

# AGENDA



## BERKELEY CITY COUNCIL MEETING

Tuesday, January 26, 2021  
6:00 PM

JESSE ARREGUIN, MAYOR

Councilmembers:

DISTRICT 1 – RASHI KESARWANI  
DISTRICT 2 – TERRY TAPLIN  
DISTRICT 3 – BEN BARTLETT  
DISTRICT 4 – KATE HARRISON

DISTRICT 5 – SOPHIE HAHN  
DISTRICT 6 – SUSAN WENGRAF  
DISTRICT 7 – RIGEL ROBINSON  
DISTRICT 8 – LORI DROSTE

### **PUBLIC ADVISORY: THIS MEETING WILL BE CONDUCTED EXCLUSIVELY THROUGH VIDEOCONFERENCE AND TELECONFERENCE**

*Pursuant to Section 3 of Executive Order N-29-20, issued by Governor Newsom on March 17, 2020, this meeting of the City Council will be conducted exclusively through teleconference and Zoom videoconference. Please be advised that pursuant to the Executive Order and the Shelter-in-Place Order, and to ensure the health and safety of the public by limiting human contact that could spread the COVID-19 virus, there will not be a physical meeting location available.*

*Live audio is available on KPFB Radio 89.3. Live captioned broadcasts of Council Meetings are available on Cable B-TV (Channel 33) and via internet accessible video stream at <http://www.cityofberkeley.info/CalendarEventWebcastMain.aspx>.*

*To access the meeting remotely: Join from a PC, Mac, iPad, iPhone, or Android device: Please use this URL <https://us02web.zoom.us/j/87354849181>. If you do not wish for your name to appear on the screen, then use the drop down menu and click on "rename" to rename yourself to be anonymous. To request to speak, use the "raise hand" icon by rolling over the bottom of the screen.*

*To join by phone: Dial 1-669-900-9128 or 1-877-853-5257 (Toll Free) and enter Meeting ID: 873 5484 9181. If you wish to comment during the public comment portion of the agenda, Press \*9 and wait to be recognized by the Chair.*

*To submit an e-mail comment during the meeting to be read aloud during public comment, email [clerk@cityofberkeley.info](mailto:clerk@cityofberkeley.info) with the Subject Line in this format: "PUBLIC COMMENT ITEM ##." Please observe a 150 word limit. Time limits on public comments will apply. Written comments will be entered into the public record.*

*Please be mindful that the teleconference will be recorded as any Council meeting is recorded, and all other rules of procedure and decorum will apply for Council meetings conducted by teleconference or videoconference.*

*This meeting will be conducted in accordance with the Brown Act, Government Code Section 54953. Any member of the public may attend this meeting. Questions regarding this matter may be addressed to Mark Numainville, City Clerk, (510) 981-6900. The City Council may take action related to any subject listed on the Agenda. Meetings will adjourn at 11:00 p.m. - any items outstanding at that time will be carried over to a date/time to be specified.*

## Preliminary Matters

### Roll Call:

**Ceremonial Matters:** *In addition to those items listed on the agenda, the Mayor may add additional ceremonial matters.*

**City Manager Comments:** *The City Manager may make announcements or provide information to the City Council in the form of an oral report. The Council will not take action on such items but may request the City Manager place a report on a future agenda for discussion.*

**Public Comment on Non-Agenda Matters:** *Persons will be selected to address matters not on the Council agenda. If five or fewer persons wish to speak, each person selected will be allotted two minutes each. If more than five persons wish to speak, up to ten persons will be selected to address matters not on the Council agenda and each person selected will be allotted one minute each. The remainder of the speakers wishing to address the Council on non-agenda items will be heard at the end of the agenda.*

## Consent Calendar

*The Council will first determine whether to move items on the agenda for "Action" or "Information" to the "Consent Calendar", or move "Consent Calendar" items to "Action." Three members of the City Council must agree to pull an item from the Consent Calendar for it to move to Action. Items that remain on the "Consent Calendar" are voted on in one motion as a group. "Information" items are not discussed or acted upon at the Council meeting unless they are moved to "Action" or "Consent".*

*No additional items can be moved onto the Consent Calendar once public comment has commenced. At any time during, or immediately after, public comment on Information and Consent items, any Councilmember may move any Information or Consent item to "Action." Following this, the Council will vote on the items remaining on the Consent Calendar in one motion.*

*For items moved to the Action Calendar from the Consent Calendar or Information Calendar, persons who spoke on the item during the Consent Calendar public comment period may speak again at the time the matter is taken up during the Action Calendar.*

**Public Comment on Consent Calendar and Information Items Only:** *The Council will take public comment on any items that are either on the amended Consent Calendar or the Information Calendar. Speakers will be entitled to two minutes each to speak in opposition to or support of Consent Calendar and Information Items. A speaker may only speak once during the period for public comment on Consent Calendar and Information items.*

*Additional information regarding public comment by City of Berkeley employees and interns: Employees and interns of the City of Berkeley, although not required, are encouraged to identify themselves as such, the department in which they work and state whether they are speaking as an individual or in their official capacity when addressing the Council in open session or workshops.*

## Consent Calendar

- 1. Contract No. 32000129 Amendment: Resource Development Associates for Planning and Project Coordination Services**  
**From: City Manager**  
**Recommendation:** Adopt a Resolution authorizing the City Manager or her designee to execute an amendment to Contract No. 32000129 with Resource Development Associates through January 31, 2022, adding \$49,000 for a total not to exceed amount of \$97,850, to fund Mental Health Services Act (MHSA) Innovations (INN) Planning and “Help@Hand” Technology Suite Project Coordination services.  
**Financial Implications:** See report  
Contact: Lisa Warhuus, Health, Housing, and Community Services, (510) 981-5400
- 2. Contract No. 32000106 Amendment: Easy Does It for Provision of Wheelchair Van Service for Seniors & Disabled**  
**From: City Manager**  
**Recommendation:** Adopt a Resolution authorizing the City Manager or her designee to execute an amendment to Contract No. 32000106 with Easy Does It with a new NTE (not to exceed) total amount of \$150,000 for the period April 1, 2021 through June 30, 2023 for the provision of accessible wheelchair van services to clients of the Aging Services Division’s Berkeley Rides for Seniors & the Disabled program.  
**Financial Implications:** See report  
Contact: Lisa Warhuus, Health, Housing, and Community Services, (510) 981-5400
- 3. Resolution Accepting the Surveillance Technology Report for Automatic License Plate Readers, GPS Trackers, Body Worn Cameras, and the Street Level Imagery Project Pursuant to Chapter 2.99 of the Berkeley Municipal Code**  
*(Continued from November 10, 2020)*  
**From: City Manager**  
**Recommendation:** Adopt a Resolution accepting the Surveillance Technology Report for Automatic License Plate Readers, GPS Trackers, Body Worn Cameras, and the Street Level Imagery Project Pursuant to Chapter 2.99 of the Berkeley Municipal Code  
**Financial Implications:** None  
Contact: Andrew Greenwood, Police, (510) 981-5900, Savita Chaudhary, Director of Information Technology (510) 981-6541, Dave White, City Manager's Office, (510) 981-7000

## Consent Calendar

**4. Contract: Sposeto Engineering Inc. for Central Berkeley Transportation & Infrastructure Improvements Project**

**From: City Manager**

**Recommendation:** Adopt a Resolution: 1. Approving plans and specifications for the Central Berkeley Transportation & Infrastructure Improvements Project, (“Project”), Specification Nos. 21-11411-C, 21-11416-C, and 21-11417-C; 2. Accepting the bid of Sposeto Engineering Inc., the lowest responsive and responsible bidder; and 3. Authorizing the City Manager to execute a contract with Sposeto Engineering Inc. and any amendments, extensions, and/or change orders until completion of the Project in accordance with the approved plans and specifications, in an amount not to exceed \$3,477,475, which includes a contingency of fourteen percent for unforeseen circumstances.

**Financial Implications:** See report

Contact: Liam Garland, Public Works, (510) 981-6300

**5. Contract: Cratus, Inc. for Sanitary Sewer Rehabilitation at Various Locations**  
**From: City Manager**

**Recommendation:** Adopt a Resolution approving plans and specifications for the Sanitary Sewer Project, located on Cedar Street, Virginia Gardens, Sacramento Street, Lincoln Street, Spaulding Avenue Backline, Roosevelt Avenue Backline, Martin Luther King Jr. Way and Backline, Walker Street Backline, Telegraph Avenue Backline, Atherton Street, Fulton Street, Bancroft Way, Shattuck Avenue, and Kittredge Street; accepting the bid of the lowest responsive and responsible bidder, Cratus, Inc.; and authorizing the City Manager to execute a contract and any amendments, extensions, or other change orders until completion of the project in accordance with the approved plans and specifications, in an amount not to exceed \$2,074,469, which includes a 10% contingency of \$188,588.

**Financial Implications:** See report

Contact: Liam Garland, Public Works, (510) 981-6300

**6. Contract: Toole Design Group for Planning, Design, and Engineering of the Southside Complete Streets Project**

**From: City Manager**

**Recommendation:** Adopt a Resolution authorizing the City Manager to execute a contract and any amendments with Toole Design Group for Planning, Design, and Engineering of the Southside Complete Streets Project, for a not-to-exceed amount of \$979,349 for the period February 1, 2021 through March 31, 2024.

**Financial Implications:** See report

Contact: Liam Garland, Public Works, (510) 981-6300

## Consent Calendar

7. **Approval of Berkeley Strategic Transportation Plan Second Addendum**  
**From: City Manager**  
**Recommendation:** Adopt a Resolution: 1. Approving the Berkeley Strategic Transportation Plan Second Addendum. 2. Authorizing the City Manager to submit unfunded Five-Year Priority Projects from the Berkeley Strategic Transportation Plan Second Addendum to the Alameda County Transportation Commission for inclusion and funding in the County's Fiscal Year (FY) 2022 – FY 2026 Comprehensive Investment Plan. 3. Authorizing the City Manager to execute agreements as needed for accepting the awarded grant funds.  
**Financial Implications:** See report  
Contact: Liam Garland, Public Works, (510) 981-6300
- 8a. **A People's First Sanctuary Encampment** *(Reviewed by the Health, Life Enrichment, Equity & Community Committee)*  
**From: Homeless Commission**  
**Recommendation:** The City Council to adopt the People's First Sanctuary Encampment Model incorporating all text in this report, urging best practices for Sanctuary Homeless Encampments with an oversight agency to be named by members of the encampment community and refer to the City Manager to fund liability insurance for the agency chosen by the encampment community.  
*(On December 14, 2020, the Health, Life Enrichment, Equity & Community Committee moved the Companion Report with a qualified positive recommendation to the City Council to take the following action: 1. Direct the City Manager to incorporate parts of the Commission's recommendations, including: providing clean water, sanitation, accessible toilets and trash removal services; and requiring that homeless services providers obtain input from clients when developing rules and ensure that the privacy and security of clients is respected and maintained at all times; 2. In addition, the City Manager shall receive the Homeless Commission's recommendations and retain them for future guidance when developing homeless services programs and models; and 3. That the City Council reaffirms its commitment to dignified and client-centered homeless services.)*  
**Financial Implications:** See report  
Contact: Brittany Carnegie, Commission Secretary, (510) 981-5400

## Consent Calendar

- 8b. Companion Report: A People's First Sanctuary Encampment** *(Reviewed by the Health, Life Enrichment, Equity & Community Committee)*

**From: City Manager**

**Recommendation:** As part of the referral adopted by City Council on January 21, 2020, the City Manager will direct staff to incorporate parts of the Commission's recommendations which do not conflict with guidance already approved by City Council including: providing clean water, sanitation, accessible toilets and trash removal services for the sanctioned encampment, requiring that a future provider of services for the encampment obtain input from residents of the encampment when developing rules for the outdoor shelter and ensure that the privacy and security of residents is respected and maintained.

*(On December 14, 2020, the Health, Life Enrichment, Equity & Community Committee moved the Companion Report with a qualified positive recommendation to the City Council to take the following action: 1. Direct the City Manager to incorporate parts of the Commission's recommendations, including: providing clean water, sanitation, accessible toilets and trash removal services; and requiring that homeless services providers obtain input from clients when developing rules and ensure that the privacy and security of clients is respected and maintained at all times; 2. In addition, the City Manager shall receive the Homeless Commission's recommendations and retain them for future guidance when developing homeless services programs and models; and 3. That the City Council reaffirms its commitment to dignified and client-centered homeless services.)*

**Financial Implications:** Staff time

Contact: Lisa Warhuus, Housing and Community Services, (510) 981-5400

## Council Consent Items

- 9. Confirming Community Appointments to Reimagining Public Safety Task Force**

**From: Mayor Arreguin (Author)**

**Recommendation:** Adopt a Resolution: 1. Confirming the appointment of by the Associated Students of the University of California (ASUC) External Affairs Vice President to the Reimagining Public Safety Task Force. 2. Confirming the appointment of by the Steering Committee of the Berkeley Community Safety Coalition (BCSC) to the Reimagining Public Safety Task Force

**Financial Implications:** No direct fiscal impacts

Contact: Jesse Arreguin, Mayor, (510) 981-7100

## Council Consent Items

10. **Budget Referral to Reinstate Partial Funding for the Gun Buyback Program Previously Authorized by City Council** *(Continued from November 10, 2020)*  
**From: Councilmember Kesarwani (Author), Mayor Arreguin (Co-Sponsor), Councilmember Davila (Co-Sponsor)**  
**Recommendation:** Refer to the FY 2020-21 November Amendment to the Annual Appropriations Ordinance (AAO #1) \$40,000 to reinstate partial funding for the Gun Buyback Program—originally proposed by Councilmember Cheryl Davila and authorized by the City Council on Nov. 27, 2018.  
**Financial Implications:** \$40,000  
Contact: Rashi Kesarwani, Councilmember, District 1 (510) 981-7110
11. **Short Term Referral to City Manager, Disaster and Fire Safety Commission and Planning Commission to Amend Local Accessory Dwelling Unit (ADU) Zoning Ordinance and Berkeley's Fire Code**  
**From: Councilmember Wengraf (Author), Councilmember Hahn (Co-Sponsor)**  
**Recommendation:** Refer to the City Manager, the Disaster and Fire Safety Commission and the Planning Commission to evaluate and recommend to Council within 90 days, a set of ordinance amendments and implementation programs to address emergency access and egress, parking and objective development standards to address the constraints presented by high fire hazard conditions and narrow and curving roadways in Fire Zones 2 and 3. (Attachment 1 to the report). Recommendations to Additional Objective Development Standards in Zones 2 and 3:  
-Zone 2 and 3 - limit the base maximum size of newly constructed, detached ADUs to 850 sq. feet. -Zone 2 and 3 – require compliance with front yard, side yard and open space and coverage requirements of the applicable zoning district.  
Recommendations to amend the Fire Code: -Prohibit parking on streets where egress and ingress will be adversely impacted by additional vehicles and increased population. -Require sprinklers in new construction, consistent with local Fire Code. - Explore their authority under California Health and Safety Code Sec. 13869.7 to mitigate the adverse impacts of ADU creation in requiring safe and adequate ingress and egress routes and sufficient off-street parking.  
**Financial Implications:** Staff time  
Contact: Susan Wengraf, Councilmember, District 6 (510) 981-7160

## Action Calendar

*The public may comment on each item listed on the agenda for action as the item is taken up. For items moved to the Action Calendar from the Consent Calendar or Information Calendar, persons who spoke on the item during the Consent Calendar public comment period may speak again at the time the matter is taken up during the Action Calendar.*

*The Presiding Officer will request that persons wishing to speak use the "raise hand" function to determine the number of persons interested in speaking at that time. Up to ten (10) speakers may speak for two minutes. If there are more than ten persons interested in speaking, the Presiding Officer may limit the public comment for all speakers to one minute per speaker. The Presiding Officer may, with the consent of persons representing both sides of an issue, allocate a block of time to each side to present their issue.*

*Action items may be reordered at the discretion of the Chair with the consent of Council.*

## Action Calendar – Public Hearings

*Staff shall introduce the public hearing item and present their comments. This is followed by five-minute presentations each by the appellant and applicant. The Presiding Officer will request that persons wishing to speak use the "raise hand" function to be recognized and to determine the number of persons interested in speaking at that time.*

*Up to ten (10) speakers may speak for two minutes. If there are more than ten persons interested in speaking, the Presiding Officer may limit the public comment for all speakers to one minute per speaker. The Presiding Officer may with the consent of persons representing both sides of an issue allocate a block of time to each side to present their issue.*

*Each member of the City Council shall verbally disclose all ex parte contacts concerning the subject of the hearing. Councilmembers shall also submit a report of such contacts in writing prior to the commencement of the hearing. Written reports shall be available for public review in the office of the City Clerk.*

- 12a. \*\*\*Item Removed by City Manager\*\*\* Public Hearing: ZAB Appeal: 1850 Arch Street, Use Permit #ZP2019-0212  
From: City Manager  
Contact: Jordan Klein, Planning and Development, (510) 981-7400**
- 12b. \*\*\*Item Removed by City Manager\*\*\* Public Hearing: ZAB Appeal: 1862 Arch Street, Use Permits #ZP2019-0213  
From: City Manager  
Contact: Jordan Klein, Planning and Development, (510) 981-7400**
- 12c. \*\*\*Item Removed by City Manager\*\*\* ZAB Appeals: 1850 and 1862 Arch Street, Use Permits #ZP2019-0212 and ZP2019-0213  
From: City Manager  
Contact: Jordan Klein, Planning and Development, (510) 981-7400**

## Action Calendar

- 13. Berkeley 2020 Pedestrian Plan  
From: City Manager  
Recommendation:** Adopt a Resolution approving the Berkeley 2020 Pedestrian Plan, and directing the City Manager to pursue implementation of the Plan as funding and staffing permit.  
**Financial Implications:** See report  
Contact: Liam Garland, Public Works, (510) 981-6300
- 14. Public Works Commission Recommendation for the Five-Year Paving Plan  
From: Public Works Commission  
Recommendation:** Adopt a resolution that recommends approval of the first three years of the Five-Year Paving Plan, for FY2021 to FY2025, as proposed by Staff, with special advisories regarding prioritization of permeable paving on select streets.  
**Financial Implications:** See report.  
Contact: Joe Enke, Commission Secretary, (510) 981-6300



## Action Calendar – Public Hearings

**15. Amend BMC Chapter 14.52 Authorizing goBerkeley Parking Program at All Parking Meters**

**From: City Manager**

**Recommendation:** Conduct a public hearing, and upon conclusion adopt first reading of an Ordinance amending Berkeley Municipal Code (BMC) Chapter 14.52 to add all parking meter areas to the goBerkeley parking program, thereby authorizing the use of demand-responsive parking management citywide under the existing goBerkeley fee structure and program guidelines.

