

City of Boulder FasTracks Local Optimization (FLO) Facilities Study

CU and Boulder Transit Stations



Prepared for City of Boulder

Prepared by David Evans and Associates, Inc.



with IBI Group

June 2007

City of Boulder

FasTracks Local Optimization (FLO) Facilities Study

CU and Boulder Transit Stations

Executive Summary

The FasTracks Local Optimization (FLO) is an important effort by the City of Boulder and partner organizations to maximize the benefits of the RTD FasTracks program for the Boulder community. The purpose of the FLO Facilities Study is to identify critical bus facility needs that are not being funded by FasTracks or addressed in the US 36 Environmental Impact Statement (EIS), including the CU Transit Station (at Broadway and Euclid) and the Boulder Transit Station (at 14th and Walnut). The study identified the most promising preliminary ideas for possible future expansion of these two important transit facilities.

A wide range of partners are involved in the FLO process, including the City of Boulder (COB), RTD, CU, and Boulder County. A FLO Facilities Team including these partners was established in December, 2006 to provide input and guide the FLO Facilities Research. COB is conducting a proactive public and stakeholder involvement process to provide input to the planning process.

The objectives for improvements at the CU Transit Station and Boulder Transit Station are:

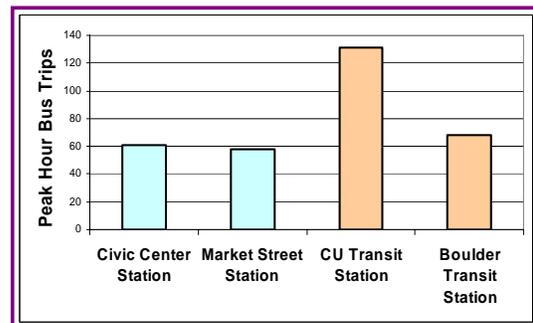
- to provide efficient bus operations while maintaining acceptable and safe traffic flow;
- to provide enough space and appropriate amenities for the numbers of buses and passengers using the stops;
- to assure attractive and safe access to the stops for passengers who may be walking, riding a bike, or being dropped off; and
- to maintain and enhance the functions and value of adjacent land uses.

Key Findings

The CU Transit Station and the Boulder Transit Station are the two highest volume transit

centers in Boulder, and are among the busiest locations in the RTD system. The CU Transit Station currently accommodates over 1,280 bus trips per day. More than 785 bus trips per day are made to the Boulder Transit Station. **One of the key findings of this study is that peak hour bus activity at each of these locations is higher than that of the Market Street and Civic Center transit stations in Downtown Denver.** Passenger boardings at these stations also are high and are expected to increase in the future.

Buses Per Hour



The CU Transit Station and Boulder Transit Station are among the busiest in RTD's system.

- An estimated 750 passengers currently board buses at the CU Transit Station during the peak hour. This could increase to approximately 1,400 over the next 20 years.
- An estimated 420 passengers currently board buses at the Boulder Transit Station during the peak hour. This could increase to approximately 1,000 over the next 20 years.

While both Boulder facilities are extremely busy transit stations, they are distinct in their character and function. The CU Transit Station

is a major on-line transit stop for local and regional transit routes along the Broadway corridor. Buses spend a very short time there, and the majority of passenger activity is related to the CU campus. Conversely, the Boulder Transit Station serves as a major terminal or transit hub for downtown Boulder. In addition, it serves as a terminus (layover) point for most routes that serve this location and a strategic transfer point between local and/or regional bus routes.

The analysis of existing and future activity at each location indicates that demand exceeds the efficient operating capacity (see tables below and opposite). Detailed results of this evaluation are documented in the *CU and Boulder Transit Stations Opportunities and Constraints, Functional Requirements*, which can be obtained from the City of Boulder Transportation Department or at www.BoulderFLO.net.

Conflicts with general traffic regularly occur at the CU Station when more than one bus occupies either of the stops. In addition, the high volume of passengers, heavy use of the adjacent multi-use path, and vehicular traffic create conflicts and safety issues among the various users. For example, the NB stop requires passengers to move directly across the multi-use path when boarding or alighting a bus. The traffic signal at Broadway and Euclid also must allow substantial time for the very high volume of pedestrian crossings; therefore, affecting traffic flow. Future growth in demand at this location will exacerbate the problems, leading to increased traffic congestion, delays to buses, and more pedestrian and bicycle conflicts. **Two to five additional passenger boarding positions are necessary at the CU Transit Station to meet future needs.**

**CU Station (Broadway and Euclid)
Bus Capacity
(All Stops Combined)**

Current Bus Capacity	Future Required Bus Capacity	Required Increase in Capacity
6	8 to 11	2 to 5

The existing configuration of the Boulder Transit Station causes crowding during the peak hours for buses, passengers, and traffic accessing the upper-level parking garage. Many buses must travel between boarding and layover areas due to the number of routes that terminate at the station. This resulting bus traffic affects the efficiency of transit operations and also impacts general traffic in the area. **An additional five to seven boarding and/or layover recovery positions are required at the Boulder Station to meet future needs.** The constraints of this site require that additional on-street or off-street locations be considered to accommodate these future needs.

**Boulder Station (14th and Walnut)
Bus Capacity**

Current Bus Capacity	Future Required Bus Capacity	Required Increase in Capacity
19	24 to 26	5 to 7

Recommendations

A range of preliminary expansion ideas was developed for each location based on issues, opportunities, constraints, and estimated requirements for future operations. More information is available in the study report, *CU and Boulder Transit Stations Concept Development and Evaluation* (www.BoulderFLO.net). The preliminary ideas were evaluated using criteria that considered how well they addressed the critical issues noted above. The preliminary concepts recommended for additional future study, including key features and potential cost ranges, are described below. These concepts are not recommended designs. They are intended to be ideas for exploration and show how the transit station components might fit on each site, and to provide preliminary information for illustrating the possible range of costs at each location.

CU Station

Two expansion ideas are recommended for future study at the CU Transit Station – Options 2A and 6 (see attached illustrations). Due to the high volume of pedestrian activity and

pedestrian conflicts at this location, and the related negative impact on traffic flow, a pedestrian underpass is incorporated into both options. Option 2A includes the relocation of the northbound transit stop to the far-side of the Euclid intersection. This location provides more space to expand the transit stop pullouts to accommodate three to four buses, and it allows the stop to be separated from the multi-use path. Another new bus stop would be developed along eastbound Euclid Avenue, providing a separate stop location for routes that turn from northbound Broadway (Routes J, Stampede, and Buff Bus) and the HOP route. In Option 2A, the southbound transit stop would be expanded further south, creating enough room in the pullout for three to four buses. Properties on each side of the roadway would require some reconfiguration to accommodate the new stops and pedestrian ramps to the underpass.

Option 6 at Broadway and Euclid incorporates transit stops at the same locations as Option 2A, as well as a pedestrian underpass. However, the intersection would be redesigned using a roundabout configuration. A roundabout offers the potential opportunity to ease peak hour

traffic congestion by eliminating the signal and providing continuous traffic flow. The roundabout concept also provides an opportunity to integrate improvements as part of the CU gateway development program.

Both improvement ideas for the CU Transit Station would smooth bus and traffic operations by providing enough room for buses to pull completely out of traffic while loading passengers, and they would reduce congestion by allowing pedestrians to cross under Broadway instead of using the intersection. Both options would eliminate the existing severe conflicts between bus passengers and multi-use trail users at the NB stop by relocating the stop to the north where room is available to separate the path from the stop. Option 6 provides additional opportunities to improve traffic flow by implementing a roundabout at the Broadway/Euclid intersection.

The approximate cost for Option 2A is \$3.3 million in 2007 dollars. The approximate cost for Option 6 is \$6.4 million. Both options provide an opportunity to phase the improvements.

CU Station (Broadway and Euclid) Recommendations

Option	Key Features	Potential Bus Positions	Estimated Cost
2A	<ul style="list-style-type: none"> ▪ Relocate northbound Broadway stop to far-side of intersection and along eastbound Euclid Avenue ▪ Expand southbound stop to south ▪ Construct pedestrian underpass across Broadway ▪ Realign multi-use path along east side of Broadway ▪ Redesign space in front of University Memorial Center and University Hill Elementary School to accommodate pedestrian underpass and circulation 	6 to 11	\$3.3 million
6	<ul style="list-style-type: none"> ▪ Redesign intersection of Broadway, Euclid, and 16th Street with a roundabout ▪ Relocate northbound Broadway stop to far-side of intersection and along eastbound Euclid Avenue ▪ Expand southbound stop to south ▪ Construct pedestrian underpass across Broadway ▪ Realign multi-use path along east side of Broadway ▪ Redesign space in all quadrants of the intersection to accommodate pedestrian underpass and circulation 	6 to 11	\$6.4 million

Note: Number of potential bus positions and effective capacity would vary based on the mix of bus types (lengths) present at any given time.

Boulder Station

For the Boulder Station, Options 1, 2A, and 3B (see attached drawings) were recommended for future study. Option 2A expands bus loading capacity by adding new boarding/layover positions on the surrounding streets. Option 2A reconfigures some of the existing on-street bus positions and provides new positions in an off-street facility adjacent to the existing station. Option 3B replaces the existing station with a new off-street station on adjacent property. The existing station site could be redeveloped under this option.

Option 1 identifies an opportunity for up to 12 new bus positions along the neighboring downtown street system. Only 5 to 7 additional positions are required, so some of the current inefficient positions could be eliminated or only a portion of the new positions could be implemented. Locations along Walnut Street, 14th Street, and Canyon Boulevard would be utilized, requiring the removal of approximately 12 metered parking spaces and some reconfiguration of driveways. Current parallel bus stop areas along 14th Street (between Walnut and Canyon) would be reconfigured as saw-tooth bus bays to provide better organization of vehicles and more room for passenger waiting. This on-street concept provides an opportunity for short-term expansion, if necessary, with other options implemented later.

Option 2A provides new bus positions on property directly south of the current facility across Canyon Boulevard while maintaining the current station at 14th and Walnut. Two existing buildings would need to be removed, but the site could potentially be developed with joint transit and commercial uses. In this concept, a total of 11 new off-street bus positions could be developed at the new site along with reconfiguration of bus positions along 14th Street. A total of 30 positions would be provided (19 at the existing site and 11 at the site south of Canyon Boulevard). Some of the existing on-street positions or the inefficient

positions in the existing station could be eliminated. All required bus circulation could occur off-street in this alternative. Option 3B makes use of this same property but assumes a complete relocation of bus facilities. A more condensed configuration is used for off-street bus positions to maximize capacity, with additional use of Canyon Boulevard for bus pullouts. Approximately five metered parking spaces would be removed along 14th Street. This concept offers a total of 25 bus positions and requires a portion of the bus circulation to occur along 14th Street, 15th Street, and Canyon Boulevard.

Option 1 would meet the need for expanded bus loading and layover capacity at a low cost, and it would not require the acquisition of land. However, operations would be spread over a larger area, which could make transfers among routes more difficult and would also impact traffic circulation on the existing street network. Option 2A makes continuing use of the existing station and consolidates most transit operations there and at a new facility conveniently located across Canyon Boulevard. Traffic flow would be aided by most bus circulation occurring off-street and by the provision of a pedestrian underpass. Option 3A would consolidate all transit operations in or immediately adjacent to a new, higher-capacity station. Connections among routes would be most convenient with this alternative. Additional off-street parking could be provided at the site of the new station facilities in Options 2A and 3B, along with other uses that might be developed by COB or a private developer. Option 3B offers the potential to redevelop the existing station site.

The approximate cost for Option 1 is approximately \$379,000 in 2007 dollars. Option 2A is estimated to cost \$29.6 million without parking and \$39.3 million with two levels of parking included. The total cost estimate for Option 3B is \$32.3 million without parking and \$43.4 million with two levels of parking.

Boulder Station (14th and Walnut) Recommendations

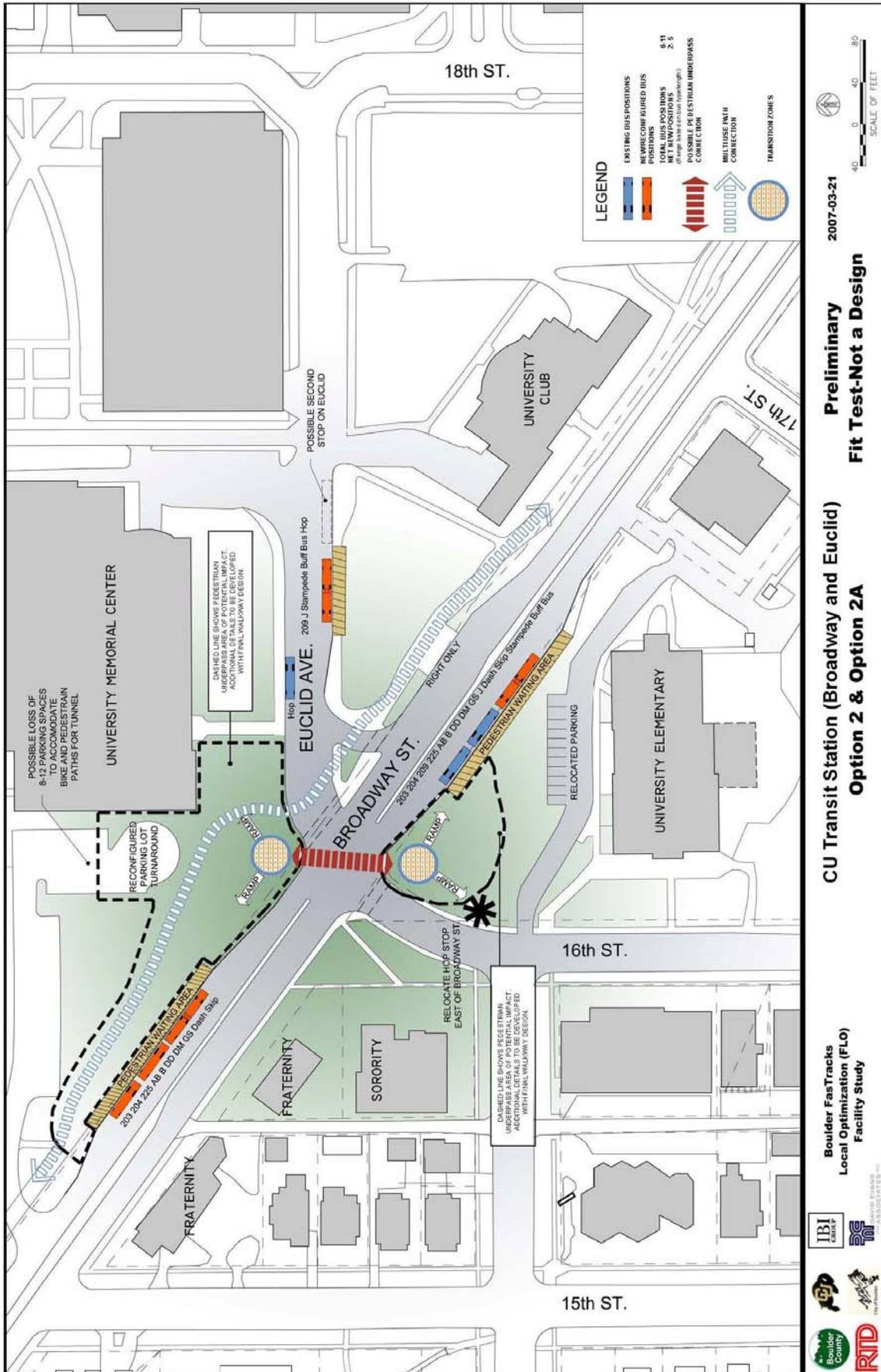
Option	Key Features	Potential Bus Positions	Estimated Cost
1	<ul style="list-style-type: none"> Existing facility plus <u>on-street</u> expansion 	31	\$379,000
2A	<ul style="list-style-type: none"> Existing facility plus <u>off-street</u> expansion to block south of current site (across Canyon Boulevard) Requires two property acquisitions and removal of three buildings on north side of expansion block Construct pedestrian underpass to connect facilities Provide for off-street circulation of buses on expanded site 	30	\$29.6 million (without parking) \$39.3 million (with parking)
3B	<ul style="list-style-type: none"> Full replacement of existing facility to block south of current site (across Canyon Boulevard), and along Canyon Boulevard curbsides Requires two full property acquisitions and one partial acquisition, and removal of three buildings on north side of expansion block Demolition of existing bus station and parking structure with possible redevelopment. 	25	\$32.3 million (without parking) \$43.4 million (with parking)

