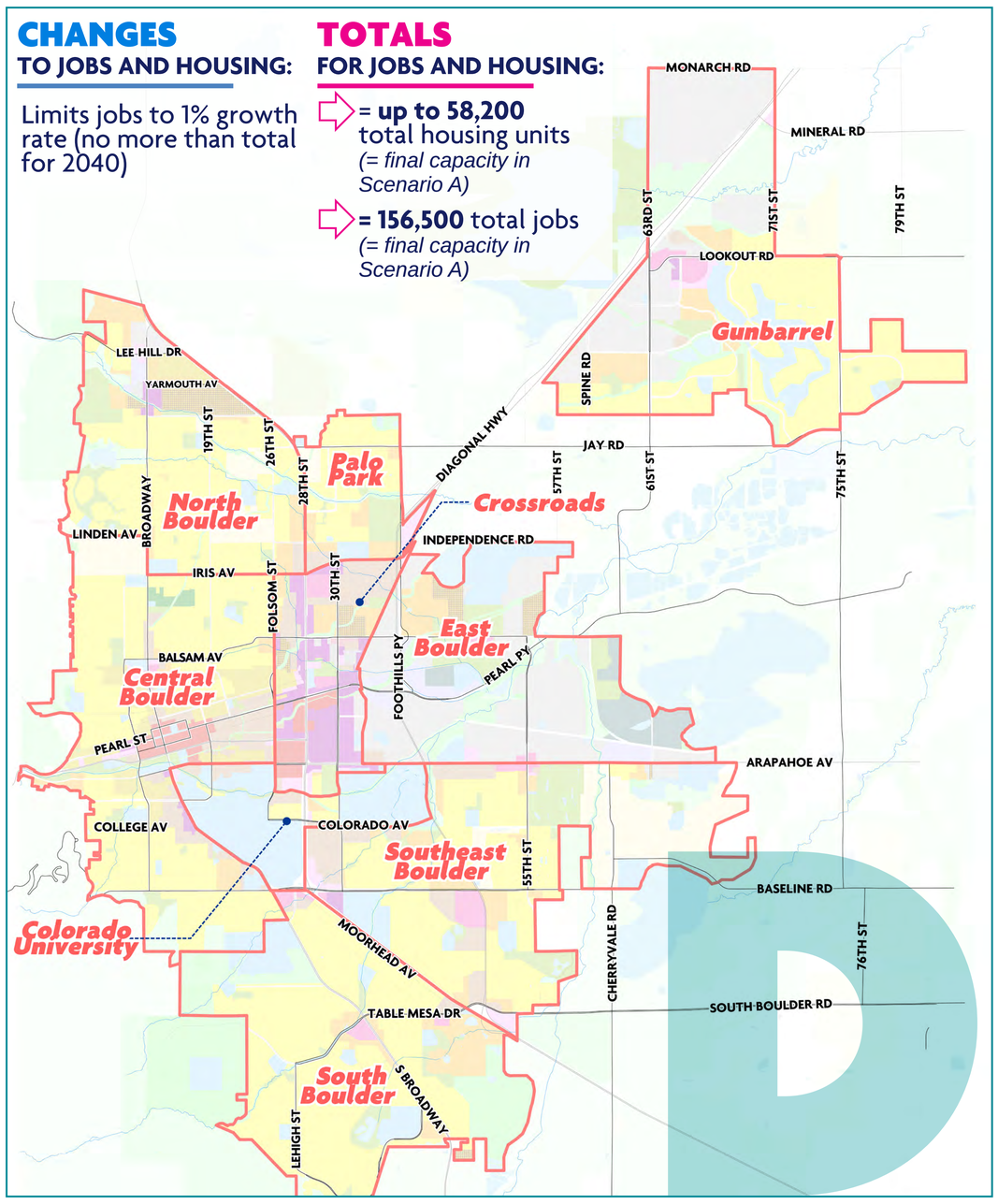
SCENARIO C: Current Land Use Policy + Housing/Industrial Innovation

This scenario allows more housing, mixed uses and amenities in light industrial areas than Scenario A. It would support live-work units and condominiums closer to workplaces and address transportation needs in industrial areas. It would also support a mix of local services in industrial areas, which would serve the workforce as well as adjacent residential neighborhoods. Initial analysis suggests this scenario, compared with the current policy, might lead to the following outcomes:

- **Additional Housing and Mix of Uses in Light Industrial Areas.** Provides additional capacity for diverse, "missing middle" housing types (e.g., rowhomes, live-work) in some light industrial areas. These types may become affordable if they are smaller units. May lead to a mix of 70% light industrial and services (such as restaurants, groceries, and day care) and approximately 30% housing in those places.
- **Future Jobs and Housing Balance.** Reduces jobs imbalance a bit by adding housing in a jobs-rich area.
- **Transportation.** Mixing uses can reduce vehicular trips if arranged to be walkable, bikeable, and/or served by transit; so this scenario performs better than A but not as well as B. The industrial areas need additional transportation services and planning to connect with the community and regional system. May reduce VMT per resident and employee relative to Scenario A.
- **Fiscal and Economic Impacts.** As noted above, a scenario that increases housing and reduces jobs may produce a net negative fiscal impact.

What might it take to accomplish?

- **Land Use Designation Change.** Modify some areas within the Light Industrial areas (LI) to encourage housing and a mix of locally serving uses or add a new land use category.
- **Changes to Land Use Code- General Industrial District (IG)**, following policy changes, code would need to be revised to incentivize or require new housing and allow other supporting commercial uses.
- **Policies Regarding Small Business.** Develop new policies regarding small business retention and affordability to retain the viability of businesses within industrial areas (note: may apply elsewhere as well).
- **Planning transportation services and infrastructure.**
- **Additional local area planning maybe be necessary.**



SCENARIO D: Current Land Use Policy + Commercial Growth Management

This scenario limits the rate of commercial growth (i.e., not to exceed 1% annually). It also assumes some reduction to overall jobs potential. Relative to the current policy, initial analysis suggests this scenario (standing alone or in combination with others above) may lead to the following outcomes:

- **Future Jobs and Housing Balance:** Does not change the mix of land uses or accommodate new affordable housing, but would limit the rate of job growth by 2040 thus improving the balance. Addresses community concerns about commercial development outpacing housing.
- **Transportation.** This scenario may reduce VMTs per employee by pacing nonresidential growth.
- **Fiscal and Economic Impacts.** May produce a net negative fiscal impact.

What might it take to accomplish?

- **Tools for Nonresidential Growth Management.** Developing the policies and doing further analysis of the regulatory tools and approaches.
- **Land Use Changes and Standards**. In combination with other scenarios, certain commercial land use categories could be modified to reduce overall nonresidential potential. Also in combination with other scenarios, standards to reduce height limits (or remove height modification exemptions) for the Boulder Valley Regional Center could address the amount and location of commercial and offices. (See scenario below.)

HYBRID SCENARIO: B + C + D

The city also is working with consultants to test a hybrid scenario that combines attributes of B, C, and D – adding more housing potential to centers, corridors, and industrial areas, further reducing jobs or nonresidential potential in the Boulder Valley Regional Center and in the other neighborhood centers and industrial areas, and pacing commercial growth.

CHANGES
TO JOBS AND HOUSING:

+ **16,570** additional housing units
+ **46,800** jobs
(9,200 fewer jobs than Scenario A final capacity)
• 60% in centers and corridors; 40% in industrial areas
• Limits jobs to 1% growth rate (no more than total for 2040)

TOTALS
FOR JOBS AND HOUSING:

= **up to 58,200** total housing units
(= final capacity in Scenario A)
= **156,500** total jobs
(= final capacity in Scenario A)

NOV. 2016

SCENARIO A: "The Baseline"

CURRENT DISTRIBUTION OF PROJECTED JOBS AND HOUSING

	2015 Dwelling Units	Additional Dwelling Units to Zoning Capacity	Additional Jobs by 2040	Additional Jobs to Zoning Capacity	YOUR NOTES
Central Boulder	13,370	730	1,330	3,820	
Colorado University	2,020	1,080	1,220	3,510	
Crossroads	4,250	1,250	3,820	10,950	
East Boulder	1,400	800	6,010	17,260	
Gunbarrel	5,600	200	4,480	12,850	
North Boulder	6,080	620	390	1,120	
Palo Park	1,720	480	110	310	
South Boulder	7,320	480	600	1,730	
Southeast Boulder	9,680	1,120	1,120	3,210	

Total Projected Housing Units: 6,750

Total Jobs Projected for 2040: 19,070

Total Jobs at Zoning Capacity: 54,760

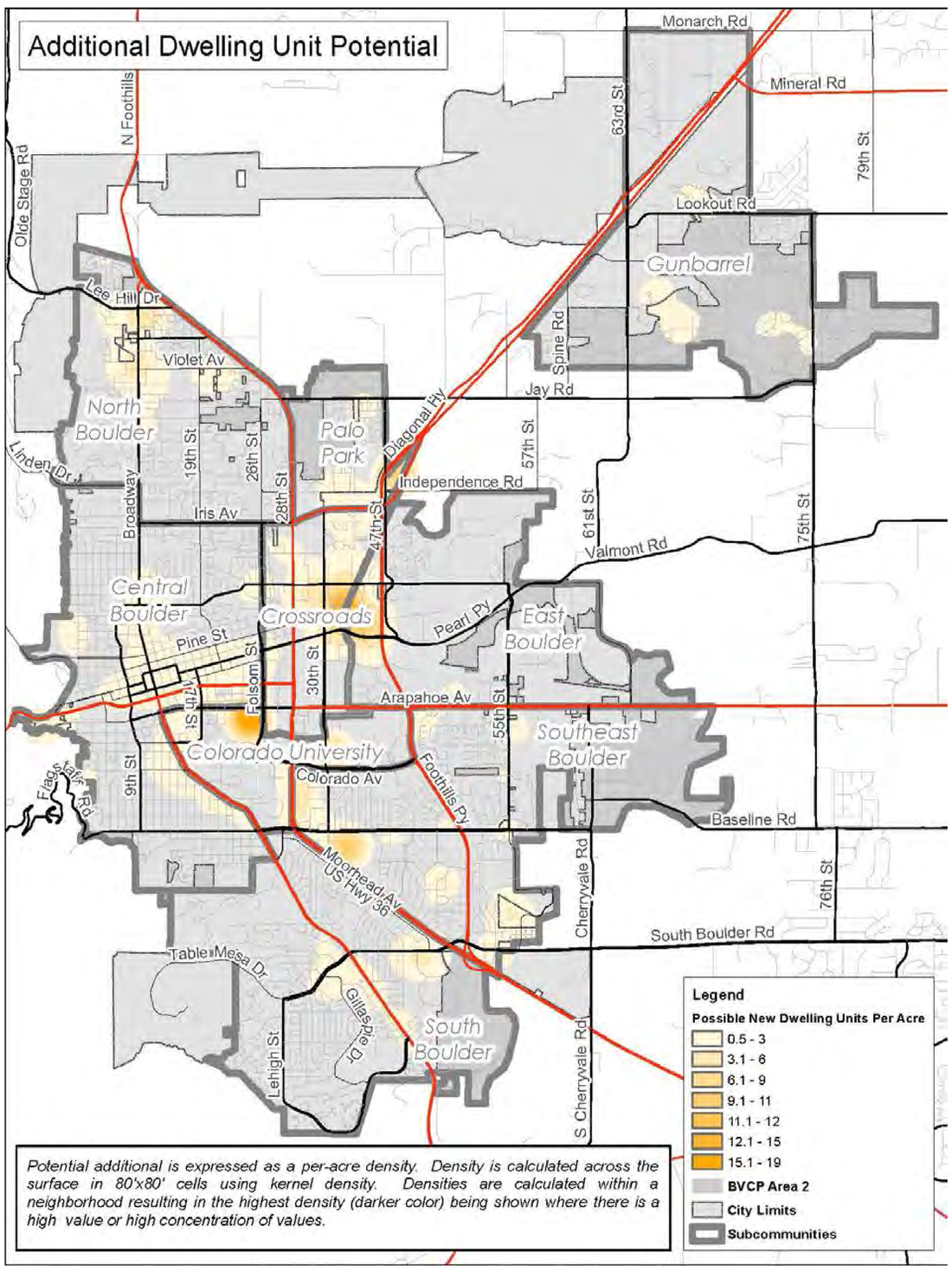


Figure 1: Additional Dwelling Unit Potential at Zoning Capacity

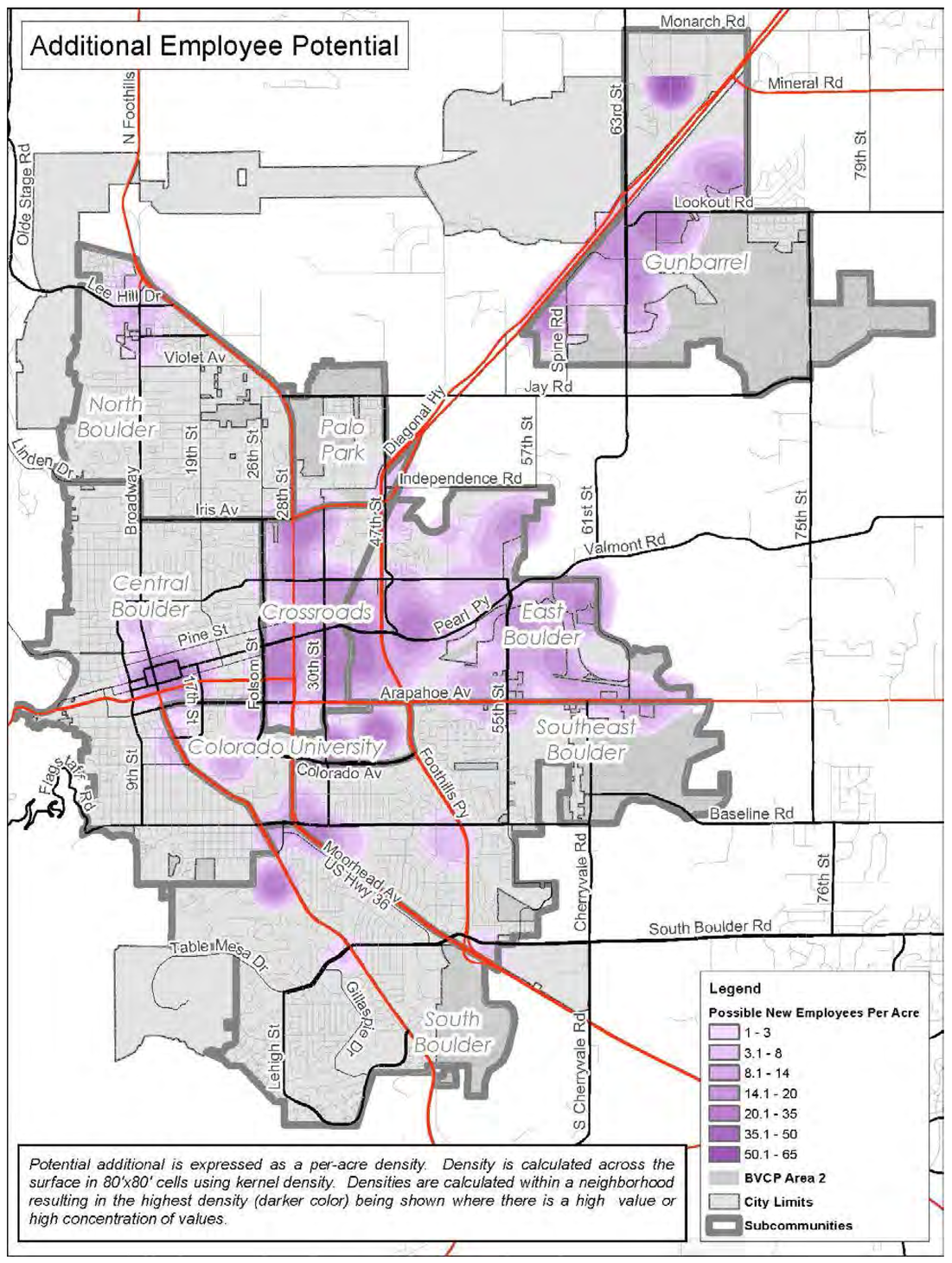


Figure 2: Additional Employee Potential at Zoning Capacity

PRELIMINARY HOUSING CONCEPTS
multifamily housing concepts

These ideas are being analyzed as part of the land use scenarios.

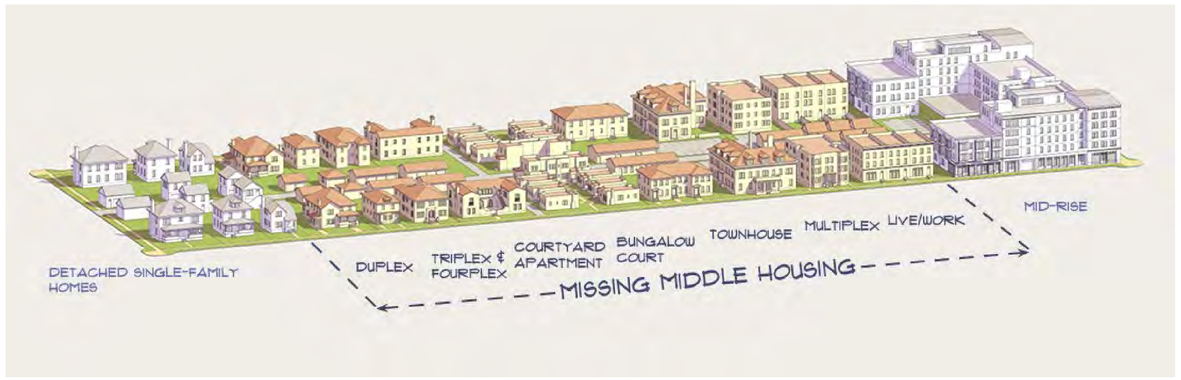
These types of housing could take place in neighborhood and regional activity centers, industrial/innovation areas or along major commercial corridors. They are not intended for neighborhoods.

Housing Diversity The BVCP includes a core value of achieving a "diversity of housing types and price ranges." In addition, the 2015 BVCP survey and focus group results concluded that this core value was the **community's #1 priority.**

Missing Middle **refers to middle-density housing prototypes.** Illustrated to the right is the range of "missing middle" housing types that could be incorporated as part of the city's centers, corridors, and industrial/innovation areas to help achieve housing priorities and support other community goals.

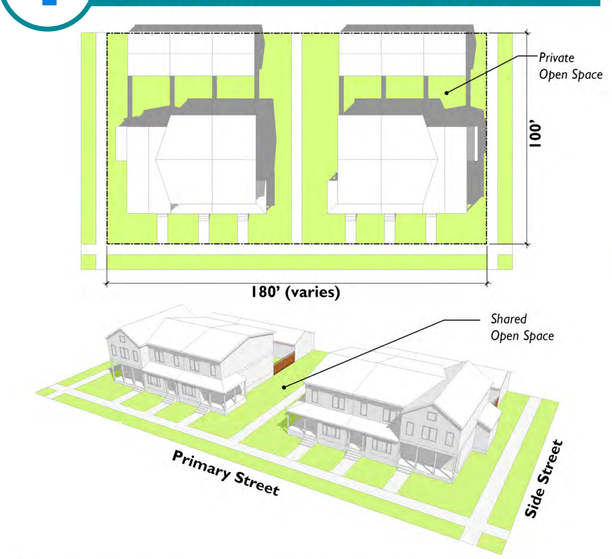
These prototypes:

- offer densities between single family detached homes and mid-rise apartment buildings;
- are lower in scale than traditional apartment buildings, providing a compatible solution to transitions from single family neighborhoods;
- incorporate amenities like private small yards or terraces that the market is demanding in Boulder;
- fall within a more affordable price range than single family homes; and
- are appropriate for young professionals entering the workforce, young couples and families, and the aging population.



How does this relate to the citywide scenarios and policy choices?
To include more diverse housing options in close proximity to existing jobs and retail services, these prototypes are relevant in the centers, corridors, and industrial/innovation areas.

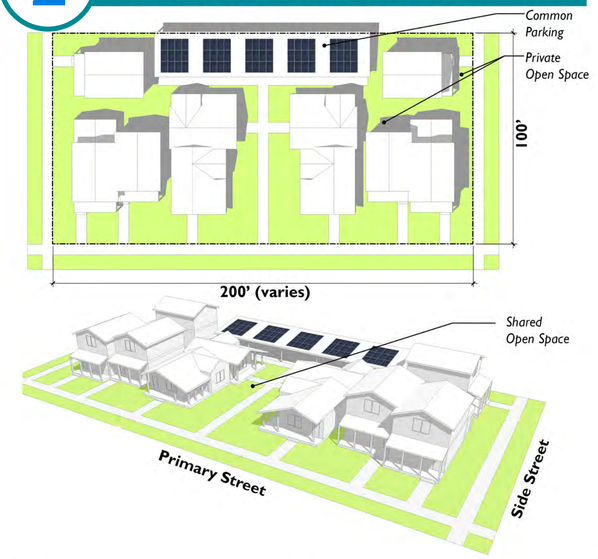
1 TOWNHOUSE COURT



EXAMPLE PROTOTYPE STATS:

TYP. LOT SIZE =	25' x 100'	**OWN or RENT =**	OWN
UNIT SIZE =	1,500 - 2,000 SF	**DENSITY =**	12-15 DU/AC
PARKING =	REAR YARD/ DETACHED	**FORM =**	ATTACHED SINGLE FAMILY

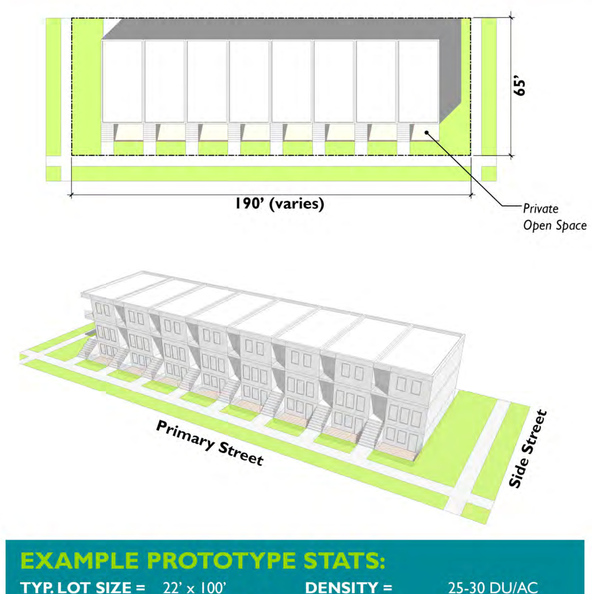
2 COTTAGE COURT



EXAMPLE PROTOTYPE STATS:

TYP. LOT SIZE =	22' x 65'	**OWN or RENT =**	OWN
UNIT SIZE =	800 - 1,500 SF	**DENSITY =**	20-25 DU/AC
PARKING =	OFF-STREET	**FORM =**	ATTACHED SINGLE FAMILY

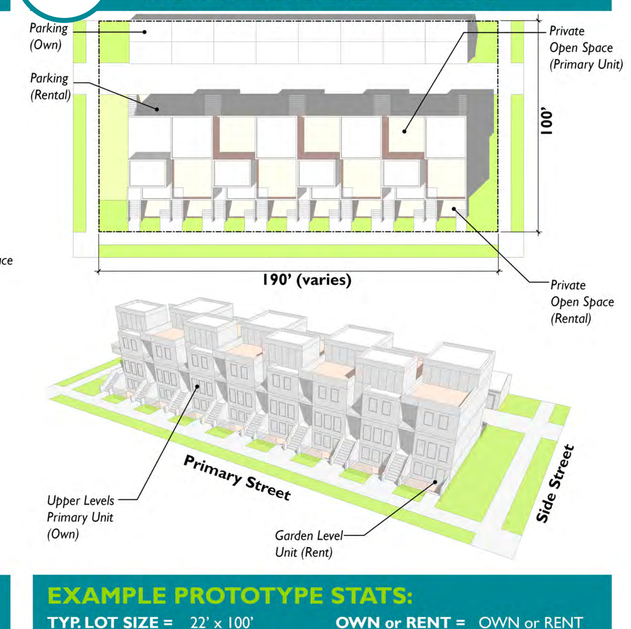
3 ROWHOUSE



EXAMPLE PROTOTYPE STATS:

TYP. LOT SIZE =	22' x 100'	**DENSITY =**	25-30 DU/AC
UNIT SIZE =	1,700 - 2,000 SF	**FORM =**	ATTACHED SINGLE FAMILY
PARKING =	REAR / ATTACHED		
OWN or RENT =	OWN		

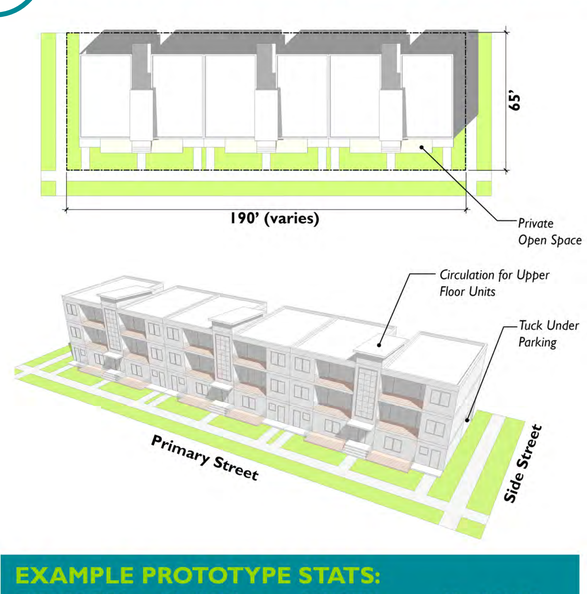
4 ROWHOUSE + FLAT



EXAMPLE PROTOTYPE STATS:

TYP. LOT SIZE =	22' x 100'	**OWN or RENT =**	OWN or RENT
UNIT SIZE =	650 - 1,800 SF	**DENSITY =**	30-40 DU/AC
PARKING =	REAR / UNDER & DETACHED	**FORM =**	ATTACHED SINGLE FAMILY

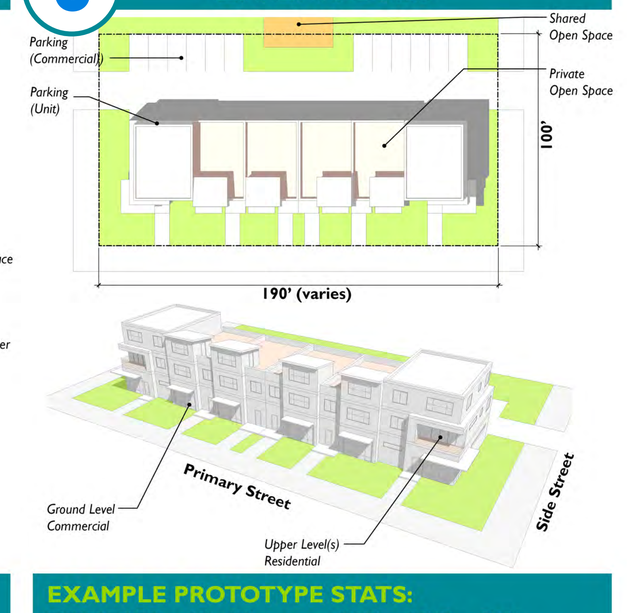
5 WALK-UP / STACKED FLAT



EXAMPLE PROTOTYPE STATS:

TYP. LOT SIZE =	65' x VARIES	**DENSITY =**	35 - 40 DU/AC
UNIT SIZE =	500 - 900 SF	**FORM =**	APARTMENT
PARKING =	TUCK-UNDER		
OWN or RENT =	OWN or RENT		

6 LIVE/WORK



EXAMPLE PROTOTYPE STATS:

TYP. LOT SIZE =	25' x 100'	**OWN or RENT =**	OWN
UNIT SIZE =	1,000 - 1,600 SF +	**DENSITY =**	10-15 DU/AC
COMMERCIAL =	600 - 900 SF	**FORM =**	CONDO
PARKING =	REAR / UNDER		

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OUR LEGACY. OUR FUTURE.
BOULDER VALLEY COMPREHENSIVE PLAN

Initial Analysis of BVCP Land Use Scenarios

Dec. 9, 2016

This paper addresses how the land use scenarios (described briefly below and under separate cover) may perform relative to the following objectives.

1. Provide a diversity of housing and affordability
2. Protect and strengthen neighborhoods
3. Make progress on transportation objectives (e.g., reducing vehicle miles traveled and greenhouse gas emissions; managing congestion; expanding options; increasing the share of residents living in complete, walkable neighborhoods; increase transportation alternatives commensurate with the rate of employee growth)
4. Balance jobs and housing (to reduce vehicle trips and address other regional impacts)
5. Protect open space and the natural environment
6. Reduce greenhouse gas emissions and expanding renewable energy
7. Minimize fiscal impacts of development; ensure development pays its own way and that city can adequately serve new development; and
8. Maintain economic vitality, employment diversity and small business

Additional analysis is underway, particularly related to the mix of uses and whether scenarios are achievable or may need adjustments to assumptions about the land uses.

Scenario Overview

The scenarios were formed to test ideas, and while they are largely about land use (e.g., housing and commercial/industrial) they also help frame a conversation about the kind of community Boulder aims to be.

Scenario A – Current Land Use Policy, which continues the current land use plan and projections for future housing and nonresidential land uses (translating to jobs) with more potential for jobs than for housing. It anticipates approximate 6,750 new housing units (including CU's approximately 1,000 units) and 19,070 new jobs by 2040. Beyond 2040, the city has non-residential capacity for an additional 36,000 jobs and no projected remaining capacity for housing units.

Scenario B – Current Land Use Policy + Housing in Centers and Along Corridors, which accommodates more housing variety than Scenario A in the Boulder Valley Regional Center, neighborhood commercial centers, and along some of the major corridors such as 28th Street, while slightly reducing commercial/office development potential in those areas. This scenario could add 10,400 to 12,900 additional housing units and may reduce job potential by about 2,670. The changes would occur in centers (65%) and along corridors (35%).

Scenario C – Current Land Use Policy + Housing/Industrial Innovation, which accommodates more housing, mixed uses, and amenities in light industrial areas than Scenario A. It would support live-work units and a variety of housing types closer to workplaces and address transportation needs in industrial areas such as Flatiron Business Park area or some parts of Gunbarrel industrial areas. This scenario could add 10,400 to 12,900 additional housing units, with 60% of them in the industrial areas and 40% in centers and along corridors.

Scenario D – Current Policy + Commercial Growth Management, limits the rate of commercial growth (i.e., not to exceed one percent annually) and does not change current housing projections. It could also result in some reduction to overall job potential in combination with other land use scenarios.

Scenario E – Hybrid (B+C+D), combines land use and housing attributes of the above scenarios, further reducing jobs or nonresidential growth potential in the centers and industrial areas.

Analysis

Housing Affordability

Will changing land uses to encourage more middle income housing products support housing goals?

- ✓ The scenarios (B, C, and E) that add potential for more townhomes, rowhomes and flats beyond the 6,750 units currently anticipated will improve the outlook for middle income housing.

However, additional inclusionary housing/affordable housing policies and regulations will be necessary to ensure that a portion of new housing built is permanently affordable and/or market rate affordable to middle income households.

The higher range of housing numbers in each scenario (B, C, and E) is ambitious based on analysis of redevelopment potential and rates, and depends to a great deal on desired future intensity (i.e., if the housing mix shifts toward more townhomes and low rise buildings for instance, the number of units possible would be lower). The following estimates may get adjusted with further study of the land use mix:

- o Scenario B could yield from 1,040 to 1,760 new townhomes and live-work units and from 1,600 to 2,680 rowhomes and flats.
- o Scenario C could yield from 1,300 to 2,220 new townhomes and live-work units and from 1,530 to 2,590 rowhomes and flats
- o Scenario E, the hybrid, could yield up to 3,290 townhomes and live-work units and 4,170 rowhomes and flats and assumes greater levels of redevelopment that the previous options.

Boulder's current housing mix is approximately 44% detached (single family and mobile homes) and 56% attached products, with less than 10% of the attached products as duplex/triplex or townhomes. These lower-density attached walk-up types of housing products have been identified as the "missing middle" housing type for which there is large demand according to the Housing Boulder studies (i.e., *Housing*

Choice Survey, 2014 and *Housing Market Analysis*, 2013, BBC, Inc.). Attached housing types are typically more affordable that detached products. Consultant, Keyser Marsten, prepared an initial analysis of housing prototypes (i.e., townhomes, live-work, small lot single family, micro units and accessory dwelling units) to determine their relative affordability for Boulder. The firm found that the townhomes/rowhomes that could be built in commercial and industrial areas (Scenarios B and C) are less likely to be affordable compared to smaller apartment units. However, depending on land costs and assuming smaller units, those types of housing could remain affordable into the future. Additional analysis is underway.

The city is also working on policies and regulations to ensure that land use changes result in a higher percentage of permanently affordable units. Three particular policies are being studied and discussed:

(1) a requirement that for any increase in residential land use intensity, the city would require that a portion of the additional housing units allowed be permanently affordable;
(2) amendment to Inclusionary Housing requirement to require middle income housing to be included in all new development – in addition to the current 20% requirement for low and moderate income housing; and
(3) providing an incentive for developers to provide additional community benefits (e.g., open space, trails, historic preservation, arts, etc.) as a condition for higher intensity or other flexible standards.

Protecting and Strengthening Neighborhoods

Do any of the land use changes directly affect established low density neighborhoods?

- ✓ None of the land use scenarios directly affect established low density neighborhoods.

The land use changes to add housing potential are aimed within commercial (Scenario B) and industrial areas (Scenario C); however, their proximity to residential areas in some cases may create transition pressures or concerns about spill over impacts that will need to be addressed. Scenario D, aimed at decreasing commercial potential also does not directly benefit or impact neighborhoods, however reducing the overall pace of development in the community may be beneficial to community character and retaining the assets and places the community cherishes. Policy discussions about infill, local area/neighborhood planning, neighborhood protection policies are occurring parallel with the land use scenario analysis and would be more pertinent to protecting and strengthening neighborhoods. Scenario C, with amenities in industrial/innovation areas, might contribute to creating new neighborhoods that have a mix of activities.

Transportation Progress

Can the addition of housing, better overall jobs/housing balance, or mix of land use in certain locations have a positive effect on progress toward transportation objectives?

- ✓ Land use changes and urban form can make a significant difference in travel choices.

- ✓ Regional transportation planning that is underway will also be necessary to make progress on transportation objectives identified in the Transportation Master Plan.
- ✓ Scenario B, with its focus on concentrating mixed uses in "centers" and along commercial corridors with transit outperforms A, C, and D.
- ✓ Scenario E (the hybrid scenario that combines B+C and offsets housing increases +9,800 with job reductions -9,200) seems to perform best of all.

Research and practice in cities has long showed that mixing uses together at higher intensities near transit and with good access to pedestrian and bicycle infrastructure can help reduce local congestion and improve mobility and livability. Building on the work done for the Transportation Master Plan, Nelson Nygaard has performed an initial comparison the four scenarios plus a hybrid scenario. The model outcomes suggest that locating housing and mix of uses in centers and along corridors (Scenario B) have a slight positive effect on:

a. Placing more new units in 15-minute neighborhoods – places with access to goods and services and destinations,
b. reducing vehicle miles traveled and congestion,
c. locating more future housing within a quarter mile of existing and planned transit,
d. placing more new units within access districts (places with transportation options programs such as EcoPasses and pricing of parking to manage supply and demand), and
e. addressing pedestrian and bicycle safety.

Additionally:

- locating housing in industrial areas where there is not good infrastructure (Scenario C) will not necessarily improve local access unless local connections are improved but might benefit overall jobs/housing balance.
- Transportation Demand Management and parking management will play an important role related to the results. Where the density and mix of uses supports TDM and parking management, they can have a significant impact on mode share and travel.
- It is unknown if reducing potential for nonresidential growth and jobs (Scenario D) will have a beneficial impact on vehicle miles travelled (VMT) or managing congestion. Ultimately reducing the number of jobs in Boulder may reduce travel in/out of Boulder. However, those jobs may increase elsewhere in the surrounding region which could actually increase VMT countywide (and GhGs associated with vehicle travel) particularly if the jobs are located in surrounding communities with fewer travel options.