**Financial Implications:** See report

Contact: Liam Garland, Public Works, (510) 981-6300

## Action Calendar

**16. Support Community Refrigerators** *(Continued from November 10, 2020)*

**From: Councilmember Davila (Author)**

**Recommendation:**

1. Adopt a Resolution to create an allocation of the homeless budget towards the purchasing of community refrigerators to be distributed in Council districts to provide access to food for those who have no refrigeration or may be food insecure.
2. Allocate \$8,000 of the budget for the purchasing of the refrigerators.

**Financial Implications:** See report.

Contact: Cheryl Davila, Councilmember, District 2, (510) 981-7120

**17. Declare Juneteenth as a City Holiday for the City of Berkeley** *(Reviewed by the Budget & Finance Policy Committee)*

**From: Councilmember Davila (Author)**

**Recommendation:**

1. Adopt a resolution declaring Juneteenth as a City Holiday for the City of Berkeley
  2. Send copies of this resolution to State Assemblywoman Buffy Wicks, State Senator Nancy Skinner, and United States Congresswoman Barbara Lee.
- (This item expired on December 14, 2020, and is returning to Council with no action taken by the Budget and Finance Policy Committee.)*

**Financial Implications:** See report

Contact: Cheryl Davila, Councilmember, District 2, (510) 981-7120

## Information Reports

**18. Report for Phase 3 Study to Underground Utility Wires in Berkeley**

**From: Public Works Commission, Disaster and Fire Safety Commission, Transportation Commission**

Contact: Joe Enke, Commission Secretary, (510) 981-6300

## Public Comment – Items Not Listed on the Agenda

## Adjournment

**NOTICE CONCERNING YOUR LEGAL RIGHTS:** *If you object to a decision by the City Council to approve or deny a use permit or variance for a project the following requirements and restrictions apply: 1) No lawsuit challenging a City decision to deny (Code Civ. Proc. §1094.6(b)) or approve (Gov. Code 65009(c)(5)) a use permit or variance may be filed more than 90 days after the date the Notice of Decision of the action of the City Council is mailed. Any lawsuit not filed within that 90-day period will be barred. 2) In any lawsuit that may be filed against a City Council decision to approve or deny a use permit or variance, the issues and evidence will be limited to those raised by you or someone else, orally or in writing, at a public hearing or prior to the close of the last public hearing on the project.*

Live captioned broadcasts of Council Meetings are available on Cable B-TV (Channel 33), via internet accessible video stream at <http://www.cityofberkeley.info/CalendarEventWebcastMain.aspx> and KPFB Radio 89.3.

Archived indexed video streams are available at <http://www.cityofberkeley.info/citycouncil>. Channel 33 rebroadcasts the following Wednesday at 9:00 a.m. and Sunday at 9:00 a.m.

Communications to the City Council are public record and will become part of the City's electronic records, which are accessible through the City's website. **Please note: e-mail addresses, names, addresses, and other contact information are not required, but if included in any communication to the City Council, will become part of the public record.** If you do not want your e-mail address or any other contact information to be made public, you may deliver communications via U.S. Postal Service to the City Clerk Department at 2180 Milvia Street. If you do not want your contact information included in the public record, please do not include that information in your communication. Please contact the City Clerk Department for further information.

Any writings or documents provided to a majority of the City Council regarding any item on this agenda will be posted on the City's website at <http://www.cityofberkeley.info>.

Agendas and agenda reports may be accessed via the Internet at <http://www.cityofberkeley.info/citycouncil>

**COMMUNICATION ACCESS INFORMATION:**

To request a disability-related accommodation(s) to participate in the meeting, including auxiliary aids or services, please contact the Disability Services specialist at (510) 981-6418 (V) or (510) 981-6347 (TDD) at least three business days before the meeting date.



Captioning services are provided at the meeting, on B-TV, and on the Internet.

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***I hereby certify that the agenda for this meeting of the Berkeley City Council was posted at the display case located near the walkway in front of the Maudelle Shirek Building, 2134 Martin Luther King Jr. Way, as well as on the City's website, on January 14, 2021.***

A handwritten signature in black ink, appearing to read "Mark Numainville".

Mark Numainville, City Clerk

## Communications

*Council rules limit action on Communications to referral to the City Manager and/or Boards and Commissions for investigation and/or recommendations. All communications submitted to Council are public record. Copies of individual communications are available for viewing through [Records Online](#).*

### **Eviction Moratorium**

1. Virginia Browning
2. Councilmember Hahn

### **25 Cent Disposable Cup Fee**

3. Carla Woodworth
4. Michael Katz

### **North Berkeley BART Development**

5. Franklin Lei

### **URL's Only**

6. Russbumper (4)

### **Supplemental Communications and Reports**

*Items received by the deadlines for submission will be compiled and distributed as follows. If no items are received by the deadline, no supplemental packet will be compiled for said deadline.*

- **Supplemental Communications and Reports 1**  
Available by 5:00 p.m. five days prior to the meeting.
- **Supplemental Communications and Reports 2**  
Available by 5:00 p.m. the day before the meeting.
- **Supplemental Communications and Reports 3**  
Available by 5:00 p.m. two days following the meeting.





Office of the City Manager

CONSENT CALENDAR

January 26, 2021

To: Honorable Mayor and Members of the City Council

From: Dee Williams-Ridley, City Manager

Submitted by: Lisa Warhuus, Director, Health, Housing and Community Services

Subject: Contract No. 32000129 Amendment: Resource Development Associates for Planning and Project Coordination Services

RECOMMENDATION

Adopt a Resolution authorizing the City Manager or her designee to execute an amendment to Contract No. 32000129 with Resource Development Associates through January 31, 2022, adding \$49,000 for a total not to exceed amount of \$97,850, to fund Mental Health Services Act (MHSA) Innovations (INN) Planning and “Help@Hand” Technology Suite Project Coordination services.

FISCAL IMPACTS OF RECOMMENDATION

Funding from MHSA revenue received from the State of California is available in the FY 2021 budget in the following Mental Health Services Act (MHSA) Fund budget codes: Project Planning - \$10,000 in 315-51-503-526-2017-000-451-612990 and Project Coordination - \$39,000 in 315-51-503-526-2020-000-451-612990.

CURRENT SITUATION AND ITS EFFECTS

The City of Berkeley Health, Housing and Community Services Department, Mental Health Division, receives MHSA INN funds on an annual basis. In order to utilize MHSA funds, both a state legislated community program planning process and a community-informed City Council approved plan outlining the use of funds, are required.

In 2018, the MHSA INN “Help@Hand” Technology Suite project was approved by City Council. This project will enable the City to provide access to mental health technology Applications (App) in Berkeley. In 2019, the mental health division executed a Request for Proposal Process to hire a Project Coordinator for the MHSA INN “Help@Hand” Technology Suite project. Further, a similar process was conducted to hire a Project Planner who would execute the State required community program planning for the next round of INN funds and projects. Resource Development Associates (RDA) was chosen as the vendor to conduct both projects.

The initial contract was in the amount of \$48,850, which included \$24,000 for the community program Project Planner and \$24,850 for the “Help@Hand” Project Coordinator. Although both areas of work began in FY 2020, there is a continued need

for consultant services through January 2022. The contract amendment will provide support on actual the launch of mental health technology Apps in the Berkeley community and working with the community on a new project to be funded through the next round of MHSA INN funds. Through the contract amendment, \$10,000 will be added for planning services for the next round of MHSA INN funds and projects, and \$39,000 for coordination services for the “Help@Hand” Technology Suite Project, for a total not to exceed amount of \$97,850 through January 31, 2022.

### BACKGROUND

Since the passage of Proposition 63 in 2004, the Health, Housing and Community Services Department, Mental Health Division, has received annual MHSA funding to expand and transform the mental health service delivery system. MHSA has five funding components for services and supports across the system. One of the five funding components is Innovations (INN). MHSA INN funds are to be utilized to create new learning in the mental health field through short-term pilot projects that increase access, quality, outcomes, and/or community collaborations. In order to utilize MHSA INN funds, state legislated community program planning and a local community informed, City Council approved plan are required.

The City of Berkeley’s initial INN Plan was approved by City Council in 2012 which implemented seven short-term pilot projects to improve mental health service acquisition, quality, and/or outcomes for underserved and inappropriately served populations. In 2016, a Trauma Informed Care project to implement training and supports at Berkeley Unified School District was approved. A modified Trauma Informed Project was approved in 2018 to implement Trauma Informed Care services and supports at Head Start sites. Additionally in 2018, the “Help@Hand” Technology Suite INN project was approved to provide mental health Technology Apps in Berkeley. Through the current contract, Resource Development Associates is providing project coordination services for the Help@Hand” Technology Suite project, and planning services for the next round of MHSA INN funds and projects.

### ENVIRONMENTAL SUSTAINABILITY

There are no identifiable environmental effects or opportunities associated with the subject of this project.

### RATIONALE FOR RECOMMENDATION

This contract was awarded on a competitive basis following the issuance of a request for proposals. The Contractor possesses unique expertise in working with various counties on MHSA Innovations Planning and Project Coordination.

### ALTERNATIVE ACTIONS CONSIDERED

In order for MHSA INN Planning and Technology Suite Project Coordination work to continue, no other alternative actions were considered.

CONTACT PERSON

Karen Klatt, Community Services Specialist III, HHCS, (510) 981-7644

1: Resolution

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

CONTRACT NO. 32000129 AMENDMENT: RESOURCE DEVELOPMENT  
ASSOCIATES

WHEREAS, the City's Department of Health, Housing & Community Services, Mental Health Division, currently receives Mental Health Services Act funds (MHSA) Innovations (INN) funds on an annual basis for short term pilot projects that will increase learning in the mental health field through strategies that will either improve the access, quality, or outcomes of services, and/or promote community collaborations; and

WHEREAS, in order to utilize MHSA INN funds, state legislated community program planning and a community informed, City Council approved plan outlining the use of funds is required; and

WHEREAS, since 2012 the City Council has approved MHSA INN Plans; and

WHEREAS, on June 26, 2018, by Resolution No. 63,493-N.S., the City Council approved the MHSA INN "Help@Hand" Technology Suite Project to implement mental health technology applications (Apps) in Berkeley; and

WHEREAS, in 2019, the Mental Health Division executed recruitments for proposals for an MHSA INN Program Planner to execute the state required community program planning process for the next round of MHSA INN funds and projects, and for a Project Coordinator for the MHSA INN "Help@Hand" Technology Suite project; and

WHEREAS, Resource Development Associates was the chosen vendor for both of these areas of work, and Contract No. 32000129 was executed in the amount of \$48,850 with Resource Development Associates to conduct MHSA INN planning and project coordination; and

WHEREAS, funds are available in the FY21 budget in the MHSA Fund, in the following amounts and budget codes: \$10,000 in 315-51-503-526-2017-000-451-612990, and \$39,000 in 315-51-503-526-2020-000-451-612990.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the City Manager is hereby authorized to execute an amendment to Contract No. 32000129 with Resource Development Associates to provide MHSA INN planning and project coordination services, to increase the amount by \$49,000 for a total contract amount not to exceed \$97,850, and to extend the term to January 31, 2022. A record signature copy of said contract and any amendments to be on file in the Office of the City Clerk.





Office of the City Manager

CONSENT CALENDAR  
January 26, 2021

To: Honorable Mayor and Members of the City Council  
 From: Dee Williams-Ridley, City Manager  
 Submitted by: Lisa Warhuus, Director, Health, Housing and Community Services  
 Subject: Contract No. 32000106 Amendment: Easy Does It for Provision of Wheelchair Van Service for Seniors & Disabled

RECOMMENDATION

Adopt a Resolution authorizing the City Manager or her designee to execute an amendment to Contract No. 32000106 with Easy Does It with a new NTE (not to exceed) total amount of \$150,000 for the period April 1, 2021 through June 30, 2023 for the provision of accessible wheelchair van services to clients of the Aging Services Division's Berkeley Rides for Seniors & the Disabled program.

FISCAL IMPACTS OF RECOMMENDATION

Funding sources for the Easy Does It contract include Measure B and Measure BB Direct Local Distribution funding through the Alameda County Transportation Commission in the following budgets: \$115,000 from Project Code HHAMEB2101, ERMA GL132-51-505-542-2038-000-444 and \$35,000 from HHAMBB2101, ERMA GL Account 136-51-505-542-2038-000-444.

CURRENT SITUATION AND ITS EFFECTS

Easy Does It provides lift-equipment accessible wheelchair van service to wheelchair customers enrolled in Berkeley Rides for Seniors & the Disabled program. The service shall include 7 days a week same day and advanced scheduled curb-to-curb, and when necessary, door-to-door and door through door service. Customers are transported to destinations within the City of Berkeley and for those with medical appointments within 15 miles of the jurisdictional boundaries of Berkeley, including Oakland, Richmond, Walnut Creek, San Rafael, Fremont and San Francisco.

BACKGROUND

Easy Does It has been providing lift-equipment accessible wheelchair van service to the City's wheelchair van program customers since 2005. Easy Does It is the only local lift-equipment accessible wheelchair van service provider and provides an essential service to the City's wheelchair customers.

ENVIRONMENTAL SUSTAINABILITY

There are no identifiable environmental effects or opportunities associated with the subject of this report.

RATIONALE FOR RECOMMENDATION

Easy Does It provides an essential transportation service to wheelchair-bound Berkeley community members.

ALTERNATIVE ACTIONS CONSIDERED

The City could not contract with Easy Does It to provide wheelchair van transportation to senior and disabled community members. This would lead to a significant gap in transportation services that would not be provided to senior and disabled community members in Berkeley.

CONTACT PERSON

Tanya Bustamante, Aging Services Division Manager, HHCS, 981-5178

Attachments:

1: Resolution

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

CONTRACT NO. 32000106 AMENDMENT: EASY DOES IT FOR PROVISION OF ACCESSIBLE WHEELCHAIR VAN SERVICE FOR SENIORS & DISABLED

WHEREAS, in 2000 Alameda County residents passed Measure B to reauthorize the one-half sales tax for transportation projects that was passed in 1986; and in 2014, Alameda County residents approved Measure BB, authorizing an extension and augmentation of the existing Measure B transportation sale tax; and

WHEREAS, Measure B funds a wheelchair van program that provides a limited number of wheelchair van vouchers exclusively to wheelchair users needing lift-equipment wheelchair accessible van service; and

WHEREAS, Measure B and Measure BB funding for Berkeley Rides for Seniors & Disabled wheelchair van program provided by Easy Does It is available in the FY21 budget: Project Code HHAMEB2101, ERMA GL132-51-505-542-2038-000-444 and HHAMBB2101, ERMA GL Account 136-51-505-542-2038-000-444; and

WHEREAS, Easy Does It provides an average of 890 lift-equipment accessible wheelchair van rides each year to the City of Berkeley's wheelchair customers; and

WHEREAS, Easy Does It has been providing lift-equipment accessible wheelchair van service to the City of Berkeley's wheelchair customers since 2005.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the City Manager or her designee is authorized to execute an amendment to Contract No. 32000106 with Easy Does It with a new NTE total amount of \$150,000 for the period April 1, 2021 through June 30, 2023 for the purpose of providing lift-equipment accessible wheelchair van services to the City of Berkeley's wheelchair customers. A record signature copy of said contract and any amendments shall be on file in the office of the City Clerk.





Office of the City Manager

CONSENT CALENDAR

January 26, 2021

*(Continued from November 10, 2020)*

To: Honorable Mayor and Members of the City Council

From: Dee Williams-Ridley, City Manager

Submitted by: Andrew Greenwood, Chief of Police  
Savita Chaudhary, Director of Information Technology  
David White, Deputy City Manager

Subject: Resolution Accepting the Surveillance Technology Report for Automatic License Plate Readers, GPS Trackers, Body Worn Cameras, and the Street Level Imagery Project Pursuant to Chapter 2.99 of the Berkeley Municipal Code

RECOMMENDATION

Adopt a Resolution accepting the Surveillance Technology Report for Automatic License Plate Readers, GPS Trackers, Body Worn Cameras, and the Street Level Imagery Project Pursuant to Chapter 2.99 of the Berkeley Municipal Code.

FISCAL IMPACTS OF RECOMMENDATION

None.

CURRENT SITUATION AND ITS EFFECTS

On March 27, 2018, the City Council adopted Ordinance 7,592-N.S., adding Chapter 2.99 to the Berkeley Municipal Code, which is also known as the Surveillance Technology Use and Community Safety Ordinance (“Ordinance”). The purpose of the Ordinance is to provide transparency surrounding the use of surveillance technology, as defined by Section 2.99.020 in the Ordinance, and to ensure that decisions surrounding the acquisition and use of surveillance technology consider the impacts that such technology may have on civil rights and civil liberties. Further, the Ordinance requires that the City evaluate all costs associated with the acquisition of surveillance technology and regularly report on their use.

The Ordinance imposes various reporting requirements on the City Manager and staff. The purpose of this staff report and attached resolution is to satisfy the annual reporting requirement as outlined in Section 2.99.070. Attached to this staff report are Surveillance Technology Reports for Automatic License Plate Readers, GPS Trackers, Body Worn Cameras, and the Street Level Imagery Project.