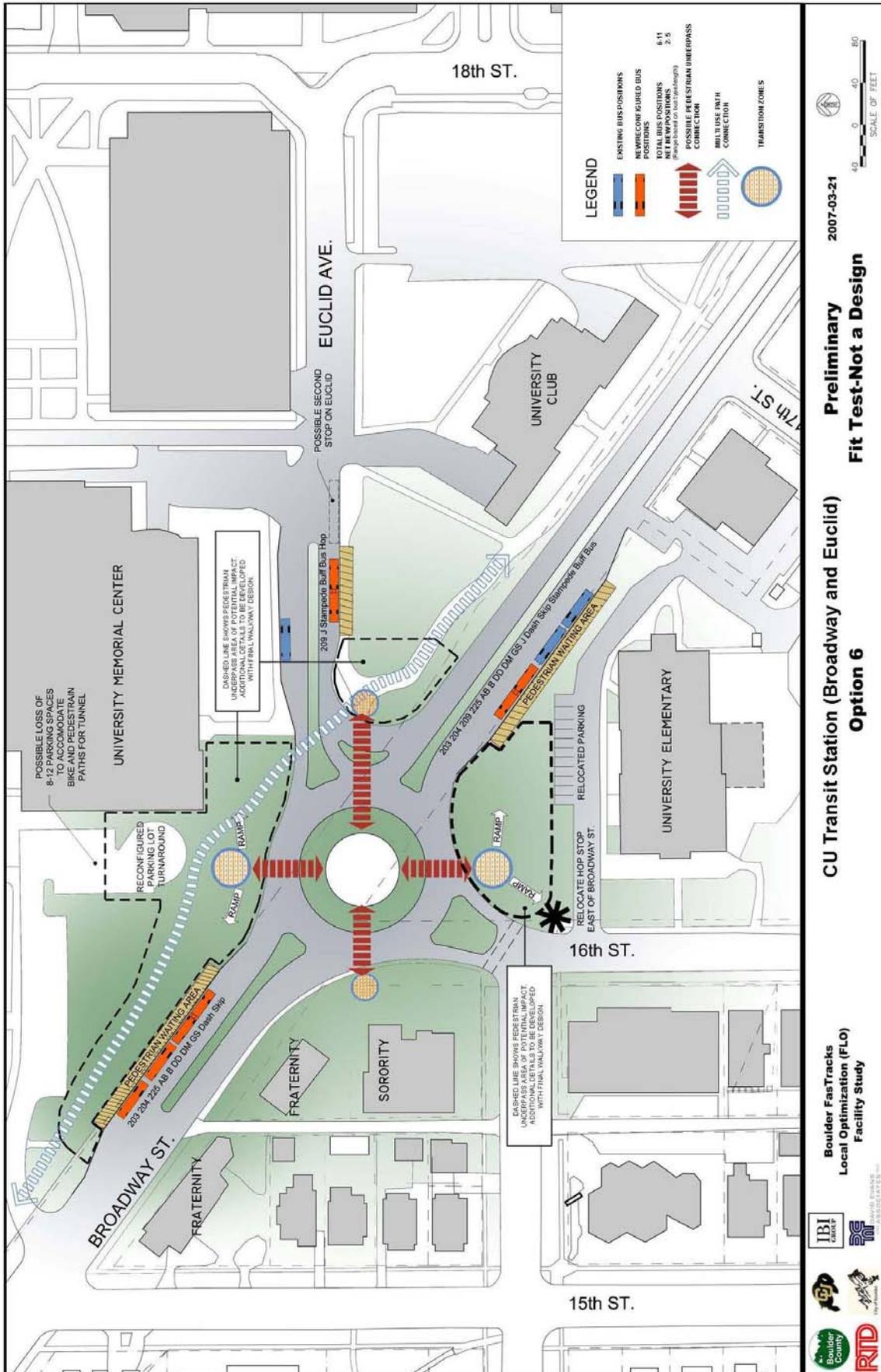
Next Steps

The next steps for the CU Station and Boulder Station include:

- Continuing community discussions on priorities for FasTracks
- Exploration of project development options with partnering jurisdictions (COB, RTD, CU, and Boulder County)

For more information: www.BoulderFLO.net;
*CU Transit Station and Boulder Transit Station
 Concept Development and Evaluation*





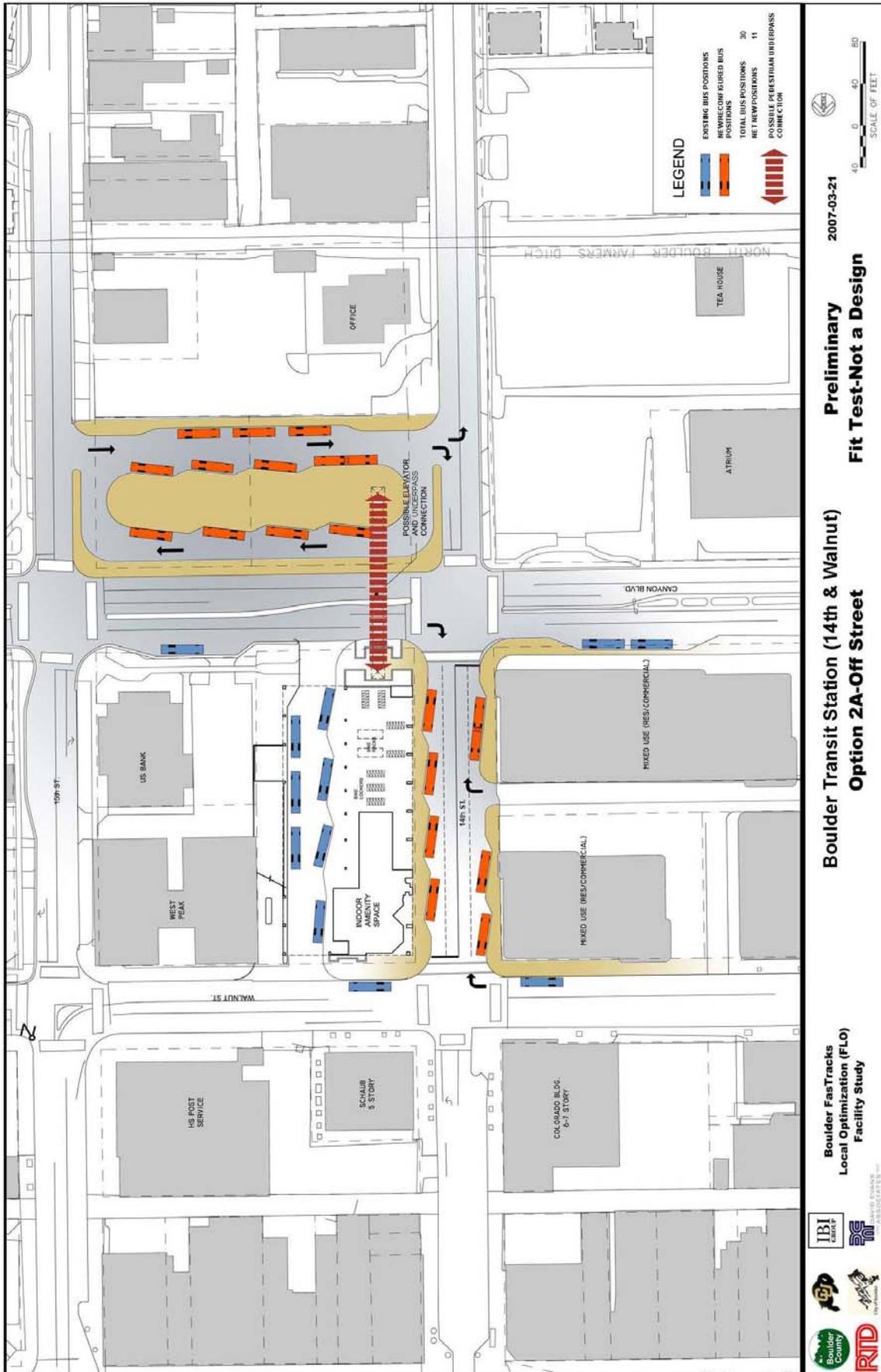
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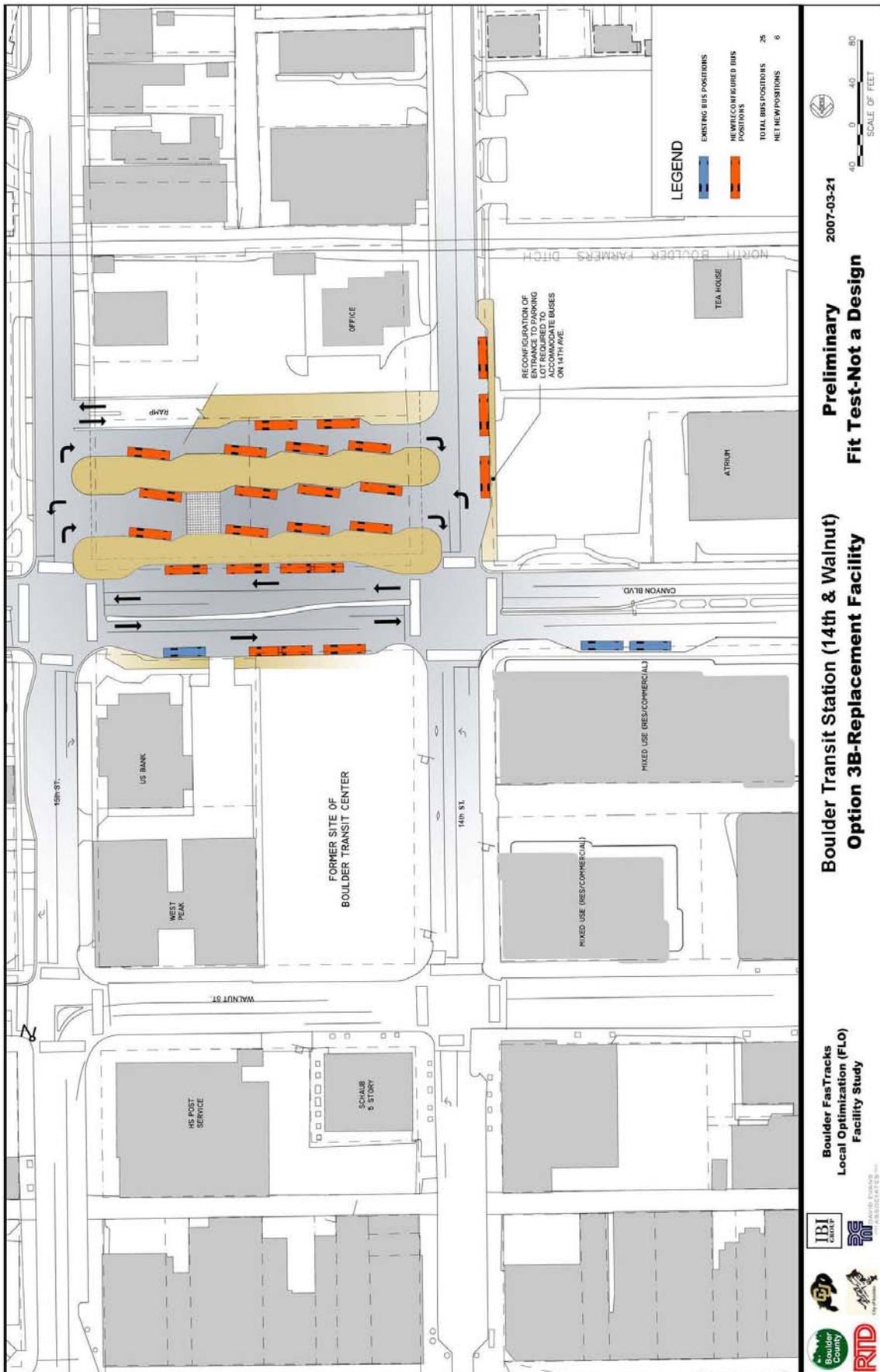


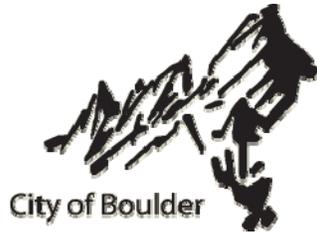
CU Transit Station (Broadway and Euclid)
Option 6

Preliminary
Fit Test-Not a Design

2007-03-21







City of Boulder **FasTracks Local Optimization (FLO) Facilities Study**

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Concept Development and Evaluation

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Summary of Requirements

A separate technical memorandum titled *CU and Boulder Transit Stations Opportunities and Constraints, Functional Requirements* was completed to document existing conditions and future operations, and to identify transit capacity requirements for the CU Transit Station and Boulder Transit Station facilities. The memorandum also identified opportunities and constraints to be considered in developing preliminary options for transit station improvements. Using forecast information from RTD and the COB, operating conditions were presented for each facility. Information included the numbers of buses per hour by type of vehicle and by direction, passenger and pedestrian activity levels, and the surrounding traffic conditions. Based on this information, the general numbers and sizing of bus positions (loading or layover areas) were identified. In addition, the parameters for passenger waiting areas and key pedestrian and bike circulation areas were described. This information provides the foundation for developing preliminary concepts for site improvement, design criteria, and draft program needs for each facility and a range of preliminary cost estimates. The initial document also provided preliminary evaluation factors to be used in comparing the alternatives. These factors were applied to the range of options presented in this report.

Analysis of CU Transit Station

The CU Transit Station at Broadway and Euclid serves as a major on-line transit stop for local and regional transit routes along the Broadway roadway corridor (see Figure 1 at the end of this section). This location serves high levels of bus volume and passenger demand related to the University of Colorado (CU) campus. A total of six bus positions are provided at this intersection – two along northbound Broadway, two along southbound Broadway, one along northbound 16th Street, and one along westbound Euclid Avenue. A total of 15 bus routes serve this location with approximately 130 peak hour bus trips on an average weekday. Of particular note is that this facility serves a higher volume of bus activity than the Downtown Boulder Transit Station or the Civic Center and Market Street Stations in Downtown Denver. Peak hour activity at the two Denver stations is approximately 60 bus departures per hour, while the CU Station serves over twice that number of trips through the intersection during its peak hour of operation (see Table 1).

Table 1. Peak Hour Bus Trips Through RTD Transit Facilities

Civic Center Station	Market Street Station	CU Transit Station	Boulder Transit Station
61	58	131	68

The analysis of existing and future estimated activity at this location indicates that demand exceeds the efficient operating capacity. Current bus activity at the CU Station often creates conflicts with general traffic when more than one bus is present in either direction. In addition, the high amount of passenger volume, multi-use path activity, and intersection traffic creates conflicts and safety issues associated with the various users. Future demand at this location will exacerbate the problem and negatively influence the overall efficiency of this facility. Future peak hour bus volumes are estimated to increase by approximately eleven percent. Northbound activity would increase from 63 to 68 bus trips per hour and southbound activity would increase from 50 to 60 bus trips per hour. Future bus volumes at the CU Station suggest that 2 to 5 new passenger boarding positions are necessary to adequately meet demand (see Table 2). Several combinations of site concepts could be considered for expanding and reconfiguring these functions on each leg of the intersection.

Table 2. CU Station (Broadway and Euclid) Bus Capacity

Current Bus Capacity	Future Required Capacity	Required Increase in Capacity
6	8 to 11	2 to 5

An analysis of passenger activity at the CU Station indicates that an estimated 750 passengers currently board buses during the peak hour of activity. When considering the future increase in bus activity and historic growth in passenger demand, future peak hour boardings could increase to approximately 1,400 over the next 20 years.

Analysis of Boulder Transit Station (14th and Walnut)

The Boulder Transit Station at 14th and Walnut has a very different function than the CU Station at Broadway and Euclid. The facility serves as a major terminal location or transit hub for downtown Boulder (see Figure 2 at the end of this section). This location serves significant levels of bus volume and passenger demand related to the downtown employment, the surrounding retail district, and Boulder High School. It also serves as a terminus (layover) point for most routes that serve this location and a strategic transfer point between different bus routes. A total of 19 bus positions are provided at this facility – four internal boarding positions, nine boarding positions on the adjacent streets, three internal layover positions, and three on-street layover positions. A total of 18 bus routes serve this location (10 local and 8 regional) with approximately 68 peak hour bus trips on an average weekday. Bus volumes at this location are of similar magnitude to those at the Market Street and Civic Center stations in Downtown Denver, ranging from 60 to 70 trips during the peak hour of operations.

Transit activity at the Boulder Transit Station suggests that current capacity has been reached. The existing configuration causes crowding during the peak hours for buses, passengers, and parking facility users. A significant amount of bus circulation occurs between boarding and layover areas due to the number of routes that terminate here. This excessive circulation affects the efficiency of transit operations and also has an impact on general traffic conditions adjacent to the site. Future peak hour bus volumes are estimated to increase by approximately 35 percent for this location based on increases to peak hour headways on select routes. Regional bus activity would increase from 24 to 28 bus trips per hour and local bus activity would increase from 44 to 64 trips per hour. Future bus volumes projected for the Boulder Station suggest that an additional 5 to 7 new boarding and/or layover recovery locations are required at this location to adequately serve demand (see Table 3). The constraints of this site require that additional on-street or off-street locations be evaluated to accommodate these future needs.

Table 3. Boulder Station (14th and Walnut) Bus Capacity

Current Bus Capacity	Future Required Capacity	Required Increase in Capacity
19	24 to 26	5 to 7

An analysis of passenger activity at the Boulder Station indicates that an estimated 420 passengers currently board buses during the peak hour of activity. When considering the future increase in bus activity and historic growth in passenger demand, future peak hour boardings could increase to approximately 1,000 over the next 20 years.