(Note: The consultant anticipates doing another model run to compare the 2040 outcomes vs. zoned capacity because the different time horizons may have skewed results favorably toward Scenario D. That scenario reflects a 2040 horizon whereas other scenarios are based on zoned capacity beyond 2040 with each having a higher jobs projection.)

Jobs/Housing Balance

Can changing land uses better balance jobs and housing and thus yield other benefits, as addressed in Policy 1.19? What is an optimal balance?

- ✓ Scenario D outperforms each of the scenarios by 2040, resulting in a jobs/housing balance of 2.4 (vs. 2.46 to 2.76), however the final number is not really a fair comparison because it is a 2040 figure whereas the others are based on zoned capacity.
- ✓ Of the scenarios comparing zoned capacity, Scenario E, the hybrid with its higher amount of new housing and greater reduction of non-residential potential, outperforms A, B and C, with a balance of 2.22.

Cities have not identified an optimal balance or universal standard for jobs and housing balance – the mix is really driven by individual community goals and values, according to research. BVCP Policy 1.19 states that Boulder is an employment center and will seek opportunities to improve the balance of jobs and housing while maintaining a healthy economy. Each of the scenarios aim for better balance, recognizing that the mix and locations of land uses (e.g., creating more housing in jobs-rich areas) can affect transportation systems in particular and possibly shift the tradeoff of housing/travel costs for some workers and residents. Boulder's current balance of jobs to housing in the community is 2.04, and with the current policy (Scenario A), the future imbalance is expected to grow closer to 2.76. The city's land use GIS model and Nelson Nygaard transportation model indicate that Scenarios B, C, and D could each have some benefit toward shifting the future imbalance of jobs and housing that may have small positive other effects on regional transportation and demand for housing and overall affordability.

Fiscal Impacts

Will shifting the balance of future housing and jobs and changing land uses have fiscal impacts to the community's revenues?

It is unknown how the scenarios perform relative to each other without a detailed fiscal impact model that is not scoped for this comprehensive plan update; however, from previous models the city may have some ideas how the scenarios may perform.

Residential can have a net fiscal negative impact whereas commercial and industrial often has a net fiscal positive impact according to a fiscal impact model prepared for the city in the early 2000s. Keyser Marsten reviewed that model and observes that land use changes that add more housing/reduce jobs could yield slight negative fiscal impacts (Scenarios B and C), but infill and redevelopment tends to have less of a negative fiscal impact on revenues than greenfield development, so the negative impact could be offset. Using the same assumptions, reducing the potential for nonresidential space also may have a slight negative fiscal impact (Scenario D).

Land Use Change Effects on Water/Wastewater and Stormwater Utilities

Does the city have the water and infrastructure to serve land use changes brought on by each of the scenarios?

- ✓ The city has adequate water and the infrastructure to serve Scenarios A, B, C, and D. The range of projected units for each are supportable by city utilities. Scenario B may perform slightly better where new housing is concentrated in centers near existing infrastructure and largely in Tiers 1 and 2 of city service areas.
- ✓ Scenario E may be more challenging for the city to provide utilities over the long term because more units are anticipated.

Initial input from city utilities indicates that water demand in the community has been flat in recent years despite increases in population and jobs. That is in part due to efficiencies and upgrades in appliances and more outdoor water conservation or less outdoor use due to higher density developments. Both the water and wastewater systems are designed to support the city's current projections for growth (Scenario A) and could accommodate an increase in general terms that would support either Scenarios B or C. However, a scenario that projects additional units into East Boulder (into service Zone 3) may require additional infrastructure upgrades that would need to be funded by development. The hybrid scenario (combination of B and C, that adds an additional 9,800 housing units in centers and the industrial areas) would maximize the water system's potential at 10B gallons/year. Finally, the city's stormwater system has unfunded system needs that would need to be addressed in any case.

Energy and GhG Reductions

How do the scenarios affect energy conservation, GhG reductions, and/or the potential to increase renewable energy production?

- ✓ None of the scenarios shine or fail from an energy and climate standpoint. The implementation details are what matter most – building energy use and site planning to optimize renewable energy production.
- ✓ Scenario B may have some benefit to reducing GhGs related to transportation energy use.

The city has worked with Integral Group on an Energy System Transformation Strategy and land use case studies. Integral's study of an industrial area do not suggest that land uses changes will largely affect transformations to energy use and renewables. Other policies, codes (e.g., Energy Code update) and strategies and programs will have a greater effect. The city sees a large GhG impact from non-resident employees who average travel of 28 miles a day versus 11 for a Boulder resident. The TMP analysis shows almost a third of the city's transportation GhG emissions come from the non-residential employees. Such emissions would grow significantly with most of the scenarios. A scenario that mixes uses to reduce VMT (i.e., Scenario B) may have some benefit to reducing GhGs related to transportation

energy, especially if combined with Electric Vehicle (EV) adoption, passenger vehicle fuel efficiency improvements and mode shifts (which, as noted above, can be supported by land use changes).

Open Space and Natural Environment

Do any of the land use changes or scenarios affect open space or the natural environment?

- ✓ All of the scenarios retain existing city or county open space and focus on infill and redevelopment. All scenarios assume that future building would be outside of floodplains.

Boulder's compact development pattern, urban service boundary, and thousands of acres of acquired and permanently protected open space is a foundation for continued protection of local environmental qualities and biodiversity. The land use changes in the scenarios, because they are in-ward focused and rely on redevelopment in existing built areas such as commercial centers and industrial areas, do not have direct impacts on open space lands. Allowing for additional housing in such areas may alleviate pressure outside the urban area to build housing in greenfields, but increased population or workforce in the city (Scenarios A, B, C) may also create higher demands on the already well-loved open spaces and trails. Open Space and Mountain Parks will be developing a master plan to continue to address visitor management on open space lands, and other city plans and programs address other natural system management needs.

Economic Vitality

Do any of the scenarios affect employment diversity or economic vitality?

- ✓ Scenario A, the current policy, projects a higher number of future jobs than any of the other scenarios so it may yield the greatest employment diversity.
- ✓ Scenario D most strongly manages or limits commercial and industrial growth which could affect economic vitality.

Land use changes that allow for or encourage additional housing in commercial/industrial areas may diminish business potential or viability; however, housing availability and affordability is also r an important need for workforce recruitment retention and economic vitality in Boulder. Scenarios that result in some additional permanent affordability for housing are also positive in terms of economic vitality.

Other Community Services – Parks, Fire/Police, etc.

Do any of the scenarios require attention to additional community services or needs?

- ✓ Scenario C, which places more housing in the industrial area would require additional park planning and consideration of how additional fire, police, and other services would be provided to the east side and Gunbarrel business areas.

Land use changes that allow for or encourage additional housing in areas that have traditionally been employment focused but lacking neighborhood amenities will require further planning. For instance, the Flatiron Business Park area has trails that connect to open spaces but not traditional parks and recreation. Similarly, the area does not have schools or other residential services nor small scale retail or grocers. Such uses and services would need to be planned as new housing is introduced.

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BOULDER VALLEY COMPREHENSIVE PLAN

Initial Scenarios Analysis – *Dec. 9, 2016*

Scenarios	A	B	C	D	E
INDICATORS	Current Policy (Zoned Capacity)	+ Housing in Centers and Commercial Cor.	+ Housing in Industrial/Innovation Areas	Commercial Growth Management (2040)	Combined B and C (+ housing, - jobs)
Housing and Livability					
Balance jobs:housing (Ratio – jobs: dwelling units) (Source: City of Boulder (City), Nelson Nygaard)	2.76	2.46	2.46	2.14	2.22
Possible new housing units (City)	6,750	10,400 to 12,900	10,400 to 12,900	6,750	Up to 16,570
Range of types and affordability of dwelling units (assuming 20% affordable for current policy and 40% for new scenarios) (City)	1,150	1,850 – 2,460	1,850 – 2,460	1,150	3,930
Transportation					
New housing units near services, destinations, transit (Nelson Nygaard)	21%	81%	65%	21%	64%
New housing dwelling units in areas with high street connectivity (Nelson Nygaard)	72%	72%	62%	72%	64%
New housing units within ¼ mile of transit - Community Transit Network (CTN) (Nelson Nygaard)	65%	79%	65%	65%	71%
Vehicle Miles Traveled (VMT) – relative comparison (Nelson Nygaard qualitative)	OK	Better	Better	Better	best
New dwelling units within access districts (ability for Transportation Demand Management and managed parking) (Nelson Nygaard)	16%	46%	35%	16%	56%
Environment and Energy					
Acres of city open space lands maintained (no loss all scenarios) (City)					
Greenhouse gas emissions from transportation (related to VMT) (Nelson Nygaard, Integral Group)					
Economic					
Number of future new jobs based on changes to nonresidential lands (City)	56,000	52,400	52,900	19,020 (2040)	46,800
Fiscal impact to general fund (Ratio of revenues to expenditures) (City, Keyser Marsten based on qualitative research)					
Safety and Infrastructure					
Water and wastewater level of service (City utilities in initial exploration)					

Key: Least favorable Moderately favorable More favorable

Other topics for further evaluation or policy development:

- Location of dwelling units within ¼ mile space and trails (GIS analysis)
- Location of dwelling units within ¼ mile schools and other community facilities (health, government) (GIS analysis)
- Location of new units in or within ¼ mile of neighborhoods (GIS analysis)
- Location of new units related to fire station and ability to serve
- Renewable energy generation (policy development)
- Building energy use (Building Code)
- Commercial and small business retention and affordability (policies)

DECEMBER 7, 2016

Neighborhood Activity Centers

DRAFT

What can we expect from current policy?

Uses

Most neighborhood centers have a land use designation of Community Business (CB), which the plan describes as a "focal point for commercial activity serving a subcommunity or a collection of neighborhoods." Residential uses such as single-family and multi-family housing, duplexes and townhouses are allowed in these centers but are not commonly developed.

Form/Height

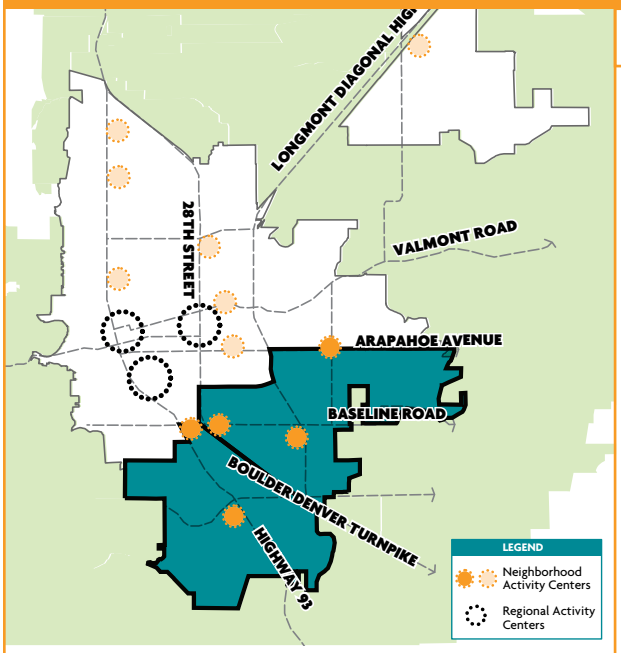
BC-1 and BC-2 zone districts, which are most common in these centers, encourage more suburban types of development, e.g. large setbacks and buildings that front parking. This largely reflects the characteristics of the older shopping centers that were developed in the early 60s and 70s. Development is restricted to three stories, and a building height of 35', except where height modifications are permitted (generally areas with adopted area plans). While most centers are designated as Community Business (CB), new and emerging neighborhood centers in North Boulder and Boulder Junction are zoned as mixed-use (MU) and Business – Main Street (BMS), which both encourage a more walkable, pedestrian-friendly and mixed-use environment.

Draft Principles

Tell us what you think!

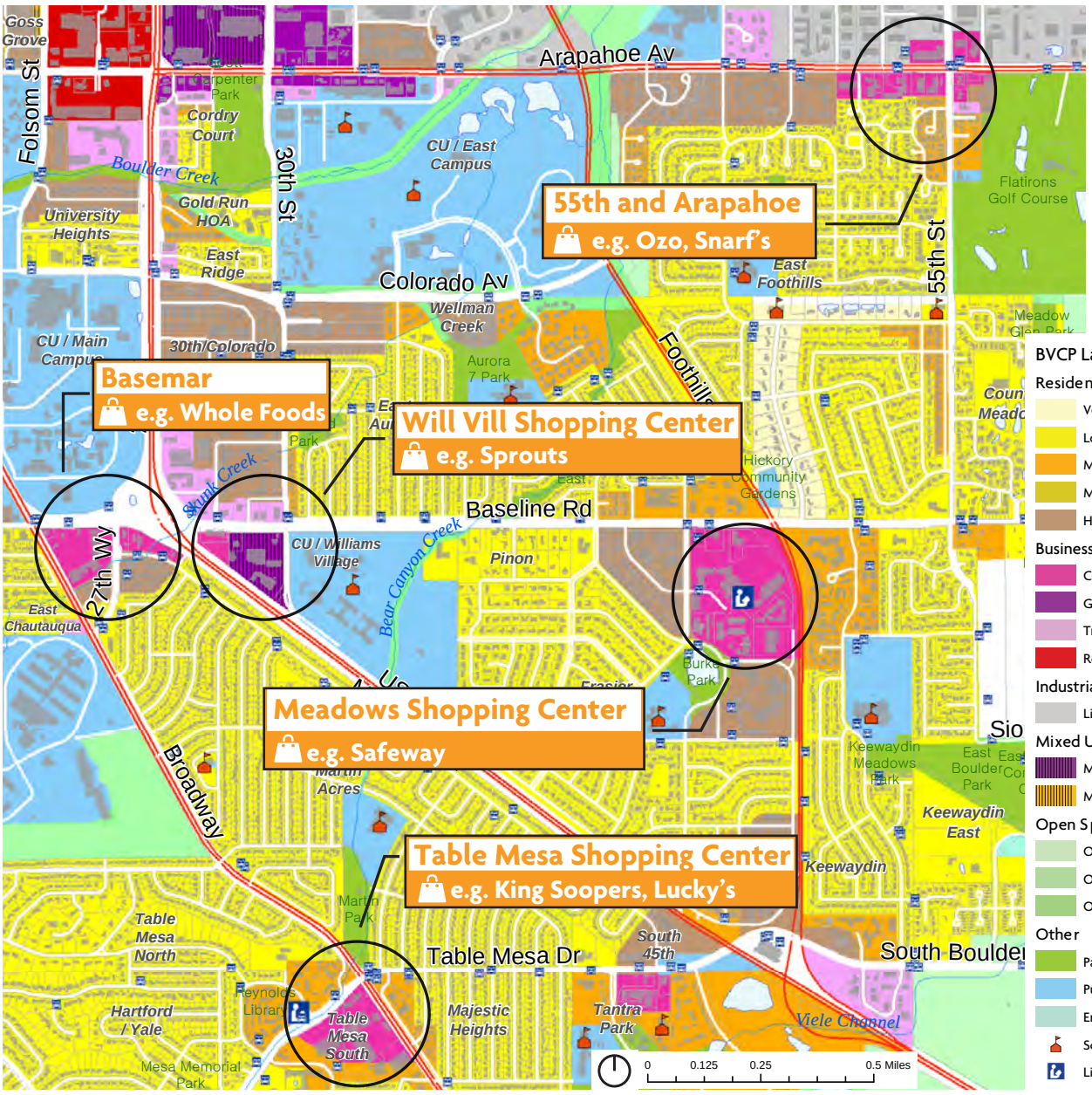
1. **Mix of activities and vibrancy.** Include a mix of locally-serving retail (e.g. retail anchors such as grocery stores and personal services such as hair salons) and other activities (e.g. smaller-scale office uses) to meet day-to-day needs and sustain both daytime and evening activity.
2. **Mobility hubs.** Include a richness of transportation amenities and conveniences such as sheltered seating, shared bicycles, bike cages and repair stations, among others.
3. **Meaningful public realm.** Create permeability in centers with a mix of semi-public and public spaces that are connected visually and easy to navigate. Include civic and cultural uses as well as outdoor seating, shade trees and green spaces in the public spaces to create a unique identity and sense of place.
4. **Architectural appeal.** Foster approachability and appeal of buildings through multiple entrances, four-sided design and attractive, well-designed architecture made of quality, long-lasting materials.
5. **Comfort and safety.** Include human-scaled lighting, furnishings, signs and way-finding that feel welcoming, safe and comfortable for users of all ages and abilities. Provide unimpeded connections within the centers between parking, transit, retail and residential uses.
6. **Parking not dominant.** Place parking behind and to the sides of buildings or in structures rather than in large street-facing lots. Encourage parking management strategies, such as shared parking, and versatile parking structures that are designed with the flexibility to allow for different uses in the future.
7. **Low-impact design.** Contribute toward sustainability goals with low-impact site design that incorporates green infrastructure (e.g. permeable materials and bioswales).
8. **Transitions to neighborhoods.** Ensure compatibility of buildings with adjacent residential uses and decrease intensity of activity around edges near neighborhoods. Encourage a diversity of residential uses such as attached single family housing, rowhomes and a variety of flats within these areas of transition.

South and Southeast Boulder Neighborhood Activity Centers

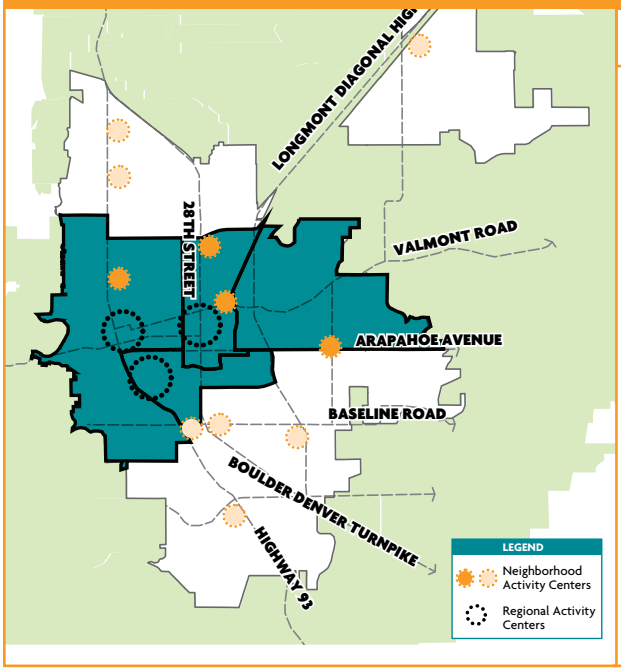


EXISTING CHARACTERISTICS

- Serve as a focal point for neighborhoods. They provide goods and services to meet the day-to-day needs of nearby residents, workers, and students
- Located throughout Boulder, generally along major corridors
- Accessible from surrounding areas by vehicle, walking, bike, and transit
- Generally classified as Community Business on the Land Use Designation Map and have Business Commercial (BC-1 and BC-2) Zoning
- Have distinct identities and are important to the nearby neighborhoods
- Sometimes contain community services and functions such as libraries, or public spaces
- Generally, do not include housing; and
- Range in size from small locally serving businesses to larger grocery stores or anchor stores. Total area ranges from 4-acres (Willows Shopping Center) to 30+ acres (Meadows)



Central and East Boulder, Crossroads, & University Neighborhood Activity Centers



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BVCP Land Use

Residential
- Very Low Density Residential (VLR)
- Low Density Residential (LR)
- Manufactured Housing (MH)
- Medium Density Residential (MR)
- Mixed Density Residential (MXR)
- High Density Residential (HR)

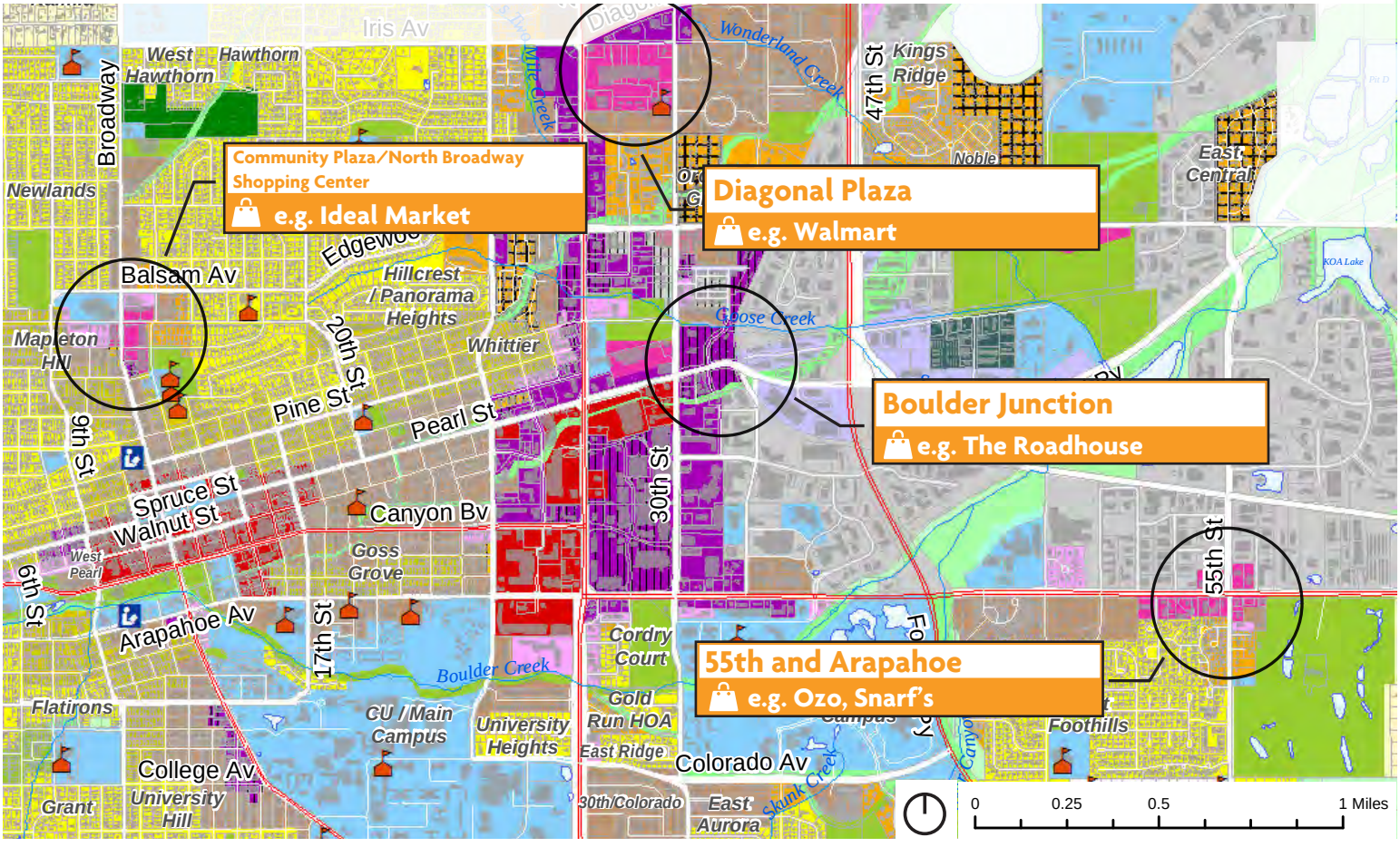
Business
- Community Business (CB)
- General Business (GB)
- Service Commercial (SC)
- Transitional Business (TB)
- Regional Business (RB)

Industrial
- Community Industrial (CI)
- General Industrial (GI)
- Light Industrial (LI)
- Performance Industrial (PI)

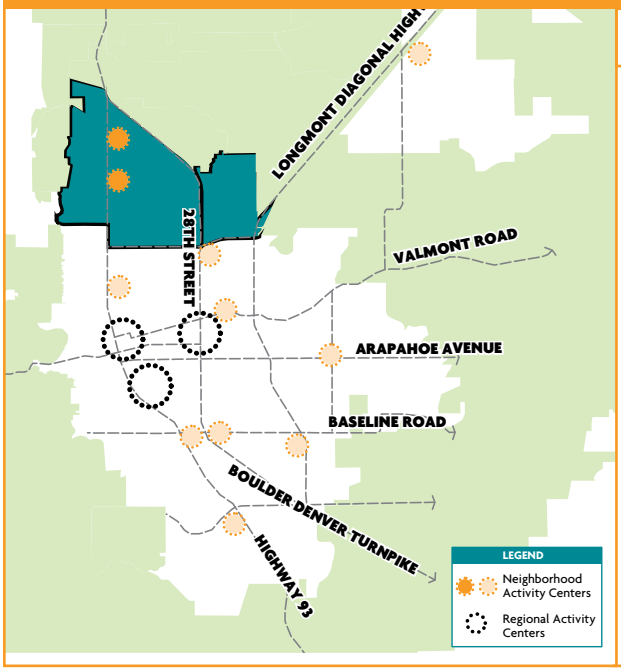
Mixed Use
- Mixed Use Business (MUB)
- Mixed Use Industrial (MUI)
- Mixed Use Residential (MUR)

Open Space and Mountain Park s
- Open Space, Acquired (OS-A)
- Open Space, Development Rights (OS-DR)
- Open Space, Other (OS-O)

Other
- Agricultural (AG)
- Park, Urban and Other (PK-U/O)
- Public (PUB)
- Environmental Preservation (EP)
- School
- Library



North Boulder and Palo Park Neighborhood Activity Centers



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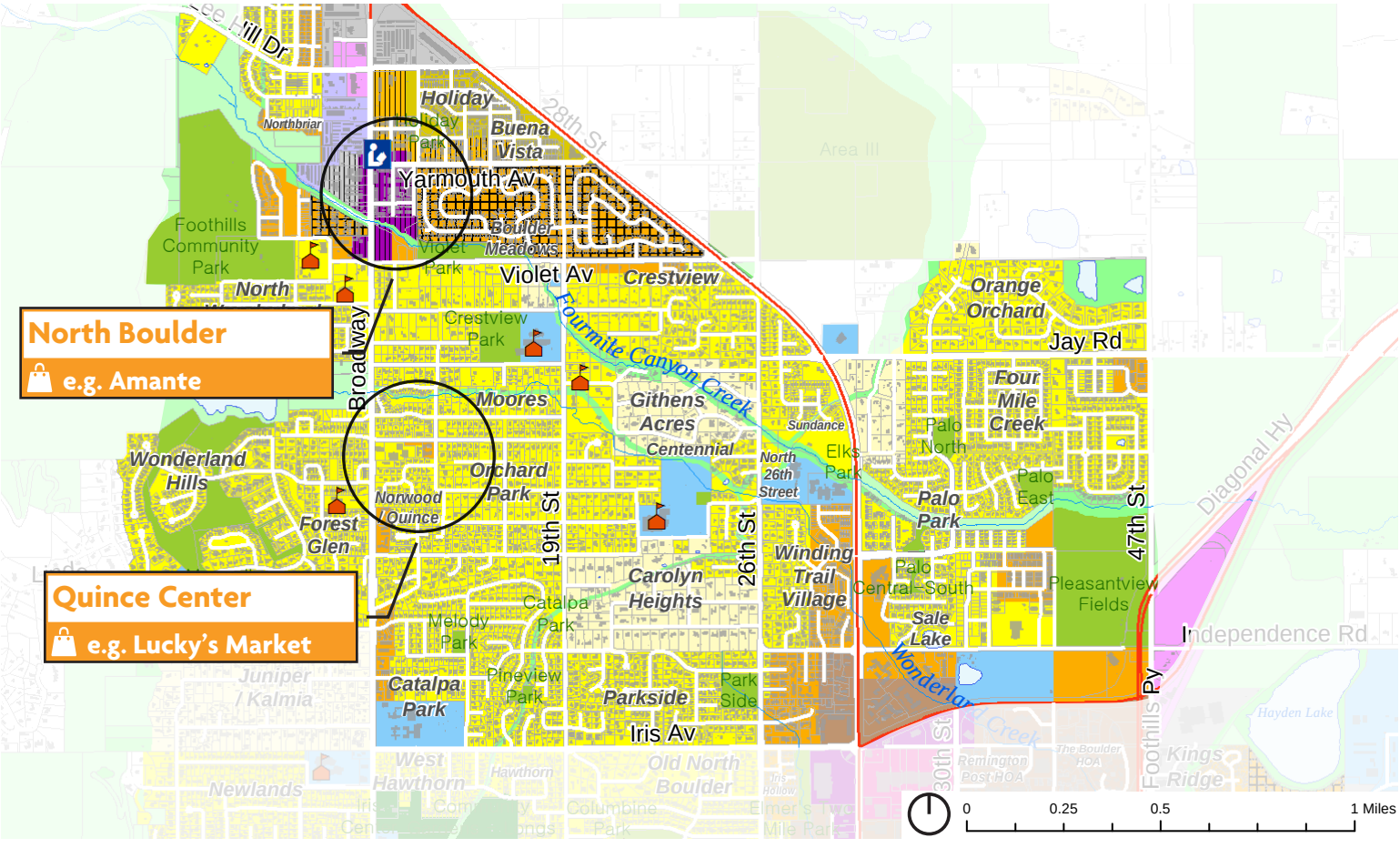


What is your vision for neighborhood activity centers?

The visuals presented below are to aid in community dialogue. They will be updated through early next year to reflect community input and other feedback received from City Council, Planning Board, and boards and commissions.

Row homes and townhomes provide transition to adjacent residential neighborhoods

Office and community serving retail concentrated along the arterial with row homes and townhomes behind

Transition Areas Buffering Existing Low Density Neighborhoods

View 1 (see aerial diagram on the back for orientation) DRAFT

Pedestrian walkway and shared greenspace for residents, employees, and commercial visitors.

Mobility hub supported by concentration of mixed-use development and live/work units

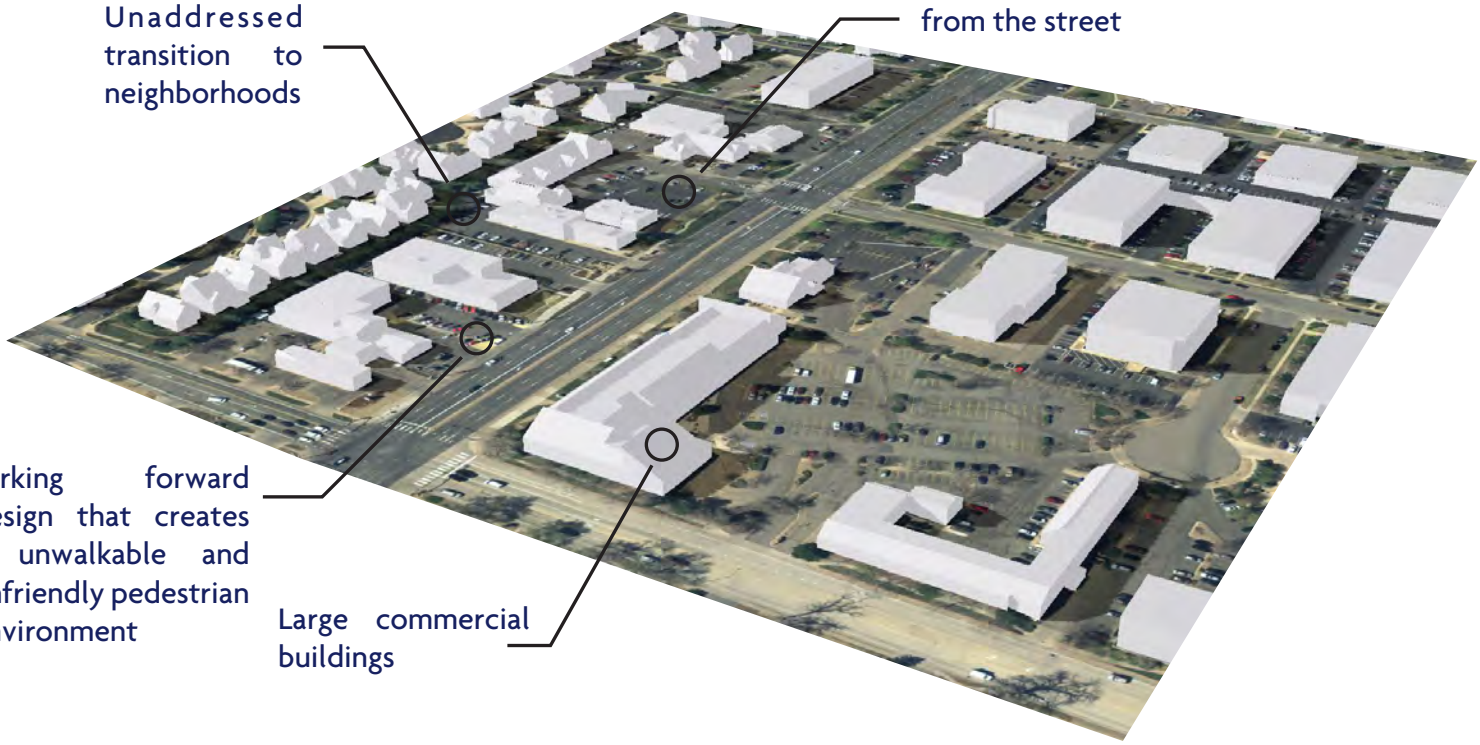
Mix of Commercial w/residential (live/work, flats)

View 2 (see aerial diagram on the back for orientation) DRAFT

The visuals presented below are to aid in community dialogue. They will be updated through early next year to reflect community input and other feedback received from City Council, Planning Board, and boards and commissions.

DRAFT

Before



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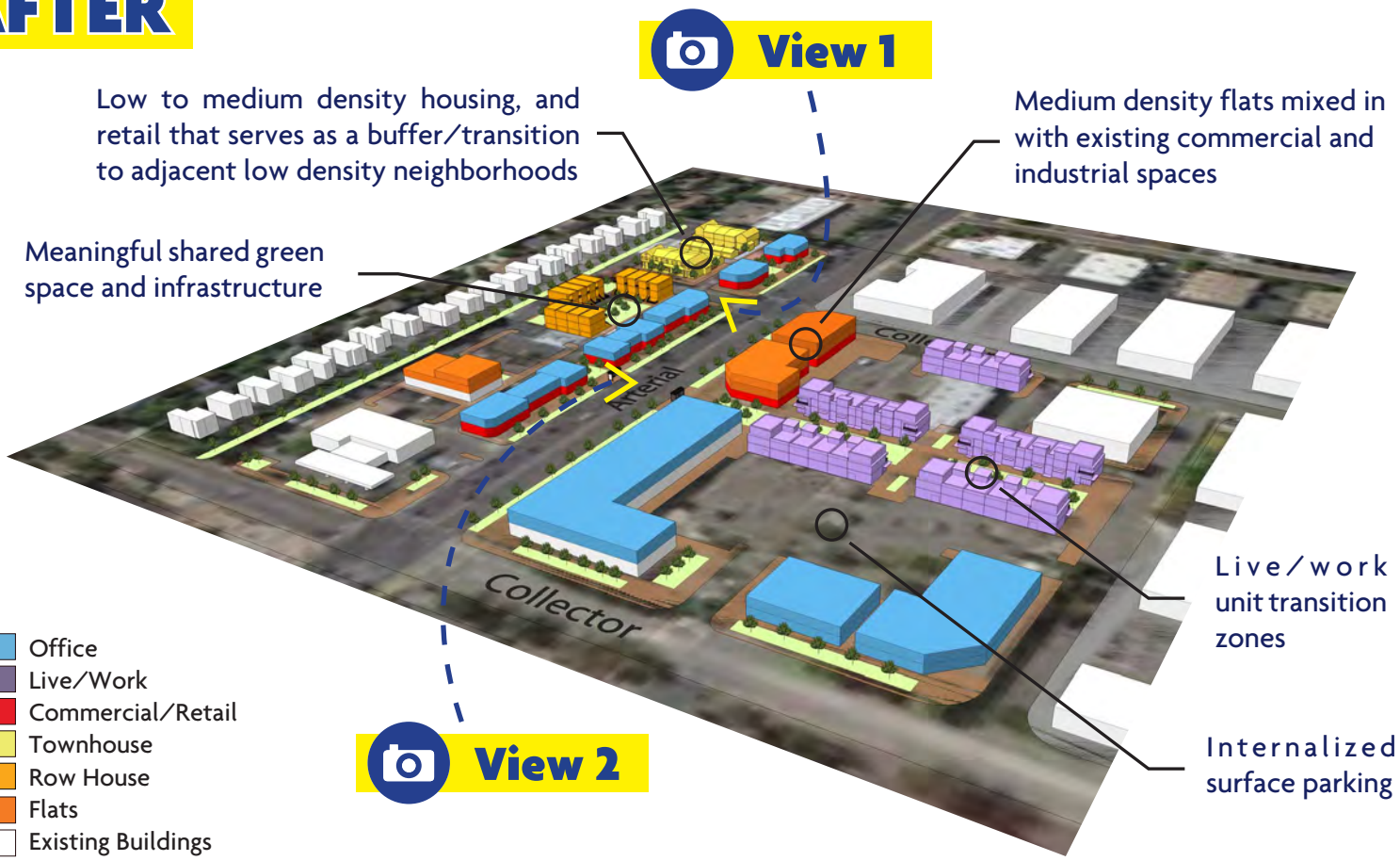


DECEMBER 7, 2016

Boulder Valley Regional Center

DRAFT

What can we expect from current policy?