BACKGROUND

On March 27, 2018, the City Council adopted Ordinance 7,592-N.S., adding Chapter 2.99 to the Berkeley Municipal Code, which is also known as the Surveillance Technology Use and Community Safety Ordinance. Section 2.99.070 of the Ordinance requires that the City Manager must submit to the City Council a Surveillance Technology Report as defined by Section 2.99.020(2) of the Ordinance at the first regular City Council meeting in November.

For each of the four technologies, the Surveillance Technology Reports were prepared to satisfy the specific, section-by-section requirements of the Ordinance, and are attached to this report.

ENVIRONMENTAL SUSTAINABILITY

There are no identifiable environmental effects or opportunities associated with the content of this report.

RATIONALE FOR RECOMMENDATION

City Council is being asked to adopt the attached resolution for the City to be in compliance with the Ordinance.

ALTERNATIVE ACTIONS CONSIDERED

City Council could decide not to adopt the resolution.

CONTACT PERSON

Savita Chaudhary, Director of Information Technology (510) 981-6541  
Andrew Greenwood, Chief of Police, (510) 981-7017  
David White, Deputy City Manager, (510) 981-7012

ATTACHMENTS

1. Proposed Resolution
2. Body Worn Cameras  
Surveillance Technology Report: Body Worn Cameras
3. Global Positioning System Tracking Devices  
Surveillance Technology Report
4. Automated License Plate Readers  
Surveillance Technology Report: Automated License Plate Readers
5. Street Level Imagery Project  
Surveillance Technology Report: Street Level Imagery Project

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

A RESOLUTION ACCEPTING THE SURVEILLANCE TECHNOLOGY REPORT FOR  
AUTOMATIC LICENSE PLATE READERS, GPS TRACKERS, BODY WORN  
CAMERAS, AND THE STREET LEVEL IMAGERY PROJECT

WHEREAS, on March 27, 2018, the City Council adopted Ordinance 7,592-N.S., which is known as the Surveillance Technology Use and Community Safety Ordinance (“Ordinance”); and

WHEREAS, Section 2.99.070 of the Ordinance requires that the City Manager must submit to the City Council a Surveillance Technology Report as defined by Section 2.99.020(2) of the Ordinance at the first regular City Council meeting in November; and

WHEREAS, the Surveillance Technology Reports satisfy the requirements of the Ordinance.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley:

Section 1. The City Council hereby accepts the Surveillance Technology Reports for Automatic License Plate Readers, GPS Trackers, Body Worn Cameras, and the Street Level Imagery Project.



## Surveillance Technology Report: Body Worn Cameras

**October 1, 2019 – Sept. 30, 2020**

| Description            | <p>A description of all non-privileged and non-confidential information about use of the Surveillance Technology, including but not limited to the quantity of data gathered and sharing of data, if any, with outside entities. If sharing has occurred, the report shall include general, non-privileged and non-confidential information about recipient entities, including the names of the entities and purposes for such sharing.</p> <p>Body Worn Cameras are used to capture video recordings of contacts between department personnel and the public, to provide an objective record of these events. These recordings are used in support of criminal prosecutions, to limit civil liability, increase transparency and enhance professionalism and accountability in the delivery of police services to the community.</p> <p>Body Worn Camera (BWC) files are shared with the Alameda County District Attorney's office in support of prosecution for crime, and may be shared with other law enforcement agencies to support criminal investigations.</p> <p style="text-align: center;">Summary of Body Worn Camera Videos Uploaded<br/>Oct. 1, 2019 to Sept. 30, 2020</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td>Total Number of Videos</td> <td style="text-align: right;">68,489</td> </tr> <tr> <td>Total Hours of Videos</td> <td style="text-align: right;">18,729</td> </tr> <tr> <td>Total GB of Videos</td> <td style="text-align: right;">35,795</td> </tr> </table> <p style="text-align: center;">Summary of All Evidence Created<br/>Oct. 1, 2019 to Sept. 30, 2019</p> <table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: left;"><u>Type</u></th> <th style="text-align: left;"><u>Count of files</u></th> <th style="text-align: left;"><u>Size (in Mb)</u></th> <th style="text-align: left;"><u>GBs Storage</u></th> </tr> </thead> <tbody> <tr> <td>Audio</td> <td style="text-align: right;">821</td> <td style="text-align: right;">9,842</td> <td style="text-align: right;">98</td> </tr> <tr> <td>Document</td> <td style="text-align: right;">318</td> <td style="text-align: right;">15</td> <td style="text-align: right;">0.14</td> </tr> <tr> <td>Image</td> <td style="text-align: right;">64,563</td> <td style="text-align: right;">293,306</td> <td style="text-align: right;">293</td> </tr> <tr> <td>Other</td> <td style="text-align: right;">1,711</td> <td style="text-align: right;">122,370</td> <td style="text-align: right;">1,224</td> </tr> <tr> <td>Videos*</td> <td style="text-align: right;">73,570</td> <td style="text-align: right;">36,984,303</td> <td style="text-align: right;">369,843</td> </tr> <tr> <td><b>Grand Totals</b></td> <td style="text-align: right;"><b>140,983</b></td> <td style="text-align: right;"><b>37,409,835</b></td> <td style="text-align: right;"><b>374,098</b></td> </tr> </tbody> </table> <p>* Includes all uploaded BWC videos <i>and</i> all other videos booked into the evidence management system. Other videos include iPhone videos uploaded, security camera video, copies of BWC videos (for redaction, etc.), and any other videos.</p> | Total Number of Videos | 68,489             | Total Hours of Videos | 18,729 | Total GB of Videos | 35,795 | <u>Type</u> | <u>Count of files</u> | <u>Size (in Mb)</u> | <u>GBs Storage</u> | Audio | 821 | 9,842 | 98 | Document | 318 | 15 | 0.14 | Image | 64,563 | 293,306 | 293 | Other | 1,711 | 122,370 | 1,224 | Videos* | 73,570 | 36,984,303 | 369,843 | <b>Grand Totals</b> | <b>140,983</b> | <b>37,409,835</b> | <b>374,098</b> |
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| Total Number of Videos | 68,489                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                        |                    |                       |        |                    |        |             |                       |                     |                    |       |     |       |    |          |     |    |      |       |        |         |     |       |       |         |       |         |        |            |         |                     |                |                   |                |
| Total Hours of Videos  | 18,729                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                        |                    |                       |        |                    |        |             |                       |                     |                    |       |     |       |    |          |     |    |      |       |        |         |     |       |       |         |       |         |        |            |         |                     |                |                   |                |
| Total GB of Videos     | 35,795                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                        |                    |                       |        |                    |        |             |                       |                     |                    |       |     |       |    |          |     |    |      |       |        |         |     |       |       |         |       |         |        |            |         |                     |                |                   |                |
| <u>Type</u>            | <u>Count of files</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <u>Size (in Mb)</u>    | <u>GBs Storage</u> |                       |        |                    |        |             |                       |                     |                    |       |     |       |    |          |     |    |      |       |        |         |     |       |       |         |       |         |        |            |         |                     |                |                   |                |
| Audio                  | 821                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 9,842                  | 98                 |                       |        |                    |        |             |                       |                     |                    |       |     |       |    |          |     |    |      |       |        |         |     |       |       |         |       |         |        |            |         |                     |                |                   |                |
| Document               | 318                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 15                     | 0.14               |                       |        |                    |        |             |                       |                     |                    |       |     |       |    |          |     |    |      |       |        |         |     |       |       |         |       |         |        |            |         |                     |                |                   |                |
| Image                  | 64,563                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 293,306                | 293                |                       |        |                    |        |             |                       |                     |                    |       |     |       |    |          |     |    |      |       |        |         |     |       |       |         |       |         |        |            |         |                     |                |                   |                |
| Other                  | 1,711                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 122,370                | 1,224              |                       |        |                    |        |             |                       |                     |                    |       |     |       |    |          |     |    |      |       |        |         |     |       |       |         |       |         |        |            |         |                     |                |                   |                |
| Videos*                | 73,570                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 36,984,303             | 369,843            |                       |        |                    |        |             |                       |                     |                    |       |     |       |    |          |     |    |      |       |        |         |     |       |       |         |       |         |        |            |         |                     |                |                   |                |
| <b>Grand Totals</b>    | <b>140,983</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>37,409,835</b>      | <b>374,098</b>     |                       |        |                    |        |             |                       |                     |                    |       |     |       |    |          |     |    |      |       |        |         |     |       |       |         |       |         |        |            |         |                     |                |                   |                |
| Geographic Deployment  | <p>Where applicable, non-privileged and non-confidential information about where the surveillance technology was deployed geographically.</p> <p>Body Worn Cameras are worn by all BPD uniformed officers city-wide at all times; BWCs are not deployed based on geographic considerations.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |                    |                       |        |                    |        |             |                       |                     |                    |       |     |       |    |          |     |    |      |       |        |         |     |       |       |         |       |         |        |            |         |                     |                |                   |                |
| Complaints             | <p>A summary of each complaint, if any, received by the City about the Surveillance Technology.</p> <p>There have been no complaints about the deployment and use of Body Worn Cameras.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                        |                    |                       |        |                    |        |             |                       |                     |                    |       |     |       |    |          |     |    |      |       |        |         |     |       |       |         |       |         |        |            |         |                     |                |                   |                |

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Audits and Violations | <p>The results of any non-privileged internal audits, any information about violations or potential violations of the Surveillance Use Policy, and any actions taken in response.</p> <p>File meta-data are routinely reviewed by our BWC manager, to ensure required meta-data fields are completed. There have been no complaints with regards to violations of the Surveillance Use Policy.</p>                                                                                                                                                                                    |
| Data Breaches         | <p>Non-privileged and non-confidential information about any data breaches or other unauthorized access to the data collected by the surveillance technology, including information about the scope of the breach and the actions taken in response.</p> <p>There have been no known data breaches or other unauthorized access to BWC data.</p>                                                                                                                                                                                                                                      |
| Effectiveness         | <p>Information that helps the community assess whether the Surveillance Technology has been effective in achieving its identified outcomes.</p> <p>Body Worn Cameras have proven effective in supporting criminal prosecutions, as video footage is available for all criminal prosecutions.</p> <p>Body Worn Cameras have been effective for training purposes, as footage can be reviewed in incident de-briefs.</p> <p>Body Worn Cameras have been extremely effective in support of Internal Affairs investigations and Use of Force Review.</p>                                  |
| Costs                 | <p>Total annual costs for the Surveillance Technology, including personnel and other ongoing costs.</p> <p>The annual cost for the Body Worn Cameras, including cameras, replacement cameras, software, and Axon's secure digital evidence management system is approx. \$204,000 per year over a five-year, \$1,218,000 contract. The systems cost for the 19 month period of this initial report was \$385,700.</p> <p>There is one full-time employee assigned to the BWC program, an Applications Programmer Analyst II, at a cost of \$168,940 per year, including benefits.</p> |

## Surveillance Technology Report: Global Positioning System Tracking Devices

**October 1, 2019 – Sept. 30, 2020**

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description           | <p>A description of all non-privileged and non-confidential information about use of the Surveillance Technology, including but not limited to the quantity of data gathered and sharing of data, if any, with outside entities. If sharing has occurred, the report shall include general, non-privileged and non-confidential information about recipient entities, including the names of the entities and purposes for such sharing.</p> <p>Global Positioning System Trackers are used to track the movements of vehicles, bicycles, other items, and/or individuals.</p> <p>For the date range of 10-01-19 through 09-30-20 the Global Positioning System (GPS) “Electronic Stake Out” (ESO) devices were deployed on “bait” bicycles 52 times, resulting in 34 arrests, 4 eluded capture, 1 person was detained and not arrested, and in 13 deployments the bicycle was not stolen. This program was suspended in mid-March due to the COVID-19 pandemic.</p> <p>GPS “Slap-N-Track” (SNT) devices were used in three separate investigations during this reporting period:</p> <ul style="list-style-type: none"> <li>(1) An investigation of an individual for Sexual Exploitation, Child Pornography, and Distribution of Child Pornography. This suspect currently has a Federal warrant.</li> <li>(2) An investigation of a serial kidnap rape suspect. The suspect was arrested and charged.</li> <li>(3) An investigation into multiple suspects involved in a “Rolex” robbery series that involved the cities of Berkeley, Piedmont, and Orinda. Two devices were used on two different suspect vehicles during this investigation. Four suspects from the above cases were arrested and charged for their involvement in these robberies.</li> </ul> <p>Data may be shared with the District Attorney’s Office for use as evidence to aid in prosecution, in accordance with laws governing evidence; other law enforcement personnel as a part of an active criminal investigation; and other third parties, pursuant to a court order.</p> |
| Geographic Deployment | <p>Where applicable, non-privileged and non-confidential information about where the surveillance technology was deployed geographically.</p> <p>GPS ESO-equipped bikes were deployed primarily in commercial districts across the city where bikes are frequently stolen.</p> <p>GPS SNT devices are deployed with judicial pre-approval, based on suspect location, rather than geographical consideration.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Complaints            | <p>A summary of each complaint, if any, received by the City about the Surveillance Technology.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                       | There were no complaints made regarding GPS Trackers.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Audits and Violations | <p>The results of any non-privileged internal audits, any information about violations or potential violations of the Surveillance Use Policy, and any actions taken in response.</p> <p>There were no audits and no known violations relating to GPS Trackers.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Data Breaches         | <p>Non-privileged and non-confidential information about any data breaches or other unauthorized access to the data collected by the surveillance technology, including information about the scope of the breach and the actions taken in response.</p> <p>There were no known data breaches relating to GPS Trackers.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Effectiveness         | <p>Information that helps the community assess whether the Surveillance Technology has been effective in achieving its identified outcomes.</p> <p>GPS Trackers continue to be very effective in apprehending bicycle thieves, many of whom are repeat offenders who've committed not only bike thefts, but other crimes as well, such as burglaries, auto burglaries, and vehicle thefts. SNT trackers are effective in that they provide invaluable information on suspect vehicle location during the investigation of complex cases where suspects may be moving around the Bay Area and beyond.</p> <p>GPS Trackers greatly reduce costs associated with surveillance operations. A bike may be left for days. Surveillance operations generally involve four or more officers for the entire duration of an operation. A moving surveillance is extremely resource-intensive, requiring multiple officers in multiple vehicles for extended periods of time. Using both types of GPS trackers eliminates the need for officers' immediate presence until officers are ready to apprehend the suspect(s).</p> <p>The program was suspended in mid-March due to the COVID-19 pandemic. This program will likely resume once the pre-COVID bail schedule is re-established.</p> |
| Costs                 | <p>Total annual costs for the Surveillance Technology, including personnel and other ongoing costs.</p> <p>The annual cost for the GPS Trackers' data service is \$1,920. Further information regarding costs is contained in Policy 1301a, the Surveillance Acquisition Report.</p> <p>There are staff time costs associated with preparing and placing SNT trackers. The investigator must prepare a search warrant and obtain a judge's approval, and a small number of officers must place the tracker on the suspect's car. The total number of hours is a fraction of the time it would take to do a full surveillance operation involving numerous officers.</p> <p>There are staff time costs associated with preparing ESO trackers and placing ESO tracker-equipped bikes for bait bike operations. These are on the order of two-four hours per operation. The total number of hours is extremely small, given the large number of operations, and resulting arrests.</p>                                                                                                                                                                                                                                                                                               |

**Surveillance Technology Report: Automated License Plate Readers**

**October 1, 2019 – Sept. 30, 2020**

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Description</p> | <p>A description of all non-privileged and non-confidential information about use of the Surveillance Technology, including but not limited to the quantity of data gathered and sharing of data, if any, with outside entities. If sharing has occurred, the report shall include general, non-privileged and non-confidential information about recipient entities, including the names of the entities and purposes for such sharing.</p> <p>Automated License Plate Readers (ALPRs) are used by Parking Enforcement Bureau vehicles for time zone parking and scofflaw enforcement. The City’s Transportation Division uses anonymized information for purposes of supporting the City’s Go Berkeley parking management program. ALPR use replaced the practice of physically “chalking” tires, which is no longer allowed by the courts.</p> <p style="text-align: center;"><b>Summary of ALPR Time Zone Enforcement Data</b></p> <p style="text-align: center;">Read Data<br/>There were an average of 12,059 “Reads” per working day<br/>(Based on one month’s data: 9/1/20/-9/30/20)</p> <p style="text-align: center;">Hit Data<br/>There were 44,068 “Hits”<br/>14, 945 “Enforced Hits” resulted in citation issuance.<br/>2,569 “Not Enforced” valid, enforceable hits resulted in no citation issued, based on PEO discretion.</p> <p>26,554 Hits were not acted upon for a variety to reasons including but not limited to:</p> <ol style="list-style-type: none"> <li>1) Customer comes out to move a vehicle. PEO’s are directed not to issue that citation.</li> <li>2) Officer gets to the dashboard and sees a permit not visible from a previous location.</li> <li>3) Officer does a vehicle evaluation and confirms that the vehicle moved from the hit location (e.g. across the street within GPS range).</li> <li>4) Stolen car.</li> <li>5) Similar Plates.</li> <li>6) 600-700 GIG cars- 100 revel scooters.</li> <li>7) Officers leave their LPR “on” collecting time zone enforcement data, but leave the area being enforced to drive to another location on another assignment, such as a traffic post at a collision scene. These hits are not enforced.</li> </ol> <p>Genetec is the vendor for the ALPR Time Zone enforcement system. A “read” indicates the ALPR system successfully read a license plate. A “hit” indicates the ALPR system detected a possible violation, which prompts the Parking Enforcement Officer to further assess the vehicle. In many cases, hits are “rejected” or “not enforced” because the Parking Enforcement Officer determines the vehicle has an appropriate placard or permit, or there is other information which precludes citation.</p> |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| <b>Summary of ALPR Booting Scofflaw Enforcement Data</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                          | <p style="text-align: center;">0 vehicles booted from 10/1/19-9/23/20.</p> <p>The Berkeley Police Department no longer maintains the ALPR Booting Scofflaw Enforcement Program. The contract to provide this service became cost prohibitive and the city opted not to renew the contract with the vendor. The city returned to having each PEO working a beat again become responsible for recognizing when a license plate has accumulated five or more unpaid parking tickets.</p> <p>All BPD ALPR data may only be shared with other law enforcement or prosecutorial agencies for official law enforcement purposes, or as otherwise permitted by law. All ALPR data is subject to the provisions of BPD Policy 415 - Immigration Law, and therefore may not be shared with federal immigration enforcement officials.</p> |
| <b>Geographic Deployment</b>                             | <p>Where applicable, non-privileged and non-confidential information about where the surveillance technology was deployed geographically.</p> <p>Only Parking Enforcement Vehicles are equipped with ALPRs. ALPRs are deployed based on areas where there are parking time restrictions. ALPRs are not deployed based on geographic considerations not related to parking and scofflaw enforcement.</p>                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Complaints</b>                                        | <p>A summary of each complaint, if any, received by the City about the Surveillance Technology.</p> <p>There have been no complaints about to the deployment and use of Automated License Plate Readers.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Audits and Violations</b>                             | <p>The results of any non-privileged internal audits, any information about violations or potential violations of the Surveillance Use Policy, and any actions taken in response.</p> <p>There have been no complaints of violations of the ALPR Surveillance Use Policy.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Data Breaches</b>                                     | <p>Non-privileged and non-confidential information about any data breaches or other unauthorized access to the data collected by the surveillance technology, including information about the scope of the breach and the actions taken in response.</p> <p>There have been no known data breaches or other unauthorized access to Automated License Plate Reader data.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Effectiveness</b>                                     | <p>Information that helps the community assess whether the Surveillance Technology has been effective in achieving its identified outcomes.</p> <p>ALPRs have proven effective in parking enforcement for time zone enforcement; the prior utilization of manually chalking car tires for time zone enforcement has been disallowed by court decision.</p> <p>ALPRs have proven effective in supporting enforcement upon vehicles which have five or more unpaid citations. The ALPR's ability to read and check license plates while being driven greatly increases efficiency, allowing an operator to cover larger areas more quickly without having to stop except to confirm a hit.</p>                                                                                                                                    |
| <b>Costs</b>                                             | <p>Total annual costs for the Surveillance Technology, including personnel and other ongoing costs.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

The annual system maintenance cost for Genetec is \$47,000. This cost is borne by the Transportation Division, which also purchased the ALPR units used in Time Zone Enforcement.