Figure 1. CU Transit Station (Broadway and Euclid) Existing Facility

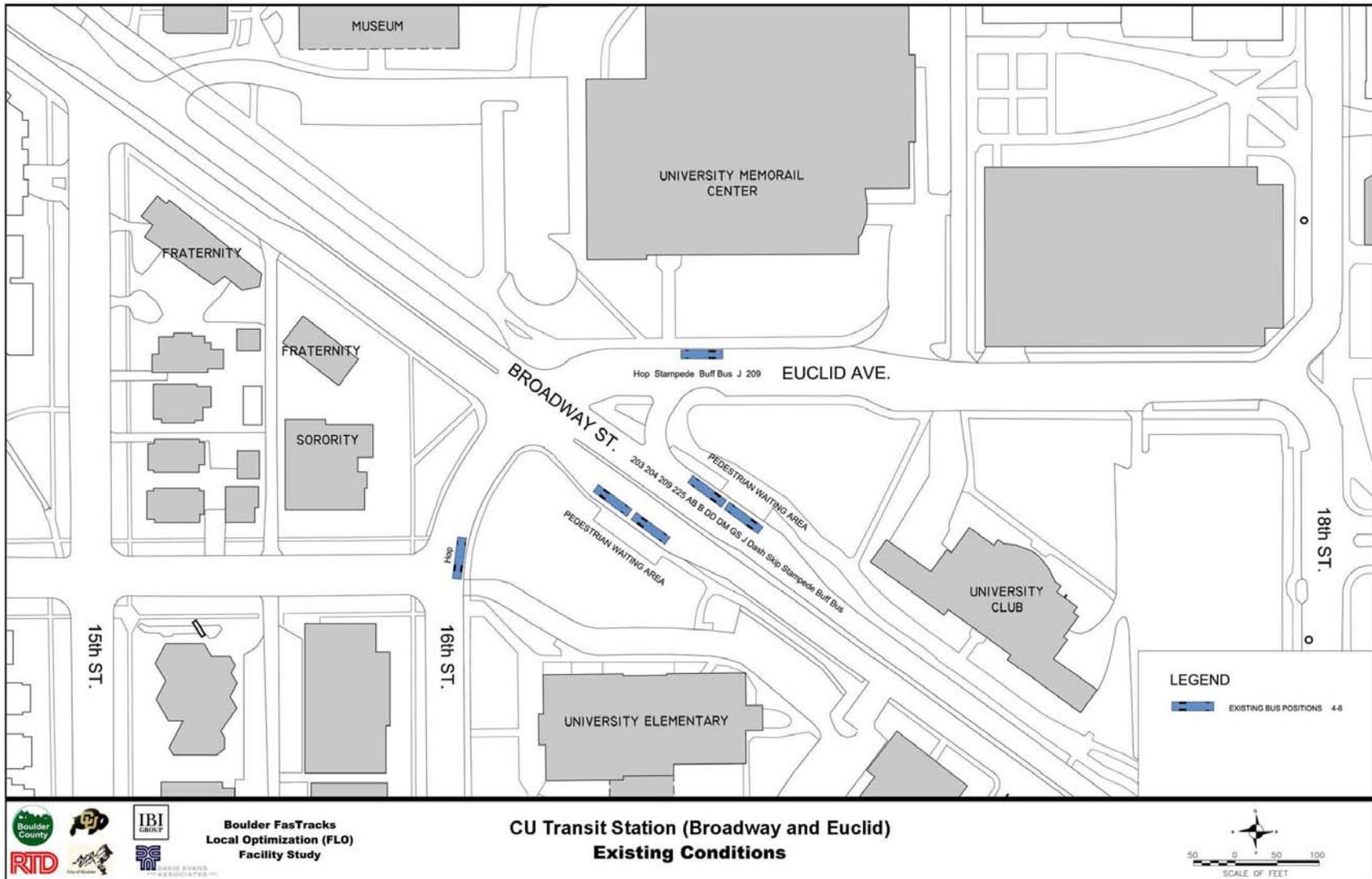
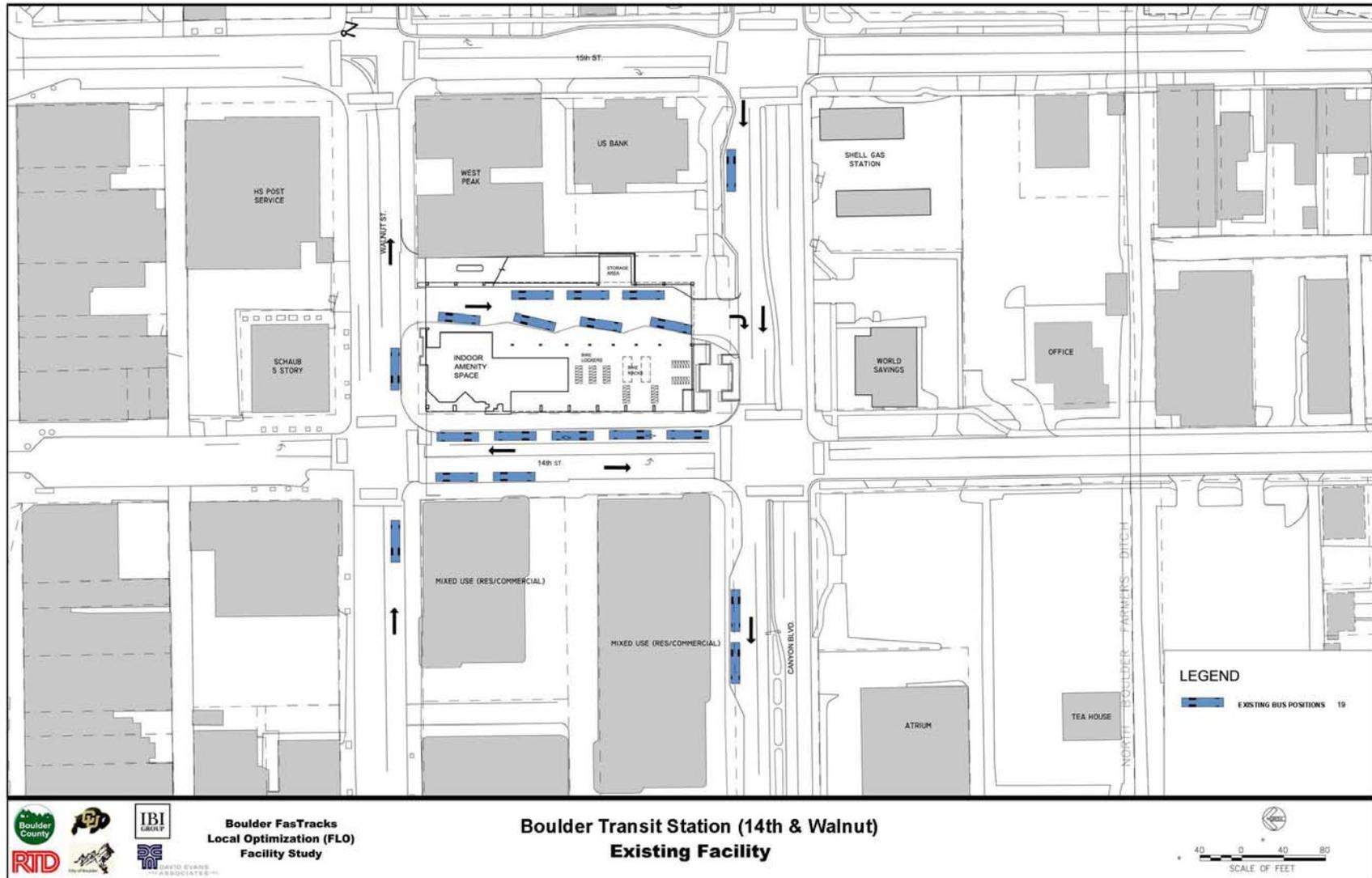


Figure 2. Boulder Transit Station (14th and Walnut) Existing Facility



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Boulder Transit Station (14th & Walnut)
Existing Facility

LEGEND

EXISTING BUS POSITIONS 19

SCALE OF FEET

0 40 80

Concept Development

A range of preliminary transit facility improvement concepts was developed for the CU Transit Station (Broadway and Euclid) and the Boulder Transit Station (14th and Walnut) facilities based on issues, opportunities, constraints, and estimated functional requirements for future operations. Previous concepts and input from project stakeholders were also used to develop the initial ideas. Candidate options were shared with the FLO Facilities team at coordination meetings during the months of February and March, 2007. Discussion and further input from project stakeholders were used to refine and modify the concepts to offer a reasonable range of options for comparison.

CU Transit Station Preliminary Concepts

The preliminary concepts at this location differed by general placement of bus boarding and alighting positions near the intersection (e.g. near-side and far-side), pedestrian connections, and intersection configuration. Due to the high volume of pedestrian activity at this location, there was a desire to incorporate a grade-separated pedestrian underpass into the transit facility concepts. Currently, the traffic signal at Broadway and Euclid must allow substantial time for the very high volume of pedestrian crossings; therefore, affecting traffic flow.

The following set of preliminary options was developed for advancement into the evaluation process (see Figures 3 - 8).

Option 1

- Expand Both NB and SB Broadway Stops to South

Option 2 and 2A (with pedestrian underpass)

- Relocate NB Broadway Stop to Far-Side on Broadway and EB Euclid; Expand SB Broadway Stop to South
 - Realign multi-use path on east side of Broadway and reconfigure CU parking (if required) adjacent to NB far-side stop on Broadway
 - Construct pedestrian underpass across Broadway (Option 2A)
 - Relocate parking at University Hill Elementary School
 - Remove parking (5-6 spaces) on Euclid Avenue
 - Redesign space in front of University Memorial Center and University Hill Elementary School to accommodate pedestrian underpass and circulation (Option 2A). May require property acquisition from Boulder Valley School District (BVSD)

Option 3 and 3A (with pedestrian underpass)

- Expand NB Broadway Stop to Far-Side on Broadway and Maintain Current Stop; Expand SB Broadway Stop to South –
 - Broadway NB near-side stop would be retained under this scenario in the event that a stop on Euclid in Option 2 is not feasible
 - Construct pedestrian underpass across Broadway (Option 3A)
 - Retain EB HOP stop on 16th Street
 - Realign multi-use path on east side of Broadway and reconfigure CU parking (if required) adjacent to NB far-side stop on Broadway
 - Relocate parking at University Hill Elementary School
 - Redesign space in front of University Memorial Center and University Hill Elementary School to accommodate pedestrian underpass and circulation (Option 3A)

3A). May require property acquisition from Boulder Valley School District (BVSD)

Option 4

- Realign Intersection of Broadway/Euclid/16th Street; Relocate Broadway NB Stop to Far-Side on Broadway and EB Euclid; Relocate Broadway SB Stop to Near-Side
 - Redesign intersection (shift slightly to the south) to provide more perpendicular geometry for legs connecting to Broadway
 - Shift Broadway to the east (minimum 20 ft.) to allow space for SB near-side stops in front of fraternity house
 - Redesign space in front of University Memorial Center and fraternity/sorority houses to accommodate new intersection configuration, pedestrian underpass, and related circulation
 - Realign multi-use path on east side of Broadway and reconfigure CU parking (if required) adjacent to NB far-side stop on Broadway
 - Remove parking (5-6 spaces) on Euclid Avenue

Option 5

- Realign Intersection of Broadway/Euclid/16th Street; Relocate Broadway NB Stop to Far-Side and EB Euclid; Expand Broadway SB Stop to South
 - Redesign intersection (shift slightly to the south) to provide more perpendicular geometry for legs connecting to Broadway
 - Redesign space in front of University Memorial Center and University Hill Elementary School to accommodate new intersection configuration, pedestrian underpass, and related circulation
 - Realign multi-use path on east side of Broadway and reconfigure CU parking (if required) adjacent to Broadway NB far-side stop
 - Relocate parking at University Hill Elementary School
 - Remove parking (5-6 spaces) on Euclid Avenue

Option 6

- Redesign Intersection of Broadway/Euclid/16th Street with a Roundabout, Relocate Broadway NB Stop to Far-Side and EB Euclid; Expand Broadway SB Stop to South
 - Redesign intersection as roundabout without a traffic signal to allow for continuous traffic flow operation
 - Construct pedestrian underpass across Broadway
 - Redesign space in all quadrants of the intersection to accommodate pedestrian underpass and circulation. May require property acquisition from Boulder Valley School District (BVSD)
 - Realign multi-use path on east side of Broadway and reconfigure CU parking (if required) adjacent to Broadway NB far-side stop
 - Relocate parking at University Hill Elementary School
 - Remove parking (5-6 spaces) on Euclid Avenue

