



Office of the City Manager

ACTION CALENDAR

February 22, 2022

To: Honorable Mayor and Members of the City Council
From: Dee Williams-Ridley, City Manager
Submitted by: Liam Garland, Director, Department of Public Works
Subject: Southside Complete Streets Project Conceptual Designs

RECOMMENDATION

Adopt a Resolution approving the conceptual designs for the Southside Complete Streets Project on Dana Street from Dwight Way to Bancroft Way; Bancroft Way from Milvia Street to Piedmont Avenue; Fulton Street from Dwight Way to Bancroft Way; and Telegraph Avenue from Dwight Way to Bancroft Way, and directing the City Manager to direct staff to proceed with the detailed engineering design of the project.

FISCAL IMPACTS OF RECOMMENDATION

The recommendation has no fiscal impacts.

SUMMARY

The Southside Complete Streets Project is an \$8.3M Federal Aid funded transportation improvement project in Berkeley's Southside neighborhood on Telegraph Avenue, Bancroft Way, Dana Street, and Fulton Street. The project proposes to construct improvements for walking, biking, transit, and commercial and passenger loading zones, as well as "placemaking" improvements to the public realm. The project repaves Telegraph Avenue and Dana Street from Bancroft Way to Dwight Way and Bancroft Way from Piedmont Avenue to Dana Street and from Fulton Street to Milvia Street. With the support of an engineering and design consultant team and staff from partner government agencies, City staff have identified conceptual design options for each of the project corridors; sought public input on and analyzed those conceptual design options; and selected recommended conceptual designs for consideration by the Berkeley City Council. Approval of the conceptual designs will keep the project on schedule for detailed engineering design in 2022, allowing the City to meet a January 2023 funding obligation deadline and receive \$7.3M in Federal Aid construction funds. Staff anticipates advertising for construction bids in 2023, followed by construction of the project in 2023 and 2024.

CURRENT SITUATION AND ITS EFFECTS

The Southside neighborhood has experienced continuing growth in both commercial activity and residential occupancy, with increased walking, biking, transit use, ride-hailing, and freight and small package delivery. The Berkeley Vision Zero Action Plan

has documented severe and fatal crashes on project streets; Southside sidewalks carry some of the highest numbers of people walking in the East Bay; gaps in the low-stress protected bikeway network result in connectivity problems that discourage bicycling for transportation; AC Transit buses have on-time performance issues that discourage bus ridership in the project area; and competition for limited loading zones creates operational issues for neighborhood businesses and further delays traffic and transit operations. The City of Berkeley Five-Year Street Repair Plan identifies numerous street segments in the project area with low Pavement Condition Index in need of repaving.

The goals of the Southside Complete Streets project are:

- Ensure safety for all street users consistent with the City's Vision Zero policy
- Improve transit reliability consistent with the City's Transit-First policy
- Support the economic and cultural vitality of Berkeley's Southside neighborhood consistent with the Economic Development goals of the City's Southside Plan

The project follows a community and data-driven approach to deliver on the City's Vision Zero, Complete Streets, Transit-First, and Climate Action Plan policies, and builds upon the specific recommendations of numerous plans and studies, including the Southside Plan, the Berkeley Bicycle and Pedestrian Plans, the 5-Year Street Repair Plan, the AC Transit Major Corridors study, and the Telegraph Avenue Public Realm Plan, among others. The Southside Complete Streets Project is a City of Berkeley Strategic Plan priority project and supports the Plan's goals of being a global leader in addressing climate change, advancing environmental justice, and protecting the environment and creating a resilient, safe, connected, and prepared City.

Stakeholder and Public Engagement

City staff initiated the project in 2020 by convening an Institutional Stakeholder Group (ISG) consisting of government agency staff from various City departments as well as University of California Berkeley (UC Berkeley), UC Berkeley Bear Transit, Lawrence Berkeley National Labs (LBNL) shuttle operators, and Alameda-Contra Costa Transit (AC Transit). The ISG met multiple times, first identifying and refining preliminary conceptual design options for each project corridor, and then providing input on the selection of the preferred conceptual designs. In 2020, City staff also conducted preliminary outreach with the Telegraph Business Improvement District (TBID) and engaged in a robust public process with AC Transit for the Dana Complete Street Pilot Project – see the Background section for more information on these and other pre-project activities.

Following the kickoff of the design consultant contract in August 2021, City staff and consultants deployed an extensive public engagement strategy consisting of two online public meetings engaging dozens of attendees; an online public survey with over 1,300

individual respondents; six Commission meetings, including the Transportation, Public Works, and Disability Commissions; and multiple stakeholder group meetings with the Associated Students of the University of California Berkeley (ASUC), TBID, Walk Bike Berkeley, and East Bay Transit Rider's Union. City staff and project consultants publicized the process by distributing and mailing thousands of postcards and flyers; installing temporary sidewalk decals on project streets, especially at or near AC Transit bus stops; and issuing press releases and conducting a social media campaign, all with the support of partner organizations like AC Transit, UC Berkeley, and TBID to help get the word out.

City staff presented the recommended conceptual design options for each project corridor to the Transportation Commission on January 20, 2022. The Transportation Commission passed a motion supporting the staff-recommended design options, as follows:

Item B2 - Southside Complete Streets

It was Moved/Seconded (Parolek/Ghosh) that the Transportation Commission:

support Bancroft Option #1, support prioritized transit lanes on Bancroft and Telegraph, and ask staff to consider a wider sidewalk on the south side to create a pedestrian corridor between downtown and Telegraph;

that the Transportation Commission support Fulton Option #1;

and that the Transportation Commission support Telegraph Option #4. The Commission strongly recommends that staff demonstrate how Option #4 can be operationalized as a car-free street with a transit lane, and with 2-way bike and micromobility facilities.

Finally, the Transportation Commission is in favor of making the Dana project permanent.