Uses

Most of the Boulder Valley Regional Center (BVRC) has a land use designation of Regional Business (RB), which the plan describes as places with "major shopping facilities, offices, financial institutions." Although residential uses such as single-family and multi-family housing, duplexes and townhouses are allowed in this center, commercial development is more prevalent. Some housing exists along 30th, 26th, and Folsom Street and there is potential for more housing.

Form/Height

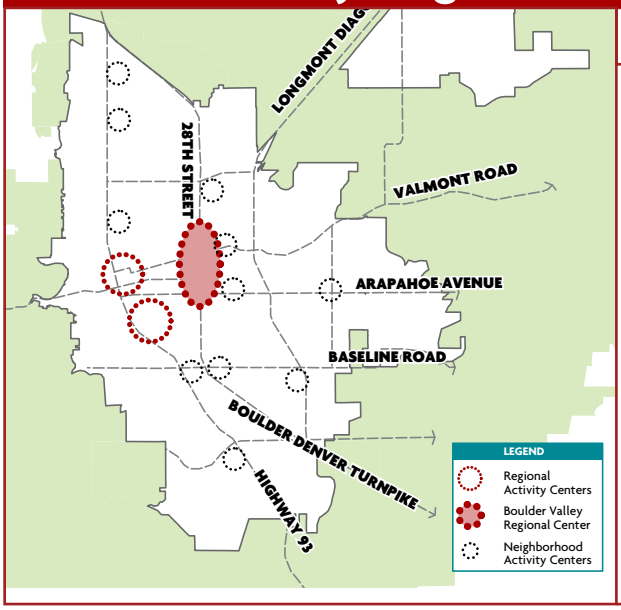
Some zoning districts (Business – Regional 1) within the BVRC reflect a more suburban development standard, e.g. large setbacks and buildings that front parking. Development is restricted to three stories and a building height of 35', except where height modifications are permitted (generally areas with adopted area plans). Design guidelines have been adopted for the BVRC which is primarily used in the site review process and minor modifications to a previously approved development. The threshold for a site review process in a Business – Regional 1 zone district (BR-1) is three acres, or 50,000 square feet of floor area. The aim of the BVRC Design Guidelines is to create a "high-quality center" by establishing design goals related to the following components of development: site layout, circulation, parking, useable open space, landscaping, streetscape, building design and signage.

Draft Principles

Tell us what you think!

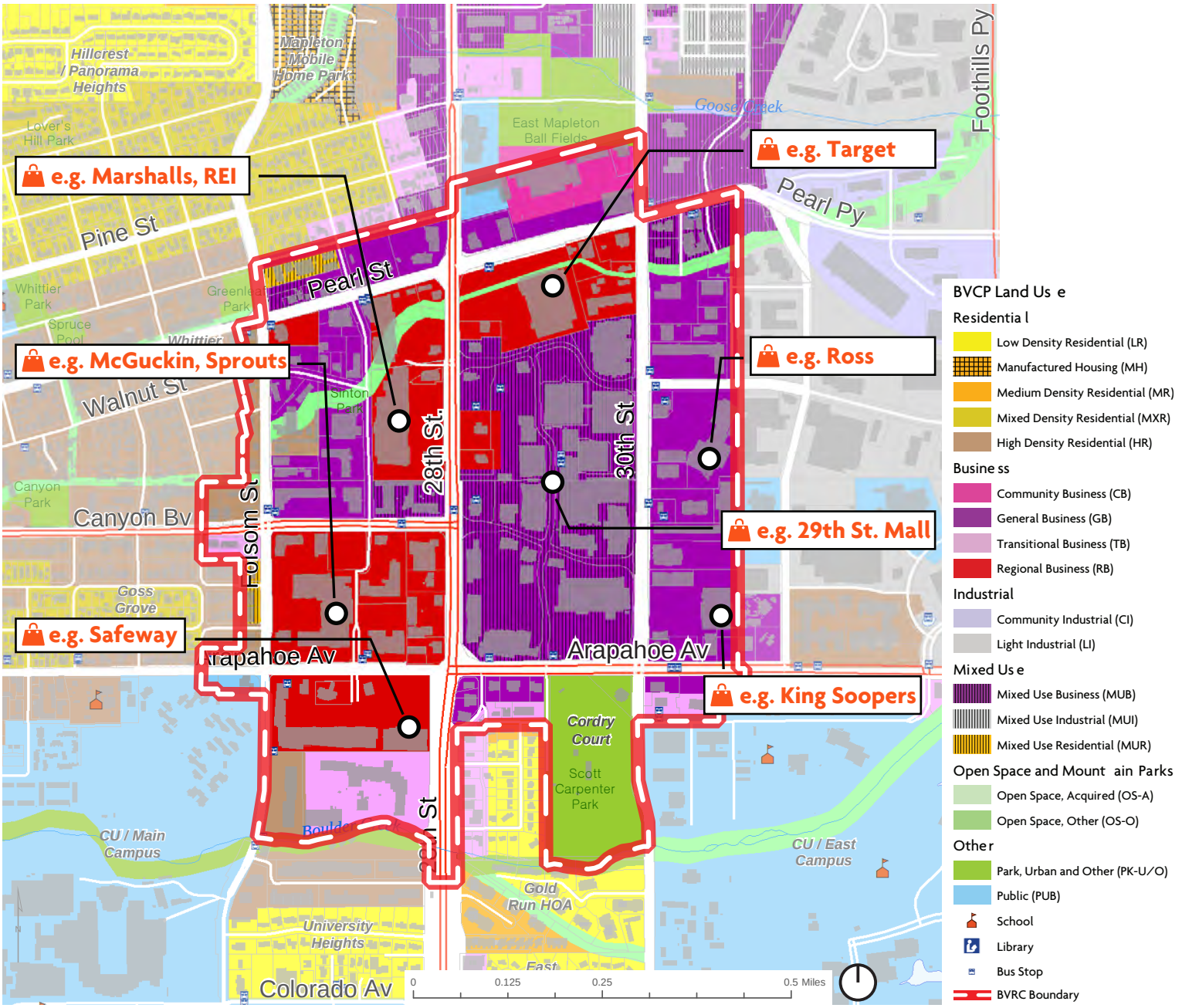
1. **Mix uses to support local and regional needs.** Encourage a mix of uses and activities that serve a primarily commercial function (e.g. large format retail and shopping, restaurants, offices, hotels) to meet the retail needs of the community and Boulder Valley and sustain daytime and evening activity. Include cultural and recreational amenities.
2. **Regional mobility hub.** Function as a regional multimodal hub by addressing ways to get around on foot, by bike, and by local transit service and offering amenities for users of all transportation modes by including sheltered seating, shared bicycles, bike cages and repair stations, among others. Improve access and connections to and from the regional mobility hub.
3. **Meaningful public realm.** Create permeability in centers with a mix of semi-public and public spaces that are connected visually for intuitive navigation. Include civic and cultural uses as well as outdoor seating, shade trees and green spaces in the public spaces to create a unique identity and sense of place.
4. **Architectural appeal.** Foster approachability and appeal of buildings through multiple entrances, four-sided design and attractive, well-designed architecture made of quality, long-lasting materials.
5. **Comfort and safety.** Include human-scaled lighting, furnishings, signs and way-finding that feel welcoming, safe and comfortable for users of all ages and abilities. Provide unimpeded connections within the centers between parking, transit, retail and residential uses.
6. **Parking not dominant.** Place parking behind and to the sides of buildings, in structures, or underground rather than in large street-facing lots. Encourage versatile parking structures that are designed with the flexibility to allow for different uses in the future.
7. **Low-impact design.** Contribute toward sustainability goals with low-impact site design that incorporates green infrastructure (e.g. permeable materials and bioswales).

Boulder Valley Regional Center



EXISTING CHARACTERISTICS

- Serves as a regional commercial destination with goods and services to meet the needs of the community
- Located in Boulder's Crossroads area along the highways and arterials and is accessible by vehicle, transit, and for pedestrians and bicycles locally and regionally
- Classified as General, Regional, and Mixed Use Business on the Land Use Designation Map and generally has Business Regional (BR-1) Zoning with the highest level of commercial
- Contains the regional mall, some larger big box commercial uses, a multitude of other restaurants and retail, offices, and some residential and is over 200 acres in size

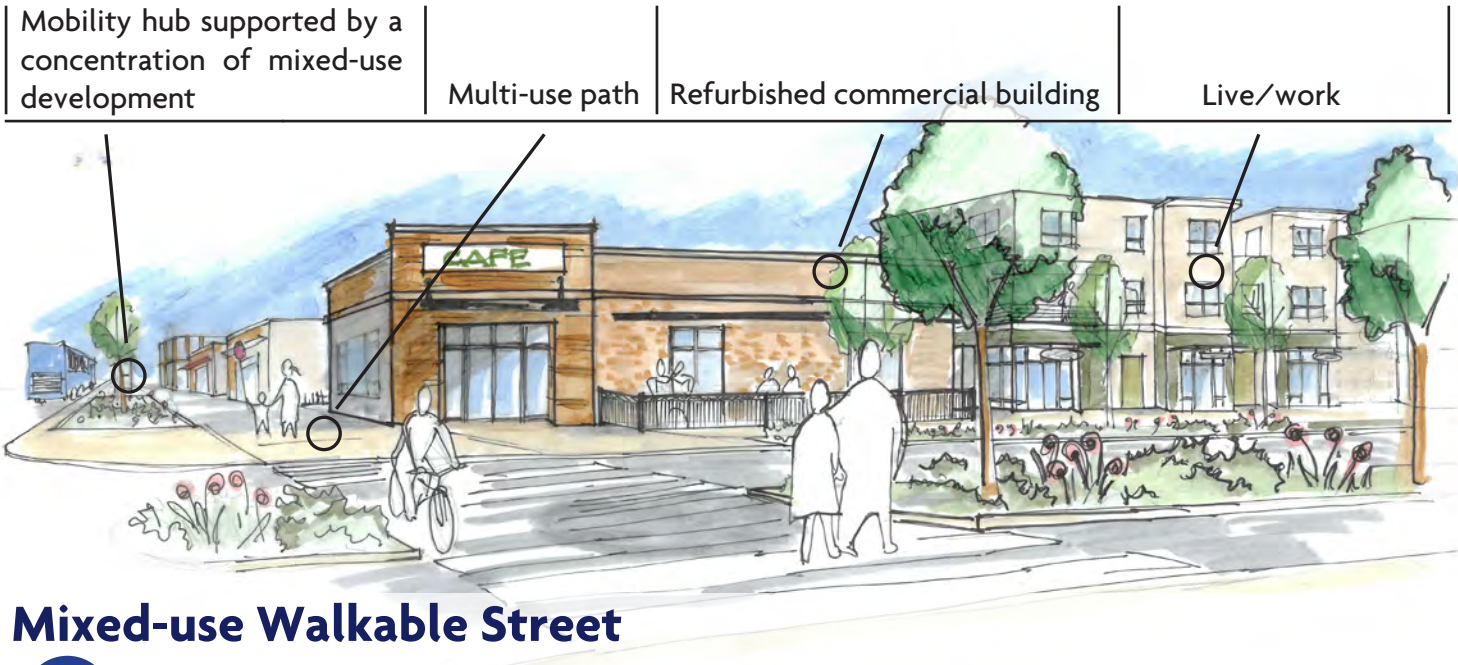


What is your vision for the BVRC?

The visuals presented below are to aid in community dialogue. They will be updated through early next year to reflect community input and other feedback received from City Council, Planning Board, and boards and commissions.

Medium Density Mixed-use Neighborhood

View 1 (see aerial diagram on the back for orientation) DRAFT



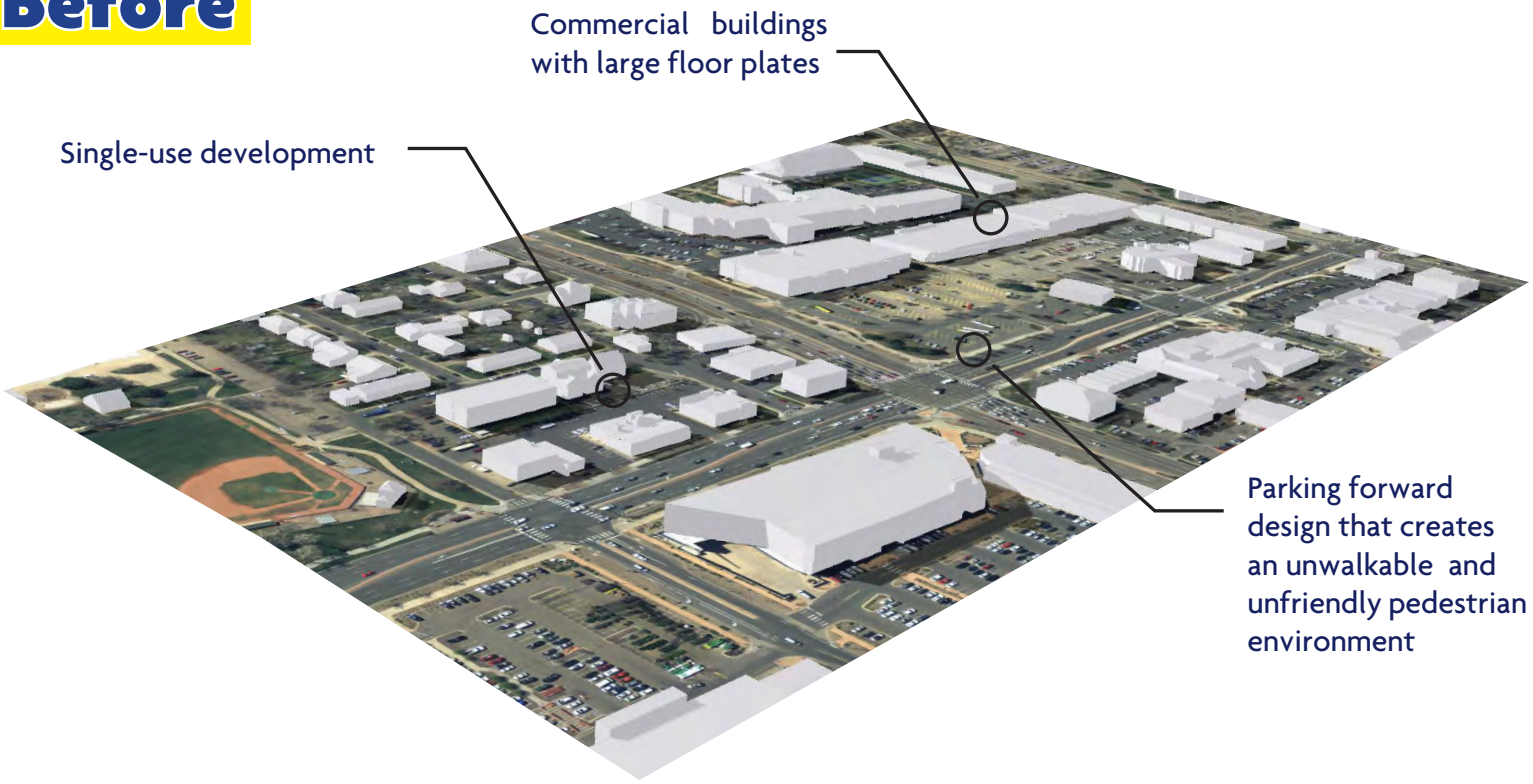
Mixed-use Walkable Street

View 2 (see aerial diagram on the back for orientation) DRAFT

The visuals presented below are to aid in community dialogue. They will be updated through early next year to reflect community input and other feedback received from City Council, Planning Board, and boards and commissions.

DRAFT

Before



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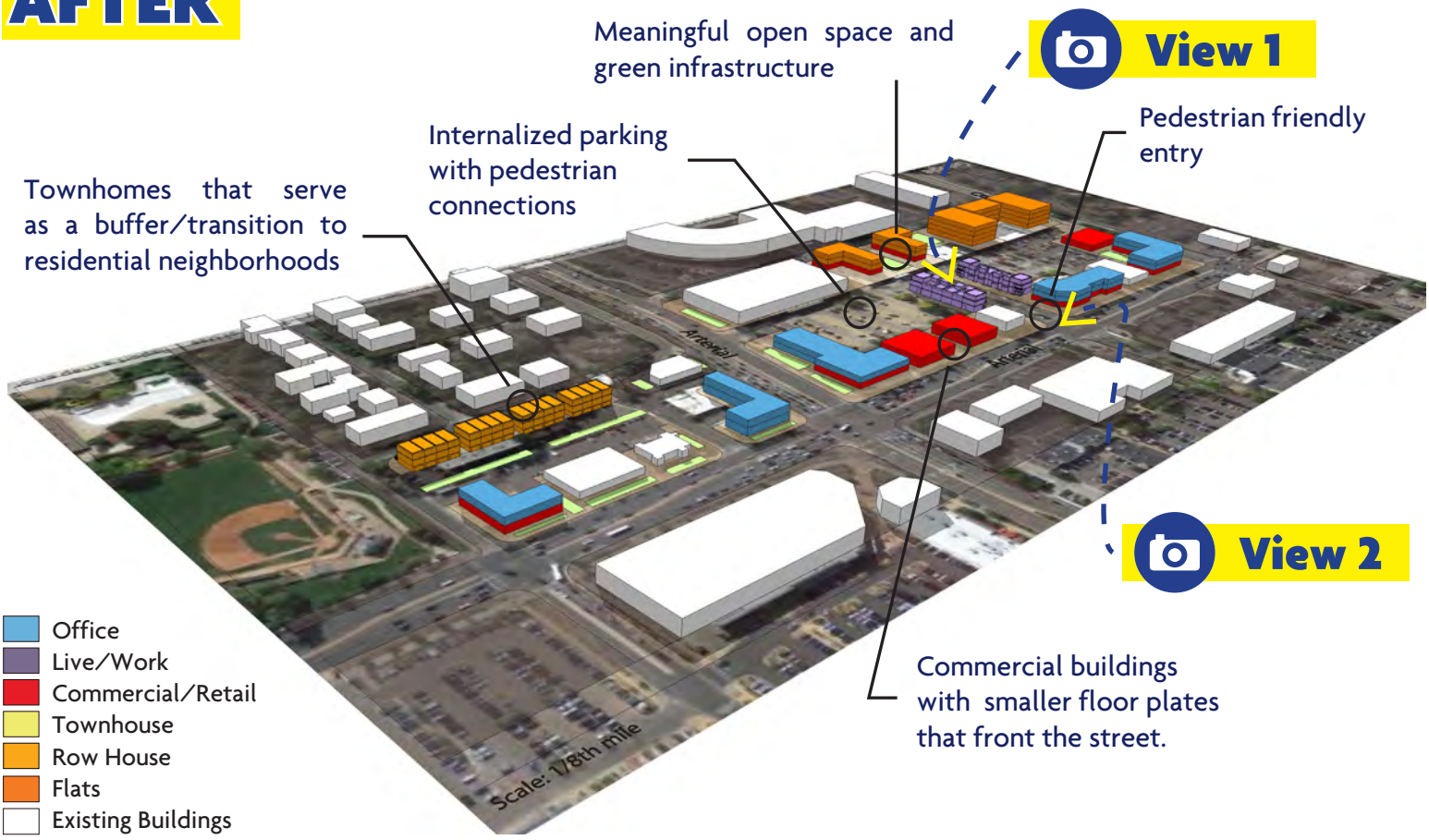

DECEMBER 7, 2016

Industrial/Innovation Areas

DRAFT

What can we expect from current policy?

Uses

The identified industrial areas have a land use designation of Light Industrial (LI), which the plan describes as "primarily research and development, light manufacturing, large-scale printing and publishing, electronics, or other intensive employment uses." Residential uses are allowed under a use review and if at least 1/6 of the existing parcel is contiguous with residential zoning or development or city- or county-owned park or open space. Housing is uncommon in these districts. Retail services and restaurants, among other non-residential uses are conditionally-allowed with certain restrictions so that it serves the surrounding neighborhood without undermining the industrial uses in these areas.

Form/Height

New development in these areas is primarily composed of light manufacturing and business parks and contains a high amount of parking relative to the new developments that are more centrally-located within the city. Development is restricted to three stories and a building height of 40' and potentially 45' if conditionally-permitted.

Draft Principles

Tell us what you think!

1. **Amenities and mix of uses.** Co-locate locally-serving retail (e.g. retail anchors such as grocery stores and personal services such as hair salons) and possibly housing with large employers in these employment-rich centers.
2. **Preservation and reuse.** Encourage retention and renovation of existing buildings and infill on parking lots.
3. **Transportation connections.** Improve the multimodal system with convenient and pleasant ways to get around on foot, by bike and with local connections to regional transit.
4. **Meaningful public realm.** Create permeability in centers with a mix of semi-public and public spaces that are connected visually for intuitive navigation. Include civic and cultural uses as well as outdoor seating, shade trees and green spaces in the public spaces to create a unique identity and sense of place.
5. **Parking not dominant.** Keep parking behind and to the sides of buildings or in structures rather than in large street-facing lots. Encourage parking management strategies, such as shared parking, and versatile parking structures that are designed with the flexibility to allow for different uses in the future.
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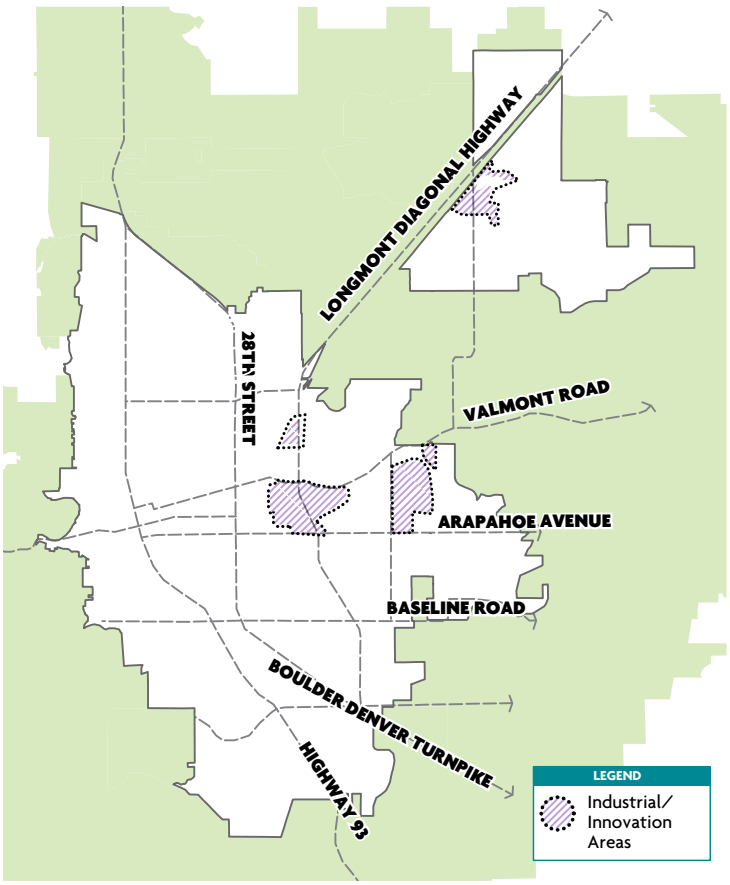
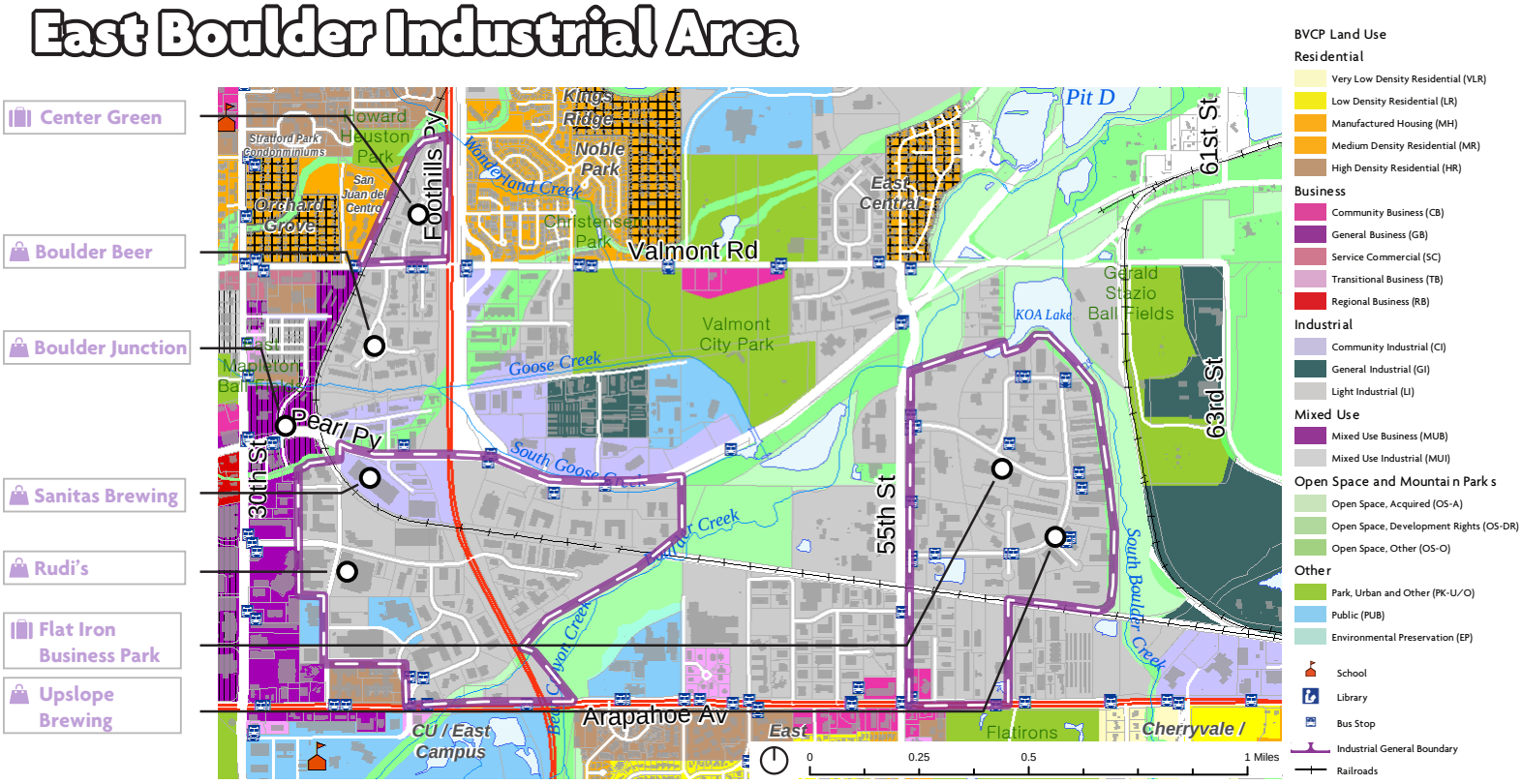
Industrial/Innovation Areas



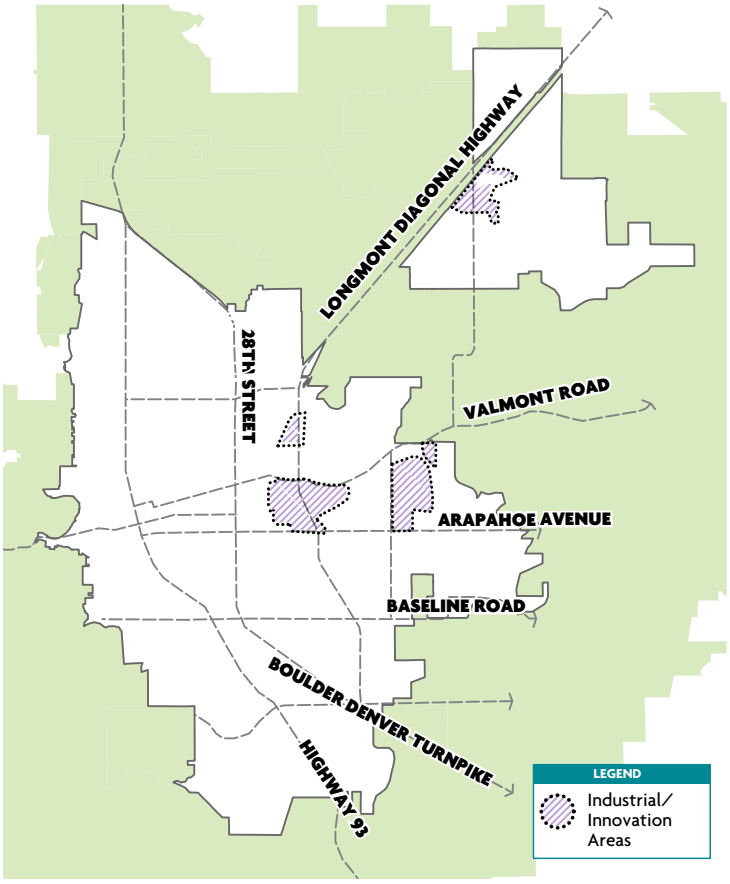
EXISTING CHARACTERISTICS

- Located in East Boulder, along Arapahoe between 33rd and South Boulder Creek, and in Gunbarrel along the Diagonal
- Classified as Light Industrial on the Land Use Designation Map and has Industrial General (IG) Zoning designed for "research and development, light manufacturing, larger scale printing and publishing, electronics, or other intensive employment uses" and "industrial parks" according to the 2010 plan
- Accessible by vehicles but are not particularly accessible by transit
- Strong regional connection to the city's greenway system, particularly in East Boulder, making the area accessible for bicycles and pedestrians
- More auto-centric and less walkable/ bikeable within these areas due to the disconnected street grid

East Boulder Industrial Area



Industrial/Innovation Areas



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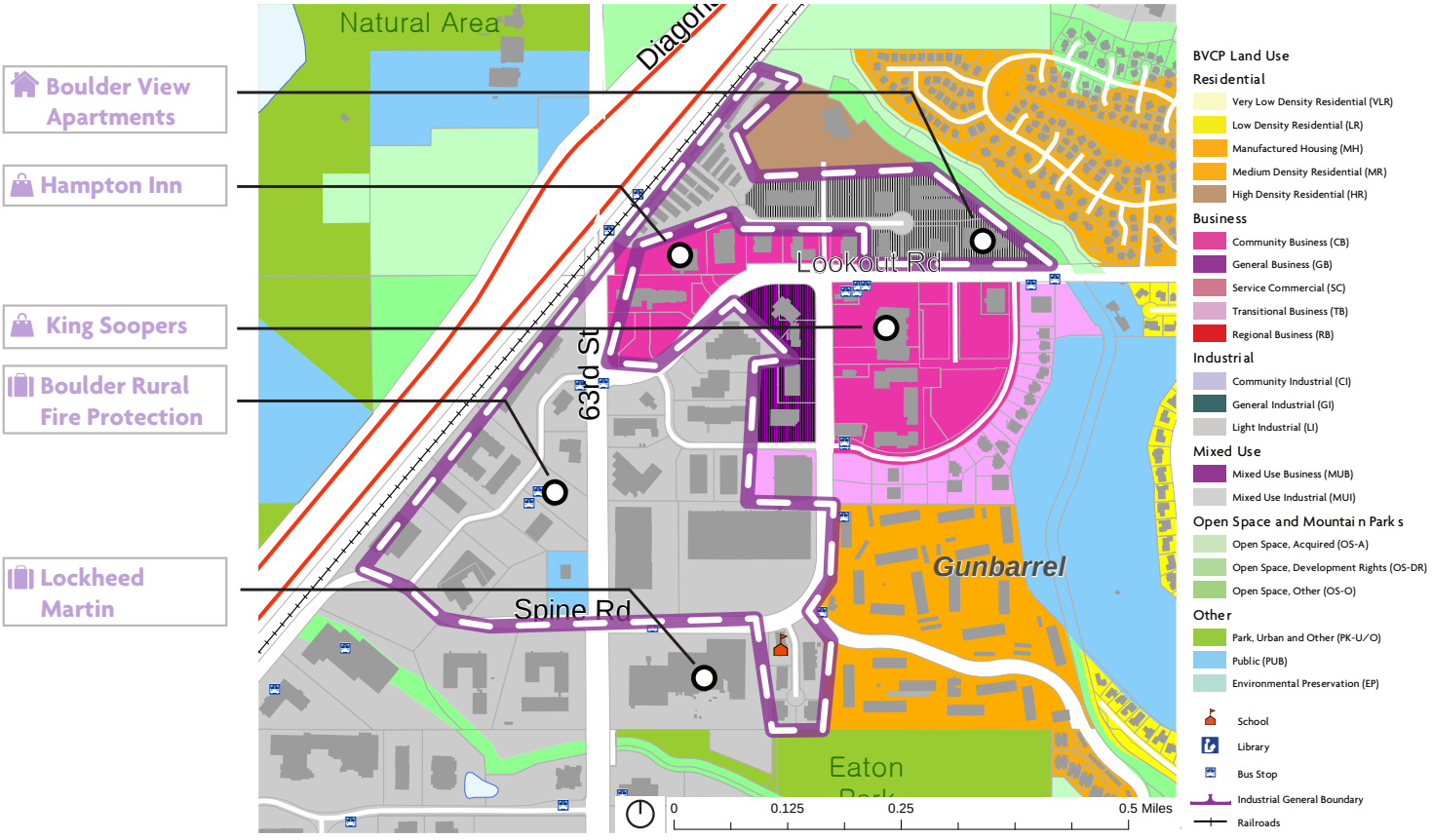
Gunbarrel Industrial Area



What is your vision for industrial/innovation areas?