Figure 3. CU Transit Station – Option 1

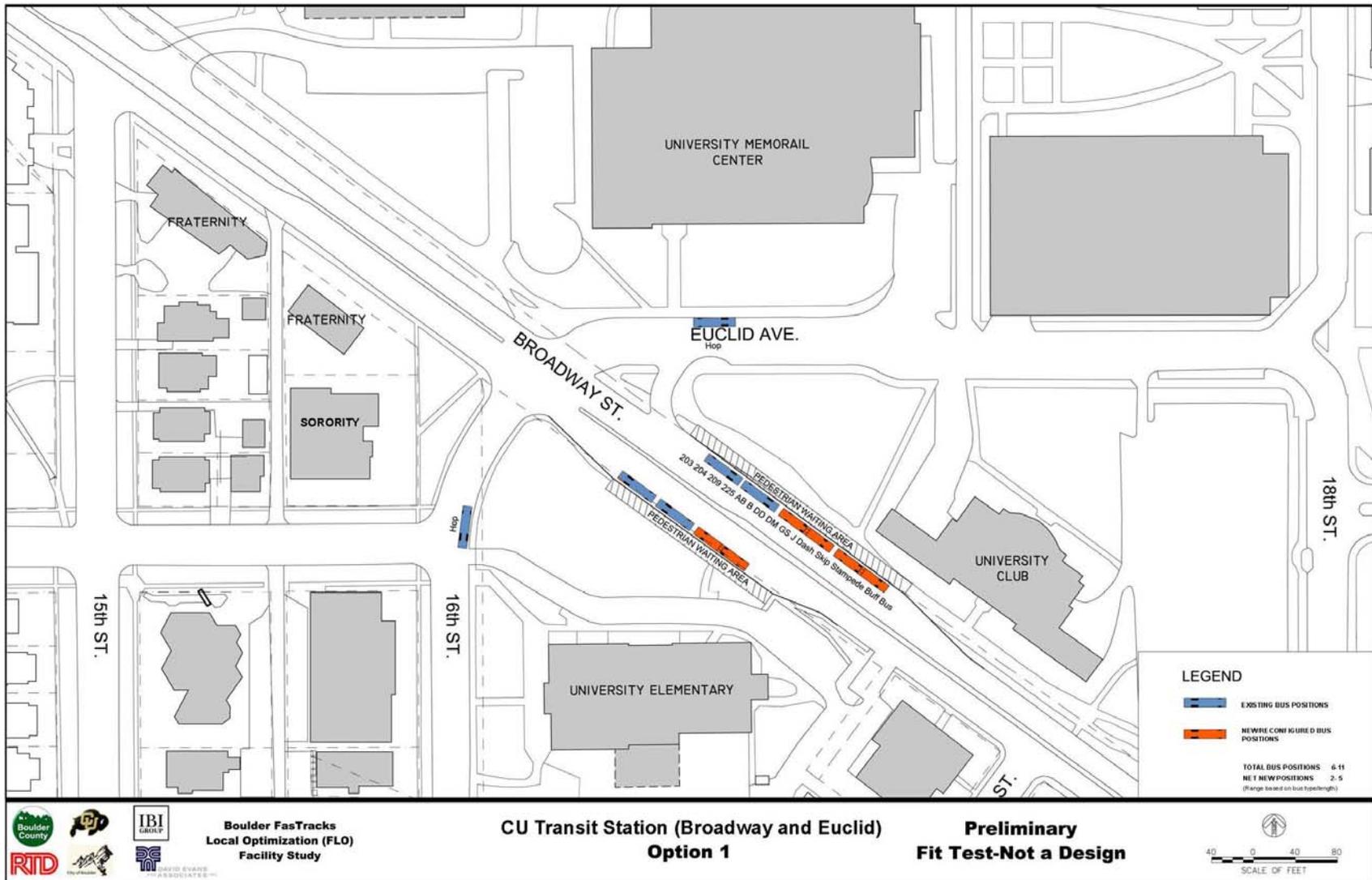


Figure 4. CU Transit Station – Option 2 and Option 2A

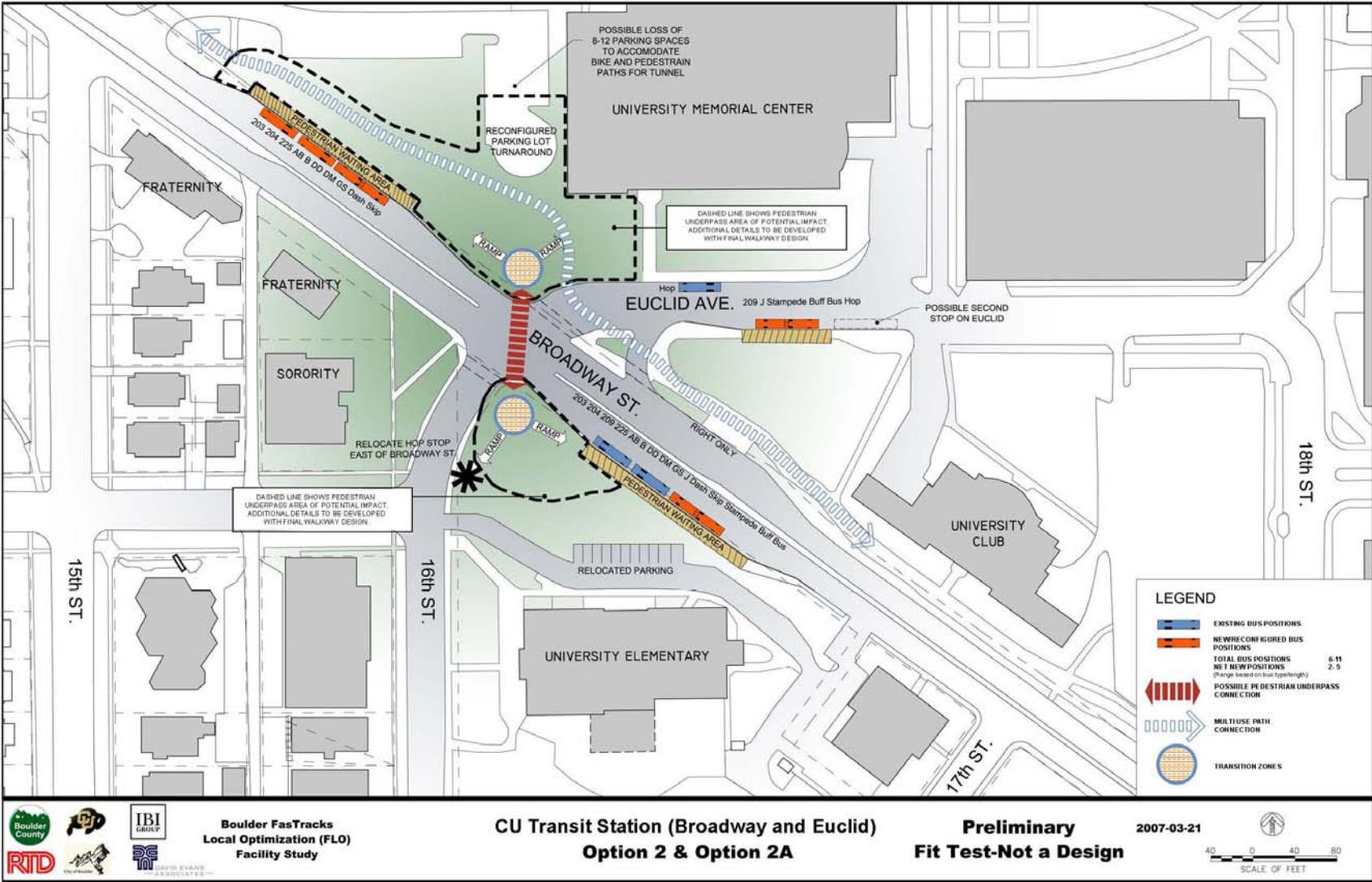


Figure 5. CU Transit Station – Option 3 and Option 3A

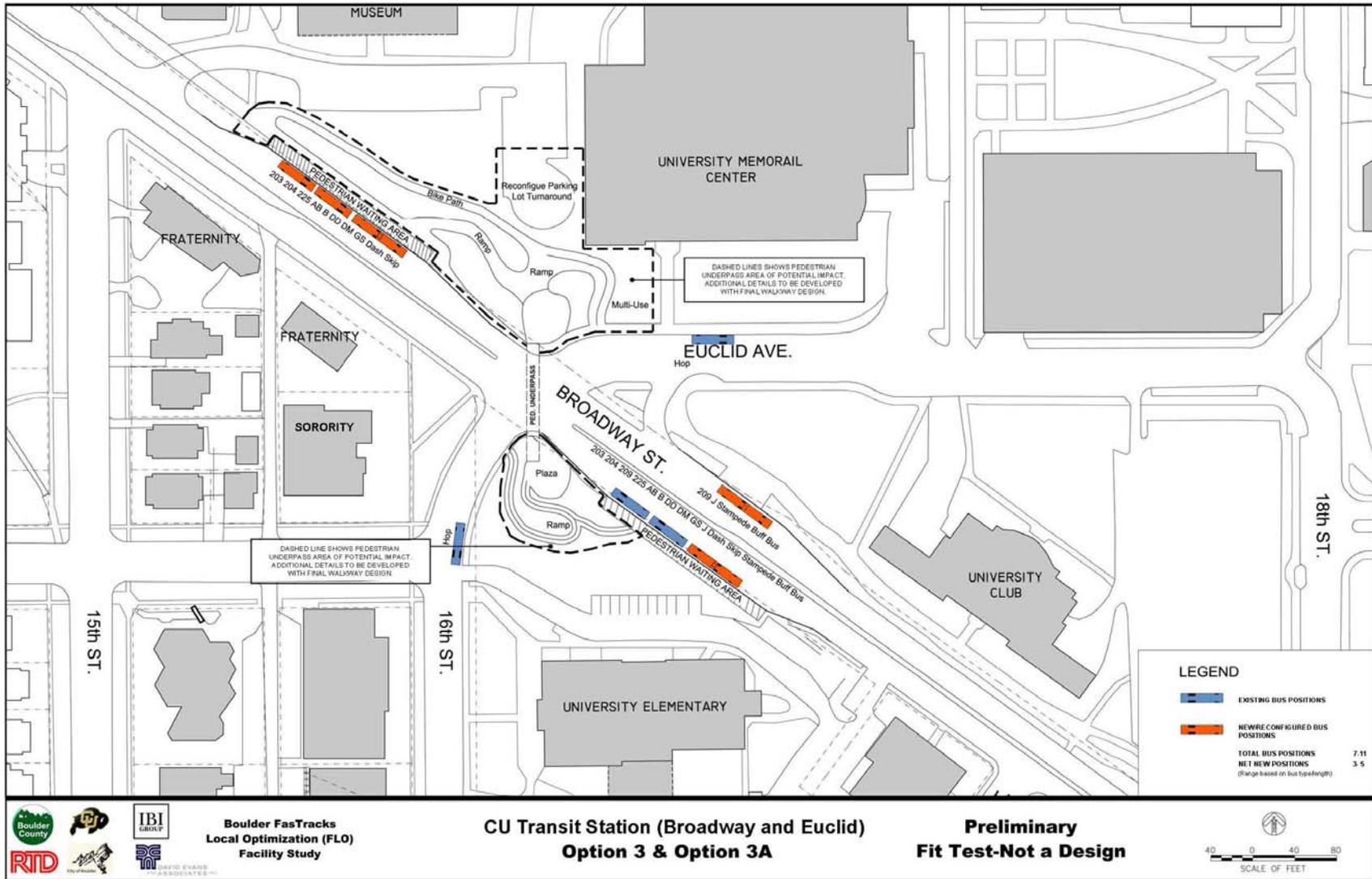
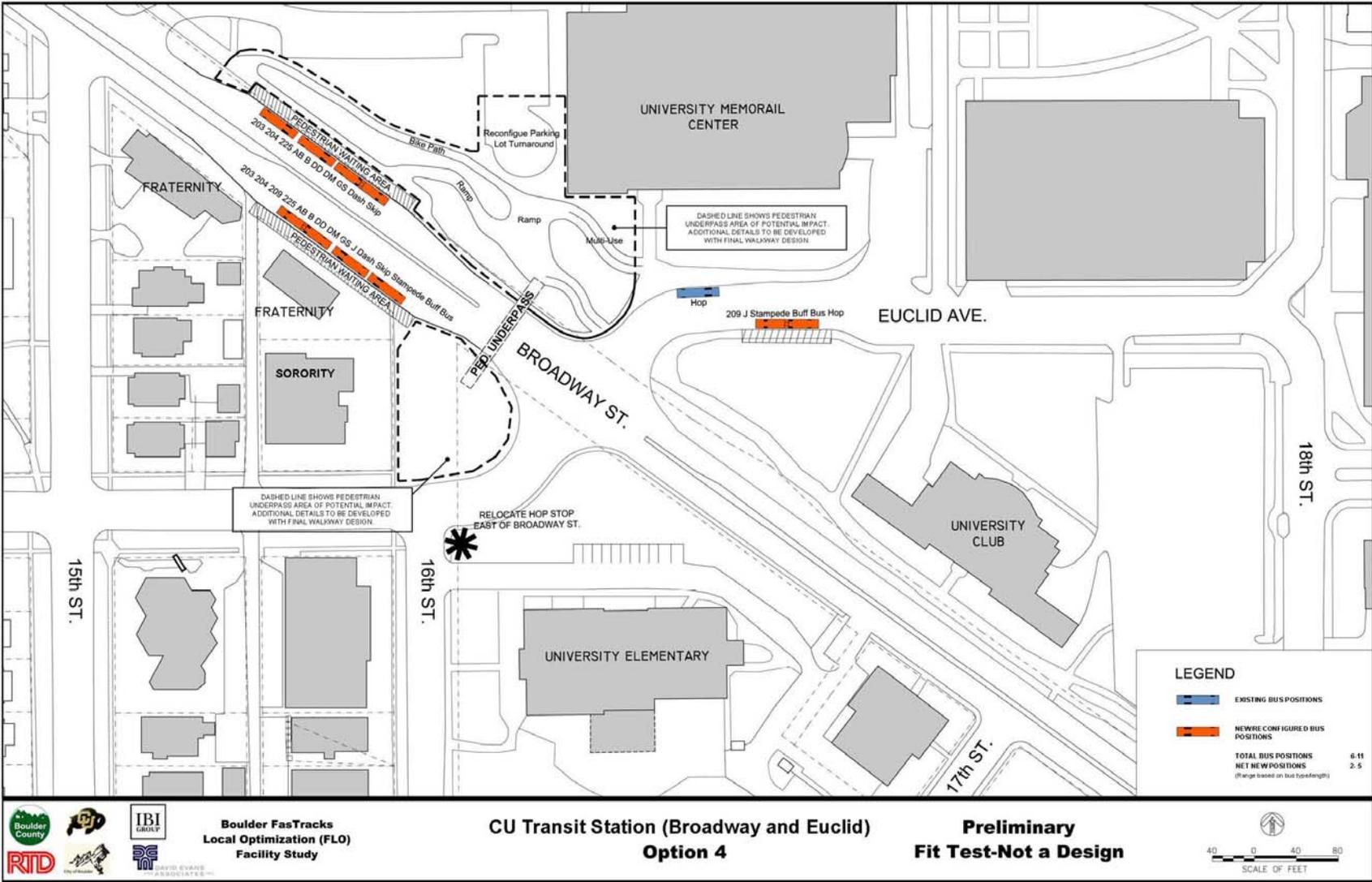


Figure 6. CU Transit Station – Option 4



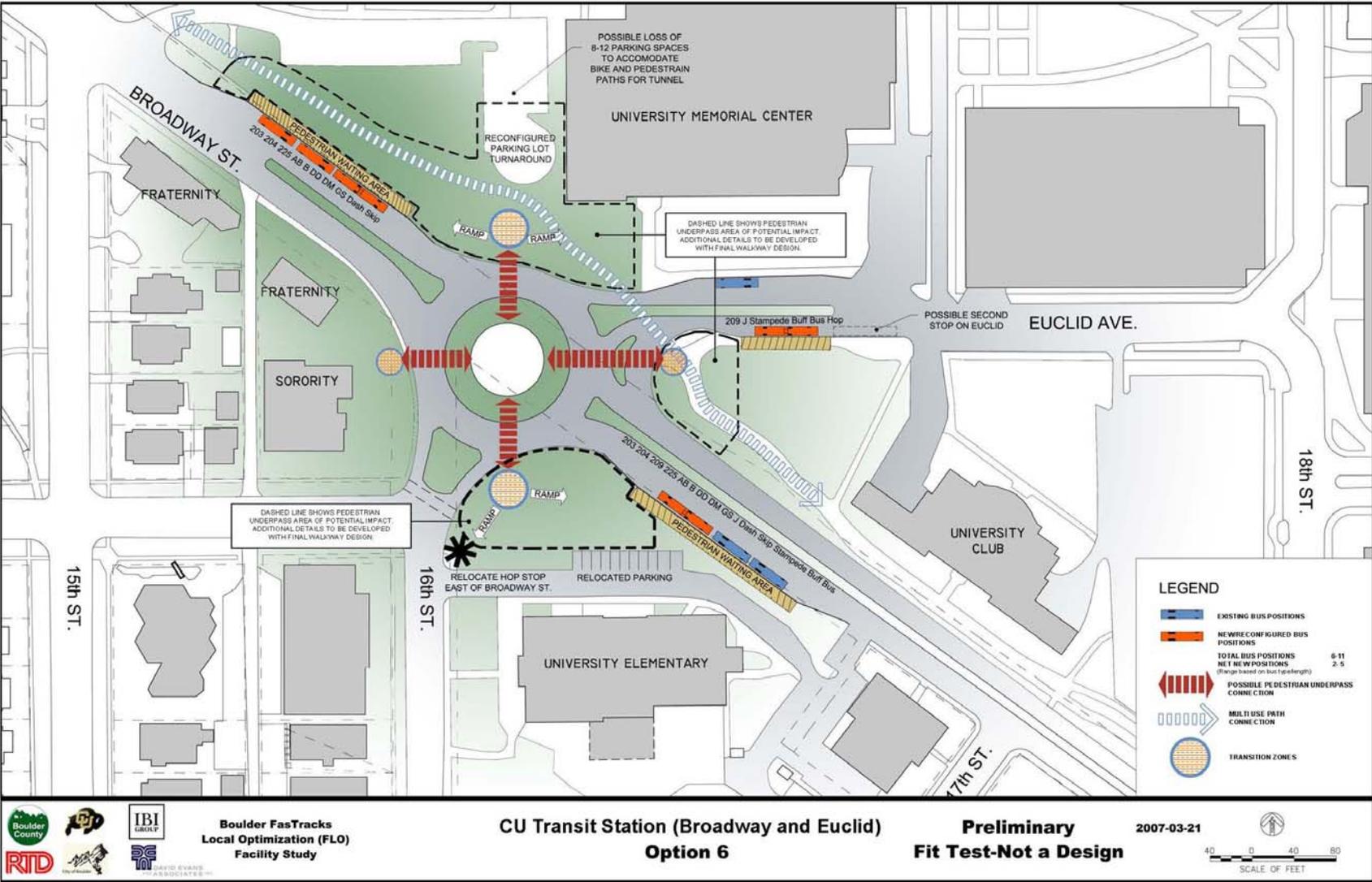
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**CU Transit Station (Broadway and Euclid)
 Option 4**

**Preliminary
 Fit Test-Not a Design**



Figure 8. CU Transit Station – Option 6



Boulder Transit Station Preliminary Concepts

The range of options at this location included both expansion and relocation of the existing transit facility. All preliminary concepts were evaluated using a set of factors that assessed their potential to address key issues and constraints. The downtown urban setting at this site results in challenging constraints for any new development.

The following set of preliminary options was developed for advancement into the evaluation process (see Figures 9 - 13).

Option 1

- Existing Facility + On-Street Expansion
 - Reconfigure existing on-street stops along 14th Street between Walnut Street and Canyon Boulevard
 - Expand on-street stops along 14th Street south of Canyon, along Canyon Boulevard east/west of 14th Street and along Walnut Street east/west of 14th Street

Option 2A

- Existing Facility + Off-Street Expansion to Block South of Current Site, Across Canyon Boulevard (World Savings and Equilon LLC properties)
 - Requires two property acquisitions and removal of three buildings on north side of block
 - Provide for internal off-street circulation of buses on-site
 - Construct pedestrian underpass to connect facilities

Option 2B

- Existing Facility + Off-Street Expansion to Block Southwest of Current Site, Across Canyon Boulevard and 14th Street (City Property, Atrium Site)
 - Utilize space where current parking facilities exist
 - New parking facility must be integrated; do not preclude
 - Preserve Tea House and Museum buildings
 - Maximize off-street areas with some use of curbside on common site
 - Provide for internal off-street circulation of buses on-site

Option 3A

- Full Replacement of Existing Facility to Full Block South of Current Site, Across Canyon Boulevard (World Savings, Equilon, XYX Corp Properties)
 - Requires property acquisition and removal of all buildings on block
 - Maximize off-street areas with some use of curbside on common site
 - Parking facility must be integrated; do not preclude

Option 3B

- Full Replacement of Existing Facility to Partial Block South of Current Site, Across Canyon Boulevard (World Savings, Equilon, XYX Corp Properties)
 - Requires two full property acquisitions and one partial acquisition, and removal of three buildings on north side of block
 - Preserve two southernmost office and retail buildings
 - Maximize off-street areas with some use of curbside on common site
 - Parking facility must be integrated to replace city parking at current transit station; do not preclude

Option 4

- Reconstruct Facility on Existing Site + 14th Street Right-of-Way
 - Provide maximum bus capacity that could be configured on available footprint
 - Parking facility must be integrated to preserve city parking at current transit station; do not preclude