*Ayes: Bruzzone, Ghosh, Gosselin, Greene, Leung, Lutzker, Parolek, Walton
Motion carried 8-0-0-0*

In response to the Transportation Commission action, City staff has directed the project design consultants to consider potentially widening the sidewalk and adding street trees and green infrastructure along Bancroft Way to create a more appealing pedestrian corridor between Downtown Berkeley and Telegraph Avenue. Further, City staff has directed the project design consultants to prepare additional graphics for the second online public meeting and other upcoming public engagement activities to clearly demonstrate how the staff-recommended conceptual design option for Telegraph Avenue can be operationalized as a car-free street.

As of this writing, City staff has yet to conclude public engagement activities for this phase of the project in January and February 2022, including additional meetings with institutional and public stakeholder groups and the second online public meeting.

Following anticipated approval of the conceptual designs, City staff will continue to work with the Berkeley community and institutional stakeholders to refine the designs through the detailed engineering process during the remainder of 2022. Staff will continue to seek input on technical and operational details of the project designs from TBID, AC Transit, Bear Transit, LBNL Shuttle operators, and others. Staff anticipates that the Southside Complete Streets Project will next return to the Berkeley City Council for the authorization of the construction contract in early 2023.

Conceptual Design Options Analysis

As depicted in Exhibit 1 to the Resolution and described in the following section, City staff and consultants considered multiple design options for Telegraph Avenue, Bancroft Way, and Fulton Street, as well as a permanent version of the temporary Dana Complete Street pilot project being constructed by AC Transit. City staff and consultants analyzed these designs using two filters: 1) public input (as described in the previous section) and 2) technical analysis. The technical analysis utilized qualitative and quantitative criteria to assess how well each design option performed in meeting the project's primary goals of safety, transit efficiency, and supporting local businesses. The analysis also tested each option against "baseline operations" metrics in order to identify potential fatal flaws, including traffic operations, parking effects, accessibility and "Universal Design", construction impacts and costs, fire marshal requirements, and streets maintenance. Table 1 provides a high-level summary of public and stakeholder preferences for each design option. Table 2 provides a summary of the results of the technical analysis expressed as overall "Good, Fair, Poor" rankings for each design option.

A comprehensive traffic study was performed using Syncho traffic modelling software. Vehicle Level of Service (LOS) is a traffic metric for individual vehicle delay, which ranks delay with a grade of A, B, C, D, E, or F. The traffic model showed that for each of the options, vehicle LOS remains at or above LOS D, and as such meets the City's goal for vehicle delay. The only exceptions are two intersections where existing conditions operate at E (Bancroft Way & Piedmont Avenue) or F (Fulton Street & Channing Way); both locations would maintain their existing LOS under all project options. Queue length is a traffic metric that is used to understand the length of queues of vehicles waiting for a green signal at signalized intersections in the "worst case scenario" (during the peak hour of the day, which is about 5% of the time that a traffic signal operates). Queue length is important because of the impact on traffic operations when queues extend into adjacent upstream intersections. The traffic model showed three locations where some of the design options produced queue lengths that exceed the length of the block between traffic signals: Options 1 and 2 on Bancroft Way between Dana Street and Telegraph Avenue; Options 1 and 2 on Shattuck Avenue between Kittredge Street and

Durant Avenue; and Option 1 on Fulton Street between Channing Way and Haste Street. None of these locations represent a “fatal flaw” in the design, but rather are locations where the detailed engineering design process will focus on signal design and optimization to try to reduce and hopefully eliminate these peak-hour queuing impacts to traffic operations.

Table 1: Southside Complete Streets Design Options Public and Stakeholder Input

Input	Fulton St	Bancroft Way	Telegraph Ave	Dana St
Online Public Meeting #1	Options 1 & 3	Option 2	Option 4	Support
Online Survey	Option 1	Option 2	Options 1 & 4	Support
Institutional Stakeholder Meetings	Option 2	Option 1	Options 1 & 4	Support

Table 2: Southside Complete Streets Design Options Technical Analysis Results

Corridor	Option 1	Option 2	Option 3	Option 4
Bancroft Way	Good	Fair	Poor	N/A
Telegraph Avenue	Poor	Poor	Fair	Good
Fulton Street	Fair	Fair	Poor	N/A
Dana Street	N/A	N/A	N/A	N/A

Recommended Conceptual Designs

The following summaries describe the conceptual design options, their impacts, and the recommended conceptual design option for each project corridor based on public and stakeholder input and the results of the technical analysis. For each design option, the intent is to utilize the most permanent, durable, low-maintenance materials possible (e.g., raised concrete bikeway buffers vs. temporary “paint and posts” bikeway buffers, etc.). Final materials choices will be made during the detailed engineering design process, based on a variety of factors such as cost, Fire Marshall access requirements, accessibility for people with disabilities, and other technical criteria. Please see Exhibit 1 to the Resolution for cross-section illustrations of each design option. Additional conceptual design graphics will be prepared for the final public engagement activities in January and February.

Bancroft Way:

- Option 1: one westbound travel lane with a two-way parking-protected bike lane on the south side and a curbside bus-only lane on the north side
- Option 2: one westbound travel lane with a parking lane on the south side and a two-way curbside separated bike lane on the north side, next to a bus-only lane
 - To construct a bus-only lane and two-way protected bikeway, Options 1 and 2 remove one of two existing westbound traffic lanes and remove parking/loading on one side of the street, leaving a single westbound traffic lane and parking/loading on only the south side of the street
- Option 3: one travel lane in each direction with a two-way separated bike lane on the south side and a parking lane on the north side
 - To construct an eastbound traffic lane and two-way protected bikeway, Option 3 removes one of two existing westbound traffic lanes and removes parking/loading on one side of the street, leaving a single westbound traffic lane and parking/loading on only the south side of the street

Recommended Bancroft Way Conceptual Design: Option 1.