Two new Genetec ALPR units were purchased during the period covered by this report. The two new units were purchased in order to equip the final two parking vehicles that did not have ALPR units attached to them.

Genetec ALPR units are installed on 23 Parking Enforcement vehicles. Parking Enforcement personnel perform a variety of parking enforcement activities, and are not limited solely to time zone enforcement. Therefore, personnel costs specifically attributable to time zone enforcement are not tracked.

## Surveillance Technology Report: Street Level Imagery Project

|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Description</b></p>           | <p><b>A description of all non-privileged and non-confidential information about the use of the Surveillance Technology, including but not limited to the quantity of data gathered and sharing of data, if any, with outside entities. If sharing has occurred, the report will include general, non-privileged and non-confidential information about recipient entities, including the names of the entities and purposes for such sharing.</b></p> <p>Street level imagery will be utilized exclusively by authorized City staff for infrastructure asset management and planning activities. The street level imagery of City infrastructure assets in the Public Right of Way that is provided to the City will not consist of information that is capable of being associated with any individual or group.</p> <p>The project has not started, and the contract is still in progress.</p> |
| <p><b>Geographic Deployment</b></p> | <p><b>Where applicable, non-privileged and non-confidential information about where the surveillance technology was deployed geographically.</b></p> <p>Street level imagery will be collected by driving through the entire community over a defined period of time. It will be accessible to the City through a proprietary third-party application, Street Smart™.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>Complaints</b></p>            | <p><b>A summary of each complaint, if any, received by the City about the Surveillance Technology.</b></p> <p>No complaints received. The project has not started, and the contract is still in progress.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <p><b>Audits and Violations</b></p> | <p><b>The results of any non-privileged internal audits, any information about violations or potential violations of the Surveillance Use Policy, and any actions taken in response.</b></p> <p>There have been no complaints with regards to violations of the Surveillance Use Policy.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <p><b>Data Breaches</b></p>         | <p><b>Non-privileged and non-confidential information about any data breaches or other unauthorized access to the data collected by the surveillance technology, including information about the scope of the breach and the actions taken in response.</b></p> <p>There have been no known data breaches or other unauthorized access to Cyclomedia Street Level Imagery data.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |



|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Effectiveness</b></p> | <p><b>Information that helps the community assess whether the Surveillance Technology has been effective in achieving its identified outcomes.</b></p> <p>Staff considered hiring contractors to use GPS in the field to create and update the infrastructure asset GIS data. This method is costly and time consuming. Cyclomedia’s unique and patented processing techniques allow positionally-accurate GIS data to be collected in a cost-effective way and over a shorter period of time than a “boots on the ground” GPS field survey.</p> <p>The Imagery will be used to extract the following Citywide Infrastructure assets to create accurate and current Geographic Information Systems (GIS) data inventories:</p> <ul style="list-style-type: none"> <li>• Bus pads / stops</li> <li>• Maintenance Access Holes</li> <li>• Pavement Striping</li> <li>• Curb paint color</li> <li>• Parking meters</li> <li>• Pedestrian Signal</li> <li>• Pavement marking</li> <li>• Storm drains</li> <li>• Signs</li> <li>• Street trees</li> <li>• Traffic lights</li> </ul> <p>The street level imagery that is captured will also be used to:</p> <p>Create a street sign GIS layer with condition assessment to support compliance with the Manual on Uniform Traffic Control Devices Code and provide an accurate inventory of City signs. The existing sign inventory is contained in a spreadsheet that does not have accurate location data.</p> <p>Create a curb color layer with condition assessment to indicate where there are red, yellow, blue, white and green colors. This is critical to support Public Safety.</p> <p>Create pavement striping and paint symbol layers to support Transportation Planning and Vision Zero.</p> <p><b><u>Benefits Projected:</u></b></p> <p>Street level imagery will be integrated into the City’s work order and asset management system for planning activities and to document repair and maintenance.</p> <p>Planners can use the street level imagery provided to the City to take measurements remotely, such as sidewalk width and public right of way impacts at proposed development locations.</p> <p>City staff can use the street level imagery to plan the location of road markings for pedestrian crossings, bike lanes or other striping.</p> <p>City staff can remotely take accurate measurements of infrastructure assets to adequately plan for repair and replacement.</p> |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                       | <p>City staff can use the street level imagery to enhance community engagement. The street level imagery can be used to identify and depict the impact of development such as an intersection restriping plan in order to article before and after conditions.</p> <p>The project has not started, and the contract is still in progress.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                            |                                                                              |                                                                              |       |   |          |          |                                    |   |                                            |           |                                    |   |                                 |          |                                                                              |   |                                            |         |                                                                              |                       |  |                  |  |  |  |  |
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| <b>Costs</b>          | <p><b>Total annual costs for the Surveillance Technology, including personnel and other ongoing costs.</b></p> <p>The total cost of the system is \$232,401 and is itemized below.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                            |                                                                              |                                                                              |       |   |          |          |                                    |   |                                            |           |                                    |   |                                 |          |                                                                              |   |                                            |         |                                                                              |                       |  |                  |  |  |  |  |
|                       | <table border="1"> <thead> <tr> <th>Year No.</th> <th>Description</th> <th>Cost</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Licenses</td> <td>\$48,000</td> <td>Resolution No: 69,482-N.S. 30JUN20</td> </tr> <tr> <td>1</td> <td>Professional Services for asset extraction</td> <td>\$139,401</td> <td>Resolution No: 69,482-N.S. 30JUN20</td> </tr> <tr> <td>2</td> <td>Licenses and Support – One-Time</td> <td>\$45,000</td> <td>Pending Council approval after imagery and data extraction work is completed</td> </tr> <tr> <td>3</td> <td>License and Support – Ongoing Annual Costs</td> <td>\$3,000</td> <td>Pending Council approval after imagery and data extraction work is completed</td> </tr> <tr> <td colspan="2" style="text-align: center;"><b>Total Year 1-3</b></td> <td style="text-align: center;"><b>\$235,401</b></td> <td></td> </tr> </tbody> </table> | Year No.                                   | Description                                                                  | Cost                                                                         | Notes | 1 | Licenses | \$48,000 | Resolution No: 69,482-N.S. 30JUN20 | 1 | Professional Services for asset extraction | \$139,401 | Resolution No: 69,482-N.S. 30JUN20 | 2 | Licenses and Support – One-Time | \$45,000 | Pending Council approval after imagery and data extraction work is completed | 3 | License and Support – Ongoing Annual Costs | \$3,000 | Pending Council approval after imagery and data extraction work is completed | <b>Total Year 1-3</b> |  | <b>\$235,401</b> |  |  |  |  |
|                       | Year No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Description                                | Cost                                                                         | Notes                                                                        |       |   |          |          |                                    |   |                                            |           |                                    |   |                                 |          |                                                                              |   |                                            |         |                                                                              |                       |  |                  |  |  |  |  |
|                       | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Licenses                                   | \$48,000                                                                     | Resolution No: 69,482-N.S. 30JUN20                                           |       |   |          |          |                                    |   |                                            |           |                                    |   |                                 |          |                                                                              |   |                                            |         |                                                                              |                       |  |                  |  |  |  |  |
|                       | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Professional Services for asset extraction | \$139,401                                                                    | Resolution No: 69,482-N.S. 30JUN20                                           |       |   |          |          |                                    |   |                                            |           |                                    |   |                                 |          |                                                                              |   |                                            |         |                                                                              |                       |  |                  |  |  |  |  |
|                       | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Licenses and Support – One-Time            | \$45,000                                                                     | Pending Council approval after imagery and data extraction work is completed |       |   |          |          |                                    |   |                                            |           |                                    |   |                                 |          |                                                                              |   |                                            |         |                                                                              |                       |  |                  |  |  |  |  |
| 3                     | License and Support – Ongoing Annual Costs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | \$3,000                                    | Pending Council approval after imagery and data extraction work is completed |                                                                              |       |   |          |          |                                    |   |                                            |           |                                    |   |                                 |          |                                                                              |   |                                            |         |                                                                              |                       |  |                  |  |  |  |  |
| <b>Total Year 1-3</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>\$235,401</b>                           |                                                                              |                                                                              |       |   |          |          |                                    |   |                                            |           |                                    |   |                                 |          |                                                                              |   |                                            |         |                                                                              |                       |  |                  |  |  |  |  |
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|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                            |                                                                              |                                                                              |       |   |          |          |                                    |   |                                            |           |                                    |   |                                 |          |                                                                              |   |                                            |         |                                                                              |                       |  |                  |  |  |  |  |



Office of the City Manager

CONSENT CALENDAR

January 26, 2021

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: Contract: Sposeto Engineering Inc. for Central Berkeley Transportation & Infrastructure Improvements Project

RECOMMENDATION

Adopt a Resolution:

1. Approving plans and specifications for the Central Berkeley Transportation & Infrastructure Improvements Project, ("Project"), Specification Nos. 21-11411-C, 21-11416-C, and 21-11417-C;
2. Accepting the bid of Sposeto Engineering Inc., the lowest responsive and responsible bidder; and
3. Authorizing the City Manager to execute a contract with Sposeto Engineering Inc. and any amendments, extensions, and/or change orders until completion of the Project in accordance with the approved plans and specifications, in an amount not to exceed \$3,477,475, which includes a contingency of fourteen percent for unforeseen circumstances.

FISCAL IMPACTS OF RECOMMENDATION

The construction budget for the Central Berkeley Transportation & Infrastructure Improvements Project is \$3,477,475, including contingency. The construction contract for this Project consists of three individual projects that are funded in part by a California Affordable Housing and Sustainable Communities ("AHSC") Infrastructure pass-through grant via BRIDGE Housing in connection with the Berkeley Way HOPE Center project. Funding is available in the FY 2021 budget as identified in the following table.

| Project                                                                                                             | AHSC<br>Capital Grant-<br>State<br>(Fund 306) | Alameda County<br>Measure BB<br>Bicycle and<br>Pedestrian<br>Program<br>(Fund 135) | Council Budget<br>Referral for<br>University<br>Ave./Grant St.<br>Crossing<br>Improvements<br>GF (Fund 011) |
|---------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| Milvia Street Bikeway<br>Improvements, Specification No.<br>21-11411-C                                              | \$2,349,596                                   | \$435,733                                                                          |                                                                                                             |
| Addison Street Bicycle Boulevard,<br>Specification No. 21-11416-C                                                   | \$243,073                                     | \$130,652                                                                          |                                                                                                             |
| University Avenue/Grant Street<br>Bus Bulb and Pedestrian Crossing<br>Improvements, Specification No.<br>21-11417-C | \$218,421                                     |                                                                                    | \$100,000                                                                                                   |
| Total funding for Project<br>construction: <b>\$3,477,475</b>                                                       | <b>\$2,811,090</b>                            | <b>\$566,385</b>                                                                   | <b>\$100,000</b>                                                                                            |

|                                       |                |
|---------------------------------------|----------------|
| Low Bid by Sposeto Engineering Inc.   | \$3,051,249.25 |
| 14% Contingency                       | \$426,225.75   |
| Total Not-To-Exceed Construction Cost | \$3,477,475.00 |

#### CURRENT SITUATION AND ITS EFFECTS

On December 10, 2020, four bids were opened for the Project, with bids ranging from \$3,051,249.25 to \$4,056,403.50. The determination of the lowest responsive and responsible bidder was based on the sum of all base bid items, as described in the bid documents. The low bidder is Sposeto Engineering Inc., with a bid of \$3,051,249.25, or \$177,249.25 above the engineer's estimate of \$2.874 million. Staff have identified additional funding to cover the total bid price of the low bidder, plus a 14% contingency, as indicated above. Staff have verified that Sposeto Engineering Inc. is the lowest responsive and responsible bidder.

The Living Wage Ordinance does not apply to this project as Department of Public Works construction contracts are, pursuant to City policy, subject to State prevailing wage laws. Sposeto Engineering Inc. has submitted a Certification of Compliance with the Equal Benefits Ordinance. The Community Workforce Agreement applies to this project because the estimated construction cost exceeds \$500,000. As a result, the successful bidder and all subcontractors will be required to sign an agreement to be bound by the terms of the Community Work Force Agreement.

## BACKGROUND

The primary purpose of the Central Berkeley Transportation & Infrastructure Project is to improve the safety of all travelers within the Project limits, with particular emphasis on improving pedestrian and bicyclist safety and transit reliability.

The Project is a part of the City's obligations under AHSC funding requirements for the development of a housing project located at 2012 Berkeley Way ("Berkeley Way project") for homeless and disabled individuals, as well as separate affordable housing units. The City's agreement with BRIDGE Housing Corp. and Berkeley Food and Housing Project, developers of the site, obligates the City to design and construct sustainable transportation infrastructure ("STI") improvements as a condition of funding. The following projects are identified as STI improvements under the agreement:

1. The Milvia Street Bikeway Improvements project ("Milvia project"), Specification No. 21-11411-C, is a Strategic Plan Priority Project that will construct a continuous Class IV Separated Bikeway – a bikeway that is physically protected from motor vehicle traffic – and pedestrian crossing improvements on a 12-block segment of Milvia Street through downtown Berkeley, from Hearst Avenue to Blake Street. The project also includes ADA-accessible on-street customer parking for downtown businesses, new ADA disabled placard blue zones, and new commercial and passenger loading zones. The bicycle and pedestrian improvements are identified as the highest priority Tier 1 project in the City's 2017 Bicycle Plan as a result of data that indicates this segment of Milvia Street has the highest volume of people riding bicycles as well as the highest number of bicycle-involved collisions of any bikeway street in Berkeley. The Milvia project will also construct a roadway median in Martin Luther King Jr. Way at Addison Street. This new median will both calm traffic in conjunction with the proposed new bicycle boulevard on Addison Street (described below) and discourage motorists from using Addison Street as a through route.
2. The Addison Street Bicycle Boulevard project ("Addison project"), Specification No. 21-11416-C, is also identified as a Tier 1 Priority Project in the City's 2017 Bicycle Plan. It will construct:
  - A Class 3B bicycle boulevard along an approximately 0.6-mile segment of Addison Street, from Sacramento Street to Milvia Street,
  - Pedestrian crossing improvements consisting of crosswalk markings and new pedestrian lighting at selected intersections, and
  - Rectangular rapid flashing beacons ("RRFBs") on Martin Luther King Jr. Way at Addison Street to improve crossing safety for bicyclists and pedestrians.
3. The University Avenue/Grant Street Bus Bulb and Pedestrian Crossing Improvements project ("University/Grant project"), Specification No. 21-11417-C, will construct:

- A new bus bulb, bus shelter, and bench at the northwest corner of the University Avenue/Grant Street intersection to improve the reliability of transit along the University Avenue corridor, and
  - RRFBs on University Avenue at Grant Street to improve crossing safety for bicyclists and pedestrians. The crossing improvements are identified as Priority Project #17 in the City's Pedestrian Plan and addresses a City Council referral for intersection safety improvements at this location.
4. Bus Bulb on University Avenue at Sacramento Street will construct a new bus bulb at the northeast corner of this intersection intended to improve the reliability of transit along the University Avenue corridor. The construction of this bus bulb is included in the City's Sacramento Complete Streets project (Specification No. 20-11379-C), as the limits of these projects coincide with each other and allow for efficiencies in construction. Council awarded the construction contract for the Sacramento Complete Streets project on April 14, 2020, and the project is currently in the construction phase.