Figure 9. Boulder Transit Station – Option 1-On Street

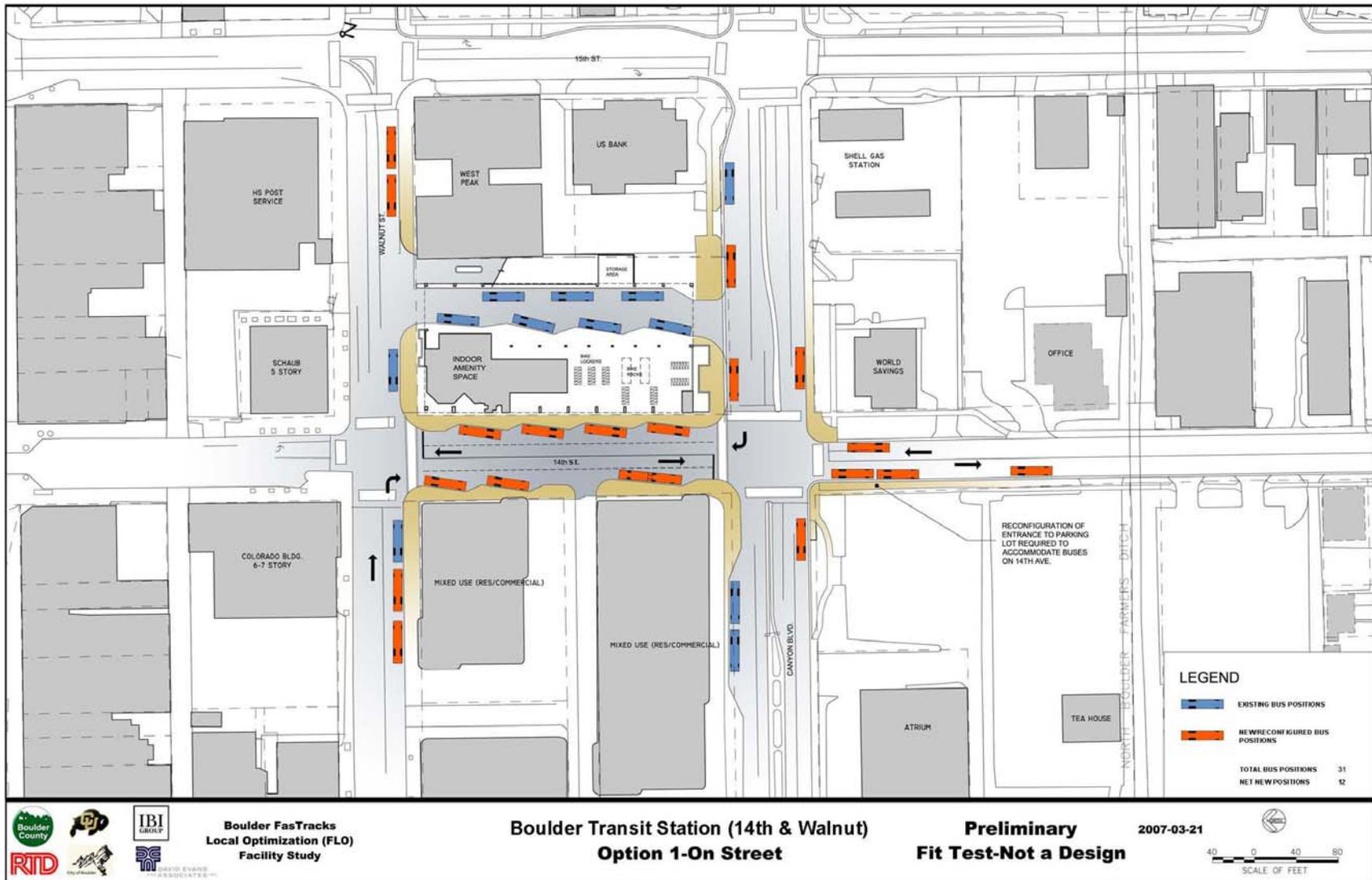


Figure 10. Boulder Transit Station – Option 2A-Off Street

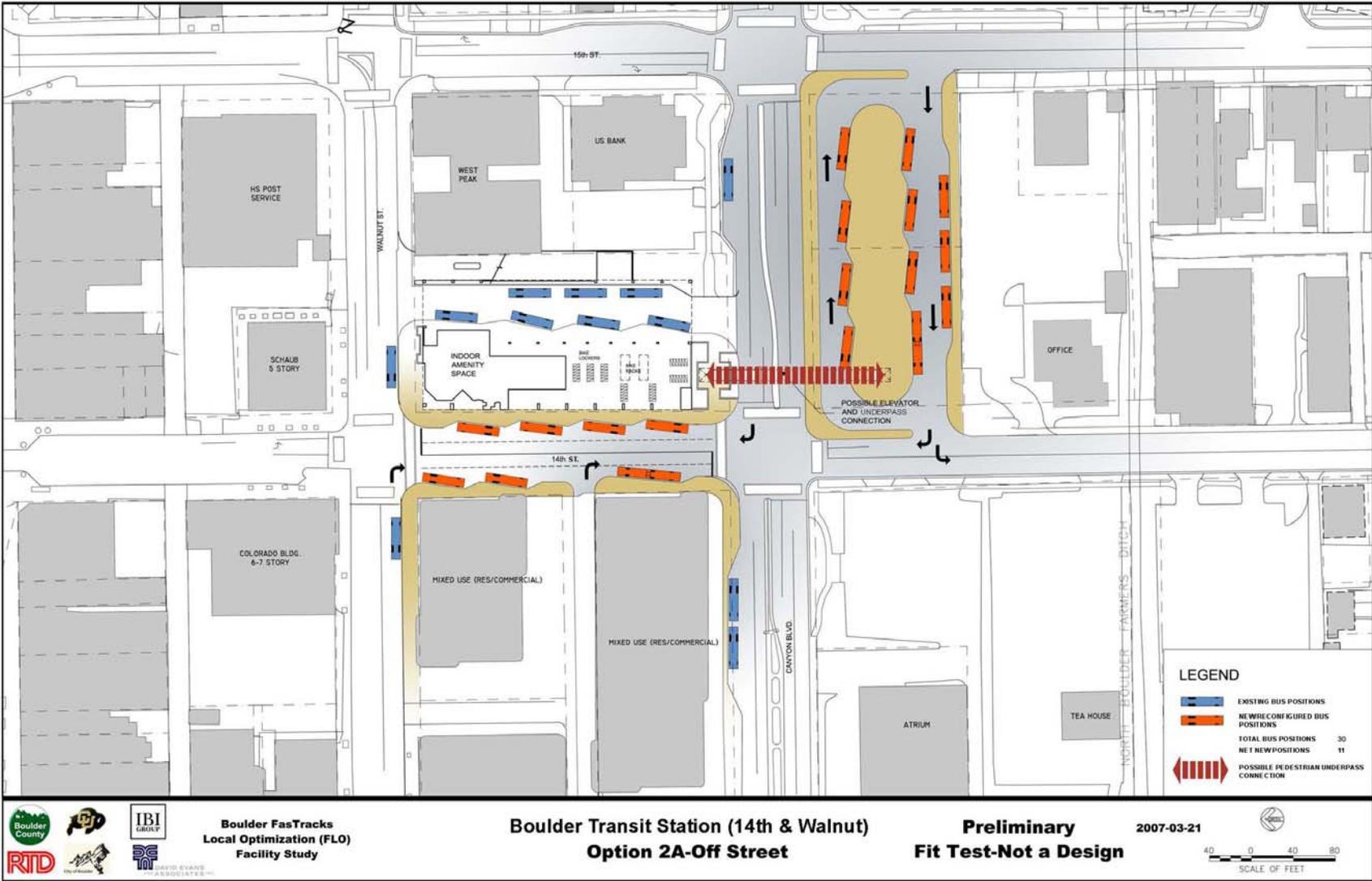


Figure 11. Boulder Transit Station – Option 2B-Off Street

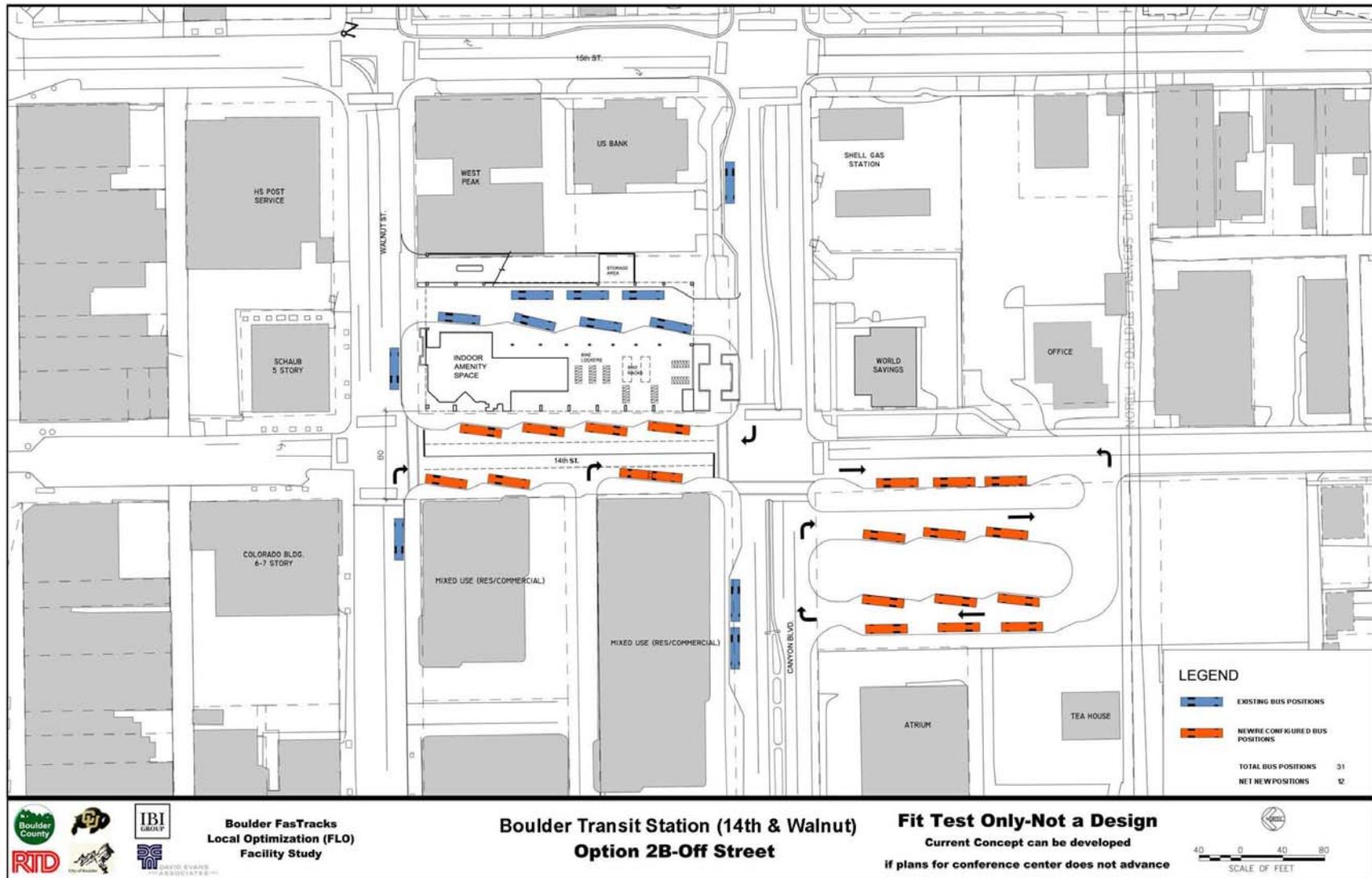


Figure 12. Boulder Transit Station – Option 3A-Replacement Facility

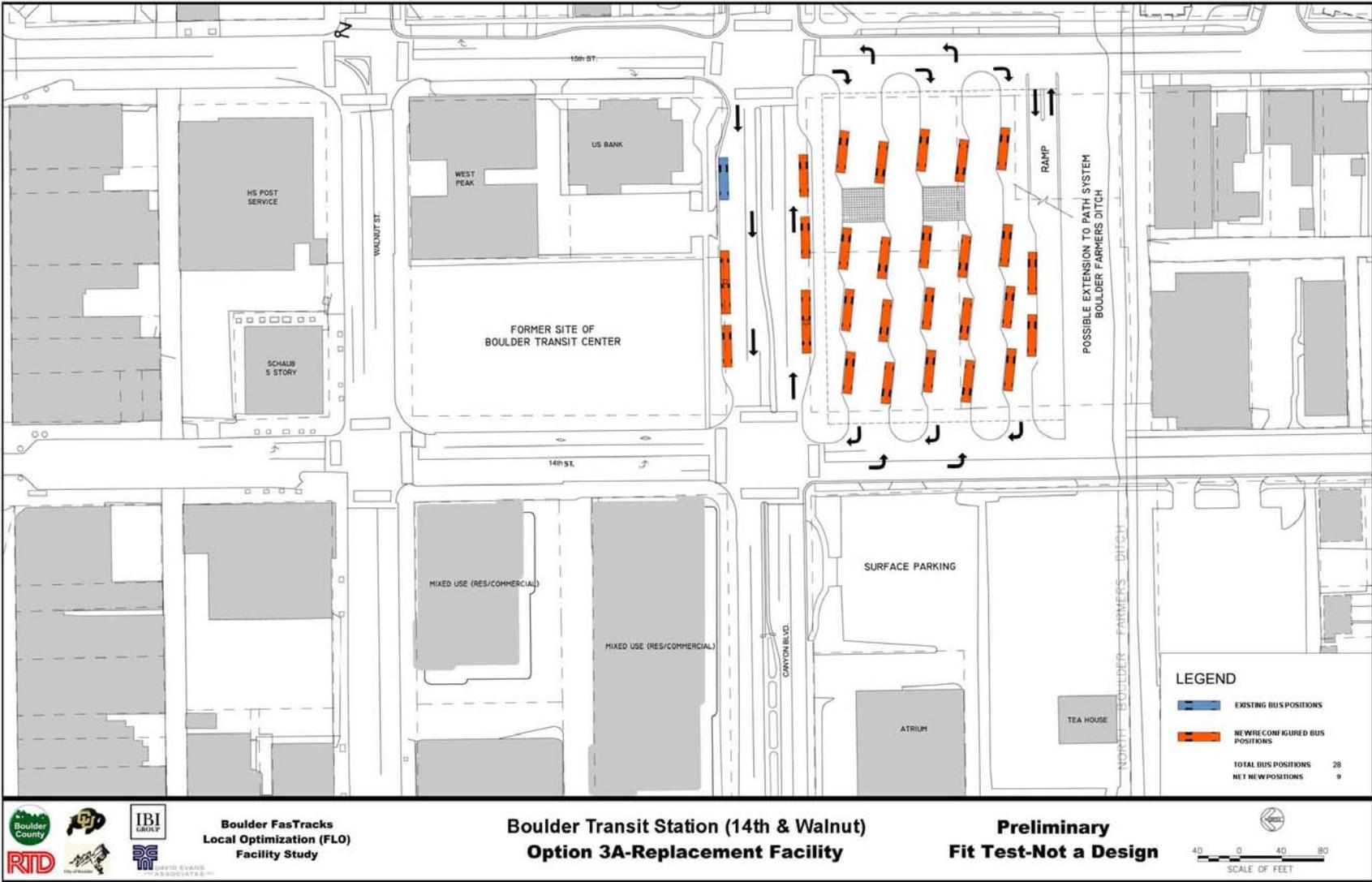


Figure 13. Boulder Transit Station – Option 3B-Replacement Facility

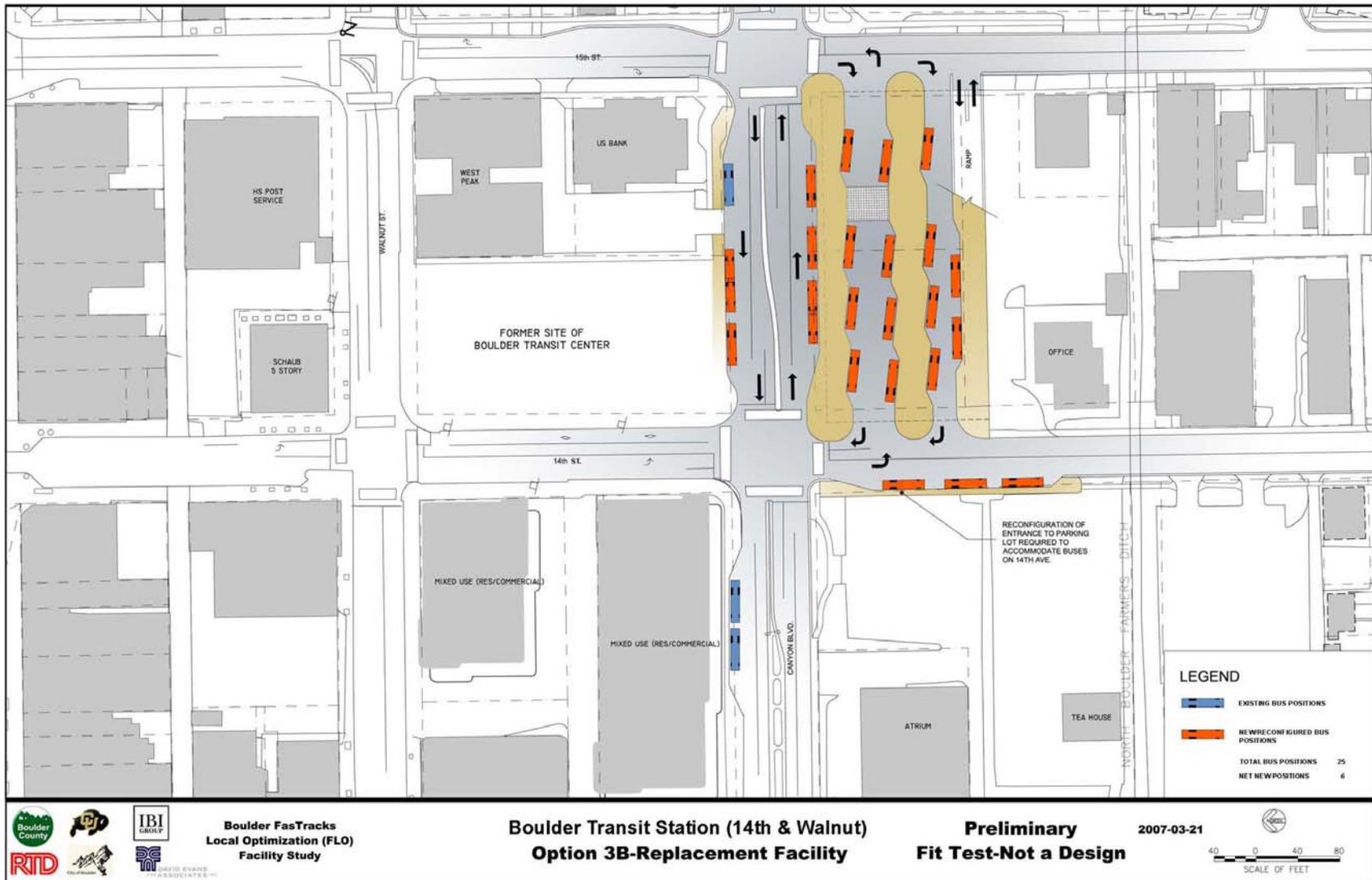
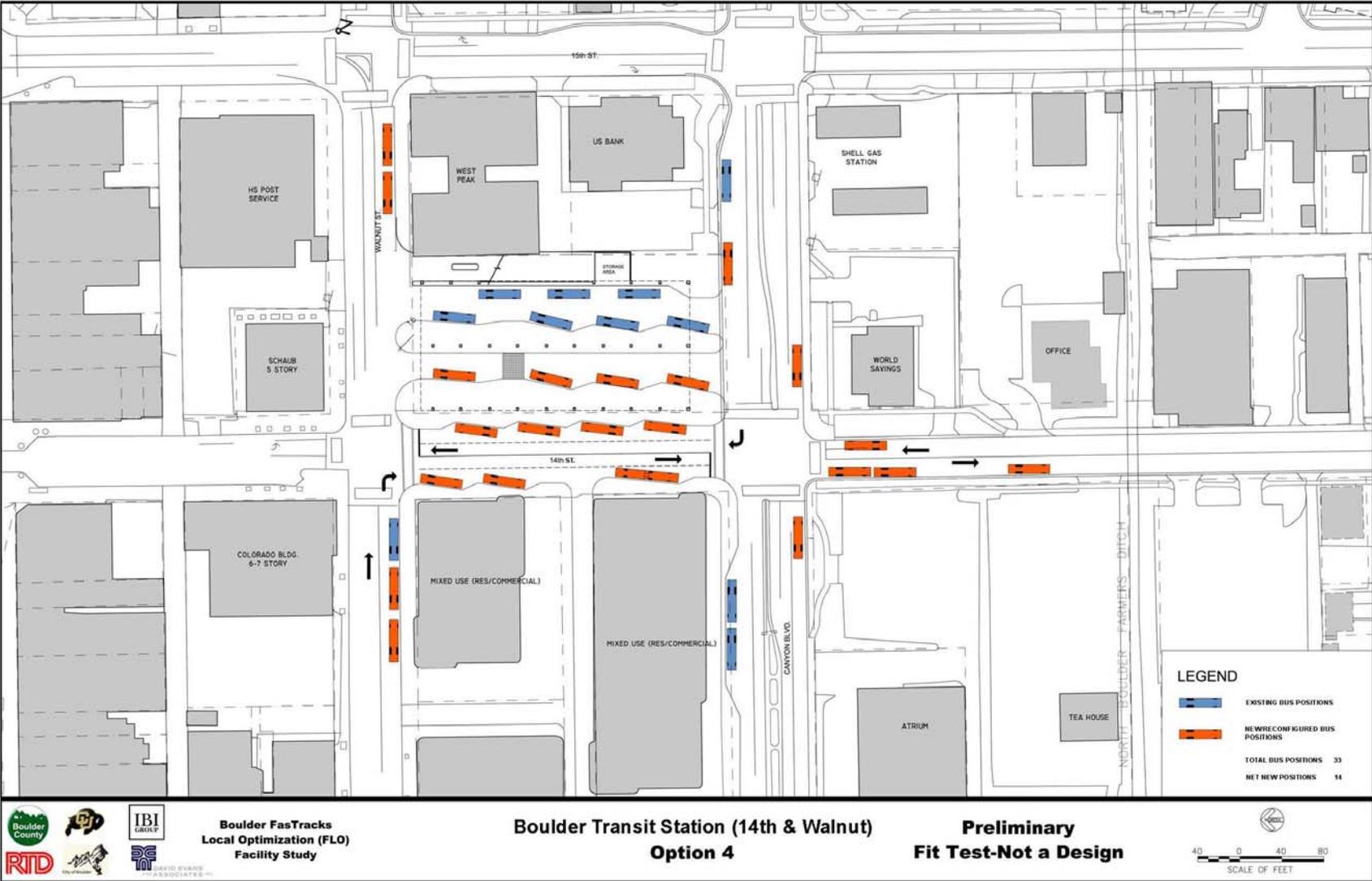