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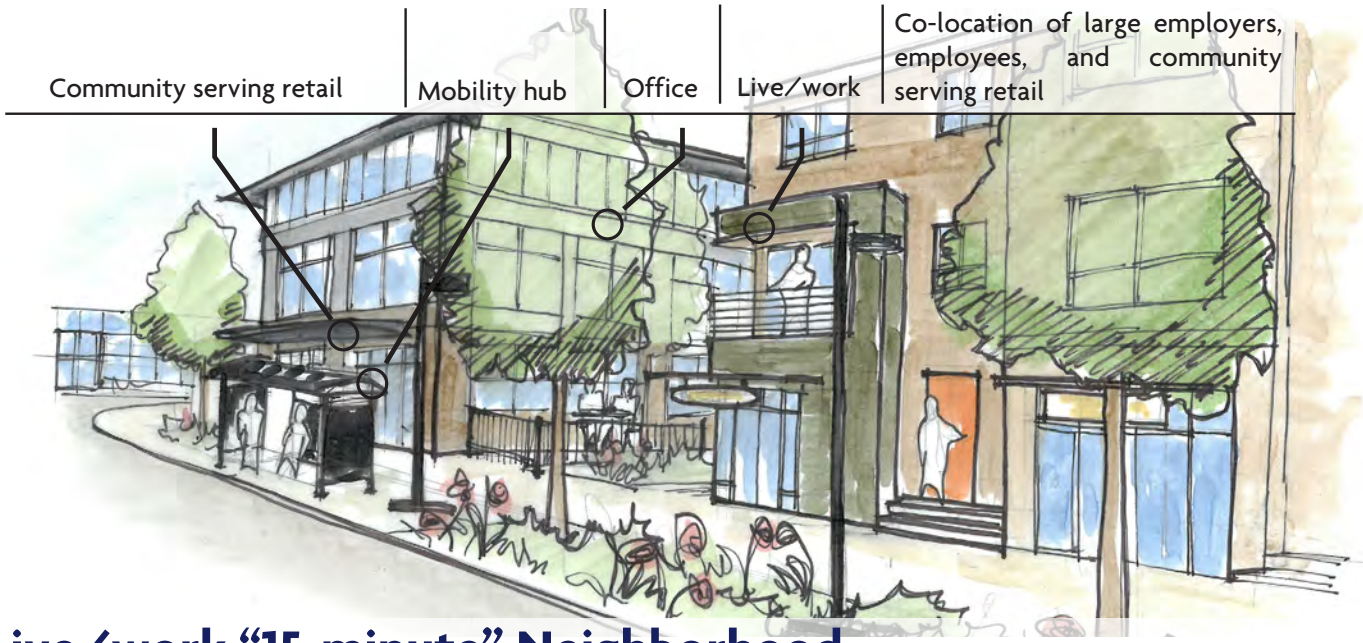

Live/work "15-minute" Neighborhood

View 1 (see aerial diagram on the back for orientation) DRAFT

Friendly Walkable Neighborhood composed of Medium Density Residential

View 2 (see aerial diagram on the back for orientation) DRAFT

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DRAFT

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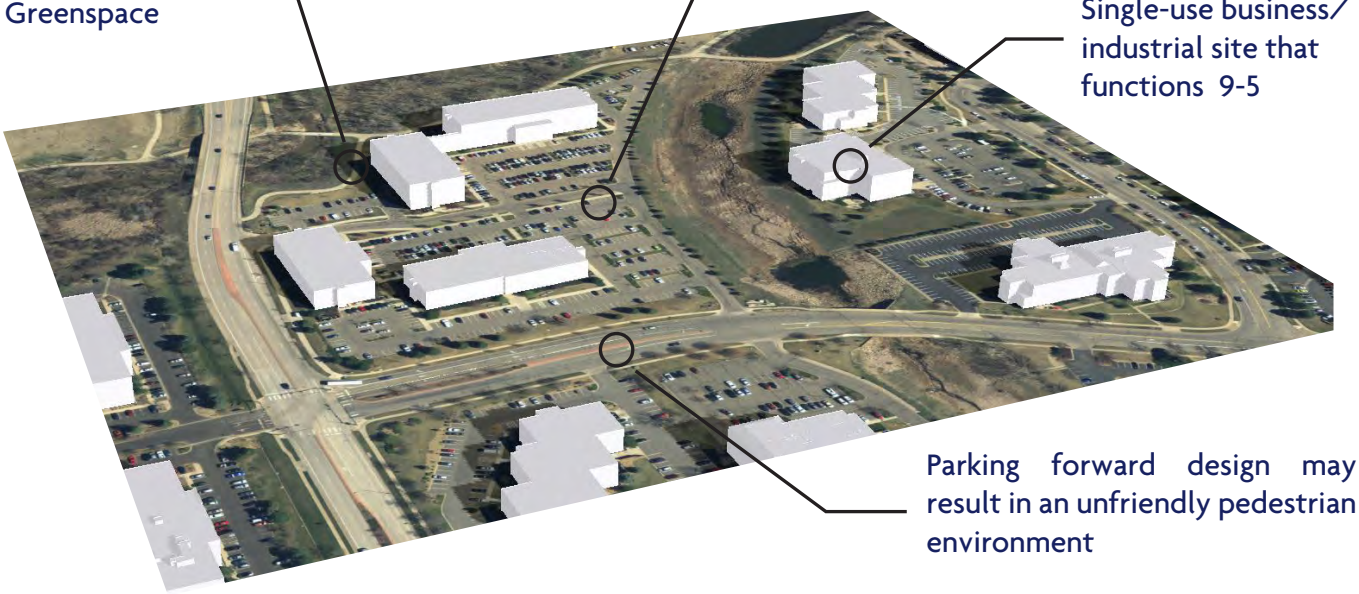

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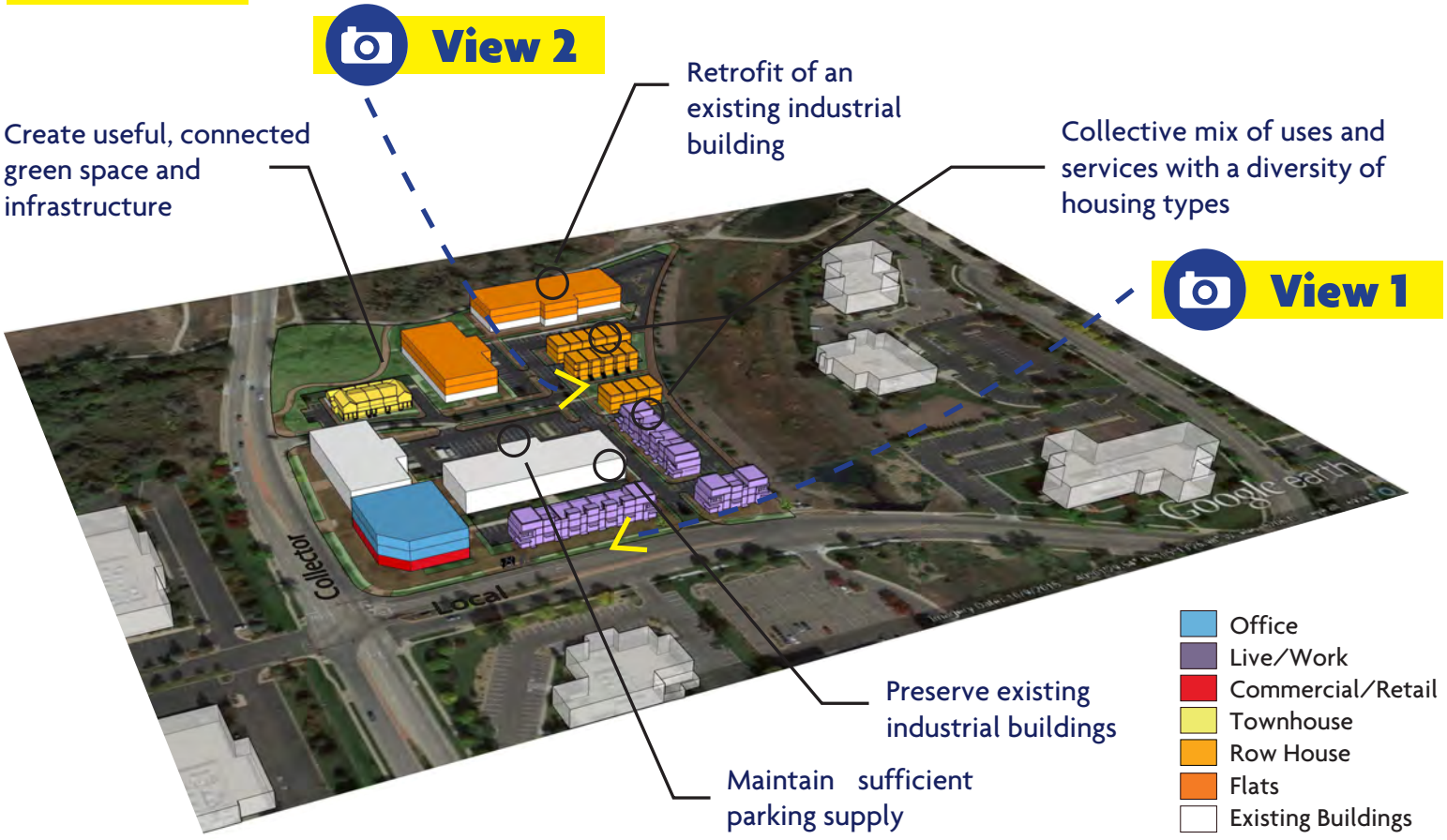

Boulder Valley Comprehensive Plan
University of Colorado Boulder, South Campus

Site Suitability Analysis

OUR LEGACY.
OUR FUTURE.
BOULDER VALLEY COMPREHENSIVE PLAN

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List of Figures and Tables

Attachments

Introduction / Executive Summary

This report is intended to inform potential changes to Boulder Valley Comprehensive Plan (BVCP) land use designations for the CU South site and subsequent annexation, initial zoning, and agreements between the City of Boulder and University of Colorado Boulder (CU Boulder). Discussions surrounding changes to land use designations for CU South were tabled during previous updates to the BVCP until the completion of the South Boulder Creek Flood Mitigation Study. With the flood mitigation study approved by City Council in 2015, city staff reinitiated discussions about CU South as a part of the 2015 BVCP update. This report includes a high-level analysis of conservation suitability, multimodal transportation, and utility services, and concludes by offering initial insights into conservation and development of CU South.

A conservation suitability analysis was conducted by environmental planning agency Biohabitats (Denver, CO) to identify ecological characterizations, suitability mapping, and preliminary sketches of viewshed and connectivity considerations. The results suggest that the eastern perimeter and the southern wetlands have the highest ecological value and sensitivity to disturbance or development. The central portion of the property and the western edge have lower conservation values, making them less sensitive to disturbance or development.

A supporting transportation multi-modal analysis was conducted by Fox Tuttle Hernandez Transportation Group, a local transportation consultant agency. This analysis recommends keeping the primary vehicular access to the site on South Loop Drive and secondary access along Tantra Drive in the future. Other recommendations include incorporating the northern end of South Loop Drive as a mobility hub, improving existing trails to create multi-use paths and providing new pedestrian connections to adjacent neighborhoods. An additional transportation analysis is being considered by CU Boulder to estimate the amount and type of land uses that could be considered for the site based on multi-modal carrying capacity of surrounding transportation facilities.

Existing City of Boulder water distribution, sewer collection and treatment facilities have adequate capacity to serve some additional development on the site. Other than a potential water main extension, no major off-site improvement requirements for water or sewer are anticipated at this time. Prior to connecting to city services, CU Boulder must provide a utility report identifying usage requirements and the on-site (private) utility design to ensure compliance with city standards.

Interest in the future of the property remains very high. Two community meetings were held to share results of recent studies and gather insights into key issues. Some issues identified include flood mitigation, open space conservation, recreational access, neighborhood impacts and off-site visual impacts, as further described in this report. Community input is being used to inform changes to the land use designations and in developing key issues to be addressed at annexation.

Staff will use information referenced in this report and feedback from decision-making bodies to form a recommendation for changes to the CU South land use designations and a list of issues to be addressed in future agreement(s) between the city and CU Boulder for development and conservation of the site. While conversations among BVCP approval bodies are ongoing, the analysis is starting to indicate that some areas are more suitable for conservation and other uses. Conservation of ecological values and wetlands appear to be most suitable for the southern portion and along the eastern boundary of the site. With 80 acres for regional detention and 30 acres to accommodate fill material, floodwater mitigation will also cover a sizeable portion of the site.

Site Description and History

Site description

Current and Previous Land Use and Planning Area Designations

The property is entirely in Boulder County and in BVCP Planning Area II, which makes it eligible for annexation (Map 1: Vicinity). The site currently has the following three BVCP land use designations on portions of the property – Low Density Residential (LR, 49.36 AC), Medium Density Residential (MR, 66.75 AC), and Open Space-Other (OS-O, 193.25 AC)(Map 2: Existing Land Use Designations). During the 2000 and 2005 updates to the BVCP, the city decided not to consider changing the land use designations until after completing the South Boulder Creek Flood Mitigation Study. With the flood mitigation study approved by City Council in 2015, city staff reinitiated discussions about CU South as a part of the 2015 BVCP update.

The most recent changes to the land use and planning area designation of the CU South property were made during the 2000-major update. At that time the area II boundary that runs along the eastern edge of CU South had been redrawn changing a small northern portion of the site from Medium Density Residential (MR) to Open Space-Acquired (OS-A).

Size and location

CU South is comprised of six parcels totaling 308 acres, all owned by CU Boulder and is commonly called "CU South" or "CU-Boulder South." Located south of Table Mesa Drive west of U.S. 36, the site is part of the gateway for the city of Boulder. The site is within Area II of the BVCP planning area. The site is approximately a mile and a half from the Main and East Campuses and a half-mile from Williams Village. East of the site is city-owned open space and South Boulder Creek.

Site Context

Properties directly west of the site are primarily designated as residential with Tantra Park bisecting the low and medium density residential uses. Properties to the east and south are designated as open space with some existing low density residential and manufactured housing to the south. Some commercial and business areas are near the site, particularly along Table Mesa Drive and South Boulder Road.

The residential neighborhood to the west has a range of housing types including single-family homes, townhomes, and apartment complexes. The lowest intensity of housing immediately adjacent to the site is found in the single-family housing neighborhoods north and south of Tantra Park. The density of the multi-family housing ranges between 12 – 14 units per acre. Tantra Park runs throughout the neighborhood, providing direct access to open space and parks for residents. The commercial area to the north along Table Mesa contains restaurant, offices, and a gas station. West of these residential neighborhoods contain Summit Middle School and Morning Star (retirement complex). The only access to these neighborhoods is off Table Mesa and South Broadway.

Table 2: Net density for development adjacent to CU South.

	Total Dwelling Units	Acreage	du/acre
1. Walden and South Creek Condos	195	14.5	13.4
2. Tantra Lakes and South Creek Condos	349	27.4	12.7
3. Tantra Park SF Homes	65	9.5	6.9
4. Majestic Heights Neighborhood	168	42.4	4.0
5. Mountain Shadows and Somerset Condos	157	13.0	12.1

Note: Calculations reflect the net density of this neighborhood, which include building lots, rights of way and any common areas.

Access and Connection

South Loop Road serves as the primary entrance and only paved road to the site. The only other vehicular access is through a dirt road that intersects with Marshall Road, located on the south-west corner of the site; this road has a gated entry that limits public access. Pedestrian access is available mostly along the western edge of the site where multiple trailheads sit adjacent to neighborhood roads and parks, including Moorhead Circle, Chambers Drive and Tantra Park. A more detailed analysis of the existing and potential options for future access has been completed by Fox Tuttle (Attachment D).

Figure 1: Adjacent neighborhood included in the net density calculations.

History of the property

Transfers

Table 2 below contains a high-level summary of various actions taken by the city and the university related to changes in ownership and use. The following summary is an abbreviated historical account of the CU South property.

Table 2: Recent timeline of key events.

1950s – 80s	• In the mid-1950's, Flatiron Companies purchases the estimated 168-acre property from the Deepe family to continue mining and purchases the remaining CU South property from the Van Vleet family shortly after. • An embankment and channel is constructed in the floodplain of the South Boulder Creek to provide flood protection for sand and gravel mining and to control the flow and minimize any impact on the 100-year flood discharge[1]. • In the early 1980s, construction of the embankment and channel is followed by a sand and gravel mining operation[2]. • Regulatory approvals for floodplain development and sand/gravel mining are approved in 1989 for the Marshall Pit, adjacent to and incorporated into the mining of Phase Four of the Deepe Pit[3]. The floodplain permits approve open pit mining on land south of the embankment and channel.

[1] Boulder County Special Permit #AR-79-4 – Floodplain Construction, South Boulder Creek was approved on February 20, 1980.
[2] Boulder County Special Use Review #SU-81-10 – Deepe Farm Pit was approved on January 11, 1982.
[3] Boulder County Floodplain Development Permits #89-4A and #89-5 were approved on February 29, 1989, in conjunction with Special Use Review #SU-88-19 for sand and gravel mining.

1996	• Flatiron Companies sells the full property to the University of Colorado. • Boulder City Council adopts Resolution Number 758 directing the City Manager and City Attorney to "take all necessary actions and work with the County to support the County taking all necessary actions to ensure that the University follows the goals, policies and land use designations of the BVCP in the development of the Property."
2000	• During 2000 BVCP Major Update, CU Boulder requests Public land use designation for CU South for possible student and faculty/staff housing, research, academic and athletic/recreation uses. • The city decides not to consider changing the land use designations of the site until the "South Boulder Creek Floodplain Study is completed and there are further discussions with the university on the proposed development for the site."
2001	• Boulder City Council adopts Resolution Number 877 which states that City Council "stands willing to purchase the Flatirons Property from a willing seller at a fair price, for open space or flood control management purposes, in fee title or by means or conservation easement; or to contemplate whatever agreement might lead to the maximum practicable preservation of the Flatirons Property as an environmental asset, consistent with the Boulder Valley Comprehensive Plan since 1977."
2002	• CU-Boulder South Conceptual Land Use Assessment for CU South identifies approximately 128 acres of potential building area, 32 acres for either buildings or flood detention, 45 acres for flood storage and 92 acres conserved as buffers, wetlands, ponds or open space.
2003	• The city and CU Boulder begin discussions about future land uses for CU South and develop potential terms for a Memorandum of Agreement.
2006	• During the 2005 BVCP Major Update, a site suitability analysis and changes to land use designations are delayed until the South Boulder Creek Flood Study is complete.
2015	• City Council approves the South Boulder Creek Flood Mitigation Plan. The plan includes regional detention of flood water upstream of U.S. 36 on the CU South campus and along Colorado Department of Transportation right of way. • With the flood mitigation plan adopted, the city reinitiates land use designation changes as part of the 2015 BVCP Major Update.

Previous Reports and Studies

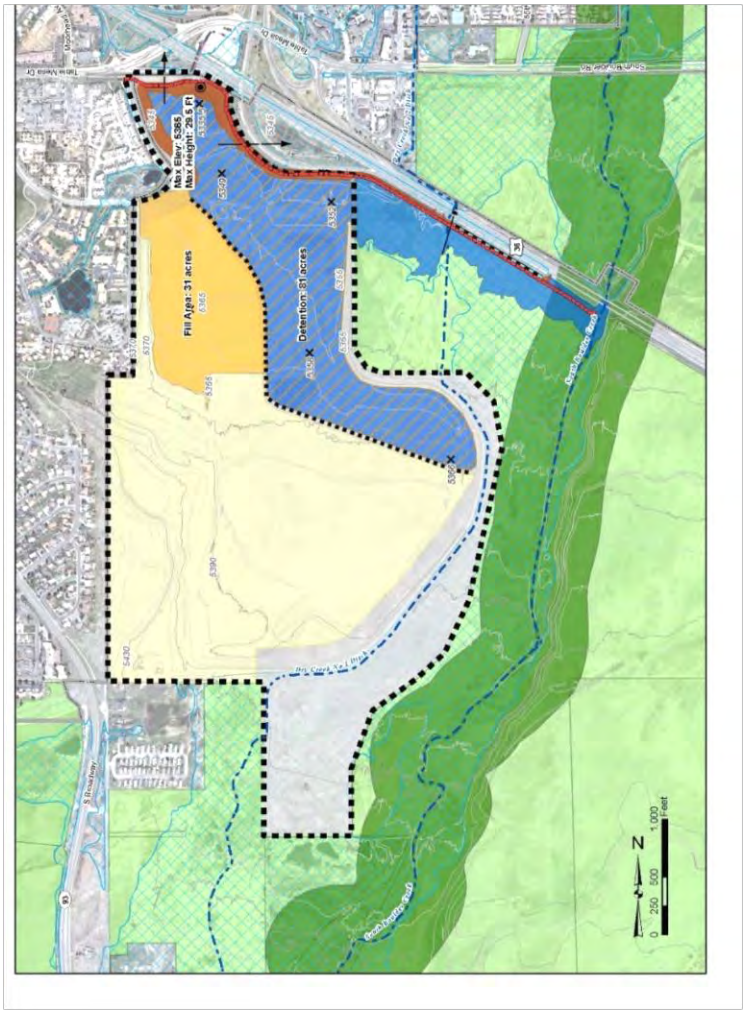
This study takes into account the analysis done by CU Boulder in 2002 ("CU-Boulder South Conceptual Land Use Assessment"), the South Boulder Creek Flood Mitigation project, the Colorado Natural Areas Program Articles of Designation and Management Plan for the adjacent South Boulder Creek State Natural

Area, and the U.S. 36 Environmental Impact Statement that included future options for the U.S 36 and Table Mesa interchange.

South Boulder Creek Flood Mitigation

The city conducted a South Boulder Creek Mitigation Flood Study to develop and evaluate alternative options that may reduce flooding along South Boulder Creek and areas impacted but not directly adjacent to the creek (Map 4: Floodplain). A total of seven flood detention options were presented to City Council on August 4, 2015 in which City Council approved the full mitigation plan with Option D for U.S 36 Regional Detention (Fig. 2). Option D would create a flood control berm on the northern and eastern portions of the CU South site adjacent to U.S 36. This option includes about 80 acres of the CU South site for detention (blue area on map) and about 30 acres for an adjacent fill area (yellow area). The city is currently negotiating a scope of work with an engineering team to prepare preliminary design of the U.S. 36 regional detention facility, though work cannot commence until an agreement between the CU Boulder and CDOT is executed for use of their land. While the city has a place holder for bond funding in 2018, timing is contingent on land holder agreements and the design process. The city anticipates that the detention facility will take approximately two years to construct.

Figure 2: Option D for U.S. Regional Detention.



Potential Range of Uses

While CU Boulder does not currently have plans to develop the site, the university has indicated interest in continuing the current recreational uses and exploring additional academic facilities. Some short-term plans include:

- Floodwater mitigation through implementation of the South Boulder Creek Flood Mitigation Study;
- Recreational and athletic fields;
- Adding restrooms and showers for athletes and restrooms and drinking fountains for spectators to sporting events;

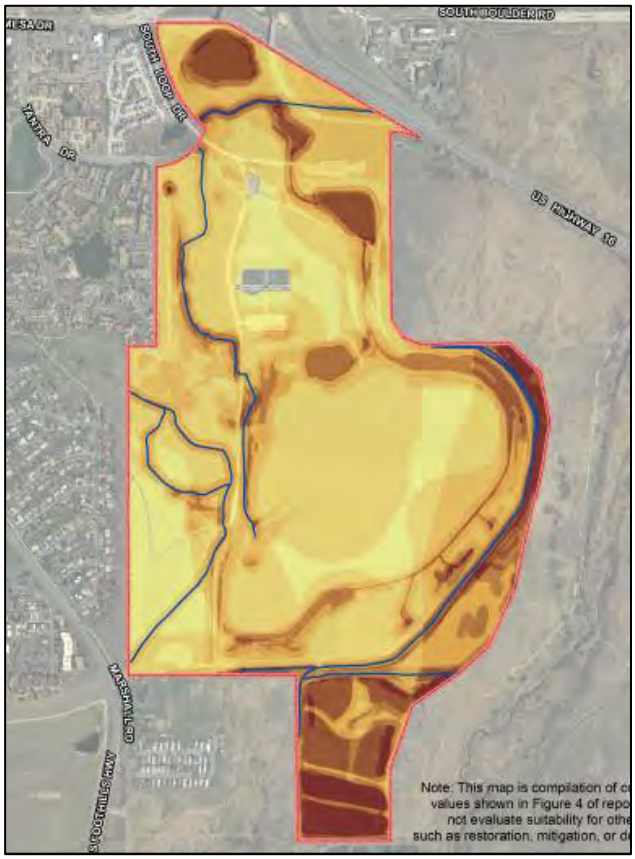
The university is also exploring several longer-term plans for CU South, such as:

- Affordable, workforce housing for faculty and staff (after studies to determine how much and what types);
- Graduate student housing and/or upper division undergraduate housing incorporated into academic villages;
- Academic, instructional and research facilities; and
- Outdoor research.

CU Boulder has also deemed that the following uses will not be pursued:

- A football stadium;
- Towers like Williams Village;
- A full build out of all 308 acres. More than half of CU South is wetlands, natural areas, ponds or potential floodwater mitigation areas which will not be developed for building sites
- First-year freshman housing;
- A bypass public roadway connecting Highway 93 and Highway 36; and

Figure 3: Site Conservation Suitability Analysis.



Site Analysis

Conservation Suitability Analysis

Biohabitats conducted a conservation suitability analysis to provide a framework for maintaining a landscape capable of integrating multiple land use objectives including flood control, protecting ecological values and identifying areas more suitable for development. The primary outcomes of the analysis are an ecological characterization, suitability mapping, and preliminary sketches of viewshed and connectivity considerations.

Ecological Characterization

Biohabitats identified and examined resources on the site for inclusion in the conservation suitability map. Key ecological factors included in the analysis were:

- Water resources (Floodplains, drainage)
- Wetlands
- Plant communities
- Species of concern
- Habitat connectivity to adjoining properties
- Wildlife observations
- Landscape features and character

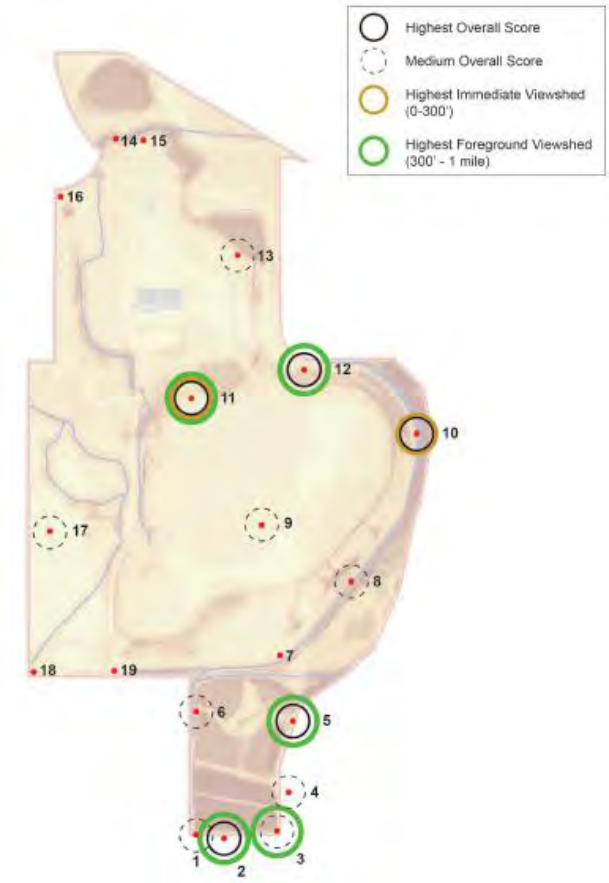
Conservation Suitability Mapping

Using the ecological characterization data, a conservation suitability map was then created to display areas with the highest density of sensitive ecological features. The analysis suggests that the eastern perimeter and the southern wetlands have the highest sensitivity to disturbance or development. The central portion of the property and the western edge have lower rankings for conservation values making them less sensitive to disturbance or development (Fig. 3).

Habitat Connectivity

Biohabitats identified the general connectivity between the CU Boulder site and nearby areas containing native plant associations and the Preble's meadow jumping mouse habitat. The highest potential areas for conservation and connectivity are to the south and east to the protected land owned by Open Space and Mountain Parks.

Figure 4: Preliminary Viewshed Analysis.



Viewshed – On Site

Biohabitats conducted an analysis that considers ecological value through the lens of aesthetics and experience from within the site. Following a landscape character viewshed analysis, a rapid assessment was conducted to examine the quality of the landscape character among several viewpoints throughout the site. Each viewpoint considered the general landscape character, attractiveness and views of natural resources. Each viewpoint was then scored and mapped (Fig. 4). Areas with a high conservation value generally also received a high viewshed score, particularly areas in the central and southern portions of the site.

Viewshed – Off Site

City staff also conducted a viewshed inventory from areas outside and around the perimeter of the site looking inward. The analysis found the higher value view corridors along westbound U.S. 36 and from the southwestern border of the site (Attachment C).

Passive Recreation

Work by Fox Tuttle Hernandez Inc., public comments, site visits and observations by city staff were used to develop a picture of current patterns of community use of the site for passive recreation. Dominant activities are walking, dog-walking and running. Under an agreement with the university and when conditions are appropriate, the Boulder Nordic Club grooms trails for cross country skiing. Most visitor activities take place on dirt roads and social trails (Map 3: Trails).

Although CU requests that dogs be leashed on the site, most dogs are not leashed and the university does not enforce dog leashing. Unleashed dogs are typically either on or near the trails; however, it is not uncommon to see dogs ranging through the open areas or swimming in the ponds.

A portion (0.12 mile) of the South Boulder Creek Trail, constructed and maintained by OSMP, crosses the south end of the CU South property on an easement granted by the university to the city. CU South is also accessible from the US36 Bikeway that connects with the South Boulder Creek trail on city open space where the highway crosses over South Boulder Creek. If Option D of the South Boulder Creek Flood Mitigation Study is constructed as currently conceived, the US36 Bikeway will be reconstructed on the top of the proposed flood berm. The city has not identified any social trails in the OSMP land between the South Boulder Creek trail and CU South.

Transportation: Multi-modal Analysis

Existing transportation infrastructure and proposed changes

The analysis performed by Fox Tuttle has looked at the existing and potential multi-modal access to CU South. The city's Bicycle System Plan illustrates several new pathway connections between the site and the adjacent neighborhoods to the west, as well as a proposed highway underpass. The plan also looked to improve the existing "social paths" in the CU South property to become multi-use paths. These connections are believed to help support the bicycle and pedestrian access to and through the site, and provide access to the transit network as it evolves.

The US 36 Environmental Impact Statement (EIS) considered alternatives for reconstructing the US 36/Table Mesa Drive/ Foothills Parkway interchange. The interchange reconfiguration option ultimately chosen by CDOT, the University of Colorado, City of Boulder, and Boulder County was the interchange design that retained the existing intersection of South Loop Drive, and Table Mesa Drive to provide direct access to CU South. This preferred alternative is predicted to have impacts on the configuration of the interchange ramps and the relationship between U.S. 36 ramps, transit stops in the area, and future bus routes.

Perimeter Access

Five roadways were examined for potential access to the CU South site. The analysis recommends keeping the primary vehicular access to the site on South Loop Drive and secondary access along Tantra Drive in the future. South Loop Drive is currently the only paved access to the site's 12 tennis courts and a gravel loop trailhead. The study recommends that as the property develops the drive should be upgraded to a "complete street" to accommodate bus, bicycle, pedestrian and automobile traffic. Tantra Drive is a 50-foot wide, two-lane street that appears to be a logical secondary access, as the eastern terminus of Tantra Drive was constructed as if it were intended to extend to CU South. Speed mitigation through the school access area will be important to address if Tantra Drive is used to provide vehicular access.

Access to the site from the south-west (off CO 93) can also be considered in the future, though it is not ideal. Creating this new access will likely require a State Highway Access Permit and variances from the Access Code geometric requirements. Ultimately, a circuitous or non-direct alignment would be necessary to discourage outside traffic from cutting through the CU South property to avoid the Table Mesa/Broadway connection. Moorhead Circle and Marshall Road were both found to be undesirable for perimeter access.

The analysis conducted by Fox Tuttle represents a first step in identifying critical multi-modal transportation considerations that will need to examined at the time of annexation. Because the future uses on the property remain unknown, the analysis did not recommend specific traffic mitigation strategies. However, the city recognizes the potential impacts to an already congested network and will take that into consideration during any land use designation or subsequent annexation decisions. An additional transportation analysis is being considered by CU Boulder to estimate the amount and type of land uses that

could be considered for the site based on multi-modal carrying capacity of surrounding transportation facilities.

Utility Service

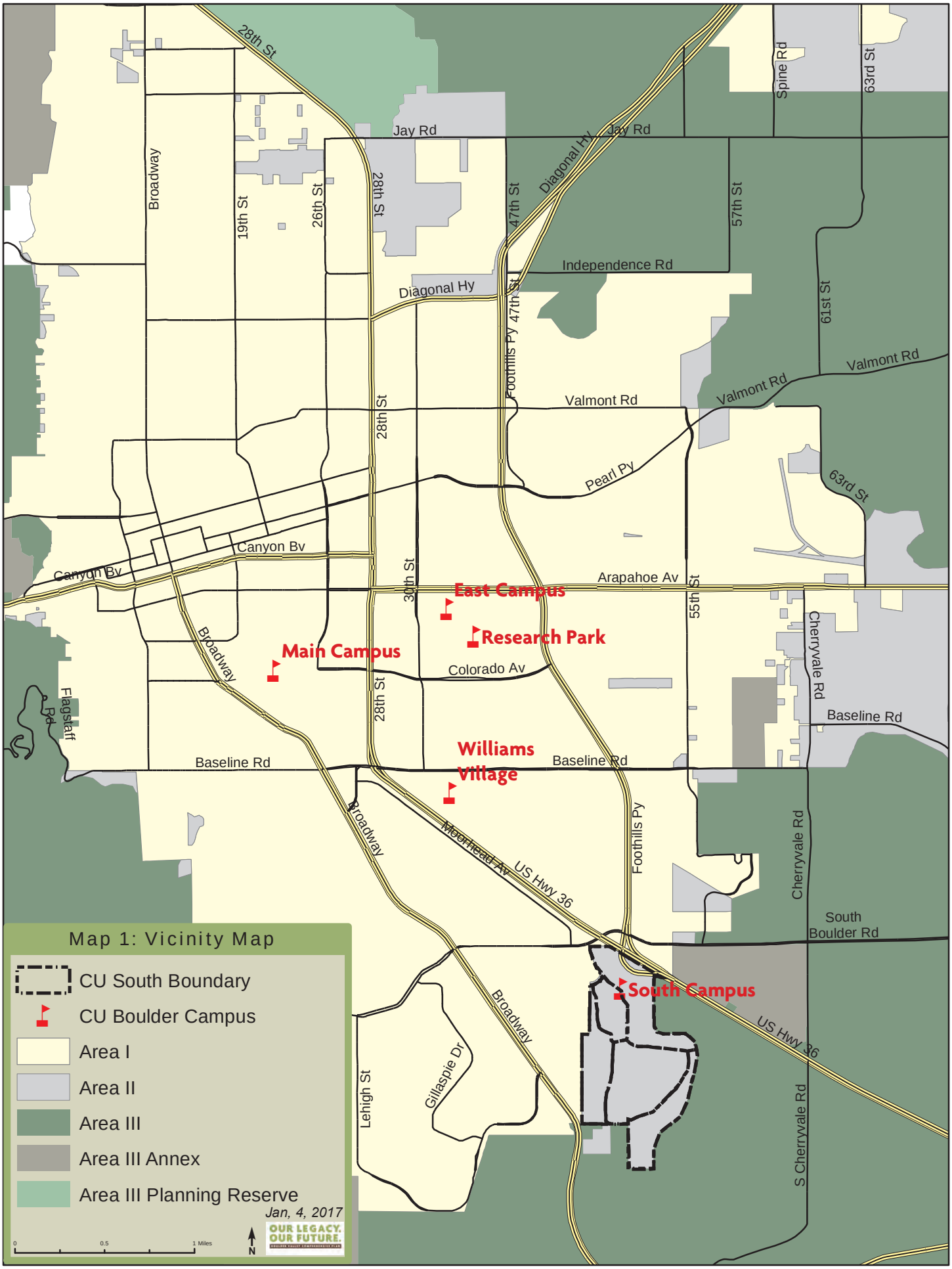
Existing water distribution, sewer collection and treatment facilities have adequate capacity to serve some additional development. The city's ability to provide service to CU South will depend largely on the specific utility needs of the project and the timing of development, neither of which are defined at this time. For this analysis, city staff assumed that the scale of future development on the CU South site would be comparable to other CU Boulder properties. The city currently has existing water mains along Table Mesa Drive (24" diameter), Moorhead Circle (12" diameter) and Broadway (16" diameter). Connections would be needed to two or more of these mains to provide service, with the Broadway main requiring an extension to the CU South site.

A major sewer main (27" diameter) abuts the southern and eastern edge of the property and should have adequate capacity to support development on the site. Stormwater flows will be examined at the time of development, particularly relating to minimizing stormwater contributions to irrigation ditches.

Other than the extension of the Broadway water main, no major off-site improvement requirements for water or sewer are anticipated at this time. Prior to connecting to city services, CU Boulder must provide a utility report identifying usage requirements and the on-site (private) utility design to ensure compliance with city standards and determine city fees.

Initial Conclusion

Staff will use information referenced in this report and feedback from decision-making bodies to form a recommendation for changes to the CU South land use designations and a list of issues to be addressed in future agreement(s) between the city and CU Boulder for development and conservation of the site. While conversations among BVCP approval bodies are ongoing, the analysis is starting to indicate that some areas are more suitable for conservation and other uses (Map 5: Key Considerations). Conservation of ecological values and wetlands appear to be most suitable for the southern portion and along the eastern boundary of the site. Additional discussions, including a recommendation by the Open Space Board of Trustees, is needed to refine these potential conservation areas and identify other portions of the site that should also be preserved. With 80 acres of regional detention and 30 acres to accommodate fill material, floodwater mitigation will also cover a sizable portion of the site. After considering conservation and floodwater mitigation, other portions of the site may be suitable for development or conservation.