The first three STI projects described above were combined together into the Central Berkeley Transportation & Infrastructure Project to allow City staff and the contractor to more efficiently manage and construct the work, as these projects have the same scheduled construction completion by the end of calendar year 2021.

The Central Berkeley Transportation & Infrastructure Improvements Project advances the City's Strategic Goals to (1) provide state-of-the art, well-maintained infrastructure, amenities, and facilities and (2) create a resilient, safe, connected, and prepared city.

#### Community Engagement

City staff made a concerted effort to engage the public for input during the conceptual and detailed design phases of the Project.

In 2015, the City partnered with Bike East Bay to present a day-long protected bikeway demonstration using temporary traffic control materials on Milvia Street between Center Street and Allston Way. City staff and consultants subsequently conducted three "pop-up" tabling events in September 2018; two Public Open Houses, in January 2019 and in October 2019; met with the Downtown Business Association and local merchant stakeholders in October 2019 and July 2020; met with the Berkeley Unified School District in July and August 2020; reviewed the design with the Berkeley Fire Department; and presented the project to the Berkeley Commission on Disability. On October 17, 2019, City staff presented the conceptual design of the Milvia project to the Berkeley Transportation Commission, which voted unanimously to recommend approval of the conceptual design by the Berkeley City Council (see next section for City Council approval). On September 1, 2020, City staff hosted an online community meeting for the Addison project to obtain input on the overall project concept, including proposed traffic calming features. In July and August 2020, City staff engaged with businesses near the University/Grant project area to solicit input on the proposed bus bulb and associated

curbside parking changes, including relocation of a commercial loading zone; the resulting project concept was presented to the neighboring community via a postcard mailer in October 2020.

#### City Council Actions

On January 22, 2019, City Council authorized the City Manager to negotiate and enter into an agreement for approximately \$13.5 million in AHSC loan funds for the construction of the Berkeley Way project and \$5 million in AHSC grant funds for the STI improvements described above. The agreement was executed on February 6, 2019, under Contract No. 4190005, and the conceptual design and public engagement phases of the Project began thereafter.

On December 3, 2019, City Council adopted a resolution approving the conceptual design of the Milvia project, including installation of a protected bikeway and the removal or modification of traffic lanes and on-street parking, and specified changes from two-way to one-way traffic operations, as necessary, and directing the City Manager to direct staff to proceed with the detailed engineering design of the project. The detailed design of the Project was subsequently completed in November 2020.

#### Potential Additional Landscaping Work

Bidders were requested to provide pricing for potential work, including landscaping within various bikeway buffers along the Milvia project corridor, in response to Council members expressing interest in incorporating landscaping to enhance the appearance of the Milvia project. Early concepts for the Milvia Bikeway project contemplated significant landscaping in conjunction with changes to drainage, and would have had a total project cost on the order of \$6,000,000 to \$8,000,000, which significantly exceeds the available grant funding.

As the detailed design of the Project progressed, it became apparent to City staff that based on engineer's estimates, the Project budget would be insufficient to cover the costs of the proposed landscaping work, which includes in-ground, cast-in-place concrete bikeway buffers with a variety of low-height plants that are intended to preserve sight lines. In response to City Council and public comments, City staff also looked for appropriate locations where new trees would not obstruct sight lines or be in conflict with existing underground utilities or other elements of the Project, but no locations for new trees could be identified due to the density of existing development on Milvia Street.

Based on bidders' prices, the one-time capital cost to install the proposed landscaping is about \$600,000, which includes a contingency of ten percent. This work would need to be negotiated with the contractor and would be performed as a change order to the construction contract, thereby depleting the available construction contingency. In addition, City staff estimates a monthly maintenance cost to the City of \$2,000 to establish and maintain the landscaping and associated planters. The current Project budget is insufficient to cover the cost to install landscaping, and so the recommended Resolution

by Council is to award the construction contract without the work of the additive alternate bid items.

#### ENVIRONMENTAL SUSTAINABILITY

The purpose of the AHSC program is to reduce greenhouse gas emissions in California, and all of the STI projects identified above will help accomplish that goal.

Increasing cycling and walking would help the City achieve the 2009 Berkeley Climate Action Plan Policy 5.a that calls for expanding and improving Berkeley's bicycle and pedestrian infrastructure. The Plan sets targets of reducing transportation emissions 33 percent below year 2000 levels by 2020, and 80 percent 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

The three STI projects comprising the Central Berkeley Transportation & Infrastructure Project were previously identified in existing City plans, including a Strategic Plan Priority Project, two Tier 1 projects from the Bicycle Plan, a high-priority project from the Pedestrian Plan, and a project from the Berkeley Strategic Transportation Plan. The AHSC program is providing grant funding for the design and construction of the Project and is also providing funding for the Berkeley Way project.

The Project will close gaps in the City's Low-Stress Bikeway Network by (1) creating a protected bikeway on the City's busiest bikeway street, Milvia Street and (2) creating a bicycle boulevard on an already heavily-used street for biking, Addison Street, which connects to the downtown area. The Project will also improve pedestrian crossing safety by installing sidewalk bulbouts, new crosswalk markings, and new pedestrian lighting at selected locations, as well as RRFBs on Martin Luther King Jr. Way (at Addison Street) and University Avenue (at Grant Street). The Project will also improve transit reliability and safety by constructing a bus bulb at the far side of the University Avenue/Grant Street intersection in the westbound direction and will also improve access to commercial loading zones and install accessible curbside parking spaces on Milvia Street.

Construction of the Project requires contracted services, as the City does not possess the in-house staff or equipment resources needed.

#### ALTERNATIVE ACTIONS CONSIDERED

1. Council could opt not to take the proposed actions at this time and instead defer the item to a future Council agenda. Such a decision would delay the construction of the Project and could cause the City to fail to meet its AHSC grant funding obligation to complete construction by the end of May 2022 which would ultimately endanger the delivery of not only this project, but also the Berkeley Way HOPE project, as both projects are funded by the same AHSC grant.



2. Council could identify funding source(s) to cover the estimated one-time additional capital cost of \$600,000 to install landscaping along the Project corridor and the anticipated monthly maintenance cost of \$2,000. Council could also elect to reduce the scope of the landscaping work by restricting it to the three largest planters, located in front of City Hall, which would result in an estimated one-time additional capital cost of \$250,000 and an anticipated monthly maintenance cost of \$900.

If funding source(s) are established, City staff would (1) negotiate a change order with the Contractor to include the desired amount of landscaping work and (2) enter into a separate contract with a landscape maintenance contractor to perform periodic maintenance of the planters.

CONTACT PERSON

Farid Javandel, Transportation Manager, Public Works Department (510) 981-7061  
Kenneth Jung, Associate Civil Engineer, Public Works Department (510) 981-7028

Attachments:

- 1: Resolution
- 2: Site Map
- 3: Abstract of Bids

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

CONTRACT: SPOSETO ENGINEERING INC. FOR CENTRAL BERKELEY  
TRANSPORTATION & INFRASTRUCTURE IMPROVEMENTS PROJECT

WHEREAS, completion of the Central Berkeley Transportation & Infrastructure Improvements Project will provide improvements intended to increase pedestrian and bicyclist safety at the following locations: (1) Milvia Street, from Hearst Avenue to Blake Street, (2) Addison Street, from Sacramento Street to Milvia Street, and (3) the intersection of University Avenue and Grant Street; and

WHEREAS, completion of the Central Berkeley Transportation & Infrastructure Improvements Project will also construct a bus bulb and associated transit amenities at the intersection of University Avenue and Grant Street that are intended to increase the reliability of transit along the University Avenue corridor; and

WHEREAS, a Strategic Plan Priority Project and two Tier 1 projects from the City's Bicycle Plan are included in this Project; and

WHEREAS, a priority project from the City's Pedestrian Plan is included in this Project; and

WHEREAS, the City has received funding from the California Affordable Housing and Sustainable Communities ("AHSC") Infrastructure pass-through grant via BRIDGE Housing in connection with the Berkeley Way HOPE Center project for the work of this Project; and

WHEREAS, the City has neither the staff nor the equipment needed to undertake the construction of this Project; and

WHEREAS, on November 9, 2020, the City released an Invitation for Bids (Specification Nos. 21-11411-C, 21-11416-C, and 21-11417-C) for the work of this Project; and

WHEREAS, Sposeto Engineering Inc. was found to be the lowest responsive and responsible bidder; and

WHEREAS, funds are available in the FY 2021 budget in the Capital Grants - State Fund (Fund 306), the Measure BB Bicycle and Pedestrian Fund (Fund 135), and the General Fund (Fund 011); and

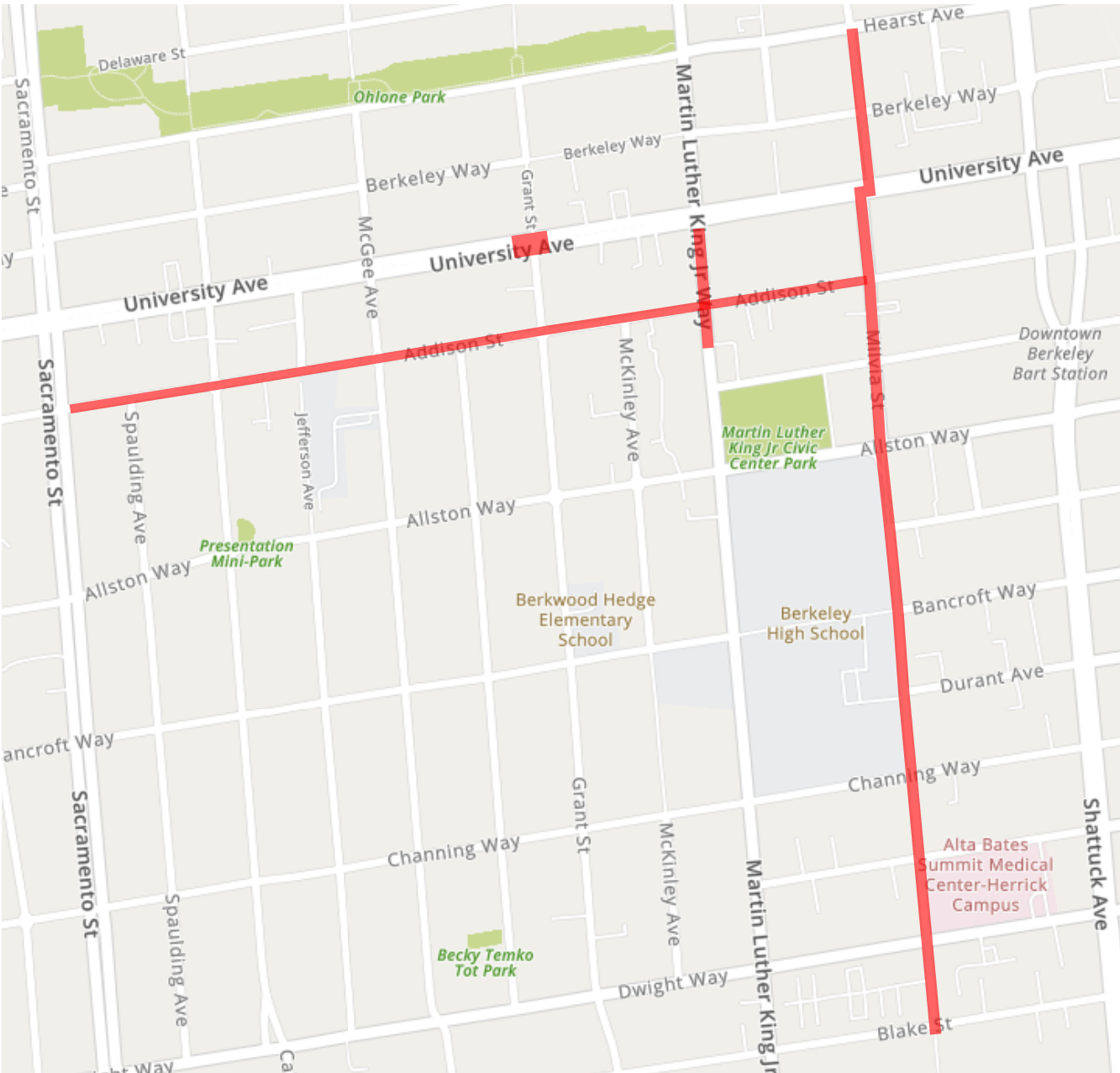
WHEREAS, no other funding is required, and no other project will be delayed due to this expenditure.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the Plans and Specifications for the Central Berkeley Transportation & Infrastructure Improvements Project (Specification Nos. 21-11411-C, 21-11416-C, and 21-11417-C) are approved.

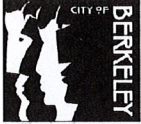
BE IT FUTHER RESOLVED that the Council of the City of Berkeley accepts the bid of Sposeto Engineering Inc. as the lowest responsive and responsible bidder.

BE IT FURTHER RESOLVED that the Council of the City of Berkeley authorizes the City Manager to execute a contract and any amendments, extensions, and/or change orders until completion of the project in accordance with the approved plans and specifications with Sposeto Engineering Inc. in an amount not to exceed \$3,477,475, which includes a fourteen percent construction contingency for unforeseen circumstances. A record signature copy of said agreement and any amendments will be on file in the Office of the City Clerk.

Figure 1 - Site Map  
Central Berkeley Transportation & Infrastructure Improvements Project  
Spec. Nos. 21-11411-C, 21-11416-C, & 21-11417-C



Legend:  
■ Approximate locations of project work



Finance Department  
General Services Division

City of Berkeley  
Abstract of Bids Worksheet

For: Central Berkeley Transportation & Infrastructure Improvements


Specification No.: 21-11411-C, 21-11416-C, & 21-11417-C


Available Budget/Engineer's Estimate: \$2,874,000

Bid Date: December 10, 2020

|   | Bidders                     | Subtotal for Package A (Base Bid Items Only) | Subtotal for Package B | Subtotal for Package C | Total           | Addendum | Exp. & Financial Quals | Taxpayer ID Report | Opp. States | Nuclear Free | EBO | Sanctuary City | Bid Bond |
|---|-----------------------------|----------------------------------------------|------------------------|------------------------|-----------------|----------|------------------------|--------------------|-------------|--------------|-----|----------------|----------|
| 1 | Redgwick Construction       | \$ 2,675,005.00                              | \$ 326,329.60          | \$ 322,495.50          | \$ 3,323,830.10 | x        | x                      | x                  | x           | x            | x   | x              | x        |
| 2 | Bay Cities Paving & Grading | \$ 2,713,788.25                              | \$ 297,281.30          | \$ 371,701.00          | \$ 3,382,770.55 | x        | x                      | x                  | x           | x            | x   | x              | x        |
| 3 | Ray's Electric              | \$ 3,238,968.50                              | \$ 432,806.00          | \$ 384,629.00          | \$ 4,056,403.50 | x        | x                      | x                  | x           | x            | x   | x              | x        |
| 4 | Sposeto Engineering         | \$ 2,422,025.35                              | \$ 339,750.00          | \$ 289,473.90          | \$ 3,051,249.25 | x        | x                      | x                  | x           | x            | x   | x              | x        |

Bid Recorder: S/Roop Soorma 12/10/2020

Bid Opener:  12/10/2020

Project Manager:  12/10/2020





Office of the City Manager

CONSENT CALENDAR

January 26, 2021

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: Contract: Cratus, Inc. for Sanitary Sewer Rehabilitation at Various Locations

RECOMMENDATION

Adopt a Resolution approving plans and specifications for the Sanitary Sewer Project, located on Cedar Street, Virginia Gardens, Sacramento Street, Lincoln Street, Spaulding Avenue Backline, Roosevelt Avenue Backline, Martin Luther King Jr. Way and Backline, Walker Street Backline, Telegraph Avenue Backline, Atherton Street, Fulton Street, Bancroft Way, Shattuck Avenue, and Kittredge Street; accepting the bid of the lowest responsive and responsible bidder, Cratus, Inc.; and authorizing the City Manager to execute a contract and any amendments, extensions, or other change orders until completion of the project in accordance with the approved plans and specifications, in an amount not to exceed \$2,074,469, which includes a 10% contingency of \$188,588.

FISCAL IMPACTS OF RECOMMENDATION

Funding is available in the FY 2021 Sanitary Sewer Fund 611-54-623-676-0000-000-473-665130-PWENSR2102.

|                                |                    |
|--------------------------------|--------------------|
| Low bid by Cratus .....        | \$1,885,881        |
| 10% Contingency .....          | \$188,588          |
| <b>Total construction cost</b> | <b>\$2,074,469</b> |

CURRENT SITUATION AND ITS EFFECTS

An Invitation for Bids (Specification. No. 21-11412-C) was released on November 17, 2020 and eight bids were received, ranging from a low of \$1,885,881 to a high of \$2,364,960 (Attachment 3, Bid Results). The engineer's estimate for the project was \$2,590,000. Cratus, Inc. of San Francisco, CA was the lowest responsive and responsible bidder with a bid of \$1,885,881. Previous work and references for Cratus proved satisfactory, thus staff recommends award of the contract to Cratus.

This sanitary sewer project supports the City's Strategic Plan goals of providing state

of-the-art, well-maintained infrastructure, amenities, and the goal of protecting the environment.

### BACKGROUND

To remain compliant with the September 22, 2014 Consent Decree, the City has implemented a long-term mandated Sanitary Sewer Capital Improvement Program to eliminate sanitary sewer overflows (SSOs) and to reduce storm water infiltration and inflow into the sanitary sewer system. Under this program, the City utilizes a comprehensive asset management approach based on complex and evolving hydrologic and hydraulic modeling and condition assessments to repair, replace, or upgrade the City's portion of the sanitary sewer system. Ultimately, these actions will assist East Bay Municipal Utility District (EBMUD) in their goal of eliminating discharges from their wet weather facilities by the end of 2035.