Figure 14. Boulder Transit Station – Option 4-Reconfiguration



Concept Evaluation

A set of evaluation factors (or criteria) was developed to help identify the tradeoffs between the different conceptual options at the CU and Boulder transit stations. Criteria were tied to overall issues, objectives, and functional needs to help determine how well each concept would meet the desired outcome. The following factors were identified and reviewed with project stakeholders.

Concept Evaluation Factors

- Transit passenger convenience and safety
 - passenger access
 - passenger safety
 - space allocations for passenger waiting areas
 - flexibility for increase in passenger activity
- Transit operations
 - efficiency of site and configuration to accommodate current and future transit volumes
 - space allocations for passenger loading
 - efficiency of route patterns and bus access
 - potential for delay
 - flexibility for increased service
- Traffic and parking operations
 - interface with adjacent general traffic volumes
 - impact on intersection level of service
 - impact to existing parking supply
 - multi-modal access safety
- Pedestrian and bicycle system/operations
 - interface with adjacent pedestrian and/or multi-use path volumes
 - pedestrian and bicycle user safety
- Property impacts
 - property acquisition requirements
 - impact to existing land uses
 - integration with existing land uses
- Costs
 - capital cost range
 - potential impact to transit operating costs
- Implementation considerations
 - partnering opportunities
 - potential funding sources
 - phasing opportunities
 - compliance with city land use plans, policies and regulations
- Public and stakeholder input

Factors were applied to each of the preliminary options to determine how well they addressed critical issues and to highlight the advantages and disadvantages of the respective concepts. The objective was to

recommend two options at each location for additional study and to develop preliminary cost estimates. Summary matrices are presented at the end of this section with the general conclusions for each option. A discussion and summary of the evaluation are described below for each location

Evaluation Summary for CU Transit Station

Options 1, 3/3A, 4, and 5 were not advanced due to their comparative performance among the concept evaluation factors. Concepts not advanced for further consideration were generally unable to meet future needs due to right-of-way or physical constraints that would result in high costs or unreasonable impacts, and their inability to address key functional issues. Option 1 was not advanced primarily because this option would not address the conflicts associated with the adjacent multi-use trail and the existing right turn lane from northbound Broadway to eastbound Euclid Avenue. Options 3/3A were also not advanced because they were similar to Options 2/2A. It was determined that there was a preference to establish a new stop on eastbound Euclid Avenue rather than preserve any transit stop functions at the existing near-side location. However, Options 3/3A could be considered as a contingency in the event that developing a stop on Euclid Avenue proved to be infeasible.

Option 4 included a reconfiguration of the 16th Street and Euclid Avenue legs of the intersection to allow for improved intersection geometry and a shorter pedestrian crossing. However, this option included the relocation of the southbound Broadway stop to the near-side of the intersection, which would require the alignment of Broadway to shift approximately 20 feet to the east. In addition, transit routes turning from westbound Euclid Avenue to southbound Broadway would be unable to use a near-side Broadway stop. Due to the anticipated high costs for roadway reconstruction and reduced benefit from a near-side transit stop, this option was not advanced. Option 5 also included intersection reconfiguration and an expansion of the southbound Broadway stop. This would not require a shift in the alignment of Broadway but the intersection modification would consume much of the vacant land in front of University Hill Elementary School. Option 5 was not advanced in favor of an alternate intersection reconfiguration concept (roundabout) that had greater potential to improve traffic flow, afford more flexibility in reconfiguring the surrounding area, and be coordinated with the CU gateway development program.

Recommended concepts advanced for future study at the CU Transit Station included Options 2A and 6. Option 2A includes the relocation of the northbound transit stop to the far-side of the Euclid intersection. This location provides more space to expand the transit stop pullouts to accommodate three to four buses. In addition, another new bus stop would be developed along eastbound Euclid Avenue, providing a separate stop location for routes that turn from northbound Broadway (Routes J, Stampede, and Buff Bus). The HOP route stop could also be shifted to Euclid Avenue from its current site on 16th Street (west of Broadway). Key advantages of this reconfiguration for northbound transit services include the elimination of the right turn conflict between buses and general traffic at Broadway and Euclid, the utilization of a far-side stop which provides greater efficiency for transit operations by allowing buses to utilize gaps in traffic, and the opportunity to reconfigure the adjacent multi-use trail to avoid conflicts with transit passenger movements.

In Option 2A, the southbound transit stop would be expanded further south, maintaining the more efficient far-side configuration and creating enough room in the pullout for three to four buses. Some reconfiguration of parking for the University Hill Elementary School would be required. A pedestrian underpass is also incorporated into Option 2A to provide a safer connection for the high volume of pedestrians crossing Broadway and Euclid. Properties on each side of the roadway would require some reconfiguration to accommodate the pedestrian ramps to the underpass.

Option 6 at the CU Transit Station incorporates transit stops at the same locations as Option 2A, as well as a pedestrian underpass. However, the intersection is redesigned using a roundabout configuration. This

concept offers the opportunity to ease peak hour traffic congestion by eliminating the signal and providing continuous traffic flow. The roundabout concept also provides an opportunity to integrate improvements as part of the CU gateway development program. Before any concepts are advanced, the following actions should be undertaken to further assess the intersection and pedestrian issues and opportunities at this location:

- Explore and analyze all reasonable options to reconfigure the circulation and site access at the Broadway and Euclid intersection, along Euclid Avenue, and at the Broadway and 18th Street intersection to minimize conflicts between modes, to improve efficiency for vehicles (including transit buses), and to optimize traffic Level of Service (LOS).
- Analyze the pedestrian crossing volumes, origins, and destinations to understand pedestrian needs in greater detail before designing the layout of a pedestrian underpass to ensure optimal benefit and use by pedestrians.
- Investigate options for closing 16th Street to vehicle traffic on the west side of Broadway intersection. The pedestrian underpass could be placed in this space, providing a gateway entrance feature to campus, potentially maximizing pedestrian use, and reducing pedestrian/vehicle conflicts at Broadway.
- Consider optional trail designs to enhance the safe and efficient operation of the Broadway multi-use path along the east side.

Evaluation Summary for Boulder Transit Station

Options 2B and 3A were not advanced due to their comparative performance among the concept evaluation factors. Concepts not advanced at the Boulder Transit Station were generally set aside due to the magnitude of property impacts or because of other planned uses for the adjacent properties. Option 4, the full reconstruction of the existing facility, was also not carried through the full evaluation and not included in the concept evaluation matrix. It was determined to be infeasible primarily due to the problems associated with providing a temporary site for both transit facility operations and parking provisions for an extended period of time during the redevelopment of the site. Option 2B was not advanced primarily due to the planned use of this site for a future City of Boulder conference center. This site could have potential in the future should the conference center not move forward. The site is also planned to possibly include new underground parking to replace existing surface parking on the site and to support the new conference center. In addition, a new hotel may be integrated with the development. Option 3A was also not advanced due to the significant property requirements associated with this concept. All existing structures on the block south of the current site would need to be removed to accommodate a new transit facility.

Three recommended concepts for future study were advanced to offer on-street and off-street solutions, and allow for flexibility in project coordination and phasing. Options 1, 2A, and 3B were selected for further evaluation. Option 1 focuses on on-street improvements only, while Options 2A and 3B require additional property for off-street expansion or relocation of transit facility functions.

Option 1 identifies an opportunity for up to 12 new bus positions along the neighboring downtown street system. Only 5 to 7 additional positions are required, so some of the current inefficient positions could be eliminated or only a portion of the new positions could be implemented. Locations along Walnut Street, 14th Street, and Canyon Boulevard would be utilized, requiring removal of approximately 12 metered parking spaces and some reconfiguration of driveways. Current parallel bus stop areas along 14th Street (between Walnut and Canyon) would be reconfigured as saw-tooth bus bays to provide better organization of vehicles and more room for passenger waiting. This on-street concept provides an

opportunity for short-term expansion if necessary, with other options implemented later. However, expanded on-street bus operations would impact traffic circulation on the existing street network.

Option 2A includes the redevelopment of property directly south of the current facility across Canyon Boulevard while maintaining the current station at 14th and Walnut. Two existing properties would be impacted but the site could potentially be developed with joint transit and commercial uses. In this concept, a total of 11 new bus positions could be developed in this off-street location with one new position along 14th Street to supplement the existing bus capacity. Some of the existing on-street positions or the inefficient positions in the existing station could be eliminated. The off-street configuration allows all required bus circulation to occur off-street. Additional off-street parking could also be provided at the site of the new station facility.

Option 3B makes use of this same property but assumes a complete relocation of bus facilities. A more condensed configuration is used for off-street bus positions to maximize capacity, with additional use of Canyon Boulevard for bus pullouts. Approximately five metered parking spaces would be removed along 14th Street. This concept offers a total of 23 bus positions and requires a portion of the bus circulation to occur along 14th Street, 15th Street, and Canyon Boulevard. Off-street parking would need to be provided at the site to replace the city parking at the existing transit station. Other uses could also be developed by COB or a private developer.

Before any implementation steps are advanced, the following actions should be undertaken to assess the issues associated with property acquisition and parking impacts at this location:

- Evaluate the feasibility of shifting some bus layover functions to alternate locations to relieve some of the burden from the Boulder Transit Station, reducing the required number of bus positions.
- Coordinate with Boulder Downtown Management/Parking Services to determine the feasibility of removing or relocating on-street parking, including coordination with future city projects.
- Coordinate with existing property owners to determine if joint use development is feasible or desirable for property to the south of current facility.
- Engage all adjacent property owners in project development process to ensure that all issues, concerns, and opportunities regarding new development and parking needs are considered.