Telegraph Avenue:

- Option 1: one northbound travel lane (shared with bikes) with a wider sidewalk and contraflow raised southbound bike lane on the west side and a bus-only lane on the east side, with alternating bulb-outs and parking/loading on the east side only
 - To construct a bus-only lane, a wider sidewalk, and one-way southbound protected bikeway, Option 1 removes one of two existing northbound traffic lanes and removes parking/loading on the west side of the street, leaving a single northbound traffic lane and consolidating all existing parking/loading to the east side of the street
- Option 2: one travel lane in each direction (shared with bikes), wider sidewalks on both sides of the street, with alternating bulb-outs and parking/loading on the east side only
 - To construct a southbound traffic lane and wider sidewalks on both sides of the street, Option 2 removes one of two existing northbound traffic lanes and removes parking/loading on the west side of the street, leaving a single northbound traffic lane and consolidating all existing parking/loading to the east side of the street
- Option 3: one northbound travel lane (shared with bikes) with a bus-only lane on the east side, wider sidewalks on both sides of the street, and alternating bulb-outs and parking on either side of the street resulting in a chicane
 - To construct a bus-only lane, wider sidewalks on both sides of the street, and a traffic-calmed “chicane” roadway, Option 3 removes one of two existing northbound traffic lanes and removes parking/loading alternately on the east or west side of the street, leaving a single northbound traffic lane and approximately half as much parking/loading

- Option 4: a “curbless” northbound street at sidewalk level with one northbound travel lane (shared with bikes), a bus-only lane on the east side, wider sidewalks on both sides of the street with pedestrian-scale lighting, bollards, and other “placemaking” amenities, alternating bulb-outs and parking on either side of the street
 - To construct a curbless street with a bus-only lane and wider sidewalks on both sides of the street, Option 4 removes one of two existing northbound traffic lanes, leaving a single northbound travel lane.
 - Of the four options proposed for Telegraph Avenue, Option 4 is among the most expensive. For this reason, as detailed cost estimates are developed during the engineering design process, Option 4 may be constructed on a limited number of blocks, with a curbed version of this option as a lower-cost fallback design option.
 - During the public engagement process, a substantial number of comments were received in favor of a “car free” design option for Telegraph Avenue. Limiting or eliminating access for private vehicles on Telegraph Avenue is beyond the scope of this project. However, of the options considered, Option 4 provides the most suitable and intuitive built environment for future consideration of changes to private vehicle access.

Recommended Telegraph Avenue Conceptual Design: Option 4 (curbless street), budget permitting, with a curbed version of Option 4 as a lower-cost fallback design option.

Fulton Street:

- Option 1: one southbound travel lane with a two-way separated bike lane on the east side and parking on the west side
- Option 2: one southbound travel lane with a two-way parking-protected bike lane on the west side
- Option 3: one southbound travel lane with a parking-protected southbound bike lane on the west side and a contraflow raised northbound bike lane on the east side
 - To construct either a two-way protected bikeway or one-way protected bikeways on either side of the street, Options 1, 2, and 3 remove one of two existing southbound traffic lanes and remove parking on the east side of the street, leaving a single southbound traffic lane and parking on only the west side of the street

Recommended Fulton Street Conceptual Design: Option 1.

Dana Street:

- Upgrade AC Transit’s Dana Street pilot project, scheduled for installation in Spring 2022, from temporary paint and post separated bikeway buffers to permanent concrete-protected bikeway buffers. See Background section for more information about the AC Transit pilot project.

Recommended Dana Street Conceptual Design: Dana Complete Street pilot conversion to permanent project.

BACKGROUND

The Berkeley City Council has taken action on several occasions in support of transportation improvements in the Southside neighborhood. The current project delivers on past Council direction and referrals, as described below.

In 2013, the Berkeley City Council directed staff to study conversion of Bancroft Way and Durant Street from one-way to two-way streets consistent with the Southside Area Plan recommendation to study this change. In 2015, staff delivered a traffic study and identified a cost estimate of \$5M for the conversion project. Also in 2015, as a follow-up to the two-way streets study, Council Member Kriss Worthington brought forward a referral to make Dana Street two-way for bicycle travel. This project considered but ultimately rejected the options to convert one-way Southside streets to two-way vehicle traffic, due to cost considerations and the poor performance of these options in meeting project goals. The project does carry forward the referral to implement a two-way bikeway on Dana Street.

In 2016, in response to a near-fatal vehicle-bicycle crash, the Berkeley City Council authorized installation of a one-way southbound protected bikeway on Fulton Street between Bancroft Way and Channing Way. This project continues that bikeway two blocks to the south to connect at Dwight Way with the planned and funded Fulton Street Bicycle Boulevard, and makes the bikeway two-way for all four blocks.

In 2016, the Berkeley City Council approved the Southside Pilot Project (SPP), which included the Phase I: Bancroft Way West bus lane and bikeway pilot project between Dana Street and Fulton Street, as well as a future Dana Complete Street Pilot Project as part of the overall SPP vision. This project proposes to upgrade the Phase I: Bancroft Way West project using more permanent, low-maintenance materials, as well as constructing the remaining phases of Bancroft Way as described in the SPP Council report.

In 2017, the Berkeley City Council approved the Berkeley Bicycle Plan, which calls for evaluation of two-way cycle tracks on Bancroft Way, Dana Street, Fulton Street, and Telegraph Avenue. This project evaluated bikeways on all project corridors and prioritized Bancroft Way, Dana Street, and Fulton Street for implementation of protected bikeways. Telegraph Avenue was considered for a protected bikeway but due to the space needs for wider sidewalks, abundant loading zones, and a bus-only lane, a protected bikeway could not be included.

In 2019, Council Member Rigel Robinson brought forward a referral to develop a plan to implement the shared streets proposal outlined in the Telegraph Public Realm Plan.

The recommended option for Telegraph Avenue – Option 4 – is based on the ultimate design envisioned by the Telegraph Public Realm Plan.

In 2021, the Berkeley City Council approved the AC Transit Dana Complete Street Pilot project, which is currently being developed and delivered through a partnership between AC Transit and the City of Berkeley. AC Transit's Dana Complete Street Pilot Project complements the City's Southside Complete Streets Project by piloting a two-way cycle track and bus boarding island on Dana Street. Construction of the Dana pilot project is expected to be complete in 2022, followed immediately by an evaluation of the pilot project's performance. AC Transit's evaluation consultant will recommend design modifications, if any are needed, for integration into the City's Southside Complete Streets Project detailed engineering design process. At a minimum, the City's Southside project would repave the entire street and would make temporary elements of the Dana pilot project permanent.