This is the seventh year of the twenty-two-year Consent Decree program, which stipulates that the City shall perform collection system repair and rehabilitation to control infiltration and inflow.<sup>1</sup> This is in support of and in addition to ongoing work previously identified in the City's Sanitary Sewer Management Plan (SSMP) and Asset Management Implementation Plan (AMIP).

This sanitary sewer project is part of the City's ongoing program to rehabilitate or replace its aging sanitary sewer system, and to eliminate potential health hazards to the public. The project is located on Cedar Street, Virginia Gardens, Sacramento Street, Lincoln Street, Spaulding Avenue Backline, Roosevelt Avenue Backline, Martin Luther King Jr. Way and Backline, Walker Street Backline, Telegraph Avenue Backline, Atherton Street, Fulton Street, Bancroft Way, Shattuck Avenue, and Kittredge Street as shown on the Location Map (Attachment 2). The sanitary sewer collection system in this area needs immediate rehabilitation to prevent pipe failures, sewer blockages, and leakage problems. Field investigations performed using a closed circuit television camera revealed deteriorated piping and pipe defects in the existing sanitary sewer mains. These conditions are similar to problems previously found in other sanitary sewer mains prior to their replacement.

Planned work entails rehabilitation of approximately 3,411 linear feet sanitary sewer mains varying in size from 6-inch to 24-inch diameter; maintenance hole rehabilitation; replacement of 4-inch and 6-inch diameter sanitary sewer laterals; and other related work. To reduce traffic impacts, minimize inconvenience to the public, and reduce cost, a majority of this sanitary sewer rehabilitation work will be performed using the pipe bursting and cured-in-place-pipe methods. These trenchless methods allow replacement of pipelines buried below street level without the need for a traditional open trench construction. These methods of pulling a new high-density polyethylene

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<sup>1</sup> At an average annual rate of no less than 22,120 feet of sanitary sewer mains on a three-fiscal-year rolling average.



pipe (HDPE) or a new felt liner through the existing clay and concrete pipes allow for cost savings and avoid street closures and traffic disruptions caused by open trenches.

The Living Wage Ordinance does not apply to this project as Department of Public Works construction contracts are subject to State prevailing wage laws. Cratus has submitted a Certification of Compliance with the Equal Benefits Ordinance. The Community Workforce Agreement applies to this project because the estimated value of the project exceeds \$500,000. As a result, the contractor and all subcontractors will be required to sign an agreement to be bound by the terms of the Agreement.

ENVIRONMENTAL SUSTAINABILITY

Improvements to the City's sanitary sewer system will help protect water quality by reducing the frequency of SSOs, and infiltration and inflow into the City's sanitary sewer system that can negatively affect the San Francisco Bay.

RATIONALE FOR RECOMMENDATION

Contracted services are required for the specialized services required for this project, as the City lacks in-house resources needed to complete scheduled sanitary sewer rehabilitation and replacement projects. Further, the City must take timely action to address urgent/emergent sewer repairs without delay. Finally, subject to fines and stipulated penalties, the Consent Decree demands the City to repair acute defects within one year of discovery, and complete sanitary sewer mains rehabilitation and replacement at an average annual rate of no less than 22,120 feet on a three-fiscal-year rolling average. The City will have a three-year annual average of approximately 22,160 linear feet of replaced or rehabilitated sewer through the end of FY 2021 on June 30, 2021.

ALTERNATIVE ACTIONS CONSIDERED

No reasonable alternative exists as the City's sanitary sewer pipelines are in poor condition and in need of timely rehabilitation to prevent an increased probability of infiltration and inflows, sanitary sewer leakages, and backup problems in the sanitary sewer system.

CONTACT PERSON

Joe Enke, Acting Manager of Engineering, Public Works, (510) 981-6411  
Daniel Akagi, Supervising Civil Engineer, Public Works, (510) 981-6394  
Ricardo Salcedo, Associate Civil Engineer, Public Works, (510) 981-6407

Attachments:

- 1: Resolution
- 2: Location Map
- 3: Bid Results

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

CONTRACT: CRATUS, INC. FOR SANITARY SEWER REHABILITATION – CEDAR STREET, VIRGINIA GARDENS, SACRAMENTO STREET, LINCOLN STREET, SPAULDING AVENUE BACKLINE, ROOSEVELT AVENUE BACKLINE, MARTIN LUTHER KING JR WAY AND BACKLINE, WALKER STREET BACKLINE, TELEGRAPH AVENUE BACKLINE, ATHERTON STREET, FULTON STREET, BANCROFT WAY, SHATTUCK AVENUE, AND KITTREDGE STREET

WHEREAS, the Sanitary Sewer Project is part of the City's on-going Sanitary Sewer Capital Improvement Program to rehabilitate or replace the aging and deteriorated sanitary sewer system; and

WHEREAS, the Capital Improvement Program is a requirement of compliance with the National Pollution Discharge Elimination System Permit (NPDES) and California Regional Water Quality Control Board Consent Decree; and

WHEREAS, the City has neither the staff nor the equipment necessary to undertake this Sanitary Sewer Rehabilitation Project and other urgent/emergent sewer repairs; and

WHEREAS, on November 17, 2020 the City released an Invitation for Bids (Specification No. 21-11412-C) for sanitary sewer rehabilitation and replacement; and

WHEREAS, the City received eight bids, and Cratus, Inc. was found to be the lowest responsive and responsible bidder; and

WHEREAS, funds are available in the FY 2021 budget Sanitary Sewer Fund 611; and

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the Plans and Specifications No. 21-11412-C for the Sanitary Sewer Rehabilitation Project are approved.

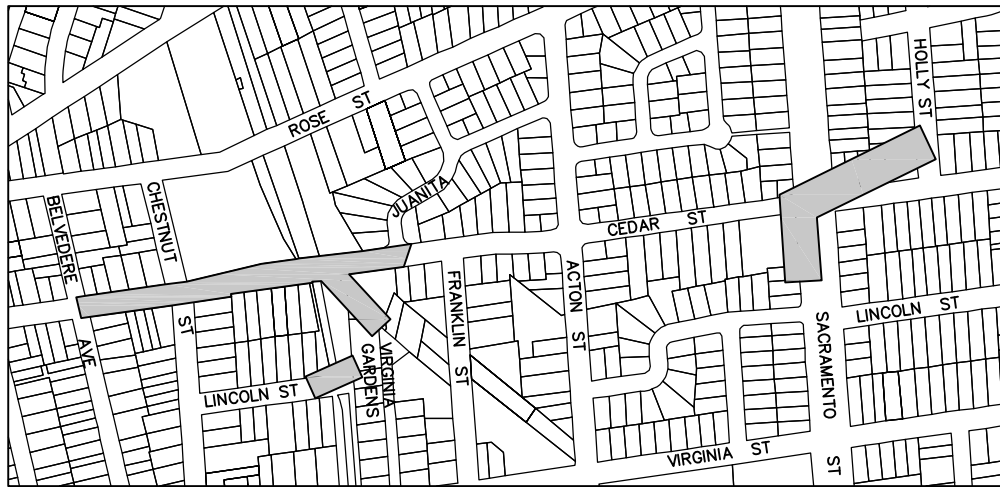
BE IT FURTHER RESOLVED that the Council of the City of Berkeley authorizes the City Manager to execute a contract and any amendments with Cratus, Inc., until completion of the project in accordance with the approved plans and specifications for the Sanitary Sewer Rehabilitation Project located on Cedar Street, Virginia Gardens, Sacramento Street, Lincoln Street, Spaulding Avenue Backline, Roosevelt Avenue Backline, Martin Luther King Jr. Way and Backline, Walker Street Backline, Telegraph Avenue Backline, Atherton Street, Fulton Street, Bancroft Way, Shattuck Avenue, and Kittredge Street, in an amount not to exceed \$2,074,469 which includes a 10% contingency for unforeseen circumstances. A record signature copy of said agreement and any amendments will be on file in the Office of the City Clerk.

# LOCATION MAP

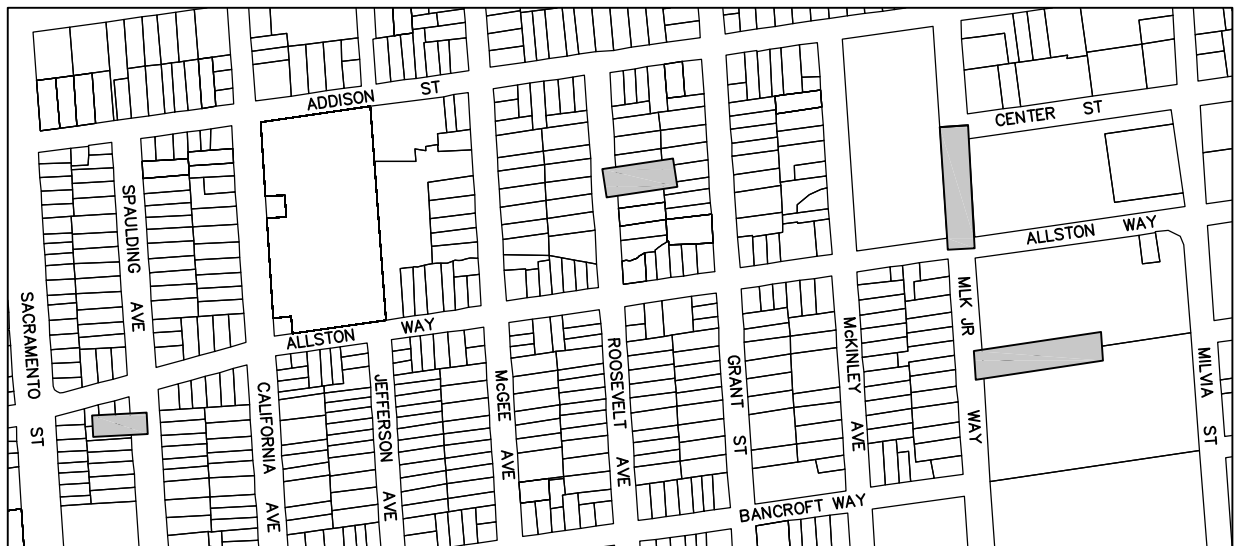
## SANITARY SEWER REHABILITATION PROJECT

CEDAR STREET, VIRGINIA GARDENS, SACRAMENTO STREET, LINCOLN STREET, SPAULDING AVENUE BACKLINE, ROOSEVELT AVENUE BACKLINE, MARTIN LUTHER KING JR WAY AND BACKLINE, WALKER STREET BACKLINE, TELEGRAPH AVENUE BACKLINE, ATHERTON STREET, FULTON STREET, BANCROFT WAY, SHATTUCK AVENUE, AND KITTREDGE STREET.

SPECIFICATION NO. 21-11412-C



LOCATION 1



LOCATION 2

ATTACHMENT 2 (SHEET A)

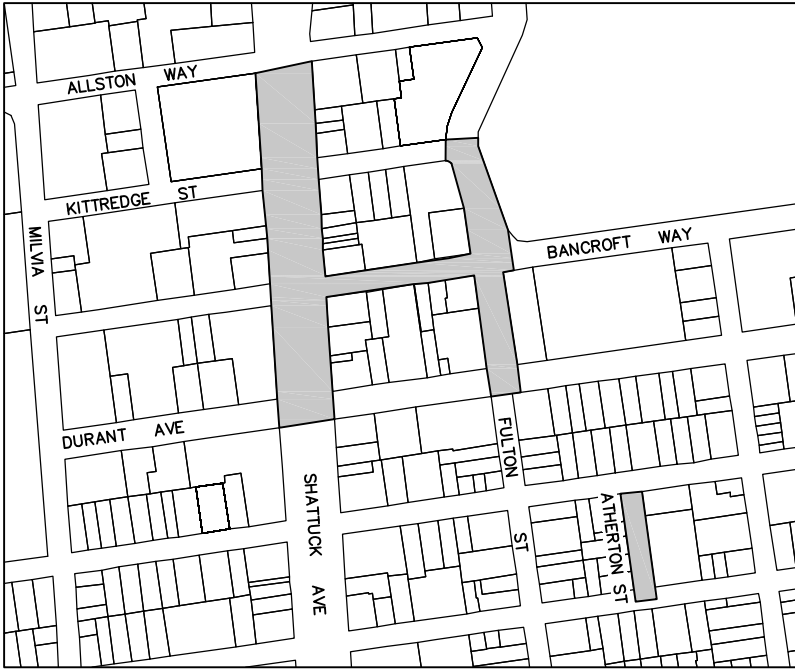
█ - CONSTRUCTION AREA

# LOCATION MAP

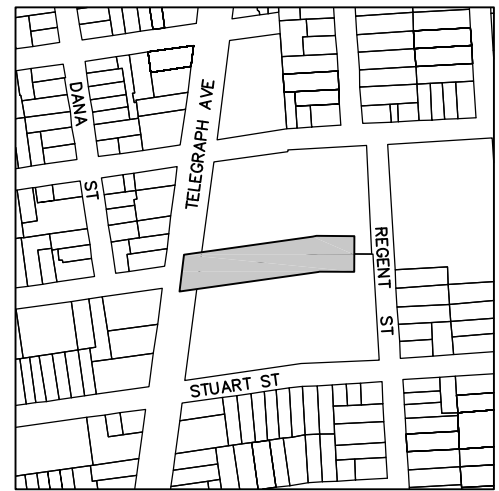
## SANITARY SEWER REHABILITATION PROJECT

CEDAR STREET, VIRGINIA GARDENS, SACRAMENTO STREET, LINCOLN STREET, SPAULDING AVENUE BACKLINE, ROOSEVELT AVENUE BACKLINE, MARTIN LUTHER KING JR WAY AND BACKLINE, WALKER STREET BACKLINE, TELEGRAPH AVENUE BACKLINE, ATHERTON STREET, FULTON STREET, BANCROFT WAY, SHATTUCK AVENUE, AND KITTREDGE STREET.

SPECIFICATION NO. 21-11412-C



LOCATION 3



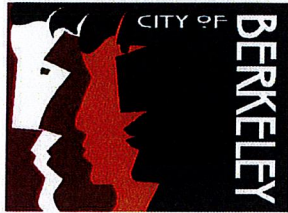
LOCATION 4



LOCATION 5

ATTACHMENT 2 (SHEET B)

 - CONSTRUCTION AREA



City of Berkeley  
Abstract of Bid Worksheet

Finance Department  
General Services Division

Spec. #21-11412-C Bid Date: 12/8/2020

FOR: Sanitary Sewer Rehab / MLK Jr. Way, Cedar

|    | Bidders              | Base Bid                           | Alt. #1                    | required w/ bid |              |    |    |    |     | n/r |  |
|----|----------------------|------------------------------------|----------------------------|-----------------|--------------|----|----|----|-----|-----|--|
|    |                      |                                    |                            | Bid Bond        | Addendum (1) | NF | OS | SC | EBO | WC  |  |
| 1  | Glosage Engineering  | <del>2,642,376.<sup>50</sup></del> | 2,332,376. <sup>50</sup> * | X               | X            | X  | X  | X  | X   |     |  |
| 2  | Westland Contr. Inc. | 2,076,882. <sup>00</sup>           | BLA                        | X               | X            | X  | X  | X  | X   |     |  |
| 3  | Andes Constr.        | 2,010,000. <sup>00</sup>           |                            | X               | X            | X  | X  | X  | X   |     |  |
| 4  | D'ARCY & HARDY       | 2,364,960. <sup>00</sup>           |                            | X               | X            | X  | X  | X  | X   |     |  |
| 5  | KJ WOODS CONST       | 2,048,000. <sup>00</sup>           |                            | X               | X            | X  | X  | X  | X   |     |  |
| 6  | CRATUS, Inc.         | 1,885,881. <sup>00</sup>           |                            | X               | X            | X  | X  | X  | X   |     |  |
| 7  | EPS, Inc.            | 2,277,763. <sup>00</sup>           |                            | X               | X            | X  | X  | X  | X   |     |  |
| 8  | PACIFIC Trenchless   | 2,126,126. <sup>00</sup>           |                            | X               | X            | X  | X  | X  | X   |     |  |
| 9  |                      |                                    |                            |                 |              |    |    |    |     |     |  |
| 10 |                      |                                    |                            |                 |              |    |    |    |     |     |  |

Bid Recorder: DARRYL SWEET 12-8  
 Bid Opener: Sherril Sigman 12/8/2020  
 Project Manager: Paul Malo 12/8/20

\* Error in bid table.  
Base bid amount corrected  
by City staff.





Office of the City Manager

CONSENT CALENDAR  
January 26, 2021

To: Honorable Mayor and Members of the City Council

From: Dee Williams-Ridley, City Manager

Submitted by: Liam Garland, Director, Public Works

Subject: Contract: Toole Design Group for Planning, Design, and Engineering of the Southside Complete Streets Project

RECOMMENDATION

Adopt a Resolution authorizing the City Manager to execute a contract and any amendments with Toole Design Group for Planning, Design, and Engineering of the Southside Complete Streets Project, for a not-to-exceed amount of \$979,349 for the period February 1, 2021 through March 31, 2024.

FISCAL IMPACTS OF RECOMMENDATION

The contract is funded by a grant of federal transportation and repaving funds from the Alameda County Transportation Commission (Alameda CTC) and the California Department of Transportation (Caltrans), with local matching funds provided by the University of California Berkeley Long Range Development Plan (LRDP) Settlement. Funding of \$867,018 in federal grant funds (Fund 305) and \$112,331 in LRDP matching funds (Fund 147) was appropriated as part of the First Amendment to the FY 2021 Annual Appropriation Ordinance.

CURRENT SITUATION AND ITS EFFECTS

In May 2020, the City released a Request for Proposals (RFP), Specification No. 20-11374-C, for Planning, Design, and Engineering for the Southside Complete Streets project. 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. The consultant's scope in the May 2020 RFP included public engagement, concept design, environmental compliance, and engineering of improvements to pedestrian, bicycle, transit, and passenger and freight loading facilities. These tasks are intended to deliver on the City's Vision Zero, Complete Streets, Transit First, and Climate Action Plan policies, and build upon the specific recommendations of numerous plans and studies, including the Southside Area Plan, the Berkeley Bicycle Plan, the AC Transit Major Corridors study, and the Telegraph Avenue Public Realm Plan, among others.