28th St
Jay Rd
Broadway
19th St
26th St
28th St
47th St
Diagonal Hy
Spine Rd
63rd St
57th St
Independence Rd
61st St
Foothills Py
Valmont Rd
Pearl Py
Canyon Bv
30th St
Arapahoe Av
55th St
East Campus
Research Park
Main Campus
Colorado Av
Cherryvale Rd
Baseline Rd
Flagstaff Rd
Williams Village
Moorhead Av
US Hwy 36
South Boulder Rd
South Campus
Lehigh St
Gillaspie Dr
S Cherryvale Rd
Map 1: Vicinity Map
CU South Boundary
CU Boulder Campus
Area I
Area II
Area III
Area III Annex
Area III Planning Reserve
Jan, 4, 2017
0
0.5
1 Miles
N
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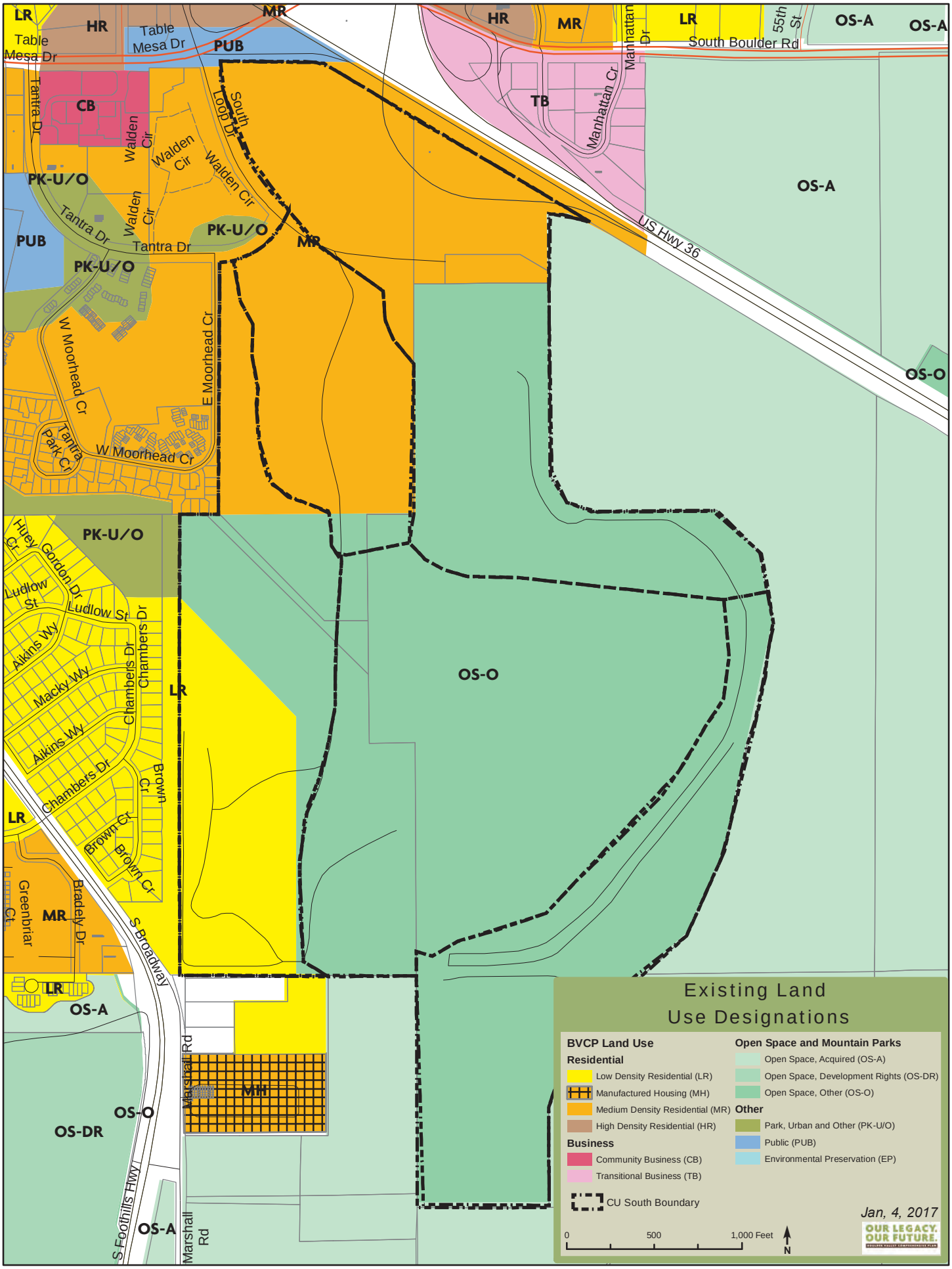
LR
HR
Table Mesa Dr
MR
PUB
CB
Tantra Dr
Walden Cir
South Loop Dr
PK-U/O
Tantra Dr
PUB
W Moorhead Cr
E Moorhead Cr
Tantra Park Ct
HR
MR
TB
Manhattan Dr
Manhattan Cr
LR
55th St
South Boulder Rd
OS-A
OS-A
US Hwy 36
OS-O
PK-U/O
Huey Ct
Gordon Dr
Ludlow St
Aikins Wy
Chambers Dr
Macky Wy
LR
OS-O
Brown Ct
LR
Greenbriar Ct
MR
Bradley Dr
S Broadway
LR
OS-A
Marshall Rd
MH
OS-O
OS-DR
S Foothills Hwy
OS-A
Marshall Rd
Existing Land Use Designations
BVCP Land Use
Residential
Low Density Residential (LR)
Manufactured Housing (MH)
Medium Density Residential (MR)
High Density Residential (HR)
Business
Community Business (CB)
Transitional Business (TB)
CU South Boundary
Open Space and Mountain Parks
Open Space, Acquired (OS-A)
Open Space, Development Rights (OS-DR)
Open Space, Other (OS-O)
Other
Park, Urban and Other (PK-U/O)
Public (PUB)
Environmental Preservation (EP)
Jan, 4, 2017
0
500
1,000 Feet
N
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Map 3: Trails
Underpass
US 36 Bikeway
CU South Boundary
Existing CU South Informal Trail
South Boulder Creek
Hiking Trail
Multi-Use Trail
Paved Path
Streams
OSMP Ownership
OSMP Conservation Easement
0
500
1,000 Feet
N
Jan, 4, 2017
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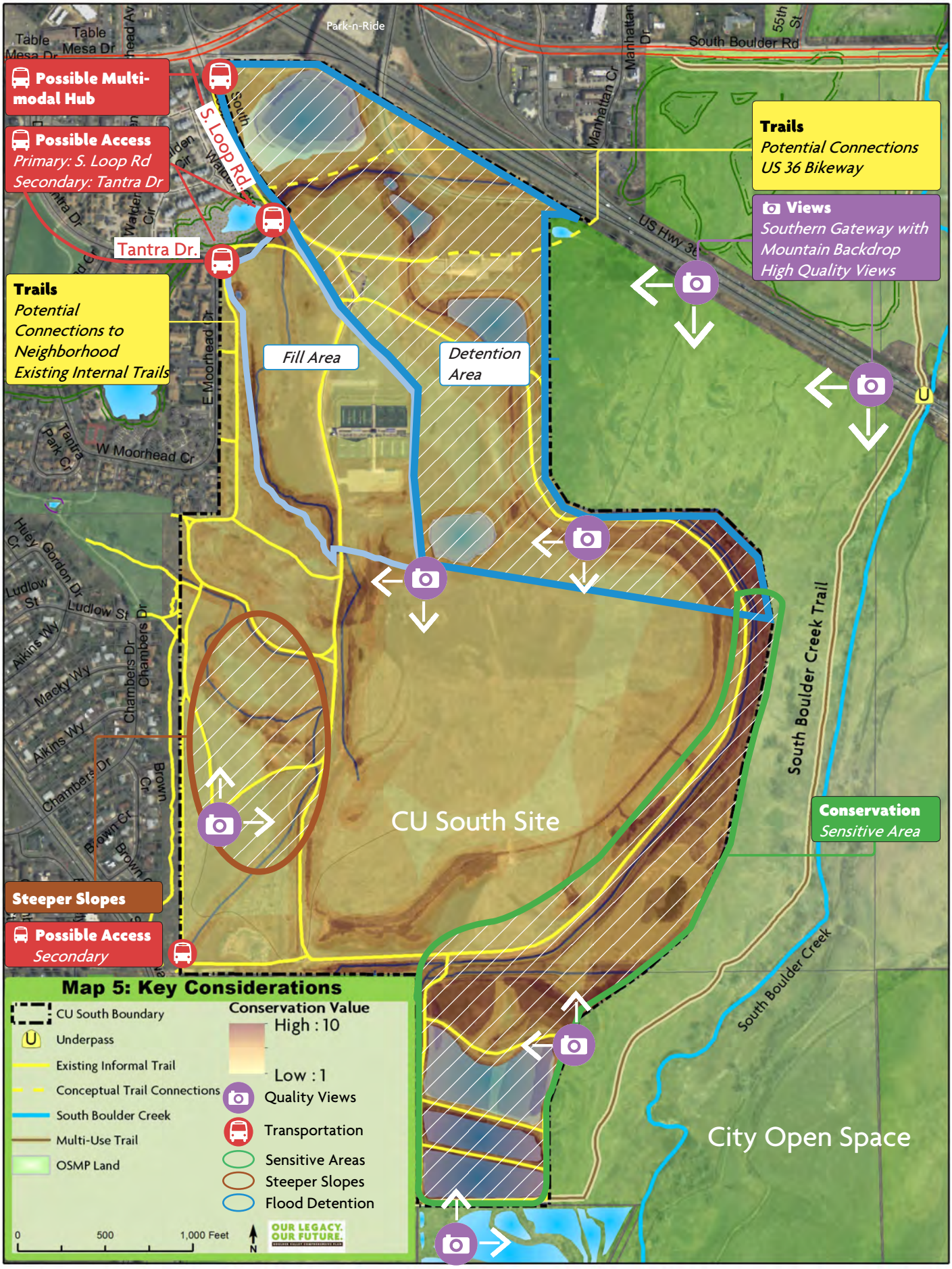
CU South
OSMP Land
US Hwy 36
US 36 Bikeway
South Boulder Creek Trail
South Boulder Creek
South Boulder Rd
55th St
Tantra Dr
Hanover Av
Darley Av
Whitney Pl
W Moorhead Cr
E Moorhead Cr
Ludlow St
Chambers Dr
Greenbriar Ct
Greenbriar Bv
Marshall Rd
S Foothills Hwy
S Broadway
Manhattan Dr
Ontario Pl
City trail easement along CU South


Map 4: Floodplain
CU South
City 100 Year Flood Plain
South Boulder Creek
Multi-Use Trail
0
500
1,000 Feet
OUR LEGACY. OUR FUTURE.
N
Jan, 4, 2017
Existing Levee
South Boulder Creek Trail
South Boulder Creek
US Hwy 36
South Boulder Rd
Table Mesa Dr
Thunderbird Dr
Apache Rd
Pima Ct
Illini Wy
Iroquois Dr
Manhattan Dr
Ontario Pl
Ontario Ct
55th St
Mineola Ct
S Boulder Cr
Walden Cir
Walden Loop Dr
South
Tantra Dr
W Moorhead Cr
E Moorhead Cr
Tantra Park Cr
Darley Av
S 46th St
Squires Cr
Huey Cr
Gordon Dr
Ludlow St
Aikins Wy
Macky Wy
Chambers Dr
Broadway
Toedtli Dr
Greenbriar Bv
Greenbriar Ct
Brown Cr
Bradley Dr
S Broadway
Marshall Rd
S Foothills Hwy


Possible Multi-modal Hub
Possible Access
Primary: S. Loop Rd
Secondary: Tantra Dr
Tantra Dr.
Trails
Potential Connections to Neighborhood
Existing Internal Trails
Fill Area
Detention Area
Trails
Potential Connections
US 36 Bikeway
Views
Southern Gateway with Mountain Backdrop
High Quality Views
Conservation
Sensitive Area
Steeper Slopes
Possible Access
Secondary
CU South Site
City Open Space
South Boulder Creek Trail
South Boulder Creek
Park-n-Ride
South Boulder Rd
S. Loop Rd
US Hwy 36
E Moorhead Cr
W Moorhead Cr
Ludlow St
Chambers Dr
Aikins Wy
Brown Ct
Manhattan Dr
55th St
Map 5: Key Considerations
CU South Boundary
Underpass
Existing Informal Trail
Conceptual Trail Connections
South Boulder Creek
Multi-Use Trail
OSMP Land
Conservation Value
High : 10
Low : 1
Quality Views
Transportation
Sensitive Areas
Steeper Slopes
Flood Detention
0
500
1,000 Feet
N
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Jan. 4, 2017

ADDENDUM #1

PROJECT: Preliminary Conservation Suitability Analysis for University of Colorado South Campus

COMPILED BY: City of Boulder, Planning, Housing and Sustainability

DATE: January 11, 2017

The correction herein shall be made to the Preliminary Conservation Suitability Analysis for University of Colorado South Campus.

1. Page 13, second paragraph shall be amended as follows:

   Currently there are limited data on groundwater characteristics on the property. ~~CU is planning to conduct a detailed groundwater investigation in the upcoming year, however,~~ As part of flood mitigation work, the city would conduct a detailed groundwater investigation and its study results can help confirm some of the following initial observations of groundwater flow patterns.

City of Boulder, Planning Housing & Sustainability

Preliminary Conservation Suitability Analysis For University Of Colorado South Campus

November 2016

Biohabitats
1732 Wazee Street
Denver, CO 80202

Biohabitats
SOUTHERN ROCKY MOUNTAIN BIOREGION

Table of Contents

List of Figures

1 Introduction

This report provides a preliminary conservation suitability analysis of the University of Colorado South Campus property ("CU South") with respect to protecting sensitive areas and identifying suitable development and conservation envelopes based on current natural resource conditions, opportunities, and constraints. The overarching goal of this analysis is to inform the CU South planning process – including land use change as part of Boulder Valley Comprehensive Plan – by providing an understanding of ecological patterns that have developed in the area over time. The results of the analysis are intended to provide a framework for maintaining a multifunctional landscape that can integrate multiple land use objectives including improving flood control, protecting ecological values, and identifying compatible development locations.

1.1 Purpose and Scope

With upcoming plans to implement the 2015 South Boulder Creek Major Drainageway Flood Mitigation Plan and desire to change land use to accommodate eventual development by the University of Colorado, the City of Boulder authorized a site suitability analysis for the property to serve as a guide to inform discussions regarding future uses on the property. The suitability analysis was conducted as part of the major update to the Boulder Valley Comprehensive Plan (BVCP) that will include updates to the land use designations for the parcel. The imperative articulated by the BVCP below guided the consideration of priorities in the current site suitability study:

…conserve and preserve environmental resources including its unique or distinctive natural features, biodiversity, and ecosystems through protection and restoration in recognition of the irreplaceable character of such resources and their importance to the quality of life.

In addition to interfacing with the BVCP, the suitability analysis is intended to inform considerations of annexing the property to the City of Boulder including:

- Findings on differential suitability across the site for development and conservation, and
- A framework, specific to CU South, for future annexation and agreements between the city and the University of Colorado (CU).

Biohabitats' scope of work for the current effort included: attending a kick-off meeting on June 3, 2016, with city staff; reviewing available background information provided by the city; conducting a desktop analysis; completing a field assessment; meeting with city staff from Public Works and Open Space and Mountain Parks (OSMP) to gather additional information on pending flood control planning and sensitive species; selecting primary criteria for conservation suitability and preparing a Geographic Information Systems (GIS) analysis; developing conceptual diagrams for secondary criteria associated with views and connectivity to offsite areas associated with conservation suitability, and; participation in a public meeting in September 2016. The current effort does not include an evaluation of potential mitigation and restoration strategies.

1.2 Site Background

The subject property is owned by the University of Colorado ("CU") and consists of a 316-acre parcel located immediately south of the juncture of U.S. Highway 36, Table Mesa Dr./South Boulder Road, and Foothills Parkway (Figure 1). The parcel was historically farmed and grazed

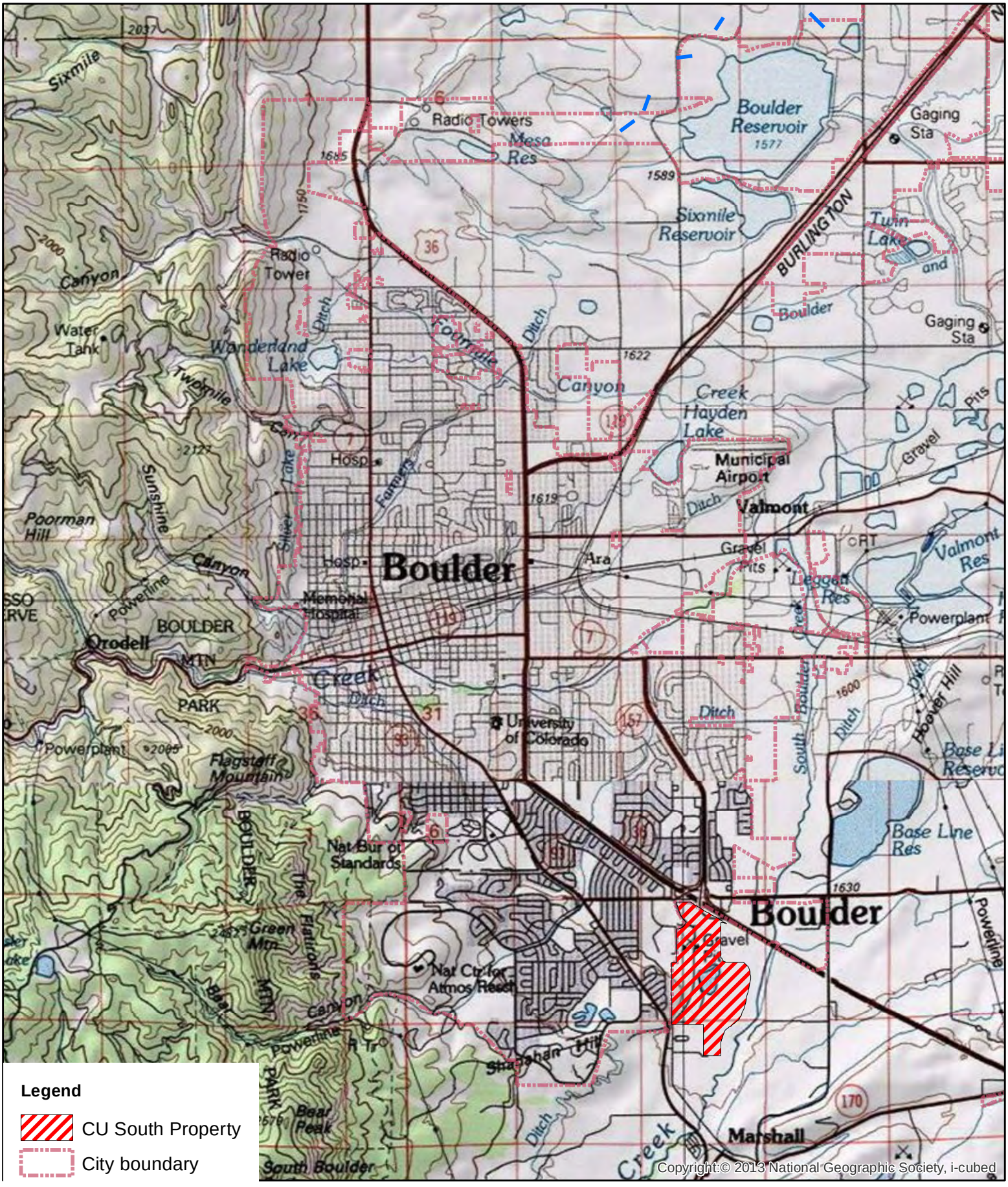


Figure 1
Site Location
CU South Property

until sand and gravel mining replaced agricultural uses, removing aggregate material from the majority of the property. In 1996, Flatiron Companies sold the property to CU.

Major features of CU South include a flood control berm that parallels the eastern boundary and northern edge of the southern “panhandle” (refer to Figure 3). The western portion of the property is characterized by a steep topographic gradient that forms a terrace. The northern half of the property has 4 ponds interspersed with development, including tennis courts, maintenance buildings, parking lots, and roads. The interior of the property is could be characterized as a basin dominated by non-native grasslands.

Current Land Uses

Currently the site is used by the CU tennis and cross-country programs with 12 tennis courts and upgraded running courses.The public also makes regular use of the trails for exercise, off-leash opportunities for dogs, and wildlife viewing. These uses align with the 2001-2008 Campus Master Plan, which originally mandated that the South Campus be used only for athletic and recreational pursuits. Future uses by CU are uncertain.

Primary vehicular access to the property is at the northwest corner via South Loop Drive off of Table Mesa Drive. A less direct approach is at the southwest corner from Marshall Road. Pedestrian users can also access the property from a dirt road on the west side that leads onto the property from the intersection of Tantra Drive and East Moorhead Circle.

To the north of the property, there is a Regional Transportation District transit station and parking garage at Table Mesa as well as the intersection of three major roads. Low- and medium-density residential development borders the west side. City of Boulder Open Space lies to the south and east of the property and includes South Boulder Creek.

Under the current BVCP, the majority of CU South is designated as Open Space-Other (193.25 acres) and other portions of the property are designated for Medium-Density Residential (66.75 acres) (MR, 6-14 dwelling units/acre) and Low-Density Residential (49.36 acres) (LR, 2-6 dwelling units/acre) (Figure 2).

2 Methods

The overall approach for this suitability analysis was to map ecologically functional zones of the site as determined by biotic communities and hydrology and, using a GIS-based scoring system, overlay these with other natural features to create a base map showing a range of sensitive natural resource areas. The primary criteria include existing native plant communities, wetlands and buffers, aquatic habitat, and identified habitat zones for rare species. Ecological connectivity to offsite properties and views within and beyond the property are secondary criteria addressed separately. Utilities, roads, and planned flood improvements were not evaluated in the base map; however, future updates to the sensitivity analyses are expected to be needed to incorporate these constraints and considerations. Additional details about methods are described below.

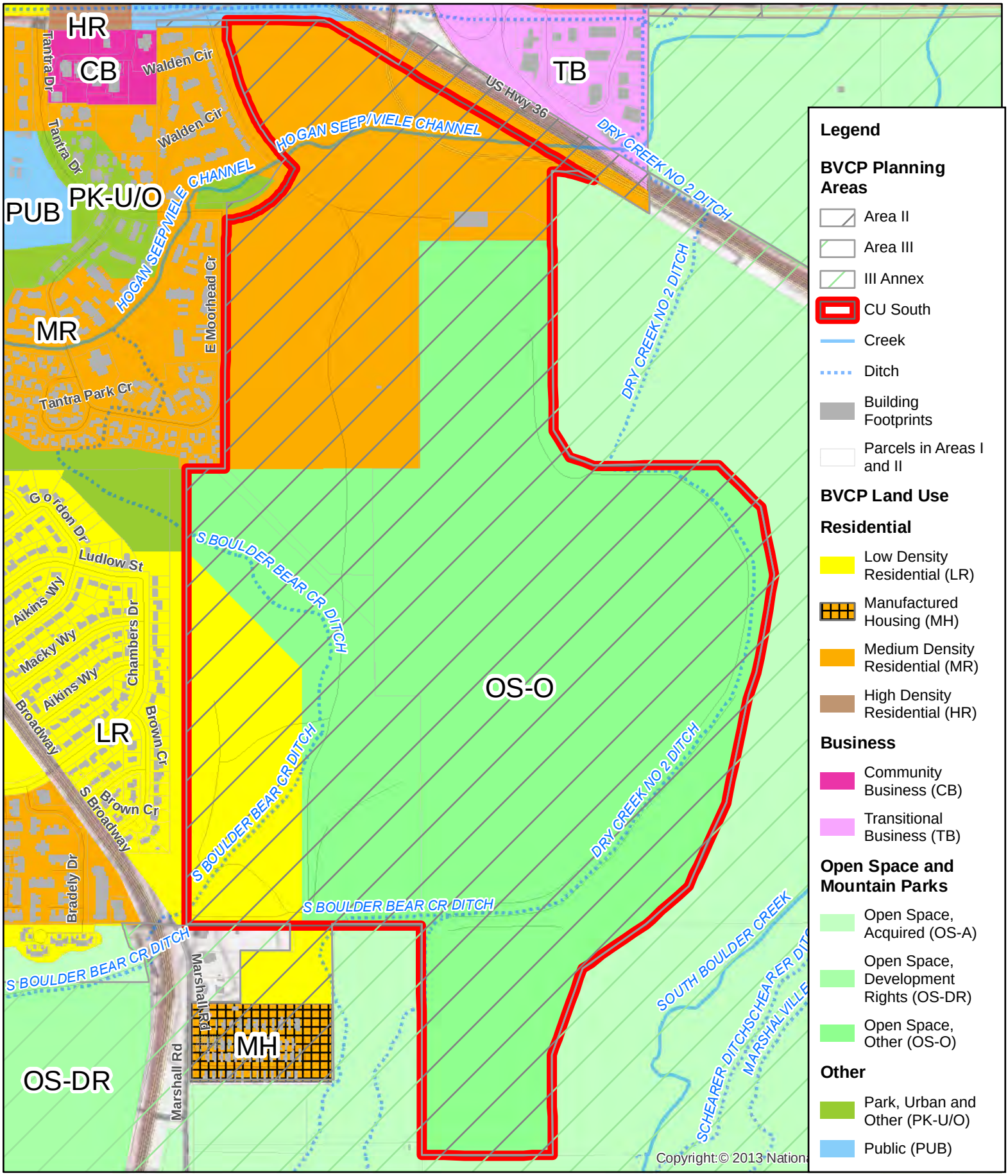


Figure 2
Land Uses
CU South Property

2.1 Data Collection and Field Assessment

Prior to field work, available site data and background information were collected and reviewed. These included but were not limited to GIS data provided by the city, the South Boulder Creek Flood Mitigation Study, previous evaluations of the site, zoning designations, transportation studies, and information on sensitive species such as Preble's meadow jumping mouse (*Zapus hudsonius preblei*).

Previous Studies

CU South has been the subject of numerous prior studies. These include the Boulder Valley Comprehensive Plan parcel report (1995), a Conceptual Land Use Assessment (Shapins Associates, Inc., 2002), a wetland delineation report (ERO Resources, 2013), the South Boulder Creek Major Drainageway and Flood Mitigation Plan (2015), and a transportation analysis (Fox Tuttle Hernandez Transportation Group, 2016). The property was also part of the U.S. 36 Mobility Project analysis (OSMP, undated).

Noteworthy among these studies is the 2002 Conceptual Land Use Assessment, which organized its findings into themes of transportation, potential building areas, flood storage, and natural areas. The Land Use Assessment also documented utility lines and transportation opportunities, thus providing a baseline for the current site suitability analysis.

A memorandum prepared by city staff for City Council in September 2014 summarized environmental considerations during the review of the South Boulder Creek Major Drainageway Mitigation Plan. The memorandum provided context on ecological values relevant to the project area including:

- Wetlands
- Preble's meadow jumping mouse (*Zapus hudsonius preblei*)
- Ute ladies'-tresses orchid (*Spiranthes diluvialis*)
- Northern leopard frog (*Rana pipiens*)
- Native fish and ground-nesting birds, and
- The South Boulder Creek State Natural Area (SBCSNA)

Additionally, the 2015 South Boulder Creek Major Drainageway and Flood Mitigation Plan will be highly influential on future development scenarios of the property. The preferred Alternative D will entail construction of a berm along US 36, excavation of 81 acres in the northeast portion of the CU South property to create a detention pond, and fill of approximately 31 acres of the northwestern portion of the CU South property to 5370 feet a.s.l. (Figure 3). Of the seven alternatives considered, Alternative D minimized impacts to sensitive species from nearby OSMP properties and minimized impacts to sensitive environmental resources.

Field Assessment

Field base maps were prepared using aerial photographs and available geospatial information. The purpose of the field assessment was to verify and supplement the available information to reflect existing water resources; plant communities (0.25-acre minimum) and their conditions as reflected by dominant species; connectivity to adjoining habitat; elements of concern such as hazards, erosion, waste, and/or disturbance; landscape features and character; and uses and impacts of adjoining properties. The site visit was conducted on June 21, 2016 by Claudia Browne, Water Resources Specialist and Conservation Planner, and Susan Sherrod, Ph.D., Certified Ecologist. Dr. Sherrod returned for a second visit on June 27, 2016. In August 2016, OSMP staff also conducted a high-level review of site conditions to evaluate potential habitat for

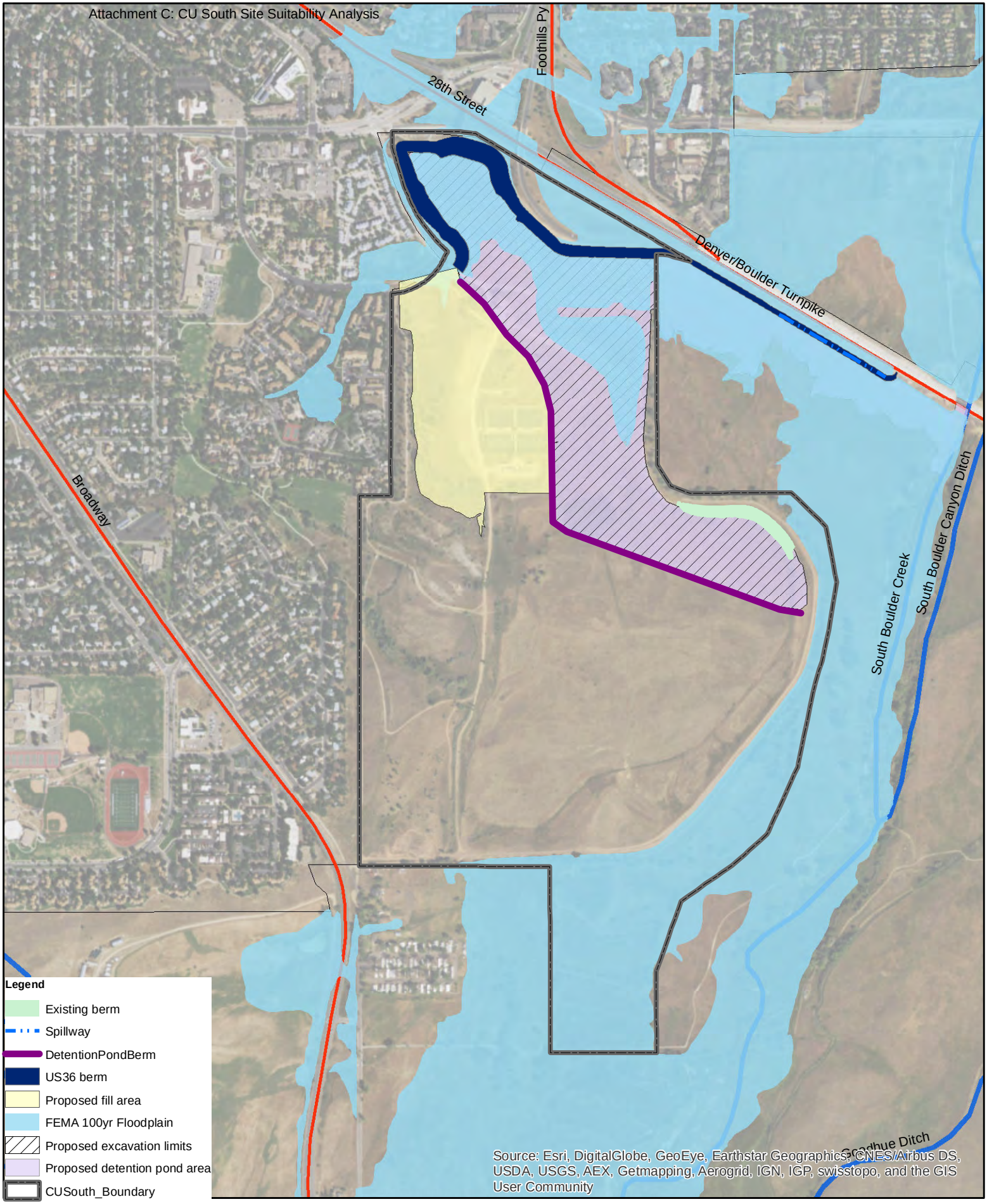


Figure 3
Flood Mitigation
Alternative D Features
CU South Campus

the Northern leopard frog and other native amphibians, Ute ladies'-tresses orchid, and native neotropical migratory and grassland-breeding bird species.

In addition to observing the above-noted features, viewshed observations were collected by Biohabitats, and photographs were taken at locations across the site to document scenic features on-site as well as views outward from the property. In a follow-up effort, City of Boulder planning staff collected additional panoramic photographs from the eastern boundary to address views from off-site across the property.

2.2 Conservation Suitability Analysis

A range of possible information sources and data layers were considered for inclusion in GIS the conservation suitability analysis including the items listed below:

- Water resources (floodplains, drainageways, lakes)
- Wetlands and buffers
- Plant communities
- Species of concern
- Habitat connectivity to adjoining properties
- Wildlife observations
- Landscape features in topography & geology

(Note that other factors such as transportation, access, and utilities are being considered separately.)

Biohabitats considered and tested a range of possible ways to group the data layers into primary or secondary criteria, to aggregate information into potential "neighborhoods" for views, to include offsite data, and to weight layers. Consistent use of data layers from previous evaluations conducted by the city for the floodplain study was also a consideration. Table 1 and the model diagram in Figure 4 show the layers that were included as primary criteria in the analysis.

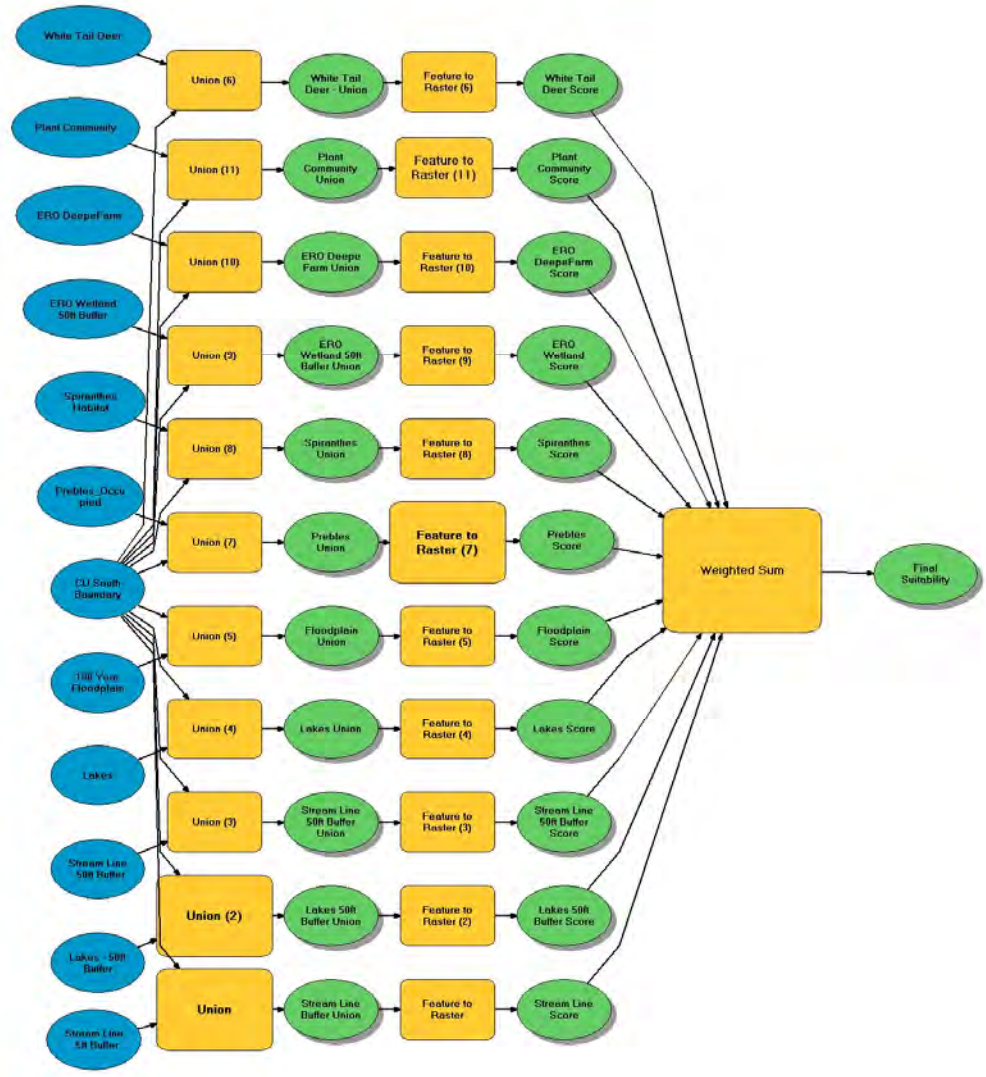
To complete the GIS analysis, the layers of primary criteria (Table 1, Fig. 4) were compiled into a geodatabase and organized into feature datasets by analysis step. The first step of analysis required clipping data to the property extents to ensure each feature represented the same area of interest. All data were assigned the same projected coordinate system, NAD 1983 HARN State Plane Colorado North FIPS 0501, to ensure spatial accuracy and alignment.