In 2021, the Berkeley City Council approved the most recent Five-Year Street Repair Plan. Consistent with this plan, the project repaves Telegraph Avenue and Dana Street from Bancroft Way to Dwight Way, and Bancroft Way from Piedmont Avenue to Dana Street and from Fulton Street to Milvia Street.

Project Funding

In 2018, the City of Berkeley received an \$8,335,000 grant from Alameda CTC and Caltrans for transportation improvements in Berkeley's Southside neighborhood. Improvements may include physically protected bikeways (i.e. cycle tracks), signal modifications, transit efficiency and reliability improvements (transit signal priority, transit only lanes), more useful freight and passenger loading zones, pedestrian sidewalk and crosswalk safety upgrades, and street repaving. Of this grant, \$1M is allocated for the current phase of the project, consisting of Preliminary Engineering (planning, conceptual design, and public engagement); California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) compliance; Plans, Specifications, and Estimates (detailed engineering design and preparation of construction plans); and construction bid and engineering support. This phase of the project is projected for completion by April 30, 2023. The remaining \$7,335,000 of the grant is for construction of transportation improvements, and would be obligated by Caltrans upon successful completion of detailed engineering design in January 2023.

Southside Complete Streets Project Timeline

- Conceptual Design, Preliminary Engineering, Public Outreach, and Environmental Review August 2021 to February 2022
- Environmental Review and Detailed Engineering Design March 2022 to January 2023

- Advertise project & award construction contract February 2023 to April 2023
- Construction May 2023 to May 2024

ENVIRONMENTAL SUSTAINABILITY AND CLIMATE IMPACTS

Installation of protected bikeways, widening sidewalks, and improving pedestrian crossings is anticipated to increase walking and biking, which is consistent with the 2009 Berkeley Climate Action Plan Policy that calls for expanding and improving Berkeley’s bicycle and pedestrian infrastructure. Installation of bus-only lanes is anticipated to improve bus reliability and decrease travel times, making on-street transit a more attractive mode of transportation. The 2009 Berkeley Climate Action Plan sets targets of reducing transportation emissions 33% below year 2000 levels by 2020, and 80% below year 2000 levels by 2050. The Plan further states that transportation modes such as public transit, walking, and bicycling must become the primary means of fulfilling the City’s mobility needs in order to meet these targets.

RATIONALE FOR RECOMMENDATION

Approval of the conceptual designs will keep the project on schedule for detailed engineering design in 2022, allowing the City to meet a January 2023 funding obligation deadline and receive \$7.3M in Federal Aid construction funds. Staff anticipates advertising for construction bids in 2023, followed by construction of the project in 2023 and 2024.

ALTERNATIVE ACTIONS CONSIDERED

Council could opt not to approve the conceptual designs for the project at this time, and instead defer the item to a future Council agenda. This decision would delay the subsequent detailed engineering design and endanger \$7.3M of Federal Aid construction funds. The City would then need to reapply for these highly competitive construction funds, alongside all other Bay Area local agencies.

CONTACT PERSON

Farid Javandel, Deputy Director of Public Works for Transportation (510) 981-7010
Beth Thomas, Principal Planner, Public Works (510) 981-7068
Eric Anderson, Senior Planner, Public Works (510) 981-7062

Attachments:

1: Resolution

Exhibit A: Southside Complete Streets Corridor Design Options

RESOLUTION NO. ##,###-N.S.

SOUTHSIDE COMPLETE STREETS PROJECT CONCEPTUAL DESIGNS

WHEREAS, the Project includes the following Southside neighborhood corridors: Dana Street from Dwight Way to Bancroft Way; Bancroft Way from Milvia Street to Piedmont Avenue; Fulton Street from Dwight Way to Bancroft Way; and Telegraph Avenue from Dwight Way to Bancroft Way; and

WHEREAS, the Berkeley Vision Zero Action Plan has documented severe and fatal crashes on Project streets; Southside sidewalks carry some of the highest numbers of people walking in the East Bay; gaps in the low-stress protected bikeway network on Project streets result in connectivity problems that discourage bicycling for transportation; the Five-year Street Repair Plan documents poor pavement quality on Project streets; AC Transit buses have on-time performance issues that discourage bus ridership in the Project area; and competition for limited loading zones creates operational issues for neighborhood businesses; and

WHEREAS, to address these needs, the project delivers on the City's Vision Zero, Complete Streets, Transit-First, and Climate Action Plan policies, and builds upon the specific recommendations of numerous plans and studies, including the Southside Area Plan, the Berkeley Bicycle and Pedestrian Plans, the Five-year Street Repair Plan, the AC Transit Major Corridors study, and the Telegraph Avenue Public Realm Plan, among others; and

WHEREAS, with the support of an engineering and design consultant team and staff from partner government agencies, City staff have identified conceptual design options for each of the Project corridors; sought public input on and analyzed those conceptual design options; and have selected recommended conceptual designs for consideration by the Berkeley City Council; and

WHEREAS, the recommended design options are Bancroft Option 1; Telegraph Option 4, budget permitting, with a curbed version of Option 4 or Option 3 as fallback design options; Fulton Option 1; and Dana Complete Street Pilot to Permanent Project, as described in Exhibit A to this Resolution; and

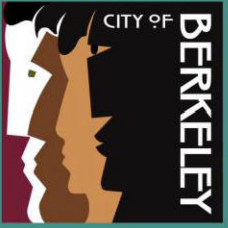
WHEREAS, approval of the Southside Complete Streets Project recommended conceptual designs will keep the project on schedule for detailed engineering design in 2022 which is necessary to meet a January 2023 funding obligation deadline for \$7.3M in Federal Aid construction funds;

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the City Manager is authorized to direct staff to proceed with the detailed engineering design of the Southside Complete Streets Project, based on the preliminary engineering

February 22, 2022

of the recommended conceptual design for each of the project corridors; Dana Street from Dwight Way to Bancroft Way; Bancroft Way from Milvia Street to Piedmont Avenue; Fulton Street from Dwight Way to Bancroft Way; and Telegraph Avenue from Dwight Way to Bancroft Way.