Concept Evaluation Matrix
CU Transit Station - Broadway & Euclid

Preliminary Evaluation Factors	Alternatives					
	Option 1 Expand both NB and SB stops to South	Option 2/ 2A (w/ Ped Underpass) Relocate NB Stop to Far-Side and Euclid, Expand SB Stop to South	Option 3/ 3A (w/ Ped Underpass) Expand NB Stop to Far-Side, Maintain Current NB Stop, Expand SB Stop to South	Option 4 (w/ Ped Underpass) Realign Intersection, Relocate NB Stop to Far-Side and Euclid, Relocate SB Stop to Near-Side	Option 5 (w/ Ped Underpass) Realign Intersection, Relocate NB Stop to Far-Side and Euclid, Expand SB Stop to South	Option 6 (w/ Ped Underpasses) Redesign Intersection as Roundabout, Relocate NB Stop to Far-Side and Euclid, Expand SB Stop to South
Transit Passenger Convenience and Safety	<ul style="list-style-type: none"> Too many (more than 3) NB bus positions in a row causes confusion for passengers (i.e. where to stand) Continued high pedestrian volumes crossing Broadway and Euclid to access bus stops Continued conflict at NB stop with adjacent multi-use trail, not efficient separation between NB transit passenger boarding/alighting and trail users 	<ul style="list-style-type: none"> Provides more space for NB transit passenger waiting areas Eliminates significant pedestrian flow across Euclid by moving NB stop to far-side Provides improved access to HOP by relocating NB/EB stop to Euclid (across street from WB/SB HOP stop) Provides clear separation of NB route stops between Broadway and Euclid for better passenger understanding 	<ul style="list-style-type: none"> Provides more space for NB transit passenger waiting areas Eliminates significant pedestrian flow across Euclid by moving much of NB stop activity to far-side Continued conflict at NB stop with adjacent multi-use trail, not efficient separation between existing NB transit passenger boarding/alighting and trail users 	<ul style="list-style-type: none"> Provides more space for NB transit passenger waiting areas Eliminates significant pedestrian flow across Euclid by moving much of NB stop activity to far-side Provides improved access to HOP by relocating NB/EB stop to Euclid (across street from WB/SB HOP stop) SB near-side stop more constrained for pedestrians, directly adjacent to fraternity house access Provides clear separation of NB route stops between Broadway and Euclid for better passenger understanding 	<ul style="list-style-type: none"> Provides more space for NB transit passenger waiting areas Eliminates significant pedestrian flow across Euclid by moving much of NB stop activity to far-side Provides improved access to HOP by relocating NB/EB stop to Euclid (across street from WB/SB HOP stop) Provides clear separation of NB route stops between Broadway and Euclid for better passenger understanding 	<ul style="list-style-type: none"> Provides more space for NB transit passenger waiting areas Eliminates significant pedestrian flow across Euclid by moving much of NB stop activity to far-side Provides improved access to HOP by relocating NB/EB stop to Euclid (across street from WB/SB HOP stop) Provides clear separation of NB route stops between Broadway and Euclid for better passenger understanding
Transit Operations	<ul style="list-style-type: none"> Meets high end of range for capacity requirements Expanded capacity allows for 2-5 more (7-11 total) positions to be used for both passenger boarding/alighting and layover functions Articulated bus can be accommodated in both directions Bus stacking likely to occur behind NB occupied position(s), could create inefficient use, difficult access/egress NB near-side stop less efficient for transit operations, limits traffic gaps, could trap buses SB far-side stop remains most efficient for transit operations, provides gaps for buses to re-enter traffic Inefficient NB/EB HOP bus stop on 16th Street 	<ul style="list-style-type: none"> Meets high end of range for capacity requirements Expanded capacity allows for 2-5 more (7-11 total) positions to be used for both passenger boarding/alighting and layover functions Articulated bus can be accommodated in both directions Efficiently splits NB stops into two locations for through bus patterns on NB Broadway and bus patterns using WB Euclid NB far-side stop more efficient, provides gaps for buses to re-enter traffic NB near-side stop remains most efficient for transit operations, provides gaps for buses to re-enter traffic 	<ul style="list-style-type: none"> Meets high end of range for capacity requirements Expanded capacity allows for 2-5 more (7-11 total) positions to be used for both passenger boarding/alighting and layover functions Articulated bus can be accommodated in both directions Splits NB stops into two locations for through bus patterns on NB Broadway and bus patterns using WB Euclid NB far-side stop more efficient, provides gaps for buses to re-enter traffic NB near-side stop less efficient for transit operations, limits traffic gaps, could trap buses SB far-side stop remains most efficient for transit operations, provides gaps for buses to re-enter traffic Inefficient NB/EB HOP bus stop on 16th Street 	<ul style="list-style-type: none"> Meets high end of range for capacity requirements Expanded capacity allows for 2-5 more (7-11 total) positions to be used for both passenger boarding/alighting and layover functions Articulated bus can be accommodated in both directions Efficiently splits NB stops into two locations for through bus patterns on NB Broadway and bus patterns using WB Euclid NB far-side stop more efficient, provides gaps for buses to re-enter traffic SB near-side stop less efficient for transit operations, limits traffic gaps, could trap buses 	<ul style="list-style-type: none"> Meets high end of range for capacity requirements Expanded capacity allows for 2-5 more (7-11 total) positions to be used for both passenger boarding/alighting and layover functions Articulated bus can be accommodated in both directions Efficiently splits NB stops into two locations for through bus patterns on NB Broadway and bus patterns using WB Euclid NB far-side stop more efficient, provides gaps for buses to re-enter traffic SB far-side stop remains most efficient for transit operations, provides gaps for buses to re-enter traffic 	<ul style="list-style-type: none"> Meets high end of range for capacity requirements Expanded capacity allows for 2-5 more (7-11 total) positions to be used for both passenger boarding/alighting and layover functions Articulated bus can be accommodated in both directions Efficiently splits NB stops into two locations for through bus patterns on NB Broadway and bus patterns using WB Euclid NB far-side stop more efficient, provides gaps for buses to re-enter traffic SB far-side stop remains most efficient for transit operations, provides gaps for buses to re-enter traffic
Traffic Operations	<ul style="list-style-type: none"> Continued conflict with near-side bus stop and NB to EB right turn lane used by general traffic NB near-side stop limits traffic gaps for buses, creates conflicts when re-entering traffic 	<ul style="list-style-type: none"> Eliminates conflict with near-side NB bus stop and NB to EB right turn lane used by general traffic NB far-side stop provides traffic gaps for buses to re-enter traffic, reducing conflicts with general traffic Potential impact to loading dock access and University Club driveway access on Euclid Vehicle/pedestrian conflicts significantly reduced in Option 2 by pedestrian underpass 	<ul style="list-style-type: none"> Continued conflict with near-side bus stop and NB to EB right turn lane used by general traffic NB near-side stop limits traffic gaps for buses, creates conflicts when re-entering traffic NB far-side stop provides gaps for buses to re-enter traffic, reducing conflicts with general traffic Vehicle/pedestrian conflicts significantly reduced in Option 3 by pedestrian underpass 	<ul style="list-style-type: none"> Eliminates conflict with near-side NB bus stop and NB to EB right turn lane used by general traffic NB far-side stop provides traffic gaps for buses to re-enter traffic, reducing conflicts with general traffic Potential impact to loading dock access and University Club driveway access on Euclid SB near-side stop limits traffic gaps for buses, creates conflicts when re-entering traffic Intersection realignment removes existing skew and provides more efficient perpendicular alignment for intersection legs Vehicle/pedestrian conflicts significantly reduced by pedestrian underpass 	<ul style="list-style-type: none"> Eliminates conflict with near-side NB bus stop and NB to EB right turn lane used by general traffic NB far-side stop provides traffic gaps for buses to re-enter traffic, reducing conflicts with general traffic Potential impact to loading dock access and University Club driveway access on Euclid Intersection realignment removes existing skew and provides more efficient perpendicular alignment for intersection legs Vehicle/pedestrian conflicts significantly reduced by pedestrian underpass 	<ul style="list-style-type: none"> Eliminates conflict with near-side NB bus stop and NB to EB right turn lane used by general traffic Unsignalized roundabout may not be as efficient in providing gaps for buses to re-enter traffic Potential impact to loading dock access and University Club driveway access on Euclid Roundabout intersection configuration removes existing skew and may help improve intersection level of service (LOS) at this location. Detailed LOS analysis should be conducted to confirm required roundabout dimensions and operational feasibility Vehicle/pedestrian conflicts significantly reduced by pedestrian underpass
Pedestrian and Bicycle System/Operations	<ul style="list-style-type: none"> Continued conflict at NB stop with adjacent multi-use trail, not efficient separation between NB transit passenger boarding/alighting and trail users 	<ul style="list-style-type: none"> Option 2A provides grade separated pedestrian underpass across Broadway, reducing pedestrian/vehicular conflicts Eliminates NB stop conflict with adjacent multi-use trail, allows for efficient separation between NB transit passenger boarding/alighting and trail users at far-side location 	<ul style="list-style-type: none"> Option 3A provides grade separated pedestrian underpass across Broadway, reducing pedestrian/vehicular conflicts Eliminates portion of NB stop transit-related passenger conflict with adjacent multi-use trail, allows for efficient separation between NB transit passenger boarding/alighting and trail users at far-side location Creates constrained pedestrian area at SB near-side stop where transit passenger boarding/alighting could conflict with high-volume sidewalk 	<ul style="list-style-type: none"> Provides grade separated pedestrian underpass across Broadway, reducing pedestrian/vehicular conflicts Eliminates NB stop conflict with adjacent multi-use trail, allows for efficient separation between NB transit passenger boarding/alighting and trail users at far-side location Creates constrained pedestrian area at SB near-side stop where transit passenger boarding/alighting could conflict with high-volume sidewalk 	<ul style="list-style-type: none"> Provides grade separated pedestrian underpass across Broadway, reducing pedestrian/vehicular conflicts Eliminates NB stop conflict with adjacent multi-use trail, allows for efficient separation between NB transit passenger boarding/alighting and trail users at far-side location 	<ul style="list-style-type: none"> Provides grade separated pedestrian underpass (3-legged) across Broadway and Euclid, reducing pedestrian/vehicular conflicts Eliminates NB stop conflict with adjacent multi-use trail, allows for efficient separation between NB transit passenger boarding/alighting and trail users at far-side location
Property Impacts	<ul style="list-style-type: none"> Requires physical impact to University Club historic property by expanded NB stop Potential for visual impact to University Club by expanded NB stop Potential impact to University Hill Elementary parking by expanded SB stop, parking could be relocated 	<ul style="list-style-type: none"> Requires physical impact to University of Colorado vacant landscaped property to relocate NB stop and realign multi-use trail Requires reconfiguration of property adjacent to University Memorial Center to accommodate pedestrian underpass access (2A only) Impact to University Hill Elementary property for pedestrian underpass access Potential impact to University Hill Elementary parking by expanded SB stop, parking could be relocated Requires removal of 3-5 metered parking spaces on Euclid May require reconfiguration of CU off-street parking east of NB far-side stop 	<ul style="list-style-type: none"> Requires physical impact to University of Colorado vacant landscaped property to expand NB stop and realign multi-use trail Requires reconfiguration of property adjacent to University Memorial Center to accommodate pedestrian underpass access (3A only) Impact to University Hill Elementary property for pedestrian underpass access Potential impact to University Hill Elementary parking by expanded SB stop, parking could be relocated May require reconfiguration of CU off-street parking east of NB far-side stop 	<ul style="list-style-type: none"> Requires realignment of Broadway to create adequate space for SB near-side stop Requires physical impact to University of Colorado vacant landscaped property to relocate NB stop and realign multi-use trail Requires reconfiguration of property adjacent to University Memorial Center and on west side of Broadway to accommodate pedestrian underpass access Impact to University Hill Elementary property for intersection realignment Potential impact to fraternity house property by relocated SB stop Requires removal of 3-5 metered parking spaces on Euclid May require reconfiguration of CU off-street parking east of NB far-side stop 	<ul style="list-style-type: none"> Requires physical impact to University of Colorado vacant landscaped property to relocate NB stop and realign multi-use trail Requires reconfiguration of property adjacent to University Memorial Center to accommodate pedestrian underpass access Impact to University Hill Elementary property for pedestrian underpass access and intersection realignment Requires removal of 3-5 metered parking spaces on Euclid Potential impact to University Hill Elementary parking by expanded SB stop, parking could be relocated May require reconfiguration of CU off-street parking east of NB far-side stop 	<ul style="list-style-type: none"> Requires physical impact to University of Colorado vacant landscaped property to relocate NB stop and realign multi-use trail Requires reconfiguration of property adjacent to University Memorial Center to accommodate pedestrian underpass access Impact to University Hill Elementary property for pedestrian underpass access and roundabout intersection Requires removal of 3-5 metered parking spaces on Euclid Potential impact to University Hill Elementary parking by expanded SB stop, parking could be relocated May require reconfiguration of CU off-street parking east of NB far-side stop
Costs	<ul style="list-style-type: none"> Lower cost than other options, retains use of current NB and SB facilities High cost for pedestrian underpass (2B) 	<ul style="list-style-type: none"> Moderate cost to relocate NB stop and expand SB stops (Option 2), retains use of current SB facilities High cost for pedestrian underpass (2B) 	<ul style="list-style-type: none"> Moderate cost to expand NB stop and expand SB stops (Option 3), retains use of current SB facilities High cost for pedestrian underpass (3B) 	<ul style="list-style-type: none"> High cost to relocate both NB and SB stops High cost for realignment of intersection and realignment of Broadway to accommodate SB near-side stop High cost for pedestrian underpass, but shorter than Options 2A and 3A 	<ul style="list-style-type: none"> Moderate cost to relocate NB stop High cost for realignment of intersection High cost for pedestrian underpass 	<ul style="list-style-type: none"> Moderate cost to relocate NB stop High cost for redesign of intersection as a roundabout High cost for pedestrian underpass, 3-legged underpass longer than all other options
Implementation Considerations	<ul style="list-style-type: none"> Requires disruption of current NB and SB facilities/operations during construction Potential for partnering between CU and City of Boulder 	<ul style="list-style-type: none"> Existing NB facility could remain functioning while relocated facilities are constructed Requires disruption of current SB facilities/operations during construction Potential for partnering between CU, City of Boulder and Boulder Valley School District (BVSD) Allows flexibility to relocate and expand stops as first phase, add pedestrian underpass as later phase 	<ul style="list-style-type: none"> Existing NB facility can remain functioning while relocated facilities are constructed Requires disruption of current SB facilities/operations during construction Potential for partnering between CU, City of Boulder and Boulder Valley School District (BVSD) Allows flexibility to expand stops as first phase, add pedestrian underpass as later phase 	<ul style="list-style-type: none"> Existing NB and SB facilities could remain functioning while relocated facilities are constructed Potential for partnering between CU and City of Boulder Intersection realignment allows less flexibility for phasing improvements 	<ul style="list-style-type: none"> Existing NB facilities could remain functioning while relocated facilities are constructed Requires disruption of current SB facilities/operations during construction Potential for partnering between CU, City of Boulder and Boulder Valley School District (BVSD) Intersection realignment allows less flexibility for phasing improvements 	<ul style="list-style-type: none"> Existing and/or new transit facilities/operations likely disrupted during construction Potential for partnering between CU, City of Boulder and Boulder Valley School District (BVSD) Intersection reconstruction allows less flexibility for phasing improvements Provides opportunity to integrate improvements with CU gateway development program
Recommendation	Do Not Advance	Advance 2A for Further Study	Do Not Advance (remains alternative to 2A if Euclid stop can not be developed)	Do Not Advance	Do Not Advance	Advance for Further Study

Concept Evaluation Matrix
Boulder Transit Station - 14th & Walnut

Preliminary Evaluation Factors	Alternatives				
	Option 1 Existing Facility + On-Street Expansion Only	Option 2A Existing Facility + Off-Street Expansion (World Savings, Equilon LLC Site)	Option 2B Existing Facility + Off-Street Expansion (City Property, Altrium Site)	Option 3A Full Replacement Facility + Common Curbside (World Savings, Equilon, XYZ Corp. Site)	Option 3B Same Site as 3A, Lower Capacity, Less Land Acquisition
Transit Passenger Convenience and Safety	<ul style="list-style-type: none"> Reasonable space available for passenger waiting in existing facility, expanded passenger waiting space created on 14th Street Maintains proximity of bus bays and stops within existing facility to facilitate passenger transfers New bus positions on Walnut Street, Canyon Boulevard and 14th Street require long walks and crossing of canyon and 14th (in some cases) for transfer connections at existing facility 	<ul style="list-style-type: none"> Reasonable space available for passenger waiting in existing facility, expanded passenger waiting space created on 14th Street Maintains proximity of bus bays and stops within existing facility to facilitate passenger transfers New off-street passenger platforms require passengers to cross Canyon Boulevard for transfer connections at existing facility. Pedestrian tunnel could be incorporated to link sites New off-street passenger platforms provides generous space for passenger waiting 	<ul style="list-style-type: none"> Reasonable space available for passenger waiting in existing facility, expanded passenger waiting space created on 14th Street Maintains proximity of bus bays and stops within existing facility to facilitate passenger transfers New off-street passenger platforms require passengers to cross Canyon Boulevard and 14th Street for transfer connections at existing facility New off-street passenger platforms provides expansive space for passenger waiting 	<ul style="list-style-type: none"> New off-street passenger platforms provides reasonable space (less than 2A and 3B) for passenger waiting Majority of passenger platforms contained within single site Some new on-street passenger platforms require passengers to cross Canyon Boulevard for transfer connections at replacement facility 	<ul style="list-style-type: none"> New off-street passenger platforms provides reasonable space (less than 2A and 3B) for passenger waiting Majority of passenger platforms contained within single site Some new on-street passenger platforms require passengers to cross Canyon Boulevard and 14th Street for transfer connections at replacement facility
Transit Operations	<ul style="list-style-type: none"> Meets high end of range for capacity requirements Expanded capacity allows for 12 more (31 total) positions to be used for both passenger boarding/alighting and layover functions Articulated bus can be accommodated in up to 4 locations Movement between internal bus bays (on existing site) and layover locations requires additional on-street circulation Saw-tooth bus bays on 14th Street allow for better organization of buses Some route patterns would be shifted to 14th Street between Canyon and Arapahoe to use new bus stops 	<ul style="list-style-type: none"> Meets high end of range for capacity requirements Expanded capacity allows for 12 more (31 total) positions to be used for both passenger boarding/alighting and layover functions Articulated bus can be accommodated in 2 locations Movement among internal bus bays and layover locations (on expanded site) allows for internal off-street circulation Access to new off-street facility is via driveway connections to 14th and 15th Streets (lower volume roads than Canyon Boulevard) Saw-tooth bus bays on 14th Street allow for better organization of buses 	<ul style="list-style-type: none"> Meets high end of range for capacity requirements Expanded capacity allows for 13 more (32 total) positions to be used for both passenger boarding/alighting and layover functions Articulated bus can be accommodated in 1 locations Movement among internal bus bays and layover locations (on expanded site) requires on-street external circulation Access to new off-street facility is via driveway connections to Canyon Boulevard (higher volume road) and 14th Street Saw-tooth bus bays on 14th Street allow for better organization of buses 	<ul style="list-style-type: none"> Meets high end of range for capacity requirements Replacement capacity allows for 23 positions to be used for both passenger boarding/alighting and layover functions Articulated bus can be accommodated in 2 locations Movement among internal bus bays and layover locations (on replacement site) requires on-street external circulation Access to new off-street facility is via driveway connections to 14th and 15th Streets (lower volume roads than Canyon Boulevard) On-street bus positions on Canyon Boulevard requires access/egress from general traffic lanes. Bus pullouts are assumed adjacent to general traffic lanes 	<ul style="list-style-type: none"> Meets low end of range for capacity requirements Replacement capacity allows for 23 positions to be used for both passenger boarding/alighting and layover functions Articulated bus can be accommodated in 2 locations Movement among internal bus bays and layover locations (on replacement site) requires on-street external circulation Access to new off-street facility is via driveway connections to 14th and 15th Streets (lower volume roads than Canyon Boulevard) On-street bus positions on Canyon Boulevard and 14th Street requires access/egress from general traffic lanes. Bus pullouts are assumed adjacent to general traffic lanes
Traffic Operations	<ul style="list-style-type: none"> Utilization of on-street locations for additional bus capacity requires bus access/egress movements at all new positions interface directly with general traffic lanes. No new pullouts are assumed but existing parking lanes would be used on Walnut Street and west side of 14th Street (S of Canyon) 14th Street remains open to general traffic (2-way), accommodating current traffic patterns 	<ul style="list-style-type: none"> Utilization of off-street locations for additional bus capacity separates bus access/egress (at passenger platforms) from general traffic lanes 14th Street remains open to general traffic (2-way), accommodating current traffic patterns 	<ul style="list-style-type: none"> Utilization of off-street locations for additional bus capacity provides some separation between bus access/egress (at passenger platforms) and general traffic lanes, but requires external circulation patterns that mix with general traffic External on-street circulation between off-street bus positions requires interface with general traffic 14th Street remains open to general traffic (2-way), accommodating current traffic patterns 	<ul style="list-style-type: none"> Utilization of primarily off-street locations for replacement bus capacity separates bus access/egress (at passenger platforms) from general traffic lanes External on-street circulation between off-street bus positions requires interface with general traffic Transit operations removed from 14th Street. 14th Street remains open to general traffic (2-way), accommodating current traffic patterns Significant bus volumes are shifted from Walnut Street to Canyon Boulevard High left turn volume is created by buses making movement from NB 14th Street to WB Canyon Boulevard 	<ul style="list-style-type: none"> Utilization of primarily off-street locations for replacement bus capacity separates bus access/egress (at passenger platforms) from general traffic lanes External on-street circulation between off-street bus positions requires interface with general traffic Transit operations removed from 14th Street. 14th Street remains open to general traffic (2-way), accommodating current traffic patterns Significant bus volumes are shifted from Walnut Street to Canyon Boulevard High left turn volume is created by buses making movement from NB 14th Street to WB Canyon Boulevard
Pedestrian and Bicycle System/Operations	<ul style="list-style-type: none"> New bus positions along Canyon Boulevard and 14th Street (S of Canyon) create additional pedestrian patterns/volumes across Canyon Boulevard Bike lockers/tracks would remain on existing site. Some lockers/tracks could be shifted to vacant space on southeast corner of property 	<ul style="list-style-type: none"> Expanded off-street facility S of Canyon Boulevard creates additional pedestrian patterns across Canyon. Pedestrian tunnel could be incorporated to link sites Expanded off-street facility S of Canyon Boulevard on this site could potentially be connected to extended trail along North Boulder Farmers Ditch Bike lockers/tracks could remain on existing site and added to new site. Some lockers/tracks could be shifted to vacant space on southeast corner of property 	<ul style="list-style-type: none"> Expanded off-street facility S of Canyon Boulevard and west of 14th Street creates additional pedestrian patterns across Canyon and 14th Expanded off-street facility S of Canyon Boulevard on this site would impact trail along North Boulder Farmers Ditch Bike lockers/tracks could remain on existing site and added to new site. Some lockers/tracks could be shifted to vacant space on southeast corner of property 	<ul style="list-style-type: none"> New off-street facility S of Canyon Boulevard provides containment of pedestrian activity but creates some new patterns across Canyon Boulevard New off-street facility S of Canyon Boulevard could potentially be connected to extended trail along North Boulder Farmers Ditch Bike lockers/tracks must be relocated to new site. 	<ul style="list-style-type: none"> New off-street facility S of Canyon Boulevard provides containment of pedestrian activity but creates some new patterns across Canyon Boulevard and 14th Street New off-street facility S of Canyon Boulevard could potentially be connected to extended trail along North Boulder Farmers Ditch
Property Impacts	<ul style="list-style-type: none"> No additional property requirements are necessary with utilization of on-street locations for additional bus capacity Requires removal of 12 metered parking spaces from Walnut Street, Canyon Boulevard and 14th Street; Parking could potentially be relocated in new City developments 	<ul style="list-style-type: none"> Requires acquisition of two properties for expansion of bus capacity to new off-street location Offers joint use opportunity with existing property owners/businesses Requires parking to be integrated into site if developed as joint use with commercial development 	<ul style="list-style-type: none"> Property for bus facility expansion is currently owned by City of Boulder, but planned for future conference center Requires displacement of existing City-owned permit parking supply; parking must be integrated into site if transit facility in lieu of conference center Requires removal of 5 metered parking spaces from Canyon Boulevard; Parking could potentially be relocated in new City developments 	<ul style="list-style-type: none"> Requires acquisition of four properties and related structures for relocation of bus facility to new off-street location Offers joint use opportunity with existing property owners/businesses Requires removal of 5 metered parking spaces from 14th Street; Parking could potentially be relocated in new City developments Requires parking to be integrated into site to replace City parking demand on current site, and accommodate additional demand if developed as joint use with commercial development 	<ul style="list-style-type: none"> Requires acquisition of two properties and related structures for relocation of bus facility to new off-street location Offers joint use opportunity with existing property owners/businesses Requires removal of 5 metered parking spaces from 14th Street; Parking could potentially be relocated in new City developments Requires parking to be integrated into site to replace City parking on current site, and accommodate additional parking demand if developed as joint use with commercial development
Costs	<ul style="list-style-type: none"> Lowest cost option Metered parking space removal would equate to approximately \$18,385 in lost revenues annually unless relocated 	<ul style="list-style-type: none"> High cost option Requires purchase of new property, removal of existing buildings and new construction 	<ul style="list-style-type: none"> High cost option Requires redevelopment/integration of parking functions with use of City property 	<ul style="list-style-type: none"> High cost option Requires purchase of new property, removal of existing buildings and new construction Metered parking space removal would equate to approximately \$7,990 in lost revenues annually unless relocated Requires existing facility be razed and redeveloped 	<ul style="list-style-type: none"> High cost option Requires purchase of new property, removal of existing buildings and new construction Metered parking space removal would equate to approximately \$7,990 in lost revenues annually unless relocated Requires existing facility be razed and redeveloped
Implementation Considerations	<ul style="list-style-type: none"> Would require some disruption of current facility and operations with reconfiguration of 14th Street Requires coordination with Boulder Downtown Management/Parking Services and City Traffic Engineering Section to confirm feasibility and operational efficiency of using on-street locations Would require displacement (temporary or permanent) of existing business located on expansion property 	<ul style="list-style-type: none"> Would require some disruption of current facility and operations Could be implemented as part of joint use transit oriented development (TOD) concept Would require temporary displacement of existing parking located on expansion property 	<ul style="list-style-type: none"> Could be implemented without disruption of current facility and operations Could be implemented as part of joint use transit and parking concept Would require temporary displacement of existing parking located on expansion property 	<ul style="list-style-type: none"> Could be constructed while current facility is still operating Could be implemented as part of joint use transit oriented development (TOD) concept Would require displacement (temporary or permanent) of existing business located on expansion property Would require parking function from existing site be incorporated with replacement site, or integrated with redevelopment on existing site 	<ul style="list-style-type: none"> Could be constructed while current facility is still operating Could be implemented as part of joint use transit oriented development (TOD) concept Would require displacement (temporary or permanent) of existing business located on expansion property Would require parking function from existing site be incorporated with replacement site, or integrated with redevelopment on existing site
Recommendation	Advance for Further Study	Advance for Further Study	Do Not Advance	Do Not Advance	Advance for Further Study