The second step of analysis involved the creation of buffers for hydrology features such as streams, lakes and wetlands. A 50-foot buffer was created around the previously delineated wetlands (ERO, 2013). This distance was selected to be conservative in the absence of wetland functional assessments, which are used by the city to determine if a 25- or 50 foot buffer is appropriate. A 5-foot buffer was also applied to stream centerlines to convert the GIS polyline to a polygon and to mimic estimated stream width. After applying buffers, "Score" fields were created in all the files in short integer format and assigned a value of 1 (for present), with the exception of the plant community layer where non-native plant communities received a 1 but native plant communities were assigned 2 to reflect their higher habitat value. Before converting data from vector to raster format, a union between each individual feature and the site boundary was required to create a cohesive layer representing all potential values throughout the site. When converted to raster format, areas where features do not exist were scored as 0 (and where features were present were a 1 or 2 as described above).

Table 1 Conservation Layers and Data Sources

Layer Category	File Name	Data Source
Lakes	Hydrology_Lakes	City data
Streams	Stream line 5 ft buffer	Created from City Hydrology (to allow 50 ft buffer creation)
Wetlands	ERO_Wetland	ERO
Lake buffer	Lake_50ft_Buffer	Created by Biohabitats
Stream buffer	Stream line_50ft_Buffer	Created by Biohabitats
Wetland buffer	ERO_Wetland_50ft_Buffer	Created by Biohabitats
Floodplain	City_100Year_Floodplain	City data
Plant community	Community_Plant_Types_8-1	Created by city from Biohabitats field data
Preble's meadow jumping mouse	PreblesMouseOccuppiedRange02222016	CPWPublicSAMData
White-tailed deer	WTDeerConcentrationArea02222016	CPWPublicSAMData
Rare plant	Spiranthes_Habitat_Field_Review	Created by city from OSMP field data
CU boundary	Project boundary	City data

Figure 4 Model of GIS Analysis for CU South Property



The final step of the process was the execution of a weighted sum overlay using ArcGIS Spatial Analyst tools. This step combines all raster datasets that were created and scored previously by overlaying each feature and summing areas of overlap. The goal of the analysis is to highlight areas with the highest density of sensitive ecological features that will be less suitable for development (see Section 3, Summary of Findings).

2.3 Secondary Analysis

Beyond the primary ecological considerations included in the GIS analysis, secondary considerations that encompass the human experience and user relationships with the ecological features on site may also be used in the analysis. These, too, have a role in determining conservation suitability, as they aim to address the relationship between a user's sense of place and the value of a site as a destination for active and passive recreation. Put another way, the secondary considerations account for ecological value through the lens of aesthetics and experience.

The first part of this secondary analysis was a landscape character viewshed analysis, a rapid assessment of quality of landscape character at a series of viewpoints throughout the site. This was based in part on the USFS Landscape Aesthetics Handbook for Scenery Management (USDA FS 1995). The key elements taken from that guidance document were a general understanding of landscape character (considering ecological systems, existing land use patterns and uses, and scenic integrity), attractiveness, and views of natural resources within different distance zones (immediate foreground: 0-300', foreground: 300'-1/2 mile, middle ground: 1-4 miles, and background: 4 miles to the horizon)[1]. The landscape character viewshed analysis examined locations within the site and also considered views outward from and across the site toward the west.

One of the basic premises of this viewshed analysis of landscape character is that "scenery contributes to a 'sense of place,' a mutually shared image" (USDA FS 1995). Some of the specific landscape characteristics that define the site's sense of place directly associated with ecological resources include: a sense of isolation from development based on the presence or absence of structures or roads, natural character reflecting native and diverse ecosystems, wide and open views to the mountains, views across open water and wetlands, access via trails, and other sensory experiences such as natural versus man-made sounds and availability of shade along trails. Each viewpoint was scored for the presence of these landscape characteristics and then total scores were determined across the site, as well as within each of the 4 distance zones to get a sense of the highest scoring points of view on the site (see Table A-1, attached).

Other secondary suitability criteria that may be integrated include availability and location of trails and recreation opportunities directly associated with the ecological resources on site, restoration potential, presence of other ecological resources associated with geology, steep slope areas that may be sensitive to erosion with future development, and social path connections.

[1] Due to topography and other existing conditions the site is limited in terms of middle ground characteristics.

3 Summary of Findings

The primary outcomes of the site conservation suitability analysis are an ecological characterization, suitability mapping, and preliminary sketches of viewshed and connectivity considerations. The purpose of these findings is to understand high-value ecological areas to help guide future planning decisions. The ecological characterization summarized in Section 3.1 describes how the elements of the site work together to support the natural systems included in the suitability analysis, and the results of the suitability analysis follow in Section 3.2.

3.1 Ecological Characterization

Ecological resources of the CU South property are related to physical resources of the site and landscape context. Key factors such as topography, geology, and water resources interact to control ecosystem characteristics such as plant community type, wildlife use, and the occurrences of sensitive species. Human activities such as water diversions, development, and transportation further influence habitat features via disturbance and management practices.

Geology

Geologic characteristics of the site were considered during this suitability analysis primarily as they relate to hydrology (described in the following subsection). As shown in Figure 5, there are 5 major surficial geologic units mapped on the property. The main portion of the site is underlain by Post Piney Creek and Piney Creek Alluvium (Qp) and Broadway Alluvium (Qb). The Piney Creek alluvium (Holocene, less than 4,000 yrs ago) occurs in a band along the South Boulder Creek corridor, and to the west is the slightly older Broadway alluvium in the northwest and central portion of the site. A small area of Louviers Alluvium (Upper Pleistocene) also occurs in the southwest corner of the property.

Pierre Shale bedrock (Cretaceous Period, 65-144 Mya) outcrops on the southwest side of the site, on the edge of the terrace formation. In the upland areas to the west of the shale, the Slocum Alluvium (Quaternary Period, mid-late Pleistocene, 1.8-2 Mya) is characterized as “10 to 90 ft of moderate reddish-brown, well-stratified, clayey coarse sand with lenticular beds of pebbles and silt” (Moore et al, 2001).[2]

Water Resources

The property is located within about 500 feet of South Boulder Creek, and a portion of the 100-year floodplain is on the property. Dry Creek Ditch No. 2 runs along the interior of the eastern border and Bear Creek Ditch is in the western portion of the property (Figure 6).

Four former gravel pits, now ponds, occur in the northern half of the site. The ponds appear to be fed primarily by groundwater with relatively stable water levels (based on vegetation). Detailed flow information was not reviewed for the ditches; however, wetland communities are supported along most of the channels, indicating sufficient hydrology for this habitat type.

Shallow groundwater occurs beneath most of the property in an unconfined sand and gravel aquifer (sometimes called a water table aquifer). Because groundwater may support baseflow and vegetation in the riparian areas along the creeks, understanding and maintaining groundwater hydrology can be important for long-term viability in these ecosystems. In

[2] Note: an evaluation of soil distribution was not included in the current analysis. The majority of the property has been mined and undergone earthwork and agricultural uses, such that soil descriptions are not expected to be pertinent to the current conditions on the property. Should restoration of portions of the site be desired, historic soil mapping could be viewed for possible insights into opportunity areas based on pre-mining conditions (depending on the date and accuracy of the mapping).

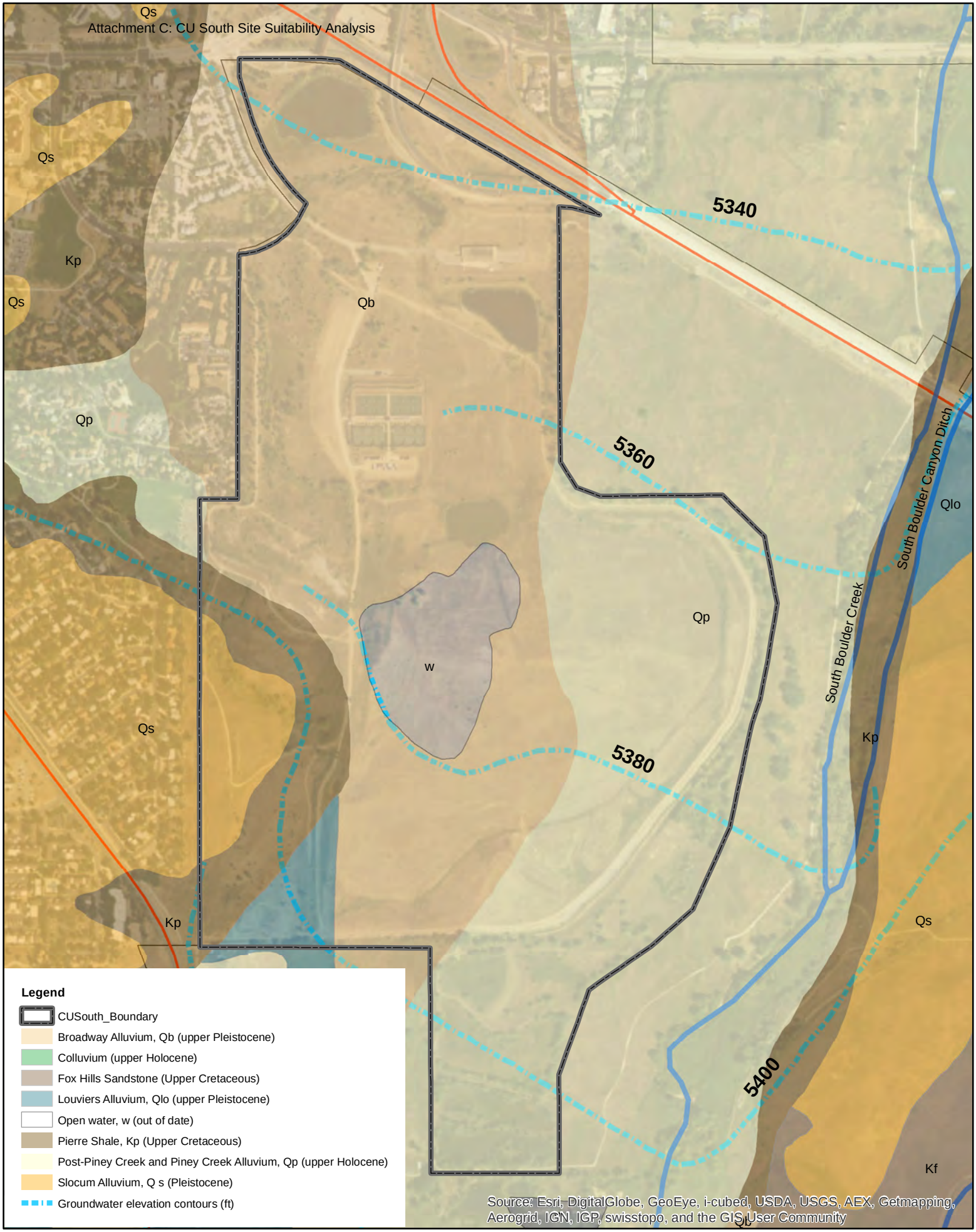


Figure 5
Geology and Regional Groundwater
CU South

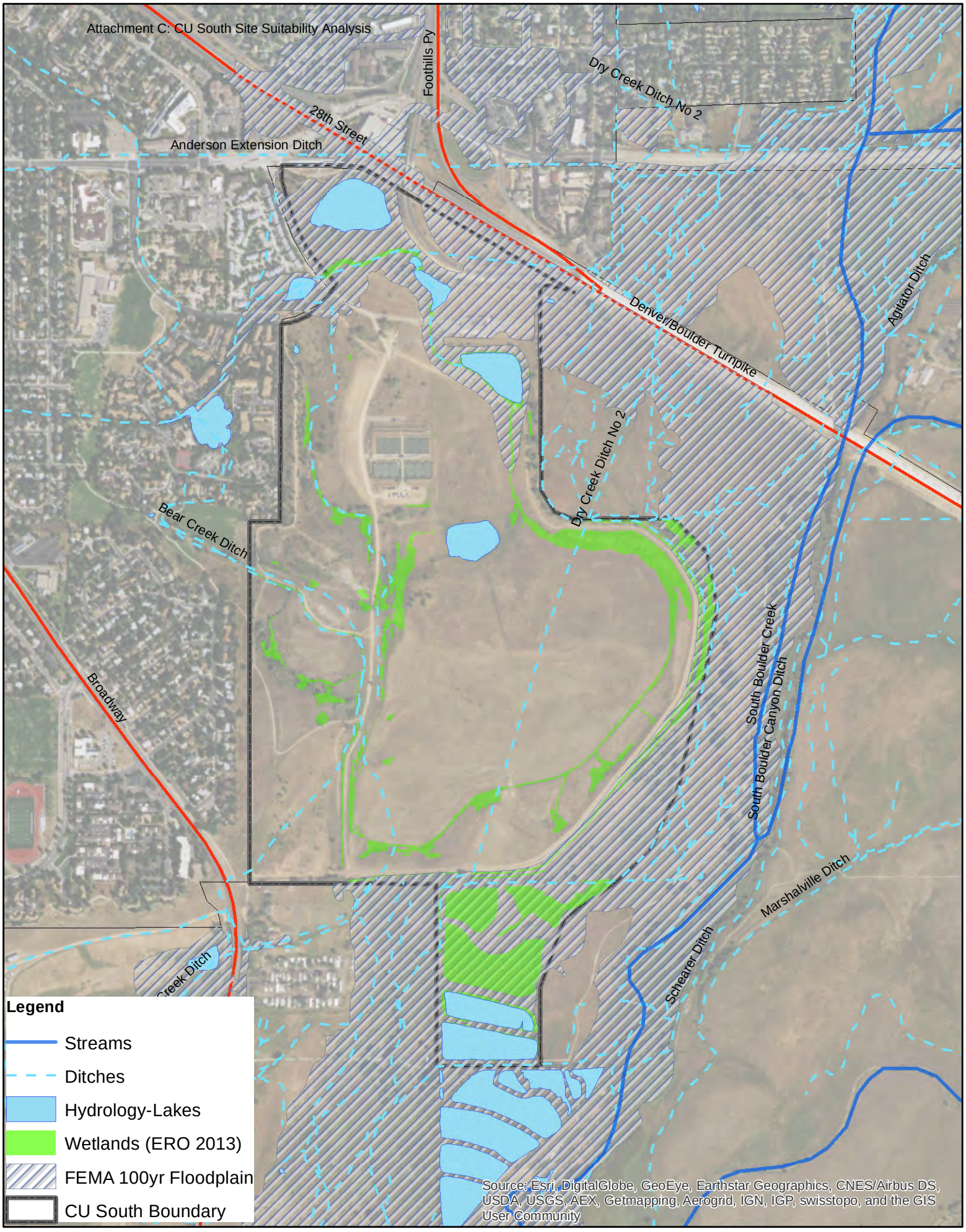


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Figure 6 Water Resources of the Property
CU South

unconfined systems, precipitation infiltrates in upland areas to recharge groundwater, and the groundwater moves through the subsurface generally following topography until it reaches discharge points. Groundwater discharge occurs where the aquifer intersects the ground surface, and water is released into lakes, seeps, or springs that feed streams and wetlands. Water table aquifers will fluctuate up and down with seasonal and annual climate variations. In the Front Range, the water table generally rises in the winter, peaks after spring snowmelt, and decreases steadily throughout the growing season. Droughts and human water management practices associated with new development (e.g., diversion ditches, wells, sump pumps, and storm sewers) can cause significant long-term changes in the water table.

Currently there are limited data on groundwater characteristics on the property. CU is planning to conduct a detailed groundwater investigation in the upcoming year, however, and its study results can help confirm some of the following initial observations of groundwater flow patterns.

- On the CU South property, groundwater generally flows from the southwest to the northeast, with water draining off of the foothill fans and discharging into the alluvial sand and gravel deposits along the creeks.
- As shown on Figure 6, regional groundwater contours in the eastern Piney Creek alluvial deposits depict the direction of flow to be generally perpendicular to South Boulder Creek. This pattern shows that the groundwater and creek interact, exchanging water depending on local differences in water elevations. In other words, there will be periods when groundwater will discharge to the creek and periods when the creek will recharge the nearby alluvial aquifer.
- Groundwater flowing from the uplands in the central and western portions of the property is recharged offsite in the foothills to the west.
- Site observations indicate a small zone of potential groundwater seepage/discharge at the base of the terrace on the western side where the surface deposits meet the underlying Pierre Shale bedrock which is relatively impermeable and acts as a lower boundary to the aquifer.

Note that the presence of perennial (i.e., year-round) water features and areas of shallow/exposed groundwater that can support wetlands and riparian vegetation is generally considered a valuable ecological asset in the semi-arid west where such features are not common.

Plant Communities

Plant community mapping was completed on June 21 and 27, 2016, to evaluate the vegetative component of conservation suitability at CU South (Figure 7). Key objectives of the mapping were to identify boundaries of major community types (at a ¼-acre scale) and to note the condition of each community based on whether dominant species were native or non-native. The OSMP Grassland Ecosystem Management Plan (2010) was used as a reference for defining the CU South plant communities. As shown in Table 2, four native communities were identified: Mixed Grass Prairie Mosaic, Native Riparian, Herbaceous Wetland, and Woody Wetland.[3] In addition, there were non-native communities labeled Non-Native Riparian, Non-Native Upland, and an "Other" category for development, large patches of bare ground, salt flats, and living fences.

[3] Note that ERO Resources (2013) report mapped jurisdictional wetlands in accordance with the 1987 U.S. Army Corps of Engineers Wetlands Delineation Manual . The plant community mapping conducted for this report was based on vegetation only and did not include evaluations of hydric soils or wetland hydrology. Moreover, the current mapping exercise was at a scale of ¼ acre minimum patch size. Thus, the wetlands presented in this report are not an update to the jurisdictional wetland mapping performed in 2013 nor are they intended for regulatory purposes.

Note: 2016 wetland plant community mapping is based on rapid assessment and did not include delineations for regulatory purposes.

0 500 1,000 Feet

Figure 7
Plant Communities of the Property
CU South

Table 2. Plant communities at CU South and observed dominant species

Plant Community	Plant Community Classification Criteria	Basis in OSMP Grassland Ecosystem Management Plan (2010)	Dominant Species Observed in 2016	Major Differences Between Expected and Observed Plant Community Characteristics	Acreage at CU South (% of plant comms.)
Native Riparian	Cottonwoods (plains, lanceleaf, narrowleaf) > 50%; box elder; shrubs, *e.g.*, snowberry, hawthorn, Woods' rose, plum, and grape; native herbaceous understories.	Riparian areas	Plains cottonwood most common, but frequently observed significant cover of Russian-olive. Peach-leaved willow and ash were also observed.	Plains cottonwood more prevalent than other native species. Native understory often not well-developed.	16 ac. (5%)
Herbaceous Wetland	Narrow-leafed cattail, bulrush, sedges, rushes, swamp bluegrass, milkweed, sedges, and grasses (foxtail barley, switchgrass, alkali muhly). Dominant species may include non-natives.	Wetlands (emergent and wet meadows)	Cattails most common site-wide. Also observed American threesquare, sedges, rushes, milkweed, and minor occurrences of teasel, sandbar willow and plains cottonwood saplings.	Extensive monocultures of cattail.	30 ac. (5%)
Woody Wetland	Sandbar willow, peach-leaved willow, leadplant, cattail, arctic rush. Could include minor tamarisk (non-native).	Wetlands (woody)	Native sandbar willow most common; often interspersed with cattail. Sedges, rushes, and occasional peach-leaved willow also observed.	Observations consistent with expectations (note no tamarisk found).	8 ac (3%)
Non-native upland (grassland)	Any of prairie types with >40% non-native pasture grasses, *e.g.*, smooth brome, orchardgrass, quackgrass, bluegrass, non-native wheatgrasses, upland weeds & forbs.	(none)	Dominant species observed were cheatgrass and alfalfa. Smooth brome, bindweed, and yellow salsify also very common, and western wheatgrass was observed.	Observations consistent with expectations.	233 ac (80%)
Non-native Riparian	Non-natives Russian-olive, crack willow	(none)	Russian-olive most common, but Siberian elm and crack willow dominant in some communities. Sandbar willow a frequent associate. Ash also observed.	Native associates were observed.	2 ac (1%)
Mixed Grass Prairie Mosaic	Native species relative cover >60%. Most prevalent native species to include western wheatgrass, blue grama, silver sage, Junegrass, buffalograss, snakeweed, scurfpea.	Mixedgrass Prairie Mosaic	Western wheatgrass, golden banner, yarrow, milkweed. Also Canada thistle.	Grasses not dominant, but rather co-dominant with forbs.	1 ac (<1 %)

High-resolution aerial photographs were used in the field to draw plant communities, and the polygons were then digitized using GIS. The smallest mapping unit for a polygon was approximately ~0.1 acre (~4,000 sq ft). Two or three dominant species were recorded for each polygon, "dominant" determined as covering at least 25% of area within the plant community.

Of the approximately 316 acres mapped at CU South, roughly 20% is comprised of native plant communities. Herbaceous wetland is the largest native plant community with most of these areas occurring in the southern part of the site and around the existing ponds and ditches. Descriptions of each of the plant communities are provided in the following subsections.

Native Riparian

Native riparian communities, comprising 16 acres (5%) of the survey area, are wooded areas with sufficient soil moisture to support trees and shrubs, and at CU South they are most commonly located near a water source such as a ditch or a wetland. Native riparian communities were observed forming a mosaic with the herbaceous wetlands in the southernmost leg of the property (Photograph 1), in the South Boulder Creek floodplain along the eastern boundary, and along the western terrace. Plains cottonwood (*Populus deltoides*) is the dominant species in all native riparian communities of the study area. The most commonly observed associate was non-native Russian-olive (*Elaeagnus angustifolia*). Ash (*Fraxinus pensylvanica*) and peach-leaved willow (*Salix amygdaloides*) are also typical.

Photograph 1. Mosaic of native riparian/herbaceous wetland communities in southernmost portion of CU South property. Native riparian patches are dominated by plains cottonwood.

Herbaceous Wetlands

Herbaceous wetlands cover 30 acres, or approximately 10%, of the survey area. The largest patches are located in the southernmost portion of the property, but they are also characteristic of the inner slope of the berm (Photograph 2) and occur sparsely around the ponds.

Photograph 2. Herbaceous wetland on the inside of the berm; photograph faces east-southeast. Dominant species in this patch are rushes, sedges, and cattail.

Cattail (*Typha* sp.) was the most common dominant species in the herbaceous wetlands, but we also observed both native and non-native rushes (*Juncus* sp.), sedges (*Carex* sp.), milkweed (*Asclepias* sp.), and American threesquare (*Schoenoplectus pungens*). Additionally, there were minor occurrences of teasel (*Dipsacus* sp.), sandbar willow (*Salix exigua*), and plains cottonwood saplings.

Woody wetlands

Woody wetlands comprise 8 acres (3%) of the survey area. Woody wetlands are found predominantly in the western portion of the property and typically abut native riparian communities.

Photograph 3. Woody wetland complexed with cattails on the west side of CU South. Photograph faces south.

Similar to other woody wetlands of the Boulder County area, the woody wetlands in the survey area are dominated by sandbar willow. Associates commonly include cattail, sedges, and rushes (Photograph 3). Peach-leaved willow was also observed.

Mixed Grass Prairie Mosaic

One patch of Mixed Grass Prairie Mosaic was observed at CU South, on the eastern boundary of the property. This patch was 0.9 acres and located between a patch of native riparian to the west and open space (beyond the property boundary) to the east.

In this sole native-dominated prairie patch observed at CU South, western wheatgrass (*Pascopyrum smithii*) is dominant, yet golden banner (*Thermopsis rhomboidea*), yarrow

(*Achillea* sp.), and milkweed were prevalent. Non-native Canada thistle (*Cirsium arvense*) was also noteworthy.

Non-Native Grassland

Non-native grassland comprises 233 acres (80%) of the property. The magnitude and features of this community reflect its history of disturbance including mining. Dominant species are cheatgrass (*Anisantha tectorum*) and alfalfa (*Medicago sativa*), and associates include bindweed (*Convolvulus arvensis*), yellow salsify (*Tragopogon dubius*), and smooth brome (*Bromopsis inermis*; Photograph 4). Patches of western wheatgrass were also observed.

Non-Native Riparian

Non-native riparian communities were relatively small at CU South covering only 2 acres (1% of survey area). These isolated patches occurred around one of the ponds in the northern portion of the site (Photograph 5), and along the eastern and western boundaries. Russian-olive was the typical dominant, but Siberian elm (*Ulmus pumila*) and crack willow (*Salix fragilis*) were dominant in some of these patches. Sandbar willow is a frequent associate and ash was also observed.

Photograph 5. Non-native riparian community around the shoreline of a pond in the northern portion of CU South. Non-native upland is in the foreground.

Open Water and Other

The remainder of the property consists of open water ponds (see previous water resources description), developed areas including tennis courts and roads, living fences (i.e., rows of non-native trees), and salt flats characterized by narrowleafe trefoil (*Lotus tenuis*). A waste pile of riprap and soil is also found in the southwest corner.

Photograph 4. Non-native grassland at CU South. Dominant species are cheatgrass and alfalfa. White tufts are yellow salsify.

Threatened Species' Habitat

On August 30, 2016, OSMP staff conducted a rapid assessment of CU South for potential habitat for Ute ladies'-tresses orchid (*Spiranthes diluvialis*), a threatened species, as well as actively growing individual *Spiranthes*. Potential habitat was observed primarily in areas that were classified as non-native upland but always adjacent to herbaceous and/or woody wetland Blue lobelia (*Lobelia siphilitica*), a common floral associate of Spiranthes, was also observed in onsite wetland. Due to the location of most wetlands on-site, the eastern and southern portions of the property were emphasized for the survey.

Figure 7 shows the areas identified as potential Ute ladies' tress orchid habitat at CU South based on OSMP's rapid assessment. Four individual *Spiranthes* plants were observed in association with a patch of herbaceous wetland adjacent to the berm close to the southeast edge. As shown on Figure 7, most of the potential habitat is identified in the eastern portion of the property, with additional patches located around the cattail wetlands in the southernmost "panhandle" as well as smaller areas adjacent to the ponds in the northern portion.

Note that this rapid assessment for *Spiranthes* habitat was not intended to meet the qualifications of a full survey for clearance from the Fish and Wildlife Service. For regulatory purpose, a more intensive survey prior to planning and development would be required. Similarly, careful surveys should be conducted for the Colorado butterfly plant (*Gaura neomexicana* ssp. *coloradensis*) prior to site development. The Colorado butterfly plant is also listed as threatened and its habitat requirements are similar to those of *Spiranthes*.

Wildlife Habitat

According to the Species Range Mapping for select mammals by Colorado Parks and Wildlife Department (CPW), most or all of the property is within the overall ranges of mule deer (*Odocoileus hemionus*), white-tailed deer (*Odocoileus virginianus*), bobcat (*Lynx rufus*), and mountain lion (*Puma concolor*), and contains potential Preble's meadow jumping mouse (*Zapus hudsonius preblei*) habitat. Figure 8a shows select ranges for bear and deer and Preble's. Detailed wildlife surveys have not been conducted on the CU South property; however, residents in the area report seeing abundant birds and wildlife such as coyote, fox, and small mammals (and even a moose recently). Other common urban wildlife including a variety of breeding grassland and wetland birds, fish, amphibians, and reptiles are known or are likely to occur on the property, particularly given its location adjacent to OSMP-protected areas and the types of plant communities found on-site.

City OSMP staff provided further input on wildlife habitat features to include in the suitability analysis. Figure 8b shows the designated conservation areas for the Preble's meadow jumping mouse used by OSMP. In August 2016, OSMP staff conducted a high-level rapid survey of aquatic, wetland, and grassland areas to ascertain the presence of suitable habitat for breeding birds, Ute ladies'-tresses orchid, native fish, amphibians, and reptiles. Site observations included:

- Open water habitat provided habitat for native amphibians and reptiles. A single snapping turtle was observed in one pond and woodhouse toad tadpoles in another (the pond close to the tennis courts). OSMP notes from prior knowledge that native western chorus frog and woodhouse toad populations breed in the ditch on the western boundary (northern portion) as well as the herbaceous wetland communities south of the tennis courts.

  The shallow depth of the lakes is a primary factor of their general low quality for wildlife as indicated by algal blooms and prevalence of non-native species such as bullfrog,

Legend

- Black Bear Fall Concentration
- Black Bear Human Conflict Area
- Mule Deer Highway Crossing
- Mule Deer Concentration Area
- White-tailed Deer Concentration Area
- CUSouth_Boundary
- Creeks and Ditches
- HIGHWAYS

The entire site is within the overall habitat ranges for black bear, black-tailed prairie dog, mountain lion, whilte-tailed deer, mule deer (also summer and winter range),Preble's meadow jumping bouse, reptiles and white tailed deer.

0 500 1,000 Feet

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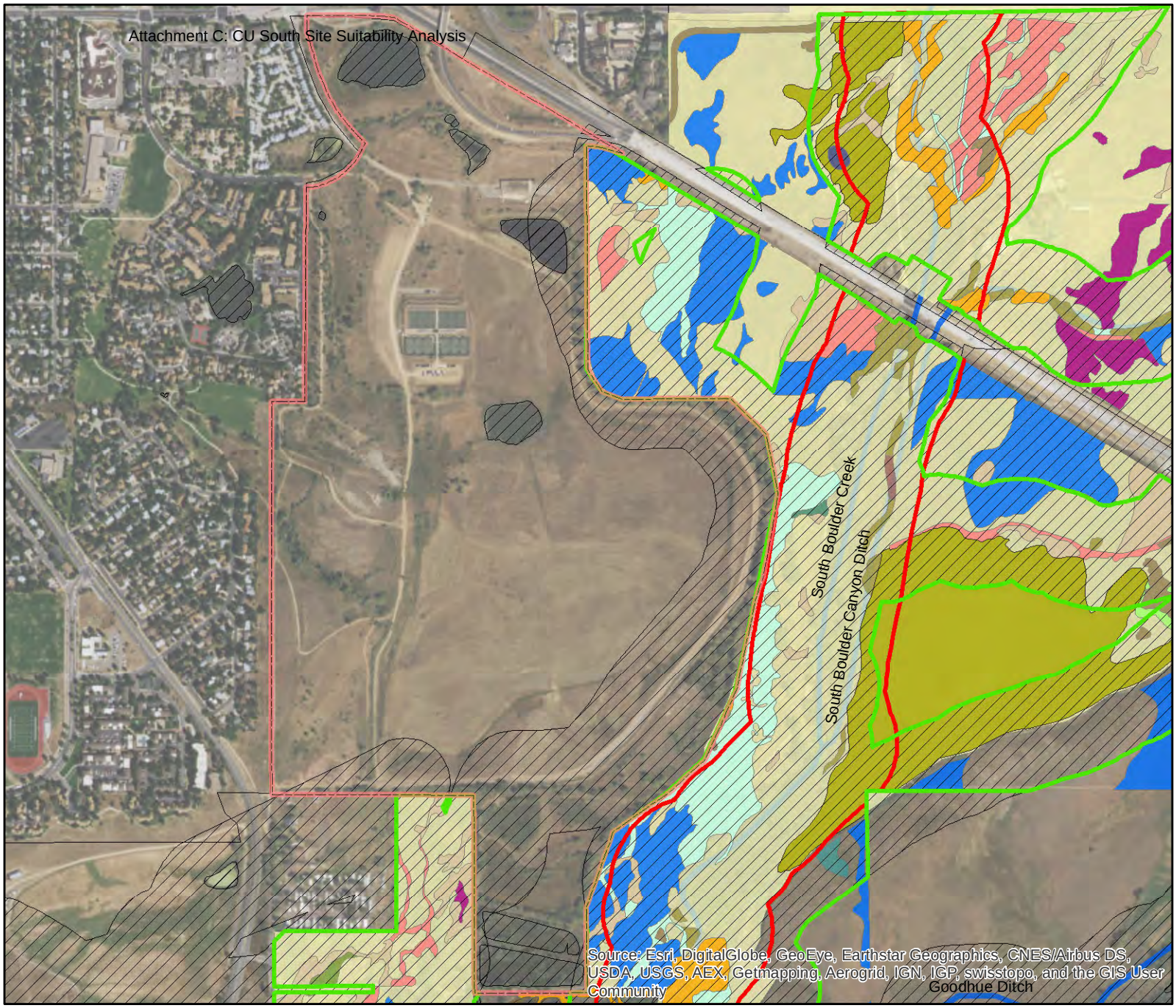
Figure 8a
Select Wildlife Ranges (regional data)
CU Property
Source :Colorado Parks and Wildlife



Legend

- CUSouth_Boundary
- South Boulder Creek State Natural Area
- Prebles Conservation Zones
- Prebles Critical Habitat
- Prebles Conservation Zones regional

OSMP_TrackedVegAssociations_S1_S3

Associations

- American Mannagrass Herbaceous Vegetation
- Big Bluestem - Prairie Dropseed Western Foothills Herbaceous Vegetation
- Big Bluestem - Yellow Indiangrass Western Great Plains Herbaceous Vegetation
- Big Bluestem Colorado Front Range Xeric Tallgrass Herbaceous Vegetation
- Clustered Field Sedge Herbaceous Vegetation
- Eastern Cottonwood - (Peachleaf Willow) / (Coyote Willow, Sandbar Willow) Woodland
- Nebraska Sedge Herbaceous Vegetation
- Prairie Cordgrass Herbaceous Vegetation
- Threesquare Wet Meadow Herbaceous Vegetation
- Woolly Sedge Herbaceous Vegetation

CNHP_TrackedVegAssociations_S1_S5

Associations

- (Broadleaf / Narrowleaf) Cattail Western Herbaceous Vegetation
- American Mannagrass Herbaceous Vegetation
- Big Bluestem - Prairie Dropseed Western Foothills Herbaceous Vegetation
- Big Bluestem - Yellow Indiangrass Western Great Plains Herbaceous Vegetation
- Clustered Field Sedge Herbaceous Vegetation
- Coyote Willow / Mesic Graminoids Shrubland
- Eastern Cottonwood - (Peachleaf Willow) / (Coyote Willow, Sandbar Willow) Woodland
- Marsh Spikerush Herbaceous Vegetation
- Narrowleaf Cottonwood / Coyote Willow Woodland
- Nebraska Sedge Herbaceous Vegetation
- Prairie Cordgrass Herbaceous Vegetation
- Threesquare Wet Meadow Herbaceous Vegetation
- Western Wheatgrass - Blue Grama Herbaceous Vegetation
- Woolly Sedge Herbaceous Vegetation

0 500 1,000 Feet

Jan. 31, 2017 Staff Recommendation

Note:Local Preble's data shown here provided by city was used in suitability analysis.

N

Figure 8b
Habitat Connectivity Considerations
CU Property

which were present in multiple locations, in large numbers, and with a diverse age structure. Such robust bullfrog populations would likely prevent the success of native frogs in those areas.