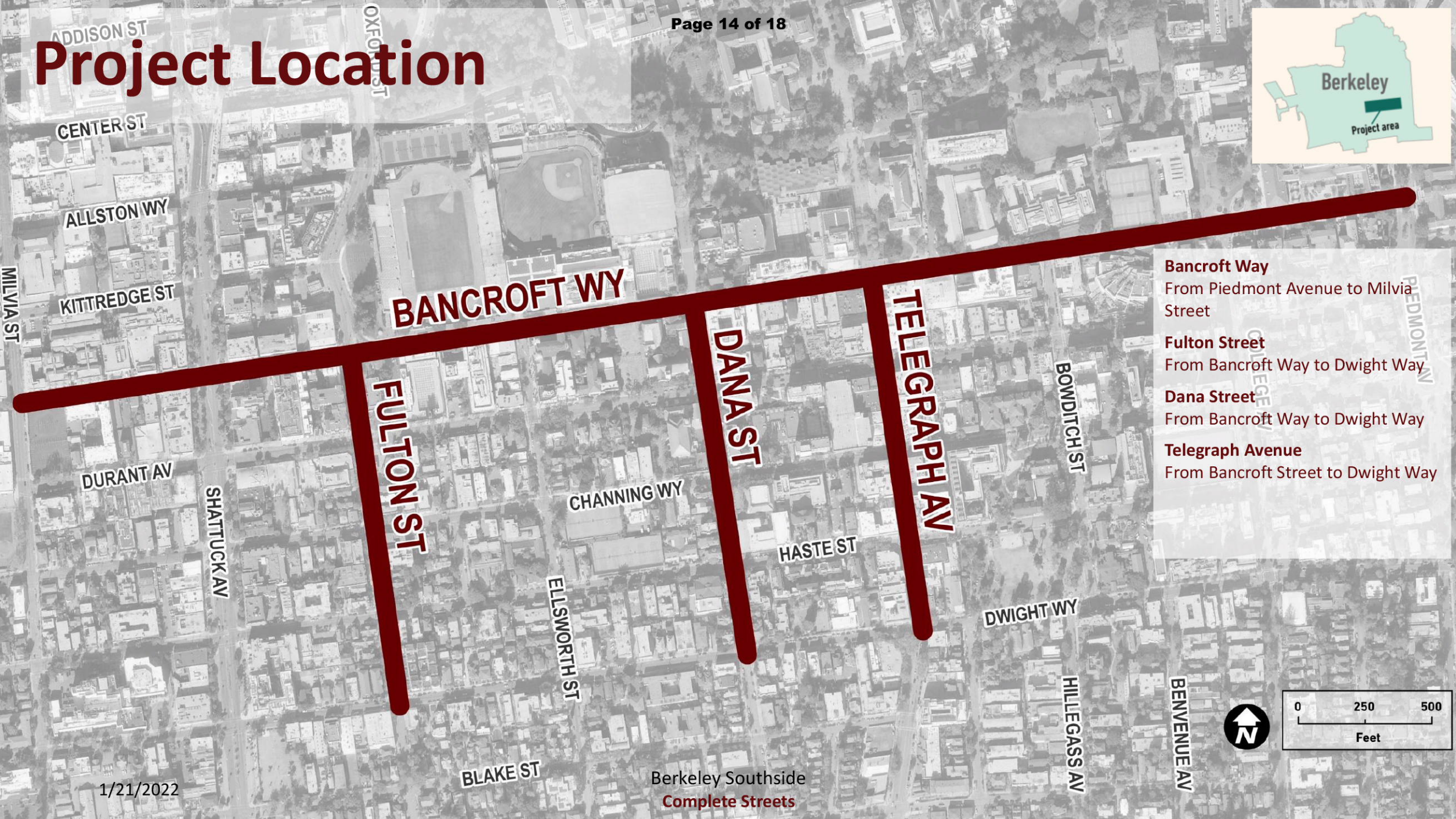
Attachment
Exhibit A



Berkeley Southside Complete Streets Project Conceptual Design Recommendations



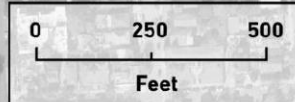
Project Location



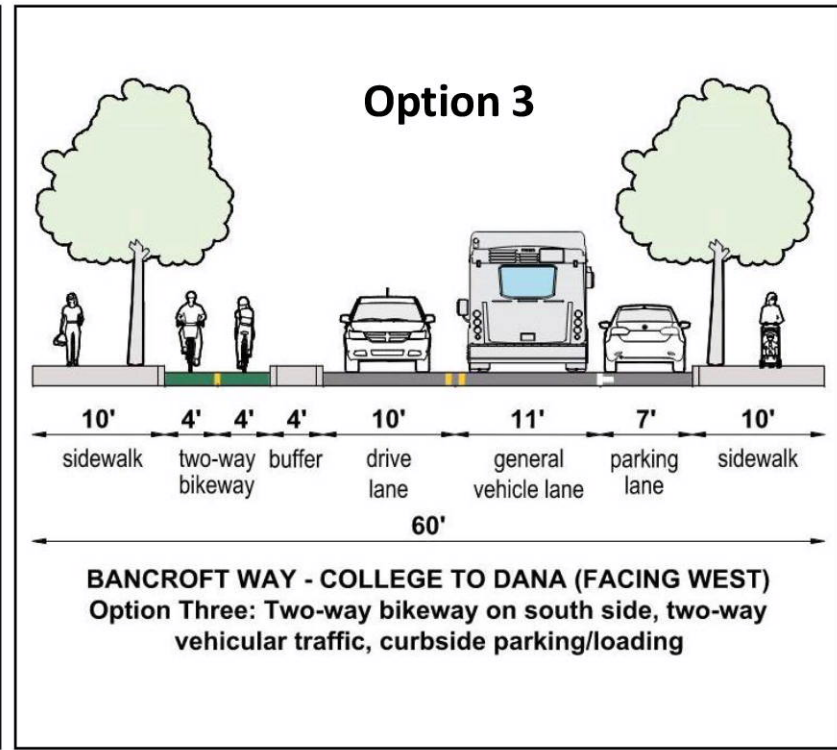
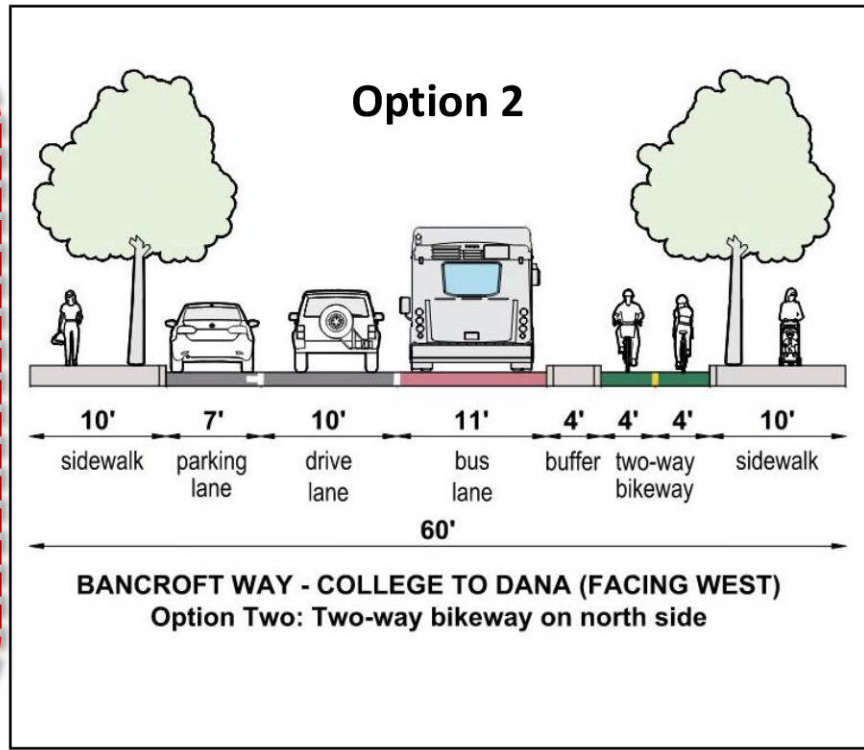