Cost Estimates for Recommended Concepts

Methodology

Preliminary cost estimates were prepared for only the recommended draft concepts for future study. These included Options 2A and 6 for the CU Transit Station (Broadway and Euclid) and Options 1, 2A, and 3B for the Boulder Transit Station (14th and Walnut). Cost estimates were developed based on the conceptual drawings provided in the Concept Development section of this document. Quantities for the estimates were calculated by the project team. The unit costs were based on the team's most relevant experience on RTD's West Corridor LRT expansion (November 2006 cost estimate) and RS Means 2007 figures.

Specific elements of the cost estimates included demolition requirements, site improvements (e.g. curb and gutter, sidewalks, pavement, etc.), transit stop or transit facility construction, property acquisition, and separate contingencies for general allowances and design. A general allowance contingency of 20 percent was assumed and a design contingency of 15 percent was used.

CU Transit Station Cost Estimates

Two options were advanced for further consideration at this location; Option 2A and Option 6. Both options have a two phased approach for enhanced transit facilities. Option 2A utilizes the existing intersection configuration at Broadway and Euclid. Phase I incorporates site improvements to enhance the function of the transit facilities, while Phase II enhances the pedestrian access by incorporating a pedestrian underpass below the Broadway and Euclid intersection. Option 6 provides the same two phased approach as Option 2A, except the intersection of Broadway and Euclid is reconfigured as a roundabout to improve vehicular circulation and provide more opportunities to reconfigure the adjacent area.

The total cost estimate for Option 2A is \$3.3 million in 2007 dollars, including an estimate for land acquisition costs to provide for access to the pedestrian underpass. The total cost for Option 6 is \$6.4 million. A more detailed breakdown of costs for these two options is provided in tables at the end of this section.

Boulder Transit Station Cost Estimates

Three options were advanced for further consideration at this location; Option 1, Option 2A, and Option 3B. Option 1 provides on-street improvements to enhance the function of the existing facility with minimal construction. Option 2A provides on-street improvements and develops a new off-street transit terminal south of Canyon Boulevard across from the current facility. It requires the purchase of two existing properties on the block south of Canyon Boulevard for the development of the new transit terminal. The concept also utilizes the existing transit terminal between Walnut & Canyon on 14th Street, and a pedestrian underpass to connect the two sites. Option 2A includes two levels of parking (Optional).

Option 3A provides a new replacement transit terminal south of Canyon Boulevard between 14th & 15th streets, and includes on-street improvements and two levels of parking (Optional). Option 3B also requires the purchase of existing properties on the block south of Canyon Boulevard for the development of the new transit terminal. The total cost estimate for Option 1 is approximately \$379,000 in 2007 dollars, and primarily for the reconfiguration of curbs line and pavement. Option 2A is estimated to cost \$29.6 million without parking and \$39.3 million with two levels of parking. Both estimates include construction costs, property acquisition, two elevators, and a pedestrian underpass to connect the two sites. The total cost estimate for Option 3B is \$32.3 million without parking and \$43.4 million with two

levels of parking. Both estimates include construction costs, property acquisition, and demolition of the current transit facility and parking structure. A more detailed breakdown of costs for these two options is provided in tables at the end of this section.

FasTracks Local Optimization Study			
Estimate of Probable Construction Costs			
CU Transit Station (Broadway and Euclid)			
Option 2A			
Site Description	Item	Cost	Total
Option 2A - Phase I			
Northbound Broadway Stop			
	Demolition	\$ 10,743.00	
	Site Improvements	\$ 45,142.00	
	Transit Shelters	\$ 60,000.00	
	Allowances/Contingency	\$101,981.00	
			\$ 217,866.00
Southbound Broadway Stop			
	Demolition	\$ 3,749.00	
	Site Improvements	\$ 59,957.00	
	Transit Shelters	\$ 60,000.00	
	Allowances/Contingency	\$108,860.00	
			\$ 232,566.00
Euclid Stop			
	Demolition	\$ 2,225.00	
	Site Improvements	\$ 9,894.00	
	Transit Shelters	\$ 20,000.00	
	Allowances/Contingency	\$ 28,266.00	
			\$ 60,385.00
Option 2A - Phase I Total			\$ 510,817.00
Option 2A - Phase II			
Northbound Broadway Stop			
	Demolition	\$ 20,674.00	
	Site Improvements	\$386,018.00	
	Transit Shelters	\$ -	
	Allowances/Contingency	\$357,889.00	
			\$ 764,581.00
Southbound Broadway Stop			
	Demolition	\$ -	
	Site Improvements	\$158,478.00	
	Transit Shelters	\$ -	
	Allowances/Contingency	\$139,461.00	
			\$ 297,939.00
Pedestrian Tunnel			
	Demolition	\$ 32,686.00	
	Site Improvements	\$426,122.00	
	Transit Shelters	\$ -	
	Allowances/Contingency	\$403,751.00	
			\$ 862,559.00
Property Acquisition			
	Land Value	\$876,450.00	
			\$ 876,450.00
Option 2A- Phase II Total			\$ 2,801,529.00
Option 2A - Phase I Total			\$ 510,817.00
Option 2A - Phase I & II Total			\$ 3,312,346.00

Costs are in 2007 dollars.

FasTracks Local Optimization Study			
Estimate of Probable Construction Costs			
CU Transit Station (Broadway and Euclid)			
Option 6			
Site Description	Item	Cost	Total
Option 6 - Phase I			
Northbound Broadway Stop			
	Demolition	\$ 10,743.00	
	Site Improvements	\$ 45,142.00	
	Transit Shelters	\$ 60,000.00	
	Allowances/Contingency	\$ 101,981.00	
			<u>\$ 217,866.00</u>
Southbound Broadway Stop			
	Demolition	\$ 3,749.00	
	Site Improvements	\$ 59,957.00	
	Transit Shelters	\$ 60,000.00	
	Allowances/Contingency	\$ 108,860.00	
			<u>\$ 232,566.00</u>
Euclid Stop			
	Demolition	\$ 2,225.00	
	Site Improvements	\$ 9,894.00	
	Transit Shelters	\$ 20,000.00	
	Allowances/Contingency	\$ 28,266.00	
			<u>\$ 60,385.00</u>
Property Acquisition			
	Land Value	\$ 1,211,100.00	
			<u>\$ 1,211,100.00</u>
Option 6 - Phase I Total			<u>\$ 1,721,917.00</u>
Option 6 - Phase II			
Pedestrian Tunnel * Traffic Circle Improvements			
	Demolition	\$ 192,294.00	
	Site Improvements	\$ 2,298,310.00	
	Transit Shelters	\$ -	
	Allowances/Contingency	\$ 2,191,731.00	
			<u>\$ 4,682,335.00</u>
Option 6 - Phase II Total			<u>\$ 4,682,335.00</u>
Option 6 - Phase I Total			<u>\$ 1,721,917.00</u>
Option 6 - Phase I & II Total			<u>\$ 6,404,252.00</u>

Costs are in 2007 dollars.

FasTracks Local Optimization Study			
Estimate of Probable Construction Costs			
Boulder Transit Station (14th and Walnut)			
Option 1			
Site Description	Item	Cost	Total
RTD Facility/14th/Other			
	Demolition	\$ 33,263.00	
	Site Improvements	\$ 174,826.00	
	Allowances/Contingency	\$ 170,633.00	
			\$ 378,722.00
Proposed Transit Center (South of Canyon)			
	Demolition	\$ -	
	Site Improvements	\$ -	
	Transit Facility	\$ -	
	Parking Structure	\$ -	
	Property Acquisition	\$ -	
	Allowances/Contingency	\$ -	
			\$ -
Option 1 Total			\$ 378,722.00

Costs are in 2007 dollars.

FasTracks Local Optimization Study			
Estimate of Probable Construction Costs			
Boulder Transit Station (14th and Walnut)			
Option 2A (With and Without Parking)			
Option 2A (With Parking)			
Site Description	Item	Cost	Total
RTD Facility/14th/Other			
	Demolition	\$ 30,210.00	
	Site Improvements	\$ 169,456.00	
	Allowances/Contingency	\$ 163,726.00	
			<u>\$ 363,392.00</u>
Proposed Transit Center (South of Canyon)			
	Demolition	\$ 480,307.00	
	Site Improvements	\$ 2,670,000.00	
	Transit Facility	\$ 12,862,500.00	
	Parking Structure	\$ 5,600,000.00	
	Allowances/Contingency	\$ 12,328,994.00	
			<u>\$ 33,941,801.00</u>
Property Acquisition			
	Land Value	\$ 5,041,640.00	
			<u>\$ 5,041,640.00</u>
Option 2A (With Parking) Total			\$ 39,346,833.00
Option 2A (Without Parking)			
RTD Facility/14th/Other			
	Demolition	\$ 30,210.00	
	Site Improvements	\$ 169,456.00	
	Allowances/Contingency	\$ 163,726.00	
			<u>\$ 363,392.00</u>
Proposed Transit Center (South of Canyon)			
	Demolition	\$ 480,307.00	
	Site Improvements	\$ 2,670,000.00	
	Transit Facility	\$ 12,862,500.00	
	Parking Structure	\$ -	
	Allowances/Contingency	\$ 8,169,994.00	
			<u>\$ 24,182,801.00</u>
Property Acquisition			
	Land Value	\$ 5,041,640.00	
			<u>\$ 5,041,640.00</u>
Option 2A (Without Parking) Total			\$ 29,587,833.00

Costs are in 2007 dollars.

FasTracks Local Optimization Study			
Estimate of Probable Construction Costs			
Boulder Transit Station (14th and Walnut)			
Option 3B (With and Without Parking)			
Option 3B (With Parking)			
Site Description	Item	Cost	Total
RTD Facility/14th/Other			
	Demolition	\$ 1,636,863.00	
	Site Improvements	\$ 48,930.00	
	Allowances/Contingency	\$ 1,382,351.00	
			\$ 3,068,144.00
Proposed Transit Center (South of Canyon)			
	Demolition	\$ 482,858.00	
	Site Improvements	\$ 25,340.00	
	Transit Facility	\$ 15,006,250.00	
	Parking Structure	\$ 6,528,000.00	
	Allowances/Contingency	\$ 12,496,554.00	
			\$ 34,539,002.00
Property Acquisition			
	Land Value	\$ 5,763,790.00	
			\$ 5,763,790.00
Option 3B (With Parking) Total			\$ 43,370,936.00
Option 3B (Without Parking)			
RTD Facility/14th/Other			
	Demolition	\$ 1,636,863.00	
	Site Improvements	\$ 48,930.00	
	Allowances/Contingency	\$ 1,382,351.00	
			\$ 3,068,144.00
Proposed Transit Center (South of Canyon)			
	Demolition	\$ 482,858.00	
	Site Improvements	\$ 25,340.00	
	Transit Facility	\$ 15,006,250.00	
	Parking Structure	\$ -	
	Allowances/Contingency	\$ 7,975,634.00	
			\$ 23,490,082.00
Property Acquisition			
	Land Value	\$ 5,763,790.00	
			\$ 5,763,790.00
Option 3B (Without Parking) Total			\$ 32,322,016.00

Costs are in 2007 dollars.

Public Outreach

Public input was solicited from a variety of sources including open house meetings, the City of Boulder Transportation Advisory Board, the FLO Steering Committee, the FLO Facilities multi-jurisdictional committee, Boulder City Council, Boulder Valley School District (BVSD), and property owners. A summary of outreach efforts follows.

FLO Facilities Team

A FLO Facilities Team was established in December, 2006 to provide input and guide the FLO Facilities Research. The FLO Facilities Team generally met twice per month from January, 2007 – April, 2007. The FLO Facilities Team is comprised of staff from City of Boulder Transportation, University of Colorado, RTD, and Boulder County. Participants include:

Micki Kaplan, City of Boulder Transportation/GO Boulder
Marni Ratzel, City of Boulder Transportation/GO Boulder
Cris Jones, City of Boulder Transportation/GO Boulder
Molly Winter, City of Boulder Downtown and University Hill Management Division/Parking Services
David Cook, University of Colorado
Casey Jones, University of Colorado
Phil Simpson, University of Colorado
Peter Roper, University of Colorado
Richard Rost, RTD
Jeff Dunning, RTD
Jeff Becker, RTD
Ceasar Ochoa, RTD
Clark Misner, Boulder County

Public Outreach Meetings

The following is a summary of the public meetings related to the overall FLO effort:

- Nov. 1, 2006 Public Open-House Meeting #1
Present and get feedback on the proposed approach and guidelines to use to create the FLO priorities list

- Dec. 11, 2006 TAB Meeting
Update on FLO and feedback from Public Open-House Meeting #1

- Feb. 12, 2007 TAB Meeting
Update on FLO

- Feb. 15, 2007 FLO Committee Meeting
Check in on Committee members' progress towards their early action items, and update the committee on City of Boulder work to create a subset of FLO projects

- Feb. 15, 2007 Public Open-House Meeting #2
Present and get feedback on the draft FLO subset of projects

- Mar. 12, 2007 TAB Meeting
Update on FLO
- April 5, 2007 Public Open-House Meeting #3
Present FLO priorities list and get feedback on most important projects
- April 6, 2007 FLO Committee Meeting
Present FLO priorities list and cost estimates and get feedback on funding allocation for the priority areas
- April 9, 2007 TAB Meeting
Staff Briefing on FLO and feedback on priorities
- May 14, 2007 Public Hearing and TAB recommendation on FLO priorities and next steps
- May 29, 2007 City Council Study Session on FLO priorities, transportation funding situation and next steps

Outreach to Property Owners

A letter was mailed to out-of-state property owners providing information about the project. One-on-one meetings were held with local property owners and BVSD.

Next Steps

The next steps for the CU Transit Station and Boulder Transit Station include:

- Continuing community discussions on priorities for FasTracks
- Exploration of project development options with partnering jurisdictions (COB, RTD, CU, and Boulder County)

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