- Potential for the northern leopard frog (*Rana pipiens*), a species of concern, to breed within the CU South property would be highest in years of high water. Such conditions would create open water on the edges of ponds and wetlands, where larvae are deposited. The current year (2016) did not foster these conditions. More intensive surveys may be needed to confirm their presence on the CU South property.
- South Boulder Creek is a known corridor for northern leopard frog migration, and adjacent OSMP property to the south (Fancher Ponds) has supported northern leopard frog breeding for the past four years. Thus, the proximity of the CU South property to known northern leopard frog habitat increases the likelihood of CU South being used for some behaviors and/or life stages.
- Over 100 bird species have been observed at CU South since 2011, over half of which were confirmed to be breeding (a comprehensive list is attached as Table A-2). Many of these, including the American kestrel, western meadowlark, common nighthawk, dickcissel, horned lark, lark sparrow, loggerhead shrike, vesper sparrow, grasshopper sparrow, and blue grosbeak, are included in OSMP's grassland conservation targets. These observations indicate that the available habitat at CU South is of sufficient size and condition to support a diverse assemblage of native species. A subset of examples is:
  - Dickcissel is a sensitive breeding bird whose presence indicates breeding habitat (OSMP 2010).
  - Blue grosbeak indicates breeding habitat effectiveness and diversity (OSMP 2010).
  - Horned lark is a common prairie dog associate whose presence indicates prey (i.e., insect and seed) availability (OSMP 2010).

The above examples focus on grassland species as a basis for including grassland in the suitability analysis. Numerous wetland bird species have also been observed at CU South, but are not discussed in detail here as their habitat was incorporated into the GIS suitability analysis and was already valued as high-quality for the purposes of the assessment.

Habitat Connectivity

As noted previously, sensitive plant and animal habitat areas have been identified on the protected OSMP lands to the east and south of the property by both the Colorado Natural Heritage Program (CNHP), the Colorado State Natural Areas Program, and OSMP. On the adjacent OSMP property, OSMP has identified ecologically significant wetlands as well as habitat for sensitive species including Preble's meadow jumping mouse (*Zapus hudsonius preblei*), Ute ladies' tresses orchid (*Spiranthes diluvialis*), northern leopard frog (*Rana pipiens*), bobolink (*Dolichonyx oryzivorus*), plains topminnow (*Fundulus sciadicus*), and orangespotted sunfish (*Lepomis humilis*).

Preble's meadow jumping mouse and Ute ladies'-tresses orchid are federally threatened under the Endangered Species Act, and the northern leopard frog is considered a Tier 1 species (i.e., of greatest conservation need) by Colorado Parks and Wildlife. In addition, these OSMP properties support the majority of the city's mesic tallgrass prairie, a globally threatened plant community.

Figure 8b shows the designated conservation areas for the Preble's meadow jumping mouse along with the plant communities that are tracked by CNHP and OSMP. Preble's was positively located within ca. 300 meters of the property as recently as 2014. Preble's meadow jumping mouse (Preble's) habitat is a riparian ecosystem characterized by a high cover of shrubs, grasses, and forbs, and adjacent uplands that are used for foraging and hibernation. Typical habitat is found in the foothills of the Front Range ranging from southeastern Wyoming to Colorado Springs. Preble's is primarily nocturnal and a true hibernator, entering hibernation in early fall (Sept-Oct) and emerging in May. Its diet, comprised of insects, seeds, fungus, moss, pollen, and fruit, changes seasonally according to the availabilities of different foods.

For larger mammals and birds, the proximity of the property to adjacent OSMP land provides important habitat connectivity opportunities to the east and south. A potential linkage was noted by one resident who suggested the property serves as a potential connector for the southeast portion of the City between the foothills to South Boulder Creek and the Baseline Reservoir.

3.2 Conservation Suitability Mapping

The preliminary results of the weighted-sum GIS conservation suitability (sensitivity) analysis (described in Section 2.2) are presented in Figure 9. Darker areas reflect a higher number of good quality attributes for conservation. Lighter areas suggest areas that may be better suited for potential restoration, mitigation, or development compatibility. The mapping suggests that the eastern perimeter and southern wetlands have the largest contiguous, higher ranked areas of sensitivity to disturbance or development. The water resources and the wetlands, as well as a mosaic area in the northwest, also are higher value areas based on the GIS analysis. The central portion of the property and western edge have lower rankings for conservation values as indicated by their lighter color.

3.3 Secondary Considerations

Secondary suitability criteria were evaluated including landscape character views and potential habitat connectivity.

Habitat connectivity to adjoining properties
Figure 10 is a sketch depicting connectivity potential between the CU South property and nearby areas containing native plant associations and Preble's meadow jumping mouse habitat. Connectivity potential was based generally on proximity, potential for seed dispersal, and wildlife usage. As indicated in the figure, the highest potential areas for connectivity are to the south and east of the CU property where OSMP-protected areas adjoin the property.

Landscape character viewshed features
Figure 11 presents a conceptual sketch of photopoint values, depicting the areas of the site with view features based on the assessment detailed in Section 2.3 above (further detail in Table A-1, attached). The outline of the point and the color reflect an initial value of key landscape characteristics at these points. This is a preliminary exercise which may need refinement once stakeholder input is gathered.

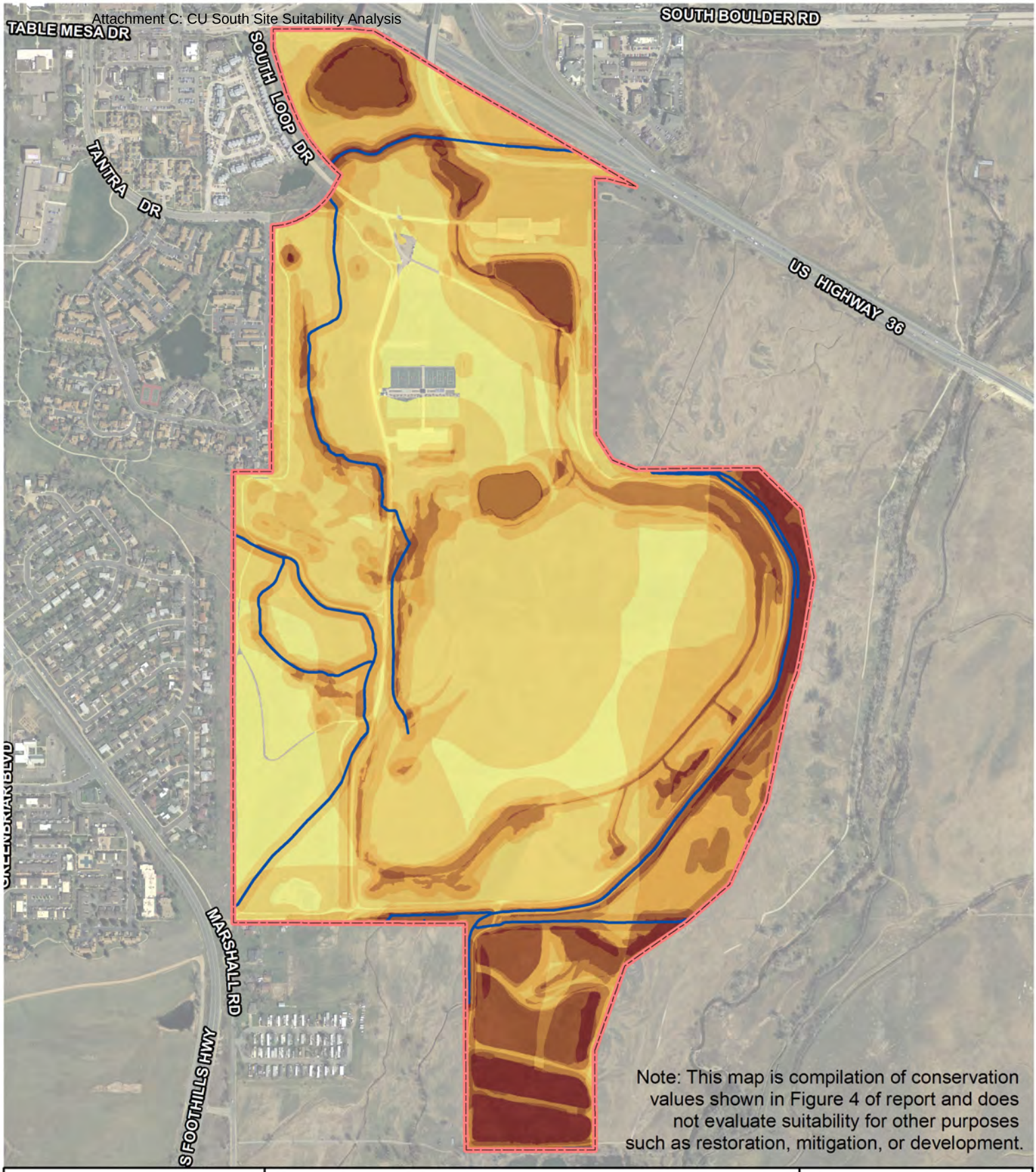


Figure 9
Site Conservation Suitability Analysis
CU South

Legend

- CU South Boundary
- Streams
- Street_Centerlines

Suitability Rating

Score

High : 10 Note: High=greater conservation value, and Low=less conservation value

Low : 1

0 400 800 Feet

N

Biohabitats
SOUTHERN ROCKY MOUNTAIN BIOREGION

November 2016

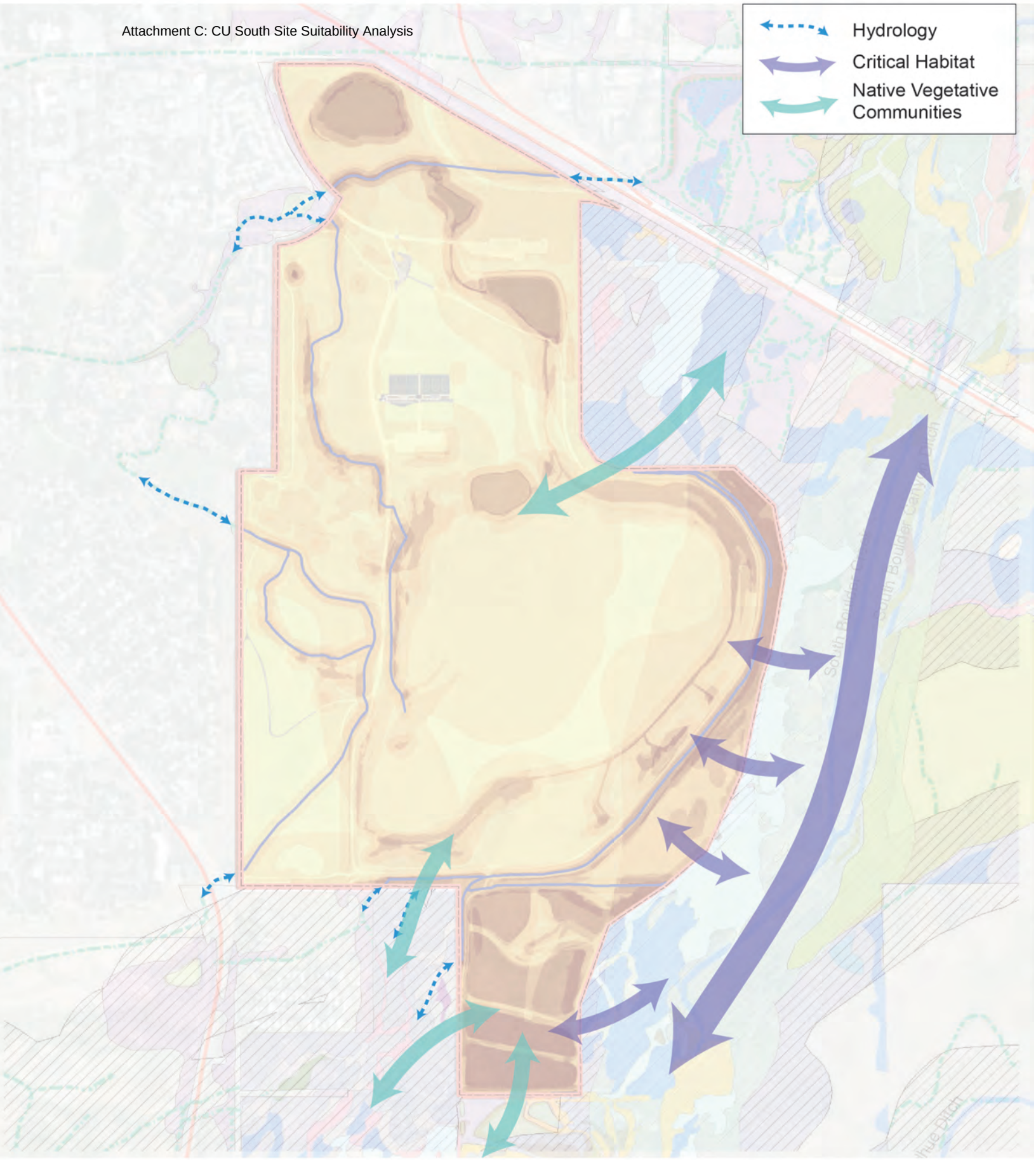


Figure 10
Connectivity: Critical Habitat, Native Vegetative Communities, & Hydrology
November 2016
CU Property

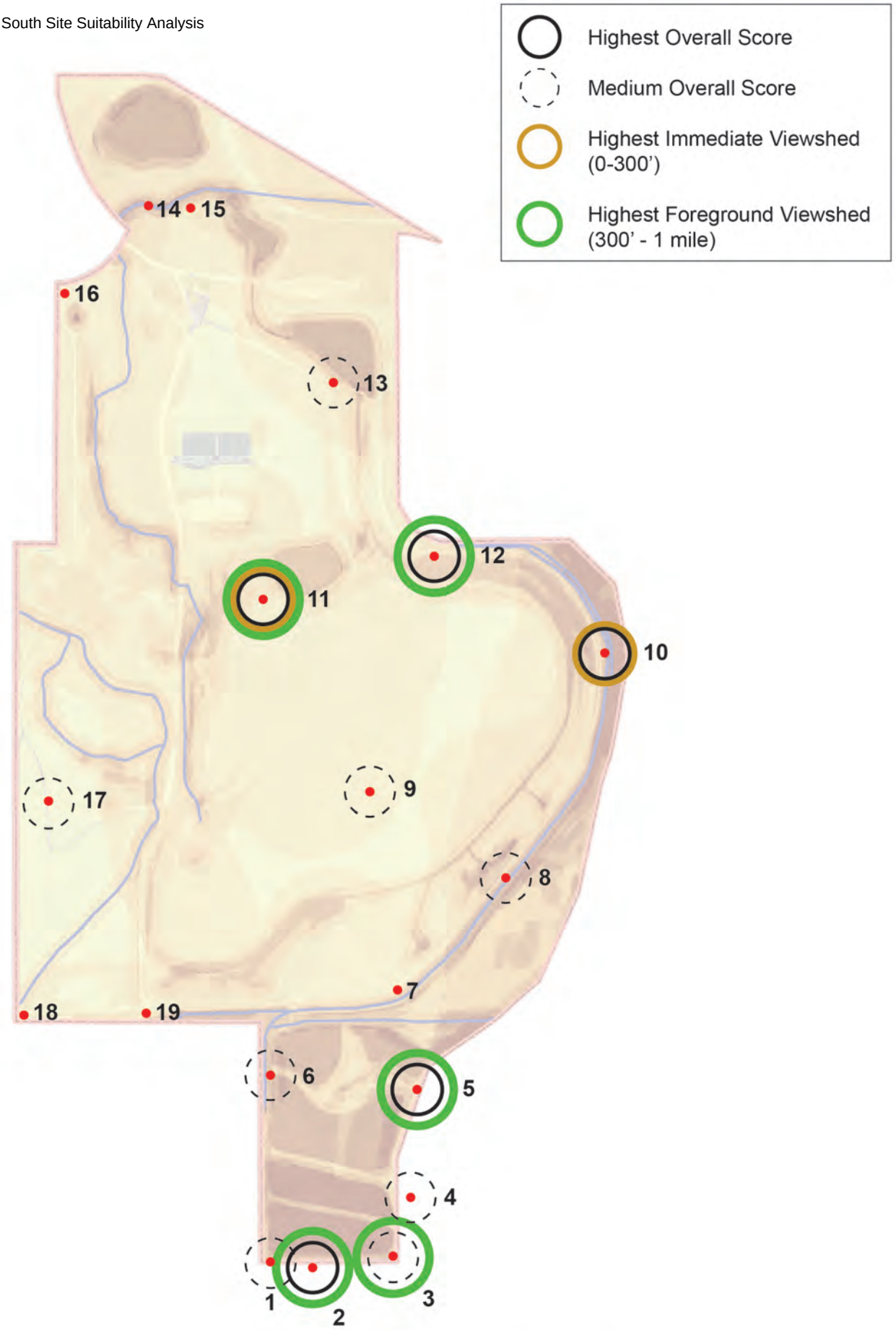


Figure 11
Preliminary Viewshed Analysis
November 2016
CU Property

4 Next steps

The following potential action items are suggested as next steps to refine and finalize this conservation suitability analysis and incorporate the findings into the decision-making process.

Collect and Synthesize Stakeholder Comments
The public and city and Boulder County boards and commissions will have opportunities to review and comment in September. Additionally, city and CU staff may have additional comments and questions for consideration in future analyses.

Revise Conservation Suitability Mapping
Depending on the nature of design alternatives and input from outreach efforts, it may be desirable to re-run the GIS analysis to adjust certain inputs and compare to the original output. For example, adding new criteria such as the potential for wetland mitigation or restoration potential could be useful. Additionally, the current qualitative analyses of habitat connectivity could be made quantitative, for example, by incorporating a layer showing buffers around tracked plant community resources found on adjoining properties (monitored by the Colorado Natural Heritage Program and OSMP). Finally, additional qualitative analyses based on viewsheds may be developed based on stakeholder input.

Integrate Comments and Additional Suitability Analyses for Transportation and Services
Environmental considerations for conservation are only a subset of the issues that the city and CU are evaluating. Other suitability analyses of transportation and city services are being conducted separately.

Collaborate with Flood Control Design Process
The current analysis of the property allows the quantification of acres of the site with various ranking values (1-8) to be tallied. By overlaying the proposed floodplain mitigation features (berm, fill, detention basin), it would be possible to quantify the areas of various ranked areas that will be impacted. Similarly, as the design engineers consider variations of the layout, it will be possible to compare the impacts to select a layout that maintains the most ecological function.

Inform Land Use Changes and Agreements
As noted in the introduction of this report, while the BVCP was updated multiple times between 200-2015, land use designations of CU South did not change during either of those updates. The BVCP is currently being updated and land use designations of the parcel are expected to change in part to accommodate the mitigation for South Boulder Creek flood earthwork on the site and to address CU's long term planning needs and other community goals. This update will be done with input from the City of Boulder, CU, and the public to determine the most appropriate updates to land use designations, and this suitability study can help inform agreements between the city and CU about future development and conservation of the site.

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Attachments

Table A-1. List of viewshed features

Immediate View (0-300')	Foreground View (300'-1 mi)	Middle Ground (1-4 mi)	Background (4 mi-horizon)
• Sounds of water • View in shady spot across open sunny area • Accessibility over wetland, e.g., boardwalk crossing • No dirt road visible	• Mixed grassland with shrubs • Two-track road/trail • Native plants/meadow fields • Diverse plant palette • Rural/agricultural fields • Trees line long views • Mature trees • Unimpeded view across open water • Unimpeded view across wetland/seep	• Some distant views visible	• Mountains partially visible on horizon • Unimpeded view of mountains • Wide Views

Table A-2. Bird species observed on the CU South property, 2011-2016.

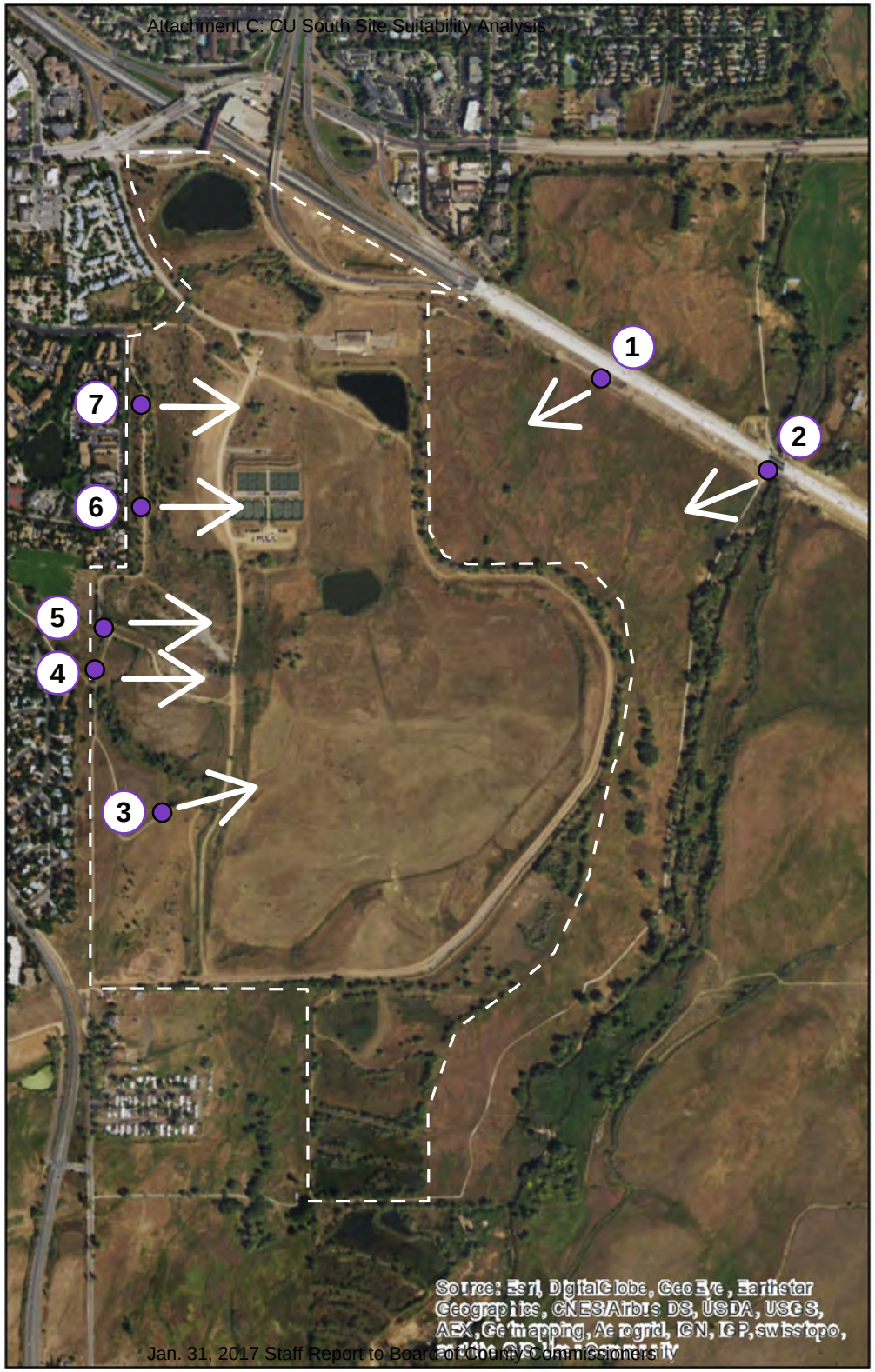
	Status				Habitat Associate			Where observed							
Species	**Resident Breeder**	**Migrant**	**Neotropical Migrant**	**Generalist**	**Wetland**	**Grassland**	**Riparian**	**N. Ponds**	**Non-Native Grassland (N)**	**Non-Native Grassland (S)**	**W. Mosaic**	**Inner Perimeter**	**Outer Perimeter**	**S. Wetlands**	**Status Notes**
American Bittern	X	X			X									X	The Southern Wetlands cattail marshes are a well-known location for American Bitterns if the water level is appropriate
American Crow				X											
American Goldfinch	X			X			X	X	X	X	X	X	X	X	
American Kestrel	X	X				X	X	X	X	X	X	X	X	X	
American Pipit		X													
American Robin	X			X			X	X	X	X	X	X	X	X	
American White Pelican		X													
American Wigeon		X			X			X							
Bank Swallow		X	X		X										
Barn Swallow	X	X	X	X	X	X		X	X	X	X	X	X	X	
Belted Kingfisher					X			X							
Black-billed Magpie	X			X											
Black-capped Chickadee	X			X			X				X	X	X	X	
Black-chinned Hummingbird	X	X	X				X				X	X	X	X	
Black-throated Sparrow		X							X						One sighting 4-22-11
Blue Grosbeak	X	X	X			X			X	X	X	X	X		
Blue Jay	X			X			X				X		X		
Blue-gray Gnatcatcher		X	X				X				X				
Brewer's Sparrow		X				X				X	X				
Broad-tailed Hummingbird		X	X								X				
Brown-headed Cowbird	X	X		X							X		X		
Bufflehead		X			X			X							

	Status				Habitat Associate			Where observed							
Species	**Resident Breeder**	**Migrant**	**Neotropical Migrant**	**Generalist**	**Wetland**	**Grassland**	**Riparian**	**N. Ponds**	**Non-Native Grassland (N)**	**Non-Native Grassland (S)**	**W. Mosaic**	**Inner Perimeter**	**Outer Perimeter**	**S. Wetlands**	**Status Notes**
Bullock's Oriole	X	X	X		X		X	X			X		X	X	
Canada Goose	X	X		X	X			X							
Cassin's Kingbird		X	X							X					
Cedar Waxwing	X	X					X				X		X	X	
Chipping Sparrow		X		X					X	X	X		X		
Cliff Swallow		X		X					X	X	X				
Common Grackle	X	X		X				X	X	X	X	X	X	X	
Common Nighthawk	X	X	X			X			X	X			X		
Common Raven				X											
Common Yellowthroat	X	X	X		X							X	X	X	nest in cattail stands in ditches and ponds
Cooper's Hawk				X			X			X	X		X		
Dark-eyed Junco		X		X				X	X	X	X				
Dickcissel	X	X	X			X				X		X			several singing males in the area in 2012
Downy Woodpecker	X			X							X		X		
Eastern Kingbird	X	X	X					X	X			X	X		
Eurasian Collared-Dove	X			X											
European Starling	X			X											
Gadwall		X			X			X							
Grasshopper Sparrow	X	X	X			X				X					singing males in the southern grassland one summer
Gray Catbird		X	X				X				X				
Gray Flycatcher		X	X								X				one individual in April 2011
Great Blue Heron		X			X			X							
Greater Yellowlegs		X	X		X			X							
Green-tailed Towhee		X	X								X				

	Status				Habitat Associate			Where observed							
Species	**Resident Breeder**	**Migrant**	**Neotropical Migrant**	**Generalist**	**Wetland**	**Grassland**	**Riparian**	**N. Ponds**	**Non-Native Grassland (N)**	**Non-Native Grassland (S)**	**W. Mosaic**	**Inner Perimeter**	**Outer Perimeter**	**S. Wetlands**	**Status Notes**
Harris's Sparrow		X									X				
Hermit Thrush		X	X										X		
Horned Lark		X				X				X					
House Finch	X			X				X	X	X	X	X	X		
House Sparrow	X			X											
House Wren	X	X	X								X		X		
Killdeer	X	X	X		X			X	X	X					
Lark Sparrow	X	X				X			X	X	X				
Lazuli Bunting		X	X									X	X		
Least Flycatcher		X	X								X				
Lesser Goldfinch	X	X	X	X				X	X	X	X		X	X	
Lesser Yellowlegs		X	X		X			X							
Lincoln's Sparrow		X	X								X	X	X	X	
Loggerhead Shrike		X				X				X					
Mallard	X	X			X			X							
Merlin		X									X				
Mountain Bluebird		X							X	X					
Mountain Chickadee		X									X				
Mourning Dove	X	X		X				X	X	X	X	X	X	X	
Northern Flicker	X			X				X			X		X		
Northern Rough-winged Swallow															
Northern Shrike		X									X				
Orange-crowned Warbler		X									X				
Osprey		X						X							

	Status				Habitat Associate			Where observed							
Species	**Resident Breeder**	**Migrant**	**Neotropical Migrant**	**Generalist**	**Wetland**	**Grassland**	**Riparian**	**N. Ponds**	**Non-Native Grassland (N)**	**Non-Native Grassland (S)**	**W. Mosaic**	**Inner Perimeter**	**Outer Perimeter**	**S. Wetlands**	**Status Notes**
Red-tailed Hawk	X	X		X			X	X	X	X	X		X		
Red-winged Blackbird	X	X			X			X			X			X	
Ring-billed Gull		X						X							
Ring-necked Duck		X			X			X							
Rock Pigeon	X			X											
Ruby-crowned Kinglet		X									X				
Savannah Sparrow	X	X	X			X		X		X		X	X	X	
Say's Phoebe	X	X	X					X	X	X	X				
Sharp-shinned Hawk		X									X				
Solitary Sandpiper		X			X			X							
Song Sparrow	X	X			X			X		X	X	X		X	
Sora	X	X			X									X	
Spotted Towhee		X									X				
Swainson's Thrush		X	X										X		
Tree Swallow		X	X					X							
Turkey Vulture		X	X						X	X					
Vesper Sparrow	X	X				X		X	X	X	X	X	X		
Virginia Rail	X	X			X									X	
Warbling Vireo	X	X	X				X						X	X	
Western Kingbird	X	X	X					X	X	X	X	X	X	X	
Western Meadowlark	X	X				X			X	X		X			
Western Tanager		X	X								X		X		
Western Wood-Pewee		X	X								X		X		
White-breasted Nuthatch	X						X				X		X		

	Status				Habitat Associate			Where observed							
Species	**Resident Breeder**	**Migrant**	**Neotropical Migrant**	**Generalist**	**Wetland**	**Grassland**	**Riparian**	**N. Ponds**	**Non-Native Grassland (N)**	**Non-Native Grassland (S)**	**W. Mosaic**	**Inner Perimeter**	**Outer Perimeter**	**S. Wetlands**	**Status Notes**
White-crowned Sparrow		X									X				
White-throated Swift		X							X	X					
Wilson's Snipe	X	X			X			X			X	X		X	
Wilson's Warbler		X	X								X				
Wood Duck		X			X			X							
Yellow Warbler	X	X	X				X				X		X	X	
Yellow-rumped Warbler		X	X					X			X		X		



CU South
Landscape character viewsheds

High Value

1.

2.

3.

Mid Value

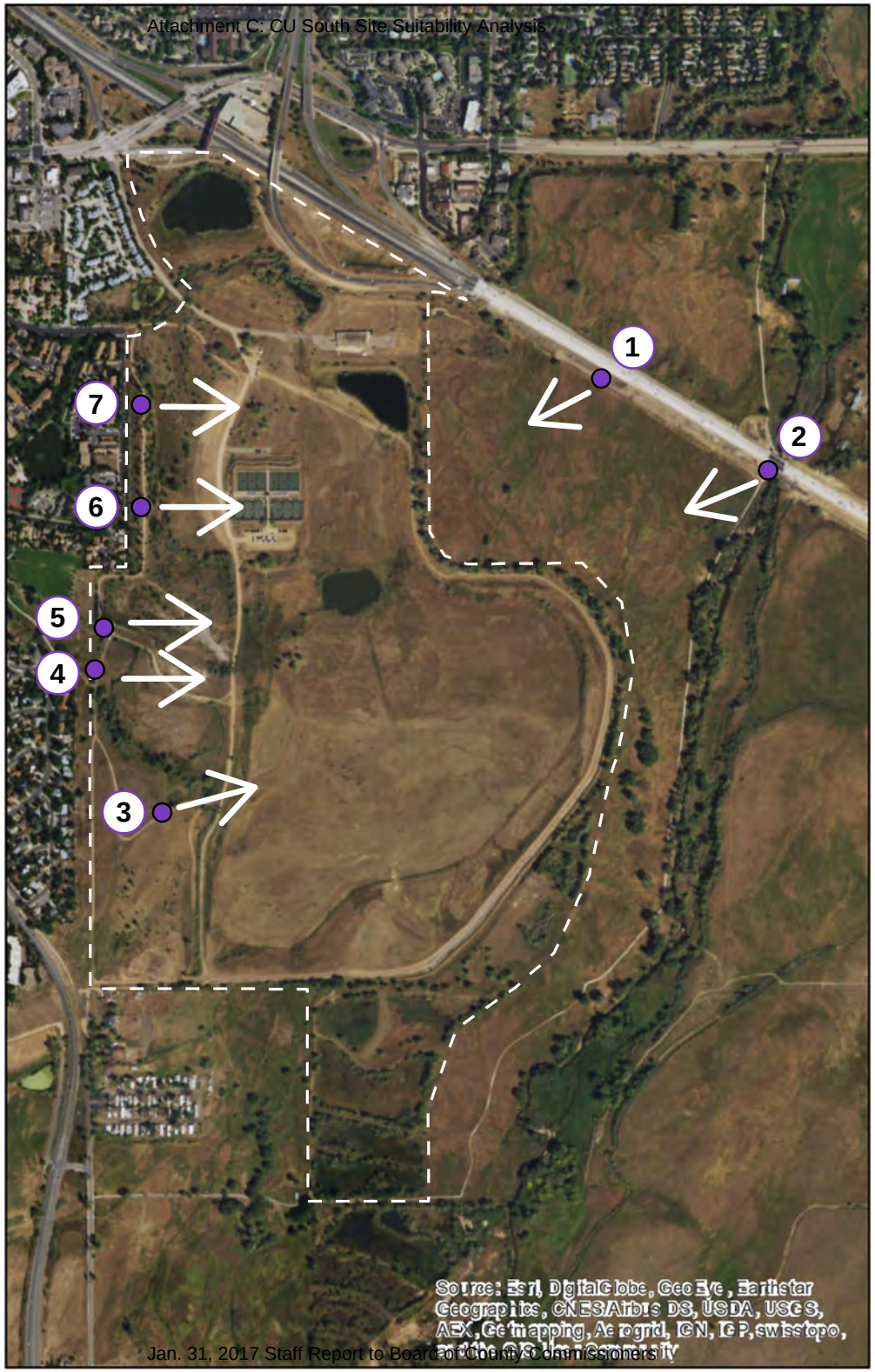
4.

5.

Low Value

6.

7.



CU South
Landscape character viewsheds

Viewpoints from US 36

1.

2.

Majority of the foreground that's visible from US 36 is city-owned open space. The CU South property is located behind the tree line which outlines the property boundary. The residential neighborhood directly west of the site is partially visible from US 36, and is located approximately .6 miles away and elevated 100 ft. higher. Currently, the view of CU South is screened by the existing tree line, as shown in the picture above.

Viewpoint from the western edge

4.

5.

The quality of the views from the western edge of the site are consistent with one another. Wider views and exposure to open space is found on the most elevated parts of the site, located south-east of Tantra Park.

FOX TUTTLE HERNANDEZ
TRANSPORTATION GROUP

MEMORANDUM

To: Lesli Ellis

From: Bill Fox, PE

Date: September 12, 2016

Project: CU South Site Suitability Analysis - Transportation

Subject: **Multi-modal Access Opportunities and Constraints - DRAFT**

Multi-modal accessibility is an important consideration when evaluating future land uses on the CU South parcel as part of the Boulder Valley Comprehensive Plan Update process. The ability to efficiently access the 316-acre parcel at the southeastern edge of the City of Boulder will help determine appropriate land use type, intensity and location within the property. Figure 1 includes an aerial view of the entire CU South site.

In this context, the Fox Tuttle Hernandez Transportation Group has completed an initial review of multi-modal access potential for the CU South property. In making this review we have:

- Reviewed the site and surrounding land uses;
- Conducted a site inspection of existing roadways, bikeways, and pathways that currently access the site;
- Identified potential for additional roadway, bikeway, and pathway access around the perimeter of the site;
- Reviewed the multi-modal facility plans contained in the City of Boulder's Transportation Master Plan, with a focus on the CU South property;
- Reviewed the US 36 Environmental Impact Statement, with a focus on the Table Mesa Drive/US 36 interchange alternatives that, when implemented, will affect access to the CU parcel;
- Met with City of Boulder Transportation Division staff to review site access issues; and
- Prepared a set of transportation opportunity and constraint sketches on aerial photo base maps.