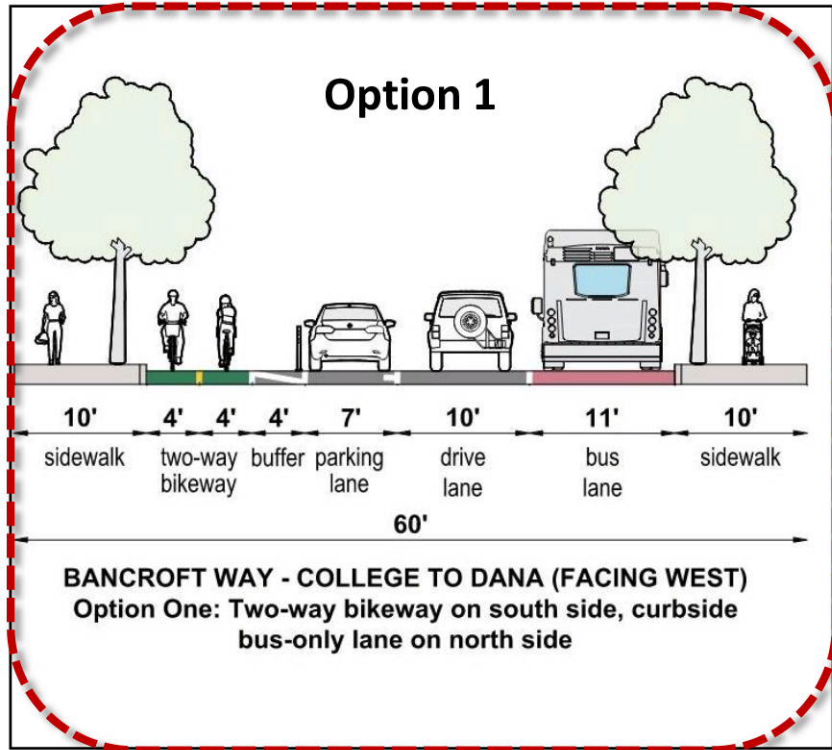
- Bancroft Way**
From Piedmont Avenue to Milvia Street
- Fulton Street**
From Bancroft Way to Dwight Way
- Dana Street**
From Bancroft Way to Dwight Way
- Telegraph Avenue**
From Bancroft Street to Dwight Way