The City received 2 proposals in response to the RFP. Of the two received proposals, only one was fully responsive to the requirements of the RFP. As such, the RFP was cancelled as non-competitive and reissued on September 10, 2020, with modifications to clarify the scope of work and level of effort, anticipated budget, and project schedule, as well as adding bid support and construction engineering support tasks. The City received 2 proposals in response to the reissued RFP, both of which were fully responsive to the requirements of the RFP.

Based on the scoring of written proposals and interviews with selected respondents, City staff found that Toole Design Group proposal demonstrated superior qualifications in all of the pre-established criteria: understanding of the work to be done, experience with similar kinds of work, quality of staff for work to be done, capability of developing innovative or advanced techniques, familiarity with state and federal procedures, financial responsibility, demonstrated technical ability.

This contract supports the City of Berkeley's Strategic Plan 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.

#### BACKGROUND

In recent years, 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 Southside Complete Streets project hopes to meet these challenges by taking the visions laid out in City plans and other documents and coupling them with a community and data-driven approach to study and design transportation improvements.

The goals of the Southside Complete Streets project are:

1. Ensure safety for all street users consistent with the City's Vision Zero policy<sup>1</sup>
2. Improve transit reliability consistent with the City's Transit-First policy<sup>2</sup>
3. Support the economic and cultural vitality of Berkeley's Southside neighborhood consistent with the Economic Development goals of the City's Southside Plan<sup>3</sup>

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.

<sup>1</sup> <https://www.cityofberkeley.info/visionzero.aspx>

<sup>2</sup> [https://www.cityofberkeley.info/Planning\\_and\\_Development/Home/General\\_Plan\\_-\\_Transportation\\_Element.aspx](https://www.cityofberkeley.info/Planning_and_Development/Home/General_Plan_-_Transportation_Element.aspx)

<sup>3</sup> <https://www.cityofberkeley.info/southsideplan/>



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 March 31, 2024. The remaining \$7,335,000 of the grant is for construction of transportation improvements, and would be allocated by Caltrans upon successful completion of detailed engineering design in January 2023.

ENVIRONMENTAL SUSTAINABILITY

Pedestrian and bicycle safety upgrades and transit reliability improvements would encourage a reduction in the use of single occupancy vehicles, which would help the City achieve the Berkeley Climate Action Plan greenhouse gas emission reduction targets of 33% below year 2000 levels by the year 2020, and 80% below year 2000 levels by 2050.

RATIONALE FOR RECOMMENDATION

The proposal from Toole Design Group demonstrates that this team is best-qualified to provide the City with the needed planning, conceptual design, public engagement, environmental compliance, and engineering services needed to support City staff in successfully delivering innovative transportation improvements as part of the Southside Complete Streets project.

ALTERNATIVE ACTIONS CONSIDERED

The Department of Public Works considered utilizing City staff to complete these tasks, but determined that existing staffing levels are insufficient to ensure timely project delivery. Execution of this contract will enable the City to complete the Southside Complete Streets project on time and within budget.

CONTACT PERSON

Farid Javandel, Transportation Manager, Public Works (510) 981-7061  
Beth Thomas, Principal Planner, Public Works, (510) 981-7068  
Eric Anderson, Senior Planner, Public Works, (510) 981-7062

Attachments:

- 1: Resolution
- 2: Project Area Map

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

CONTRACT: TOOLE DESIGN GROUP PLANNING, DESIGN, AND ENGINEERING OF  
THE SOUTHSIDE COMPLETE STREETS PROJECT

WHEREAS, the Public Works Department has determined that consultant assistance is needed for planning, design, and engineering of the Southside Complete Streets Project (Project); and

WHEREAS, In May 2020, the City released a Request for Proposals (RFP), Specification No. 20-11374-C, for the work of this Project, received 2 proposals, and upon review, rejected one of the proposals as unresponsive and cancelled the RFP as non-competitive; and

WHEREAS, In September 2020, the City reissued a Request for Proposals (RFP), Specification No. 20-11374-C (reissued), for the work of this Project, received 2 valid proposals, and reviewed them according to the RFP's scoring criteria; and

WHEREAS, after a thorough review and evaluation of the proposal, Toole Design Group was found to possess the requisite qualifications and experience and was deemed best-qualified to perform the work of this Project; and

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 consultant's scope in the RFP included public engagement, concept design, environmental compliance, engineering, bid support, and construction engineering support of improvements to pedestrian, bicycle, transit, and passenger and freight loading facilities; and

WHEREAS, funding of \$867,018 in Federal grant funds (Fund 305) and \$112,331 in LRDP matching funds (Fund 147) is was appropriated as part of the first appropriation ordinance to the FY2021 budget.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the City Manager is authorized to execute a contract and any amendments with Toole Design Group for planning, design, and engineering of the Southside Complete Streets project, an amount not-to-exceed \$979,349 for the period February 1, 2021 through March 31, 2024. A record signature copy of said contract and any amendments is to be on file in the City Clerk Department.







Office of the City Manager

CONSENT CALENDAR

January 26, 2021

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: Approval of Berkeley Strategic Transportation Plan Second Addendum

RECOMMENDATION

Adopt a Resolution:

1. Approving the Berkeley Strategic Transportation Plan Second Addendum.
2. Authorizing the City Manager to submit unfunded Five-Year Priority Projects from the Berkeley Strategic Transportation Plan Second Addendum to the Alameda County Transportation Commission for inclusion and funding in the County's Fiscal Year (FY) 2022 – FY 2026 Comprehensive Investment Plan.
3. Authorizing the City Manager to execute agreements as needed for accepting the awarded grant funds.

FISCAL IMPACTS OF RECOMMENDATION

If awarded, the Alameda County Transportation Commission (Alameda CTC) Comprehensive Investment Plan (CIP) grants would bring a total of up to \$6 million of competitive grant revenue to the Local Capital Grants Fund (Fund 307) for high-priority pedestrian and bicycle transportation projects and transit projects starting in FY 2022.

Alameda CTC FY 2022 – FY 2026 CIP Grant Funding Requests and Matching Funds

|                                              |                   |
|----------------------------------------------|-------------------|
| Ohlone Greenway Upgrade and Street Crossings | up to \$2,000,000 |
| Adeline Corridor Project                     | up to \$2,000,000 |
| Telegraph Complete Streets Corridor          | up to \$2,000,000 |
| Total Alameda CTC Grant Funding Request      | up to \$6,000,000 |
| City Matching Funds Available                | \$2,000,000       |

The total estimated cost of the projects is up to \$8 million. As a share of the total project cost, capital projects have a required local match of 25% under the Alameda CTC CIP Program. Funding for the required \$2 million local match is available from the Alameda County Measure BB Bicycle and Pedestrian Program Fund (Fund 135) and the Measure BB Local Streets and Roads Fund (Fund 134).

## CURRENT SITUATION AND ITS EFFECTS

In the two years since the first Addendum to the BeST Plan<sup>1</sup> was adopted, the City has made substantial progress in acquiring funding for the BeST Plan Five-Year Priority Projects and has approved a Vision Zero Action Plan. The Second Addendum reports on the City's progress and describes the nationally recognized street design guidelines used by the City as part of the Complete Streets Policy Implementation Strategy that was introduced in the BeST Plan. The design guideline recommendations will help standardize the City's approach to designing and planning for complete streets.

In addition, the Second Addendum proposes an amendment to the BeST Plan Five-Year Priority Project list to add "High-Priority Bicycle Plan Projects" to the "Bikeway Intersections" project category. This change would incorporate Tier 1 projects from the 2017 Bicycle Plan into the BeST Plan Five-Year Priority Projects list without these projects being limited to Bikeway Crossings. The change is also consistent with the High-Priority Pedestrian Plan projects category already included on the BeST Plan Five-Year Priority Projects list.

The Alameda CTC CIP has funding categories for bicycle and pedestrian transportation projects and transit projects, and allows cities within the County to submit up to three grant applications. Of the remaining unfunded individual projects from the BeST Plan Five-Year Priority Projects list, the following are technically eligible for the CIP grant funding: the Center Street Plaza, Downtown Transit Center, Transit Signal Priority portion of the Signal Interconnect project, and the Ohlone Greenway Upgrade and Street Crossing Project. However, the Center Street Plaza design and construction are estimated to exceed the \$2 million CIP grant cap and cannot proceed until after the conceptual design phase to be funded through the Downtown Streets and Open Space Improvement Program (SOSIP) fund. Also, recent communications from AC Transit staff have indicated that the Downtown Transit Center is not as high a priority to the agency as transit corridor improvements prioritized through the AC Transit Major Corridors Study<sup>2</sup> (2016). The Transit Signal Priority portion of the Signal Interconnect project would be eligible for CIP grant funding, but this is a small part of the project cost compared to the ineligible Signal Interconnect, and AC Transit has already acquired funding for the highest priority transit signal priority upgrades on Telegraph and San Pablo Avenues.

The remaining BeST Plan Five-Year Priority Projects eligible for CIP grant funding include the Ohlone Greenway Upgrade and Street Crossing project and projects that fall within larger categories on the Five-Year Priority Projects list. Under the High-Priority Pedestrian Plan Projects category on this list, a project to implement the recently adopted Adeline Corridor Specific Plan<sup>3</sup> on a segment of Adeline would qualify for CIP grant funding and is also one of the high-priority projects in the new Berkeley Pedestrian Plan. Under the newly proposed High-Priority Bicycle Plan Projects category, a

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<sup>1</sup> <https://www.cityofberkeley.info/Transportation/Strategic-Plan/>

<sup>2</sup> <http://www.actransit.org/major-corridors-study/>

<sup>3</sup> <https://www.cityofberkeley.info/AdelineCorridor/>

Telegraph Complete Streets Corridor project would qualify as a 2017 Bicycle Plan Tier 1 project, be eligible for CIP grant funding, and is a high-priority corridor in the AC Transit Major Corridors Study. In sum, staff proposes to submit the following projects for CIP grant funding.

- **Ohlone Greenway Upgrade and Street Crossing project:** design and construction of the segment between Peralta Avenue and Virginia Gardens, where it would meet the Ohlone Greenway segment being upgraded by BART
- **Adeline Corridor project:** preliminary engineering and design of the segment between Martin Luther King Jr. Way (MLK) and the Oakland border, potentially including funding for construction of a subsegment within these limits (south of MLK is a priority due to being the widest segment at six lanes, with future narrowing of the segment to the north of MLK pending a study currently being funded by BART)
- **Telegraph Complete Streets Corridor:** conceptual design, preliminary engineering, and potentially detailed design and construction (pending budget development for the grant application) for bicycle, pedestrian, and transit improvements on Telegraph Avenue between the Oakland border and Dwight Way, where the project would meet the segment of Telegraph already funded for improvements through the Southside Complete Streets project

### BACKGROUND

The BeST Plan was developed to establish a framework for prioritizing the funding and completion of transportation projects pooled from the City's adopted plans and Council referrals. It organizes projects into program areas and applies evaluation criteria in order to establish a list of priority projects for which the City is to seek grant funding over the five years following adoption of the BeST Plan. It also provides an implementation strategy for the City's Complete Streets Policy.

On July 19, 2016, City Council approved the BeST Plan and authorized the City Manager to submit grant applications for the Five-Year Priority Projects identified in the BeST Plan to the Alameda CTC for funding consideration in the Alameda County FY 2018 – FY 2022 Comprehensive Investment Plan. These priority projects totaled \$222 million in projected cost. Alameda CTC awarded a countywide total of \$261 million for FY 2018 and FY 2019, of which \$9 million was awarded to the City. Staff anticipates bringing a comprehensive BeST Plan Update to Council for approval in mid-2021, five years after the original BeST Plan adoption. The BeST Plan Update will include new projects from adopted City transportation plans and Council budget referrals and a new set of five-year priority projects, following review and input by the Berkeley Transportation Commission.

### ENVIRONMENTAL SUSTAINABILITY

Increasing the number of Berkeley residents and visitors who walk, bike, and take mass transit will improve traffic management and decrease greenhouse gas emissions. The BeST Plan Addendum projects will further promote transportation sustainability and resiliency that will help the City achieve the Berkeley Climate Action Plan greenhouse

gas emission reduction target of 33% below the year 2000 level by 2020, and 80% below the year 2000 level by 2050. The Climate Action Plan states that, in order to meet these targets, “Transportation modes such as public transit, walking and bicycling must become the primary means of fulfilling our mobility needs.”

RATIONALE FOR RECOMMENDATION

Alameda CTC funding will allow the City to address critical local and regional transportation infrastructure gaps for all modes of travel. These priority projects were identified using criteria drawn directly from adopted City plans and reports, which underwent extensive public review prior to Council adoption.

ALTERNATIVE ACTIONS CONSIDERED

The City could choose not to approve the BeST Plan Addendum and could also choose to forgo the opportunity to seek grant funding from Alameda CTC for three projects among the remaining unfunded Five-Year Priority Projects identified in the BeST Plan.

CONTACT PERSON

Farid Javandel, Transportation Manager, Public Works, 981-7061  
Beth Thomas, Principal Planner, Public Works, 981-7068

Attachment:

1: Resolution

Exhibit A: Berkeley Strategic Transportation Plan Addendum



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

APPROVAL OF THE BERKELEY STRATEGIC TRANSPORTATION (BEST) PLAN  
ADDENDUM

WHEREAS, the Berkeley Strategic Transportation (BeST) Plan establishes a framework for prioritizing the funding and completion of transportation projects pooled from the City's adopted plans and Council referrals; and

WHEREAS, City Council adopted Resolution No. 67, 645-N.S. on July 19, 2016 approving the BeST Plan and authorizing the City Manager to submit the Five-Year Priority Projects listed in the BeST Plan to the Alameda County Transportation Commission (Alameda CTC) for inclusion in their fiscal year (FY) 2018 through 2022 Comprehensive Investment Plan (CIP); and

WHEREAS, Alameda CTC awarded \$9 million to the City through the FY 2018 – 2022 CIP, which left some of the BeST Plan Five-Year Priority Projects unfunded or partially funded; and

WHEREAS, City Council adopted Resolution No. 68, 613-N.S. on September 25, 2018 approving the BeST Plan Addendum and authorizing the City Manager to submit the remaining unfunded and partially funded Five-Year Priority Projects listed in the BeST Plan to the Alameda CTC for inclusion in their FY 2020 through 2024 CIP; and

WHEREAS, Alameda CTC limited new grant awards from the FY 2020 through FY 2024 CIP to projects ready for construction, which the City of Berkeley did not have; and

WHEREAS, Alameda CTC will seek projects to fund through their CIP for FY 2022 through 2026; and

WHEREAS, the Draft BeST Plan Second Addendum provides a Five-Year Priority Project Status Update Table showing the remaining unfunded and partially funded Five-Year Priority Projects; and

NOW THEREFORE, BE IT RESOLVED that the Council of the City of Berkeley hereby approves the Berkeley Strategic Transportation (BeST) Plan Second Addendum, Exhibit A attached.

BE IT FURTHER RESOLVED that the City Manager is authorized to submit unfunded BeST Plan Second Addendum Five-Year Priority Projects to the Alameda County Transportation Commission (Alameda CTC) for inclusion in their five-year Comprehensive Investment Plan (CIP) for fiscal year (FY) 2022 through FY 2026, and accept the grants awarded, and execute any resultant agreements and amendments.

Exhibit:

A: Berkeley Strategic Transportation Plan Addendum

# Appendix 4

*Berkeley Strategic Transportation Plan*

*DRAFT Second Addendum*

*January 2021*

## Table of Contents

|                                                            |          |
|------------------------------------------------------------|----------|
| <b>Section I: Five-Year Priority Project Update .....</b>  | <b>1</b> |
| <b>Section II: Vision Zero Program Status Update .....</b> | <b>5</b> |
| <b>Section III: Design Guideline Recommendations .....</b> | <b>8</b> |

## Appendix 4. Berkeley Strategic Transportation Plan Second Addendum

Since the 2016 adoption of the Berkeley Strategic Transportation Plan (BeST Plan), the City of Berkeley has made strides in project development, safety policies, and complete streets design thinking. This appendix serves as an addendum to the BeST Plan to provide:

- A status update on the Five-Year Priority Projects to demonstrate progress
- An update on the status of the Berkeley Vision Zero Program since Vision Zero was incorporated into the BeST Plan by way of the 2018 Addendum (see Appendix 3)
- Recommendations for use of published national and regional design guidance in order to incorporate best practices into the planning and design of Berkeley's streets

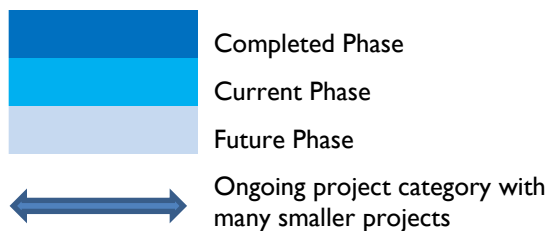
### Section I: Five-Year Priority Project Update

The City has made significant progress on the BeST Plan Five-Year Priority Projects since the adoption of the Plan in 2016 and the completion and adoption of the first BeST Plan Addendum in 2018 (see Appendix 3).

This Second Addendum proposes one amendment to the Five-year Priority Projects list. This amendment adds “High-priority Bicycle Plan Projects” to the “Bikeway Intersections” project category. This change incorporates Tier I projects from the 2017 Bicycle Plan into the BeST Plan Five-Year Priority Projects list without these projects being limited to Bikeway Crossings. The change is also consistent with the High-Priority Pedestrian Plan projects category already included on the Five-Year Priority Projects list.