P.O. BOX 19768, BOULDER, COLORADO 80308-2768
PHONE: 303.652.3571 | WWW.FTHTRANSGROUP.COM

The results of this multi-modal access evaluation are summarized by topic as follows:

Existing and Potential Roadway Access:

S. Loop Drive

Currently, the only paved roadway access to the CU South property is provided by S. Loop Drive. It accesses the site from the Table Mesa Drive/S. Loop Drive/US36 Eastbound Ramp intersection. This 5-leg signalized intersection is included on **Figure 3** and illustrated in the attached **Photos 1 and 2**. S. Loop Drive is a narrow 2-lane roadway that extends approximately 1/3 mile into the property before terminating at a gravel parking area and an old industrial building **(Photos 3 and 4)**. The parking area serves as access to 12 tennis courts and a gravel trail that loops through the property.

In the future, S. Loop Drive should continue as the primary vehicular access to the CU South property. As the area develops, the roadway should be reconstructed as a "complete street" with multi-modal facilities to accommodate bus, bicycle, pedestrian, and automobile traffic. It is recommended that the northern end of S. Loop Drive be incorporated into a "mobility hub" that connects all modes of travel and provides efficient circulation for RTD and CU buses, with bus, pedestrian and bicycle connectivity to the transit station along US 36 (see discussion below related to the potential US 36 interchange reconfiguration that was identified in the US 36 EIS). The future configuration of the Table Mesa Drive/Loop Drive/US 36 Ramp intersection and adjacent interchange will need to be carefully considered so as to provide safe and efficient access to CU South.

The extent of future storm water detention upstream of US 36 that is implemented will also have a significant impact on the land uses and access roadways in this northwest end of the CU South site. See the discussion below on this topic.

Tantra Drive

Tantra Drive is a 50-foot wide 2-lane street with on-street parking that extends from Table Mesa Drive south and then east to the western edge of the CU property **(see Figure 3, and Photos 5 and 6)**. It currently carries less than 4,000 vehicle trips per day just south of Table Mesa Drive. It provides access to the commercial area south of Table Mesa Drive, abuts the Summit Middle School property where there is a pick-up and drop-off zone, and then provides access to multi-family residential housing. The eastern terminus of Tantra Drive was constructed as if it were intended extend east into the CU site.

The easterly extension of Tantra Drive into the CU property would make a logical secondary roadway access to CU South. Tantra Drive has a cross-section that can comfortably accommodate additional automobile traffic, and it connects to Table Mesa Drive at a signalized intersection.

However, speed mitigation through the school access area will be important, and the adjacent residents along Tantra Drive will likely object to the additional traffic.

Moorhead Circle

At the eastern end of Tantra Drive there is a 90 degree "T" intersection with Moorhead Circle, which extends south along the western edge of the CU property **(see Figures 3 and 4)**. There is multi-family housing along the west edge of Moorhead Circle, and a raised, vegetated berm on the CU property along the east edge of the roadway **(see Photo 8).** Moorhead Circle is 32 feet wide with on-street parking along both sides.

While it would be physically possible to construct a roadway connection from the CU site directly onto Moorhead Circle, the narrow width and residential character on this area would make any new roadway connection undesirable.

Marshall Road

Marshall Road is a narrow paved 2-lane road in Boulder County that parallels CO 93 south of the CU property **(see Figure 5)**. The northern terminus of Marshall Road is located at the southwest corner of the CU site, where it reaches the Boulder city limits **(see Photo 11).** There is a short connection (approximately 140 feet) between Marshall Road and CO 93, located approximately 700 feet south of the northern end of Marshall Road **(see Photo 12).**

While Marshall Road does nearly connect to the CU property, it is not recommended as a future extension into the site as the property develops due to the narrow width, the adjacent residential properties in Boulder County, and the substandard spacing between Marshall Road and CO 93.

Southwestern Access Onto CO 93 (Broadway)

The only other existing vehicular access to the CU property is located at the extreme southwestern corner of the site where there is a dirt roadway that extends east from the northern terminus of Marshall Road and runs along the south edge of the property **(see Photo 10)**. It is not clear if this dirt roadway is on or off of the CU site, but eventually it does connect to the looping gravel roadway (cross-country course) within the CU property.

In the future, there is the potential to extend a new roadway access from the CU property and connect directly onto CO 93 (Broadway) as illustrated on **Figure 5**. CDOT has classified CO 93 as a non-rural arterial (NR-A), and the State Highway Access Code defines the geometric access requirements based on access category. A new roadway connection to CO 93 in this location would require a State Highway Access Permit, and it would also likely require a number of variances from Access Code geometric requirements related to intersection spacing and the design of auxiliary turn lanes, etc. A new access in this location would also need to be designed to overcome the existing topography that slopes downward to the east of the highway.

The amount of traffic that would utilize this new roadway connection will depend on the magnitude and placement of new land uses within CU South. The amount of future traffic using this access will determine the necessary intersection configuration and traffic control (stop sign or signal for example). That said, it is recommended that any internal roadway connection or connections between this new access at the south end of the property, and the Loop Drive access at the north end of the property, be constructed in a circuitous or non-direct alignment to discourage any outside traffic from cutting through the CU South property to avoid the Table Mesa Drive/Broadway connection.

Existing and Potential Bikeway and Pathway Access:

There are a number of gravel or dirt pathways that exist on, around, and through the CU South parcel as illustrated on **Figure 1**. A number of "social path" connections have been created between the CU site and the adjacent residential neighborhoods to the west **(see Photos 7 and 9).** The site also fronts on the US 36 Bikeway to the north, the Broadway path to the southwest **(see Photo 11),** and nearly reaches the South Boulder Creek Trail to the east.

In this context the CU property has excellent pathway and trail access, but there is room for improvement. **Figure 2** is a portion of the City's Bicycle System Plan from the Transportation Plan, and it illustrates a number of pathway connections that have been identified. **Figures 3 – 5** provide a more detailed look at trail connections that could be enhanced to become multi-use paths, and a number of new connections to adjacent neighborhoods and pathways as the site is developed. These connections will help support bicycle and pedestrian access to and through the site, and also provide access to the transit network as it evolves.

Existing and Potential Transit Access:

Existing local and regional RTD buses pass through the adjacent bus stops along Table Mesa Drive and US 36 in close proximity to CU South, including the 206, 209, DASH, AB, and Flatiron Flyer routes. Eventually, as the property develops, there will likely be CU bus service to the site. The challenge will be coordinating the design of the CU site in the Mobility Hub area as it develops, in concert with future modifications to the adjacent US 36 interchange and its ramps, to accommodate the circulation of buses and the connectivity between bus routes to maximize bus transit service to the CU South parcel.

It is anticipated that the design of the internal multi-modal grid within the CU property will facilitate CU and/or local RTD bus circulation as appropriate given land uses and development intensity.

Potential Future Reconfiguration of the Adjacent US 36 Interchange:

The US 36 Environmental Impact Statement (EIS) considered alternatives for reconstructing the US 36/Table Mesa Drive/Foothills Parkway interchange. The Combined Alternative Package (Preferred Alternative) of the EIS describes two interchange reconfiguration "options" that provided distinctly different access to the CU South parcel **(see Figure 6)**. The "Local Streets Option" would close the intersection of Table Mesa Drive and Loop Drive, and access to CU South would be provided by an extension of Tantra Drive into the CU site. The other option would maintain the intersection of Loop Drive onto Table Mesa Drive. These two options would have distinctly different impacts on the accessibility of the CU site and on the adjacent neighborhood as well.

Ultimately, *Section Four, Interchange Design Concepts, Impacts, and Mitigation* of the EIS references a subsequent agreement that was made between CDOT, the University of Colorado, the City of Boulder, and Boulder County that the preferred interchange design at this location will retain the existing intersection of Loop Drive and Table Mesa Drive to provide access to the CU South parcel. That said, the Preferred Alternative would still impact the configuration of the interchange ramps in the area and the relationship between the US 36 ramps, the transit stops along US 36 in this area, and the routes that buses would need to take to access the transit stations.

Figure 6 illustrates the Preferred Alternative interchange layout. It can be seen that buses on Table Mesa Drive would need to circulate on Loop Drive to access the eastbound US 36 transit stop, but would then be routed onto eastbound US 36. This calls out the need to better define local and regional bus access in this area, and supports the concept of making this northwest corner of the CU South parcel a mobility hub that includes efficient connectivity between local and regional RTD bus routes, future CU bus routes, etc.

Impacts of the South Boulder Creek Flood Mitigation Project:

The Final South Boulder Creek Major Drainageway Plan – Alternatives Analysis Report, August 2015, contains a number of alternatives related to storm water detention upstream of US 36 in the CU South parcel. The preferred Alternative D, accepted by council in August 2015, will entail construction of a berm along US 36, excavation of 81 acres in the northeast portion of the CU South property to create a detention pond, and fill of approximately 31 acres of the northwestern portion of the CU South property to 5370 feet a.s.l. (See attached Figure 9-5 Option D from Drainageway Plan). Of the seven alternatives considered, Alternative D minimized impacts to sensitive species from nearby Open Space Mountain Parks (OSMP) properties and minimized impacts to sensitive environmental resources.

Ultimately, the South Boulder Creek flood mitigation will influence the configuration of multi-modal transportation access facilities on the site. In this context, it is recommended that the "mobility hub", referenced above, be located as far north as possible within the CU South parcel to make multimodal travel and connections between modes and to off-site facilities as efficient as possible.

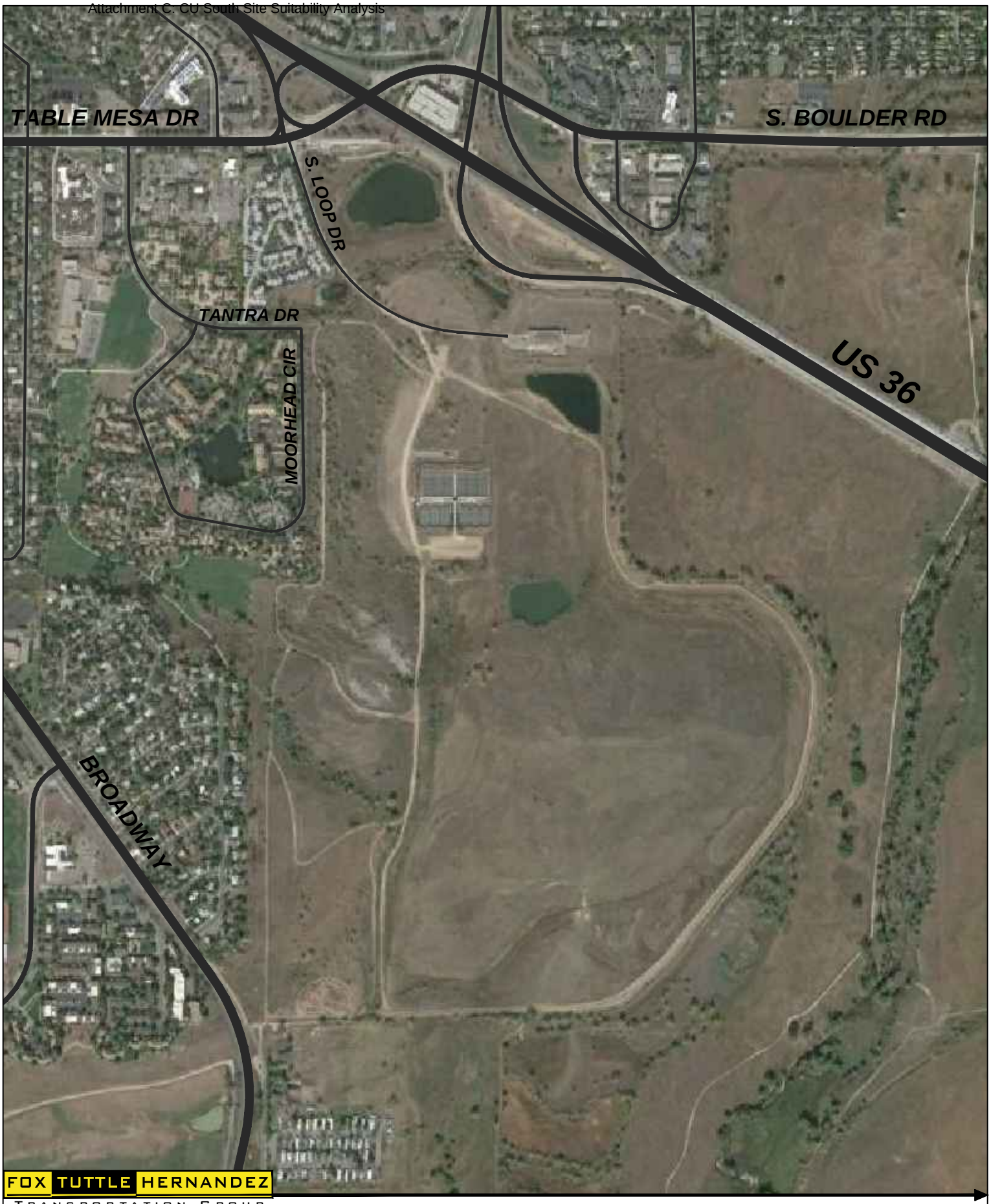
I hope this review of existing and potential multi-modal access to the CU South property is helpful. Please let me know if you have any questions.

In the next phase of this project, as future land use plans are developed for the site, we can assist with quantifying the amount and type of multi-modal transportation demand that may be expected on the various facilities that access the site.

/BF

Attachments:

Figure 1 Study Area Aerial Photo
Figure 2 Boulder Transportation Master Plan - Bicycle Facility Plan (portion)
Figure 3 – 5 Potential Multi-modal Access Improvements
US 36 Interchange Sketch
Site Photos 1 - 12
Storm Water Detention Upstream of US 36, Options D



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TRANSPORTATION GROUP

CU BOULDER SOUTH PARCEL ACCESS STUDY

STUDY AREA

Project #	16029	Original Scale	NTS	Date	7/27/16	Drawn by	CRS	Figure #	1

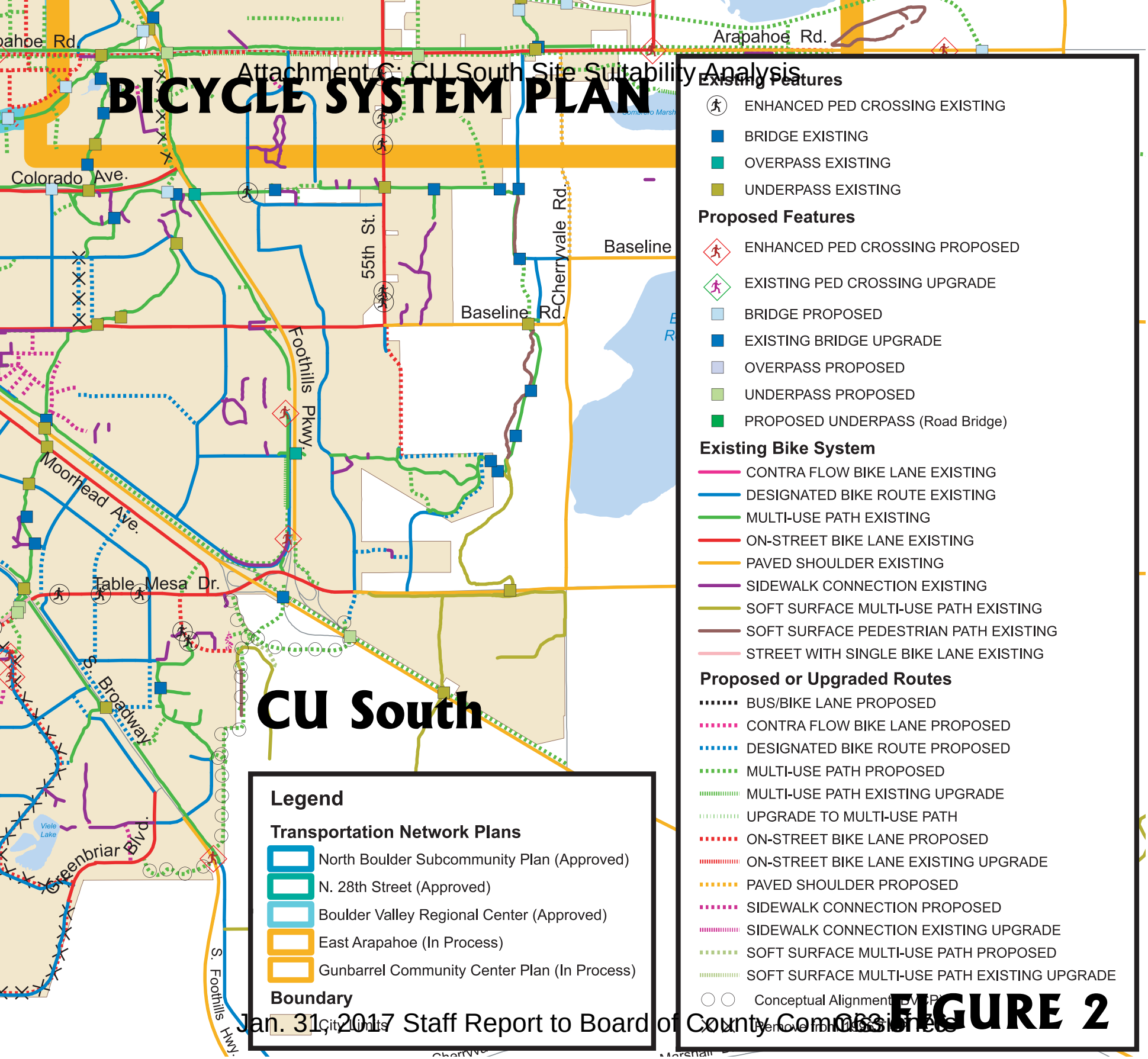
BICYCLE SYSTEM PLAN
CU South
Arapahoe Rd.
Colorado Ave.
55th St.
Cherryvale Rd.
Baseline
Baseline Rd.
Foothills Pkwy.
Moorhead Ave.
Table Mesa Dr.
S. Broadway
Greenbriar Blvd.
S. Foothills Hwy.
Existing Features
ENHANCED PED CROSSING EXISTING
BRIDGE EXISTING
OVERPASS EXISTING
UNDERPASS EXISTING
Proposed Features
ENHANCED PED CROSSING PROPOSED
EXISTING PED CROSSING UPGRADE
BRIDGE PROPOSED
EXISTING BRIDGE UPGRADE
OVERPASS PROPOSED
UNDERPASS PROPOSED
PROPOSED UNDERPASS (Road Bridge)
Existing Bike System
CONTRA FLOW BIKE LANE EXISTING
DESIGNATED BIKE ROUTE EXISTING
MULTI-USE PATH EXISTING
ON-STREET BIKE LANE EXISTING
PAVED SHOULDER EXISTING
SIDEWALK CONNECTION EXISTING
SOFT SURFACE MULTI-USE PATH EXISTING
SOFT SURFACE PEDESTRIAN PATH EXISTING
STREET WITH SINGLE BIKE LANE EXISTING
Proposed or Upgraded Routes
BUS/BIKE LANE PROPOSED
CONTRA FLOW BIKE LANE PROPOSED
DESIGNATED BIKE ROUTE PROPOSED
MULTI-USE PATH PROPOSED
MULTI-USE PATH EXISTING UPGRADE
UPGRADE TO MULTI-USE PATH
ON-STREET BIKE LANE PROPOSED
ON-STREET BIKE LANE EXISTING UPGRADE
PAVED SHOULDER PROPOSED
SIDEWALK CONNECTION PROPOSED
SIDEWALK CONNECTION EXISTING UPGRADE
SOFT SURFACE MULTI-USE PATH PROPOSED
SOFT SURFACE MULTI-USE PATH EXISTING UPGRADE
Conceptual Alignment
Removal from Plan
Legend
Transportation Network Plans
North Boulder Subcommunity Plan (Approved)
N. 28th Street (Approved)
Boulder Valley Regional Center (Approved)
East Arapahoe (In Process)
Gunbarrel Community Center Plan (In Process)
Boundary
City Limits

FIGURE 2

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CU BOULDER SOUTH PARCEL ACCESS STUDY

POTENTIAL MULTI-MODAL ACCESS IMPROVEMENTS

FT Project #	16029	Original Scale	NTS	Date	7/27/16	Drawn by	CRS	Figure #	3

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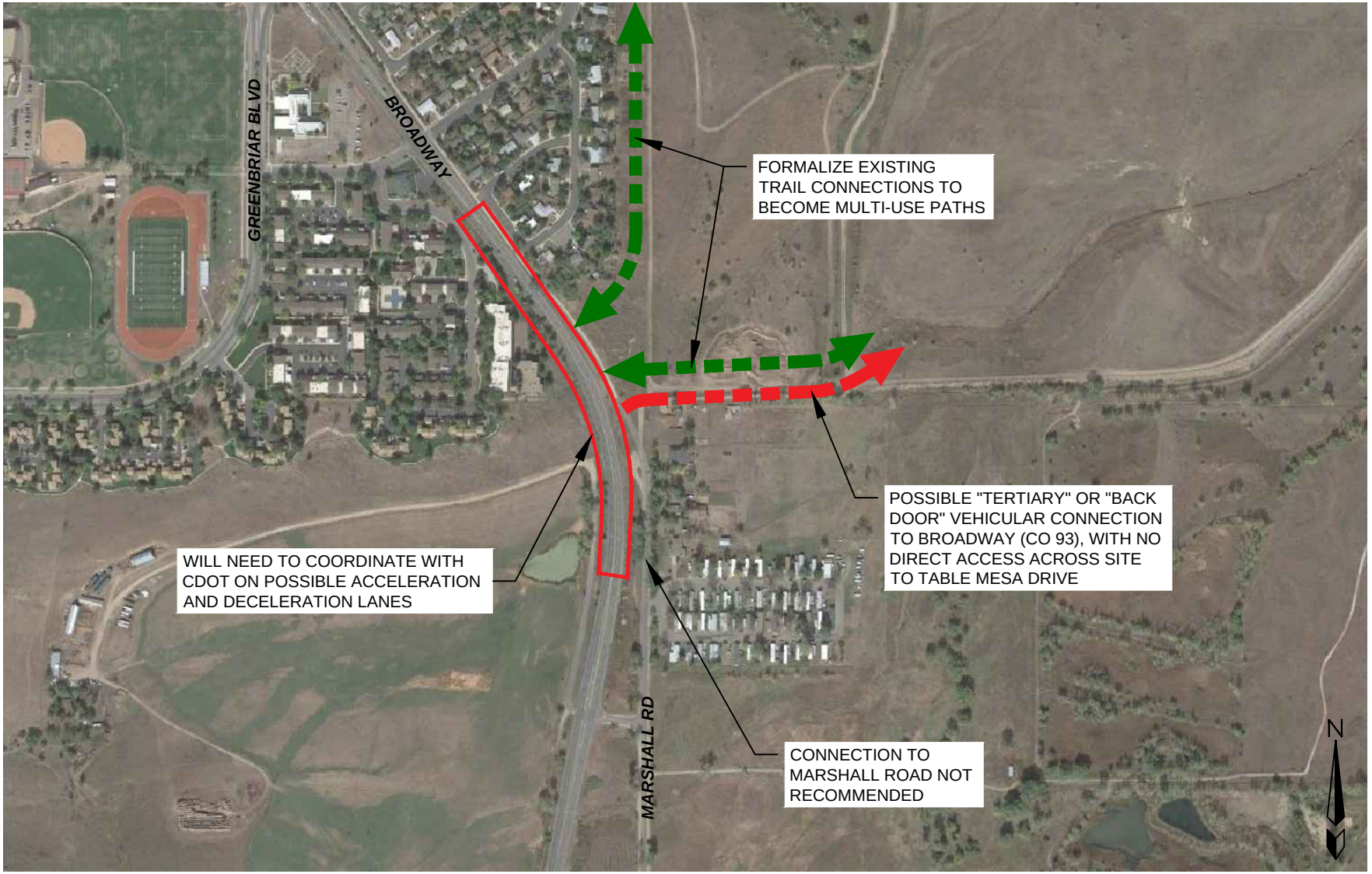
CU BOULDER SOUTH PARCEL ACCESS STUDY

POTENTIAL MULTI-MODAL ACCESS IMPROVEMENTS

FT Project #	16029	Original Scale	NTS	Date	7/27/16	Drawn by	CRS	Figure #	4



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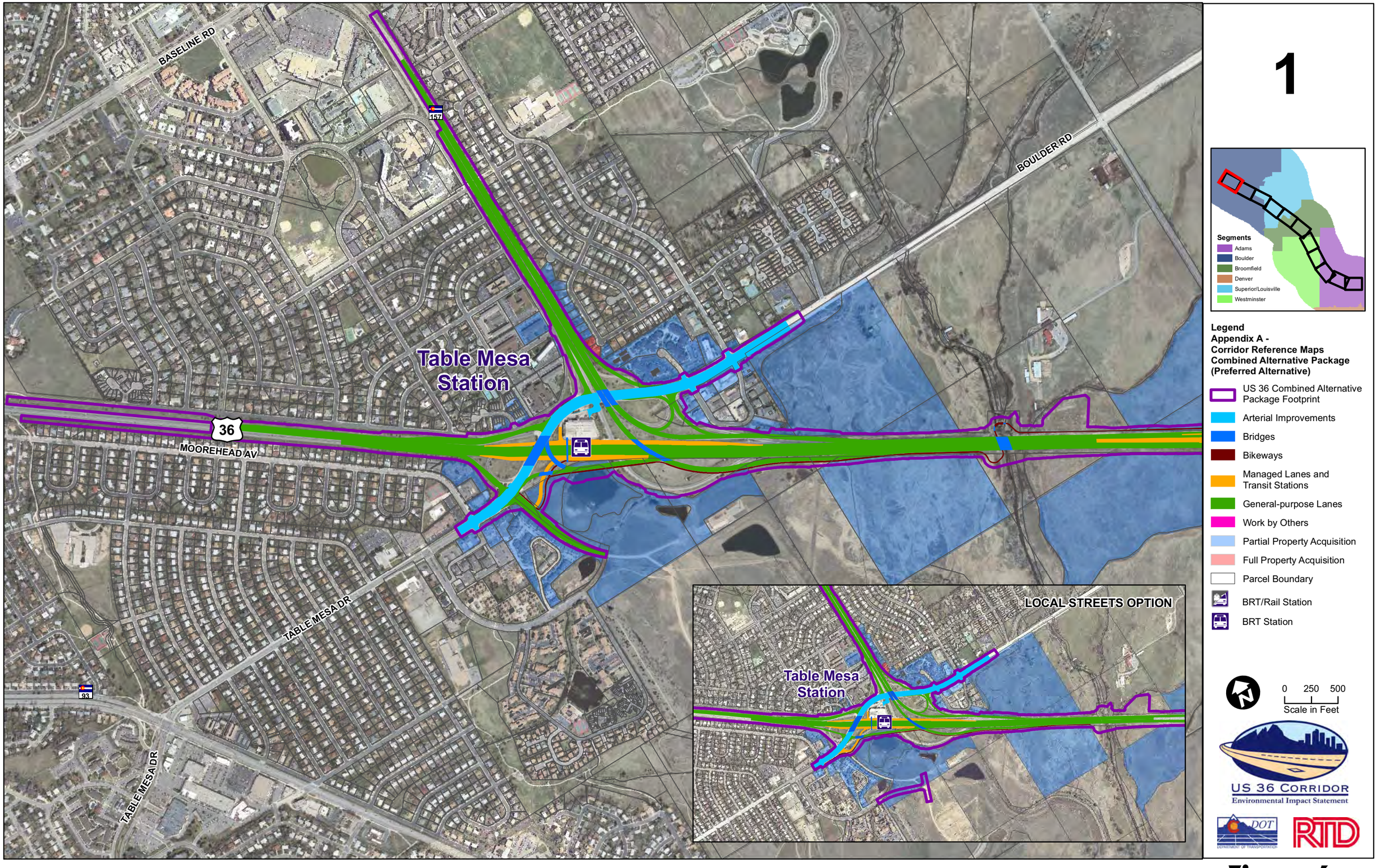
CU BOULDER SOUTH PARCEL ACCESS STUDY

POTENTIAL MULTI-MODAL ACCESS IMPROVEMENTS

FT Project #	16029	Original Scale	NTS	Date	7/27/16	Drawn by	CRS	Figure #	5



1

Segments
Adams
Boulder
Broomfield
Denver
Superior/Louisville
Westminster

Legend
Appendix A -
Corridor Reference Maps
Combined Alternative Package
(Preferred Alternative)

- US 36 Combined Alternative Package Footprint
- Arterial Improvements
- Bridges
- Bikeways
- Managed Lanes and Transit Stations
- General-purpose Lanes
- Work by Others
- Partial Property Acquisition
- Full Property Acquisition
- Parcel Boundary
- BRT/Rail Station
- BRT Station

0 250 500
Scale in Feet

US 36 CORRIDOR
Environmental Impact Statement

DOT
RTD

Figure 6

Photo 1 Eastbound Table Mesa Drive at Loop Drive

Photo 2 Northbound Loop Drive at Table Mesa Drive

Photo 3 Southbound Loop Drive south of Table Mesa Dr.

Photo 4 Loop Drive within CU South

Photo 5 Westbound Tantra Drive just west of CU South

Photo 6 Eastbound Tantra Drive approaching CU South

Photo 7 Trail from Tantra Drive into CU South

Photo 8 Southbound on Moorhead Circle

Photo 9 Trail from Moorhead Circle into CU South

Photo 10 South property line looking west toward Broadway

Photo 11 North end of Marshall Road along CO 93 (Broadway)

Photo 12 Marshall Road Connection to CO 93

Stormwater Detention Upstream of US36

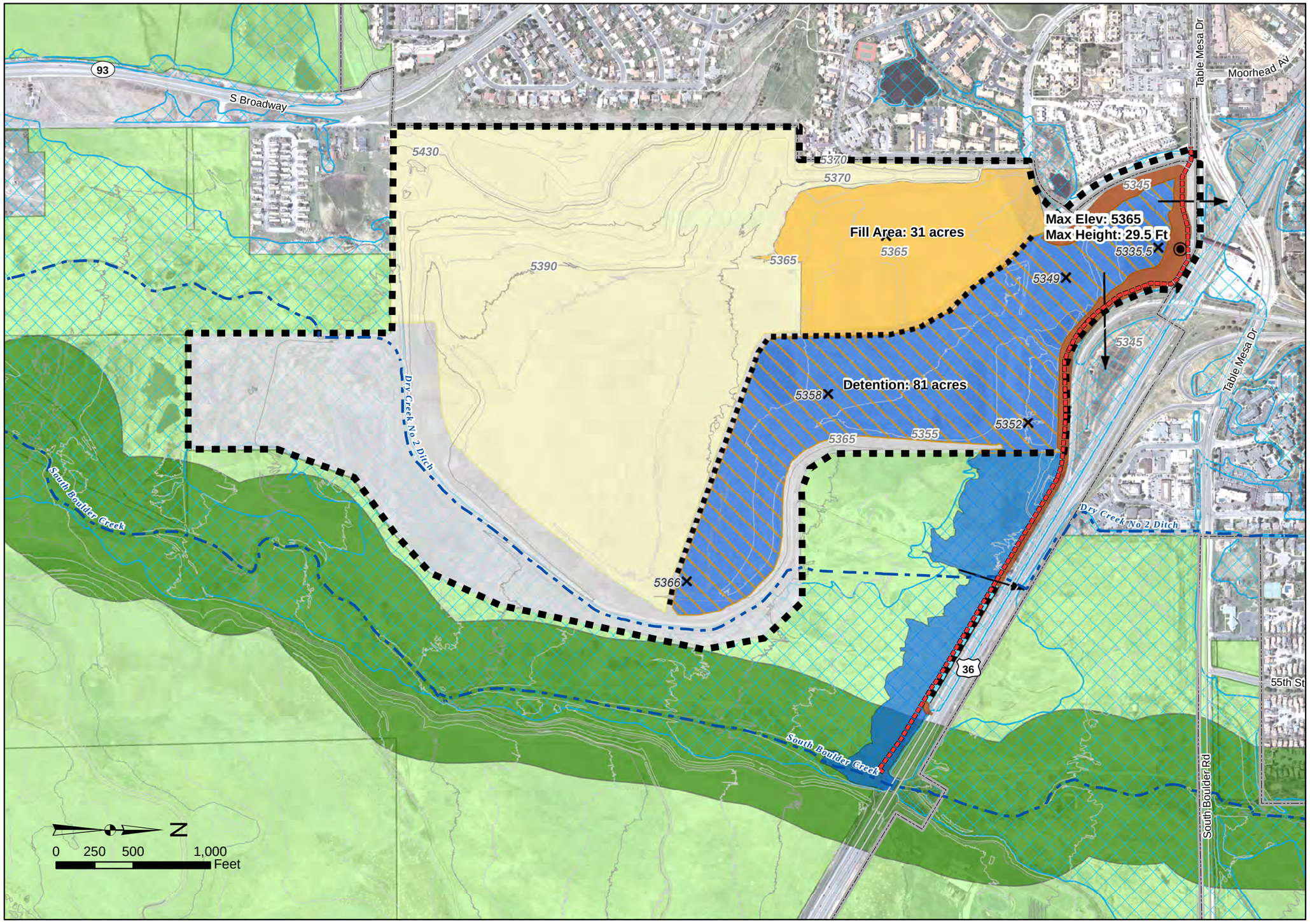
South Boulder Creek Flood Mitigation Project

Figure 9-5

Option D

Single Berm
With excavation
With fill
On CU and OSMP property
In CDOT Existing ROW
Max Berm Height 29.5ft

Description	Acres
Total CU Property	302
CU Property Impacted	78
CU Building Potential Impacted	30
OSMP Property Impacted	19



Proposed Conditions

- New Berm
- Pool Contained By Fill or Cut Slope
- Limits of Excavation
- Detention Pond Area
- Fill Area
- Out of 100yr Inundation
- Spot Elevation
- Max Berm Elevation
- Discharge Location
- Spillway

Existing Conditions

- Boulder City Limits
- CDOT Existing ROW
- CU Site Boundary
- OSMP Property
- Prebles Critical Habitat Area
- Effective 100 Year Floodplain
- 5 Foot Contours
- 10 Foot Contours

Attachment E
Public Comment Summary

Earlier this year the City of Boulder began a public dialogue with the community, stakeholders and University of Colorado Boulder about the future of the CU Boulder site. This process is intended to inform changes to the Boulder Valley Comprehensive Plan land use designations and may help inform future annexation and agreements between the city and the CU Boulder relating to future development.

There is a high degree of community interest in the development of CU South. Two community meetings were held to share information and request feedback. Over 200 residents attended a neighborhood meeting on September 26, 2016. The second meeting was held on the CU Boulder east campus on December 5, 2016 and was also well attended, with approximately 125 participants. This second meeting consisted of small group sessions convened around interests and concerns for the property and its future development. A compilation of public comments are available on the project webpage. Several key issues related to open space have surfaced throughout this project, including:

Common Themes of Public Input:

Flood Mitigation

- Flood mitigation appears to be a top priority for many residents, particularly those impacted by the 2013 flood.
- Many comments focused solely on flood mitigation on the CU South site, primarily concerning the public safety risks of future flooding.
- Residents commented that flood protection measures on the CU South site should be expedited.

Open Space Conservation

- There is general agreement that CU Boulder should protect and conserve land for open space on the site.
- Viewsheds and wildlife emerged as important considerations.
- Many residents commented that sensitive environmental areas and portions of the site critical to wildlife habitat should remain undisturbed by future development.

Timing

- Some people are concerned about changing land use designations or approving annexation prior to CU's having completed a master plan for the site because of unknown development impacts.
- Community members concerned about the potential impacts of future floods have urged that the city and university take action on flood mitigation as a priority.

Recreation and Trails

- Most prefer that existing trails remain available to the public regardless of how the site is developed.
- The CU South site offers one of the only flat hiking opportunities in Boulder, which is particularly helpful for children and elderly residents.
- CU South is one of the few cross-country skiing sites in Boulder.
- Many users enjoy allowing dogs to roam off leash and lack of enforcement.

Traffic and Congestion

- A common concern among nearby residents in the Table Mesa area is traffic congestion. Numerous comments describe nearby streets as becoming increasingly congested over the years and therefore may be unable to accommodate more traffic from the CU South site.
- Some residents think that access to the site may be problematic.

Site Uses

- Some residents commented that any level of development on the CU Boulder site is not appropriate and would negatively impact surrounding neighborhoods. Others prefer to have a better understanding of development intentions prior to changing a land use designation.
- Some commented that CU Boulder should consider workforce or faculty housing on the site.
- Because this is a gateway property, there is a general concern about development impacting critical views when entering the city.