1/21/2022

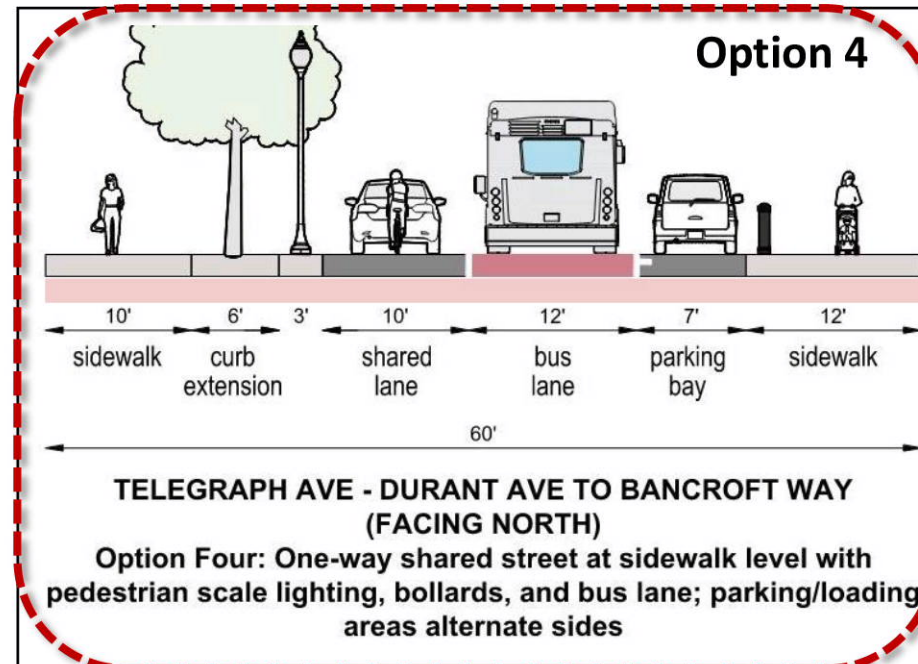
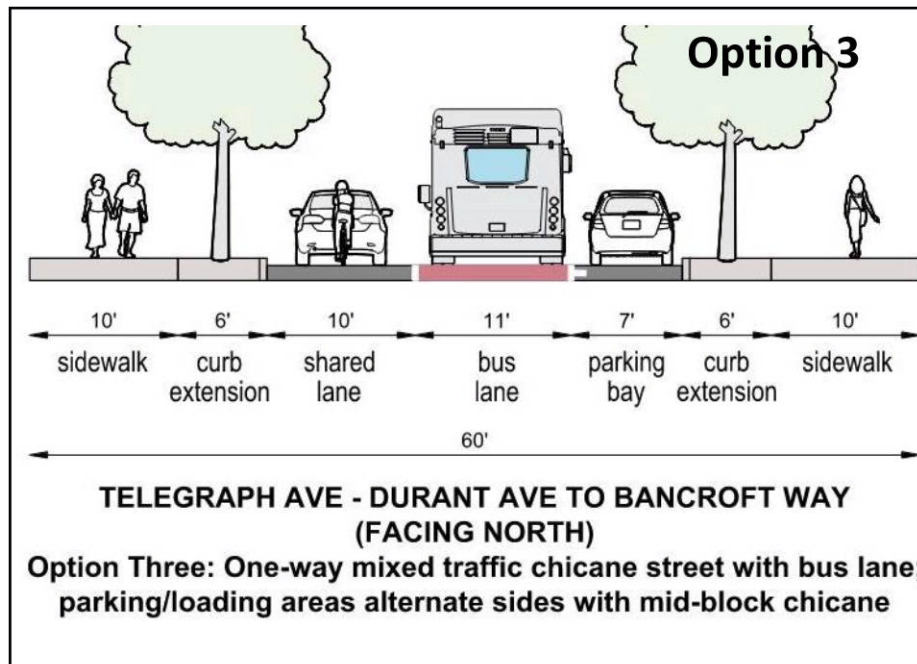
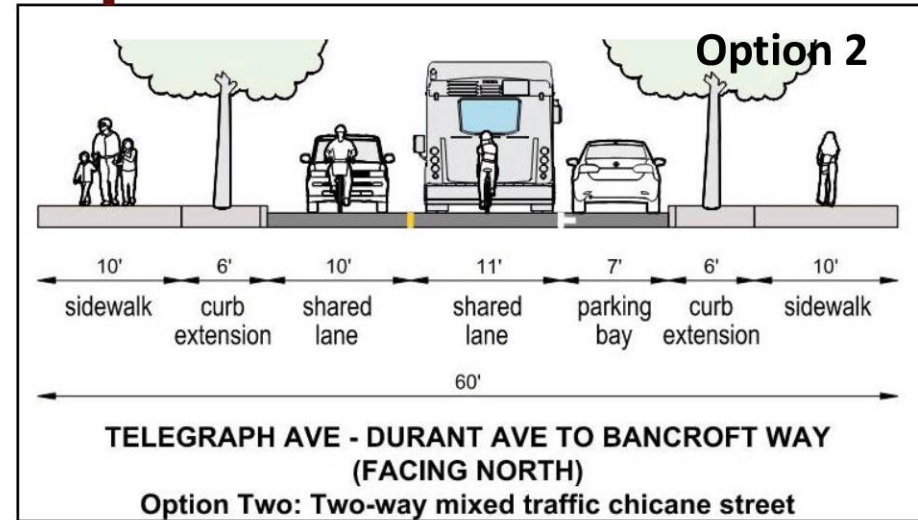
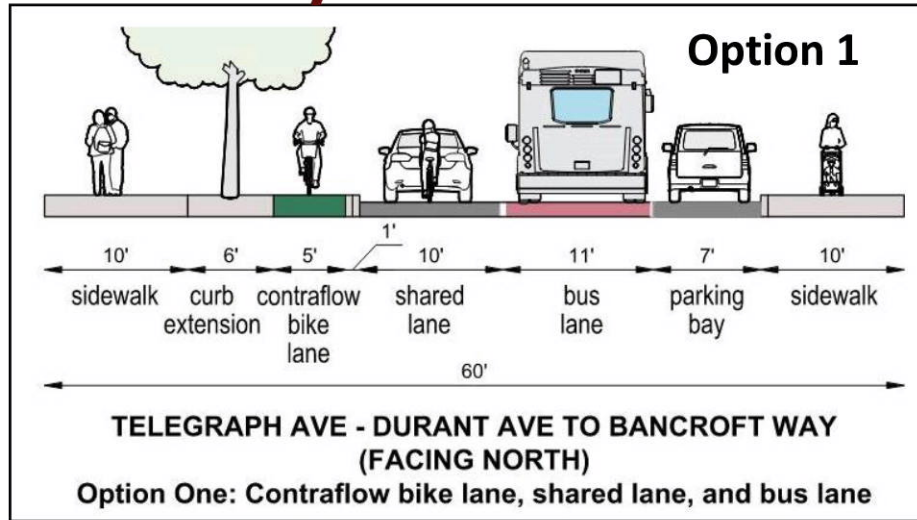
Berkeley Southside
Complete Streets



Bancroft Way Recommended Conceptual Design: Option 1

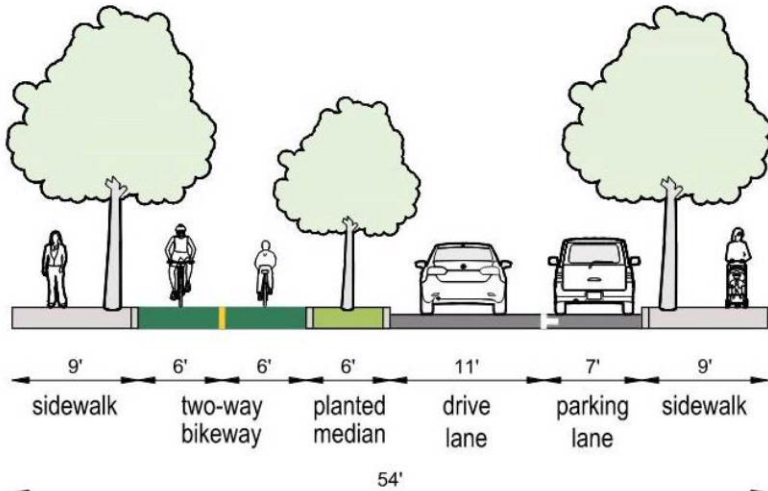


Telegraph Avenue Recommended Conceptual Design: Option 4 (curbless street) with curbed street Option 4 as lower-cost fallback.



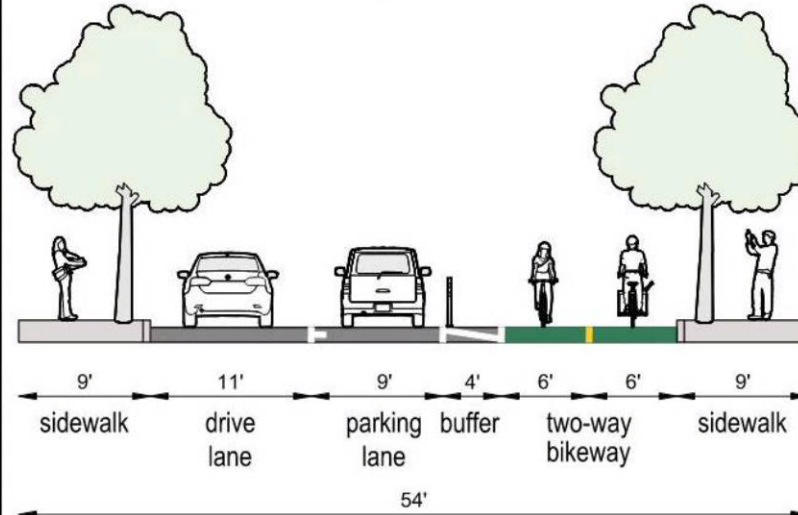
Fulton Street Recommended Conceptual Design: Option 1

Option 1



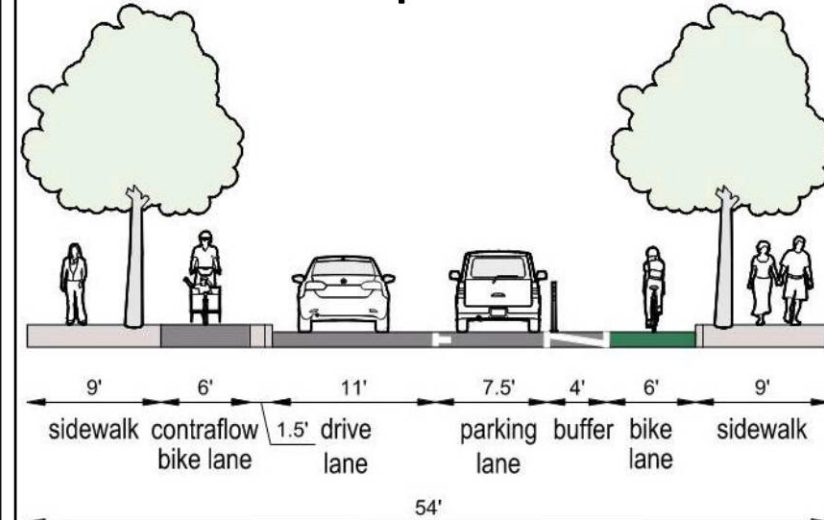
FULTON ST - CHANNING TO HASTE (FACING SOUTH)
Option One: Two-way bikeway on east side

Option 2



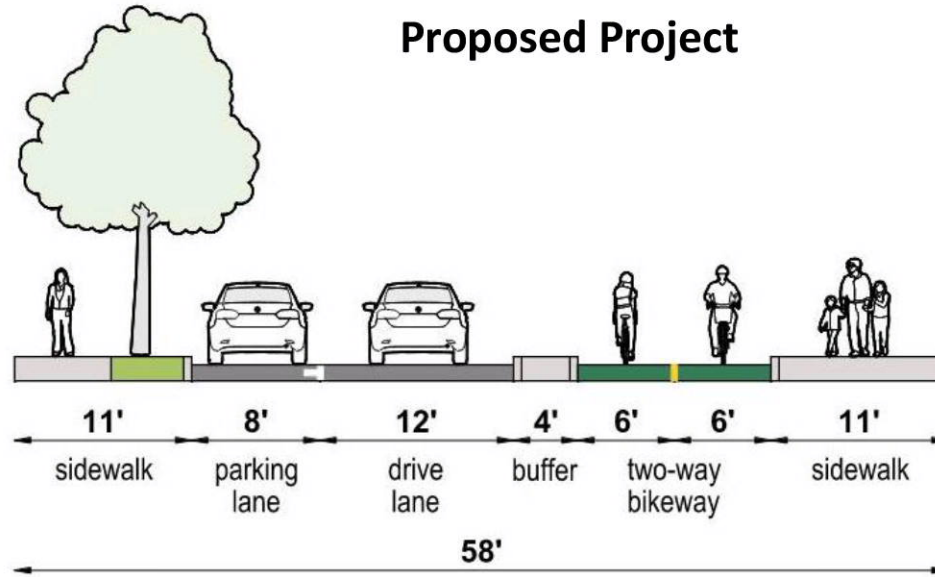
FULTON ST - CHANNING TO HASTE (FACING SOUTH)
Option Two: Two-way bikeway on west side

Option 3



FULTON ST - CHANNING TO HASTE (FACING SOUTH)
Option Three: One-way bikeway on each side

Dana Street Recommended Pilot to Permanent Conversion Project



DANA STREET - HASTE TO DWIGHT (FACING SOUTH)
Selected Design: Two-way bikeway on west side