Figure 1: Five-Year Priority Projects

| PROJECT                                                     | Phase 1<br>Project<br>Development/<br>Scoping       | Phase 2<br>Environmental<br>Study/<br>Preliminary<br>Engineering | Phase 3<br>Detailed<br>Design | Phase 4<br>Construction |
|-------------------------------------------------------------|-----------------------------------------------------|------------------------------------------------------------------|-------------------------------|-------------------------|
| <b>West Berkeley</b>                                        |                                                     |                                                                  |                               |                         |
| 9th Street Bikeway Path Extension                           | Completed Phase                                     | Completed Phase                                                  | Completed Phase               | Current Phase           |
| Gilman Grade Separation                                     | Future Phase                                        | Future Phase                                                     | Future Phase                  | Future Phase            |
| Gilman Interchange                                          | Completed Phase                                     | Completed Phase                                                  | Current Phase                 | Future Phase            |
| Railroad Quiet Zone                                         | Completed Phase                                     | Current Phase                                                    | Future Phase                  | Future Phase            |
| <b>Southside Area</b>                                       |                                                     |                                                                  |                               |                         |
| Southside Complete Streets                                  | Current Phase                                       | Future Phase                                                     | Future Phase                  | Future Phase            |
| Bikeway Intersections & High-Priority Bicycle Plan Projects | Ongoing project category with many smaller projects |                                                                  |                               |                         |
| <b>Downtown Berkeley</b>                                    |                                                     |                                                                  |                               |                         |
| Center Street Plaza                                         | Future Phase                                        | Future Phase                                                     | Future Phase                  | Future Phase            |
| Downtown Berkeley BART Plaza                                | Completed Phase                                     | Completed Phase                                                  | Completed Phase               | Completed Phase         |
| Downtown Transit Center                                     | Future Phase                                        | Future Phase                                                     | Future Phase                  | Future Phase            |
| Hearst Complete Streets                                     | Completed Phase                                     | Completed Phase                                                  | Completed Phase               | Completed Phase         |
| Milvia Protected Bikeway                                    | Completed Phase                                     | Completed Phase                                                  | Completed Phase               | Current Phase           |
| Shattuck Avenue Reconfiguration                             | Completed Phase                                     | Completed Phase                                                  | Completed Phase               | Completed Phase         |
| Signal Interconnect & Transit Signal Priority               | Future Phase                                        | Future Phase                                                     | Future Phase                  | Future Phase            |
| High Priority Pedestrian Plan Projects                      | Ongoing project category with many smaller projects |                                                                  |                               |                         |
| Safe Routes to School Projects                              | Ongoing project category with many smaller projects |                                                                  |                               |                         |
| Ohlone Greenway Upgrade & Street Crossings                  | Future Phase                                        | Future Phase                                                     | Future Phase                  | Future Phase            |



**Table 1: Five-Year Priority Project Status Updates<sup>1,2</sup>**

| PROJECT                                                                                             | LEAD                  | COMPLETE | FUNDING STATUS <sup>3</sup> | IN BERKELEY STRATEGIC PLAN <sup>4</sup> | CURRENT PHASE                         |
|-----------------------------------------------------------------------------------------------------|-----------------------|----------|-----------------------------|-----------------------------------------|---------------------------------------|
| Hearst Complete Streets                                                                             | COB                   | ✓        |                             | Yes                                     | --                                    |
| Downtown Berkeley BART Plaza                                                                        | COB                   | ✓        |                             | Yes                                     | --                                    |
| Safe Routes to School: Emerson, Sylvia Mendez, and John Muir Elementary Schools, King Middle School | COB                   | ✓        |                             | Yes                                     | --                                    |
| Shattuck Avenue Reconfiguration                                                                     | COB                   | ✓        |                             | Yes                                     | --                                    |
| 9th Street Bikeway Path Extension                                                                   | COB                   |          | ✓                           | Yes                                     | Construction                          |
| Milvia Protected Bikeway                                                                            | COB                   |          | ✓                           | Yes                                     | Finalizing Construction Bid Documents |
| Gilman Interchange                                                                                  | Alameda CTC           |          | ✓                           | Yes                                     | Finalizing Construction Bid Documents |
| Southside Complete Streets                                                                          | COB                   |          | ✓                           | Yes (Dana Street portion)               | Project Alternatives Development      |
| Bikeway Intersections & High-Priority Bicycle Plan Projects:                                        |                       |          |                             |                                         |                                       |
| Virginia Street at Martin Luther King, Jr. Way Rectangular Rapid Flashing Beacon (RRFB)             |                       | ✓        |                             | Yes                                     | --                                    |
| Hillegass Street at Ashby Avenue Pedestrian Hybrid Beacon (PHB)                                     | COB                   | ✓        |                             | Yes                                     | --                                    |
| Virginia at Sacramento Street Traffic Signal                                                        | COB                   |          | ✓                           | Yes                                     | Construction                          |
| Virginia at San Pablo Avenue PHB, California Street at Ashby RRFB                                   | Caltrans <sup>5</sup> |          | ✓                           | Yes                                     | Detailed Design                       |
| Russell and Woolsey Streets at Adeline Street PHBs                                                  | COB                   |          | ✓                           | Yes                                     | Grant Agreement Execution             |
| Russell and Woolsey at Shattuck Avenue, Mabel Street at Dwight Way RRFBs                            | COB                   |          | ✓                           | Yes                                     | Grant Agreement Execution             |
| High Priority Pedestrian Plan Project:                                                              |                       |          |                             |                                         |                                       |
| Sacramento Street/North Berkeley BART Complete Streets                                              | COB                   |          | ✓                           | Yes (Virginia Street crossing)          | Construction                          |

**Table I: Five-Year Priority Project Status Updates<sup>1,2</sup> (Continued)**

| PROJECT                                                      | LEAD | COMPLETE | FUNDING STATUS <sup>3</sup> | IN BERKELEY STRATEGIC PLAN <sup>4</sup>                 | CURRENT PHASE                                                       |
|--------------------------------------------------------------|------|----------|-----------------------------|---------------------------------------------------------|---------------------------------------------------------------------|
| Railroad Quiet Zone                                          | COB  |          | X                           |                                                         | <i>Detailed Design of Gilman Railroad Crossing Safety Component</i> |
| Center Street Plaza                                          | COB  |          | X                           | Yes                                                     | <i>Funding for Conceptual Design Deferred</i>                       |
| Safe Routes to School Projects                               | COB  |          | X <sup>8</sup>              | Yes                                                     | --                                                                  |
| Downtown Transit Center                                      | COB  |          | O                           |                                                         |                                                                     |
| Gilman Grade Separation                                      | COB  |          | O                           |                                                         | --                                                                  |
| Bike Boulevard Intersections <sup>6</sup>                    | COB  |          | O                           | Yes                                                     | --                                                                  |
| Signal Interconnect and Transit Signal Priority <sup>7</sup> | COB  |          | O                           |                                                         | --                                                                  |
| High Priority Pedestrian Plan Projects                       | COB  |          | O <sup>8</sup>              | Yes                                                     | --                                                                  |
| Ohlone Greenway Rehabilitation and Street Crossings          | COB  |          | O                           | Yes (street crossing upgrades during repaving projects) | --                                                                  |

- Notes:
1. Project status are as of December 2020. Figure I and Table I are updates to the table shown on page 69 of the BeST Plan.
  2. COB = City of Berkeley; Alameda CTC = Alameda County Transportation Commission
  3. ✓ = Fully Funded and Project Development Underway; X = Partially Funded; O = Seeking Funding
  4. The City of Berkeley Strategic Plan was passed by the Council of the City of Berkeley to help prioritize projects and programs to help meet the City’s goals. The Plan can be found at: <https://www.cityofberkeley.info/strategic-plan/>.
  5. The City of Berkeley is engaging with Caltrans to refine projects to better serve both pedestrians and bicyclists.
  6. Nine intersections are prioritized for the first phase of future funding: Woolsey Bike Boulevard (BB) at Shattuck; Russell BB at San Pablo Ave, Sacramento St, Adeline, and Shattuck; Channing BB at San Pablo Ave and Sacramento St; California St BB at Dwight; Hillegass/Bowditch BB at Dwight.
  7. First phase includes wayside signal upgrades to support transit signal priority on University Ave between Oxford and San Pablo Ave.
  8. High Priority Pedestrian Plan Projects and Safe Routes to School Projects are ongoing projects and include projects at various phases.

## Section II: Vision Zero Program Status Update

The BeST Plan builds upon and enhances existing City goals and policies to help the City achieve Berkeley's transportation vision of Complete Streets. Included are goals and policies oriented towards ensuring the safety of all street users, in support of Vision Zero. The term "Vision Zero" describes a systemic, proactive approach to transportation safety that strives to eliminate all deaths and severe injuries on City roadways through evidence-based engineering, supported by education and enforcement.

In March 2018, the Council of the City of Berkeley showed its commitment to Vision Zero by passing a Vision Zero Policy resolution that established a goal of eliminating traffic deaths and severe injuries in the City by 2028. The resolution also called for establishing a multidisciplinary Vision Zero Task Force to advise Council on the development and implementation of a Vision Zero Action Plan. This resolution was incorporated into the BeST Plan by way of the Addendum approved in September 2018 and incorporated into the BeST Plan as Appendix 3. Subsequent to this, the City convened a Vision Zero Task Force and Advisory Committee for the purpose of advising the City on the development of a Vision Zero Action Plan. The Task Force consisted of staff from key City departments, including Public Works, Fire, Police, and Public Health. The Advisory Committee consisted of representatives from City Commissions, AC Transit and UC Berkeley, and local traffic safety advocacy groups. The Vision Zero Action Plan was adopted by the Berkeley City Council in March 2020 and can be found at the following website: <https://www.cityofberkeley.info/visionzero.aspx>.



## Section III: Design Guideline Recommendations

Today, Berkeley uses a variety of resources, including the City’s standard details, **City of Berkeley Municipal Code (BMC)**, and the **California Manual on Uniform Traffic Control Devices (CA MUTCD)** to plan and design complete streets. In recent years, additional national best practices have emerged, which provide a more robust toolkit, with proven safety and mode shift benefits. Through this addendum, the City of Berkeley seeks to adopt these nationally recognized street design guidelines to standardize the City’s approach to designing and planning for complete streets, as outlined in **Table 2**. These design guidelines should be consulted and incorporated into any planning, design, and engineering projects that affect streets and building frontages within the City. These design guidelines do not replace the City’s adopted standards but provide planning and general design guidance that should be the starting point for all transportation projects in Berkeley. These should always be used in conjunction with evidence-based engineering to find a context-sensitive solution that prioritizes safety, accessibility, and complete streets. Table 2 identifies which design guidelines to which to refer based on project type. The **BMC** will prevail in all cases where there are discrepancies. More information about each design guideline document is provided in the sections below.



## Transit Design

The Alameda-Contra Costa Transit District (AC Transit) **Designing with Transit**<sup>4</sup> (2004) handbook serves as general guidance for creating transit-supportive streets. The **AC Transit Multimodal Corridor Design Guidelines**<sup>5</sup> (2018) is a supplement that provides detailed specifications for bus stop design with adjacent bicycle facilities, taking into consideration AC Transit's operations needs for different service vehicles and different roadway configurations. The National Association of City Transportation Officials (NACTO) **Transit Street Design Guide**<sup>6</sup> (2016) provides some innovative and detailed transit design elements not contained in AC Transit's materials, such as transit-only lane design and transit signal priority.

## Roadway Design

The National Association of City Transportation Officials (**NACTO**) **Urban Street Design Guide**<sup>7</sup> (2013) takes the perspective that roadways are public places for everyone, regardless of travel mode. The Guide provides details on lane width, design speed, and curb radii that fit the needs of the City of Berkeley.

## Bicycle Design

The **Berkeley Bicycle Plan**<sup>8</sup> (2017) should be referenced as a starting point for all transportation and street planning, engineering, and construction projects. The Massachusetts Department of Transportation (**MassDOT**) **Separated Bike Lane Planning & Design Guide**<sup>9</sup> (2015) provides detailed planning and design considerations for Class IV separated bikeway and intersection design, including protected intersections. It does not cover design of other bicycle treatments (e.g., Class II bicycle lanes and Class III bicycle boulevards). The **NACTO Urban Bikeway Design Guide**<sup>10</sup> (2014) provides detailed bicycle facility design guidance for a range of bikeway types, including Class II bicycle lanes, Class III bicycle routes, and Class IV Separated Bikeways. It does not currently provide guidance for protected intersections. The **NACTO Designing for All Ages & Abilities** guidance (2017) supplements the NACTO Urban Bikeway Design Guide by providing design criteria for making bikeways comfortable to use by children, families, and anyone who does not feel safe when exposed to a high traffic volume or high traffic speeds, which is the majority of the population according to the findings of a survey conducted for the Berkeley Bicycle Plan 2017.

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<sup>4</sup> Available at: [http://www.actransit.org/wp-content/uploads/designing\\_with\\_transit2.pdf](http://www.actransit.org/wp-content/uploads/designing_with_transit2.pdf)

<sup>5</sup> Available at: [http://www.actransit.org/wp-content/uploads/AC\\_Transit\\_Multimodal\\_Corridor\\_Guidelines\\_Final.pdf](http://www.actransit.org/wp-content/uploads/AC_Transit_Multimodal_Corridor_Guidelines_Final.pdf)

<sup>6</sup> Available at: <https://nacto.org/publication/transit-street-design-guide/>

<sup>7</sup> Available at: <https://nacto.org/publication/urban-street-design-guide/>

<sup>8</sup> Available at: <https://www.cityofberkeley.info/berkeleybikeplan/>

<sup>9</sup> Available at: <https://www.mass.gov/lists/separated-bike-lane-planning-design-guide>

<sup>10</sup> Available at: <https://nacto.org/publication/urban-bikeway-design-guide/>

## Pedestrian Design

The **Berkeley Pedestrian Master Plan**<sup>11</sup> should be referenced as a starting point for all transportation and street planning, engineering, and construction projects. The **Berkeley Pedestrian Master Plan** is in the process of being updated. The **NACTO Urban Street Design Guide** provides guidance on sidewalk dimensions and intersection treatments, and sidewalk and streetscape recommendations that are applicable to Berkeley streets. Refer to the Access Board's **Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way**<sup>12</sup> (2011) for general guidance on accessibility considerations for street design.

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<sup>11</sup> Available at: <https://www.cityofberkeley.info/pedestrian/>

<sup>12</sup> Available at: <https://www.access-board.gov/attachments/article/743/nprm.pdf>

**Table 2: Design Guidance Applicability Summary<sup>1,2</sup>**

| Mode               | Design Element                            | AC Transit Designing with Transit | AC Transit Multimodal Corridor Design Guidelines | NACTO Transit Street Design Guide | NACTO Urban Street Design Guide | NACTO Urban Bikeway Design Guide and Designing for All Ages & Abilities Guide | MassDOT Separated Bike Lane Planning & Design Guide |
|--------------------|-------------------------------------------|-----------------------------------|--------------------------------------------------|-----------------------------------|---------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------|
| <b>Transit</b>     | Bus Stops with Bicycle Facilities         |                                   | ✓                                                |                                   |                                 |                                                                               |                                                     |
|                    | Bus Stops without Bicycle Facilities      | ✓                                 |                                                  | ✓                                 |                                 |                                                                               |                                                     |
|                    | Midblock and Transit-Only Lanes           | ✓                                 |                                                  | ✓                                 |                                 |                                                                               |                                                     |
|                    | Intersections and Transit Signal Priority | ✓                                 |                                                  | ✓                                 |                                 |                                                                               |                                                     |
| <b>Auto</b>        | Travel Lane Width                         |                                   |                                                  |                                   | ✓                               |                                                                               |                                                     |
|                    | Design Speed                              |                                   |                                                  |                                   | ✓                               |                                                                               |                                                     |
|                    | Curb Radii                                |                                   |                                                  |                                   | ✓                               |                                                                               |                                                     |
| <b>Bicycle</b>     | Separated Bikeways                        |                                   |                                                  |                                   |                                 | ✓                                                                             | ✓                                                   |
|                    | Bicycle Lanes                             |                                   |                                                  |                                   |                                 | ✓                                                                             |                                                     |
|                    | Bicycle Boulevards                        |                                   |                                                  |                                   |                                 | ✓                                                                             |                                                     |
| <b>Pedestrians</b> | Sidewalk/Streetscape                      |                                   |                                                  |                                   | ✓                               |                                                                               |                                                     |
|                    | Uncontrolled Crosswalks                   |                                   |                                                  |                                   | ✓                               |                                                                               |                                                     |
|                    | Controlled Crosswalks                     |                                   |                                                  |                                   | ✓                               |                                                                               |                                                     |

- Notes:
1. The City of Berkeley Municipal Code will prevail over all other guidance sources where there are discrepancies.
  2. The Berkeley Bicycle Plan and Pedestrian Plan should be referenced as a starting point for all transportation and street planning, engineering, and construction projects.



Homeless Commission

CONSENT CALENDAR

January 26, 2021

To: Honorable Mayor and Members of the City Council  
 From: Homeless Commission  
 Submitted by: Carole Marasovic, Chairperson, Homeless Commission  
 Subject: A People's First Sanctuary Encampment

RECOMMENDATION

The City Council to adopt the *People's First Sanctuary Encampment Model* incorporating all text in this report, urging best practices for Sanctuary Homeless Encampments with an oversight agency to be named by members of the encampment community and refer to the City Manager to fund liability insurance for the agency chosen by the encampment community.

POLICY COMMITTEE RECOMMENDATION

At the December 14, 2020, meeting the Health, Life Enrichment, Equity & Community Committee moved M/S/C (Kesarwani/Bartlett) the Companion Report with a qualified positive recommendation to the City Council to take the following action: 1. Direct the City Manager to incorporate parts of the Commission's recommendations, including: providing clean water, sanitation, accessible toilets and trash removal services; and requiring that homeless services providers obtain input from clients when developing rules and ensure that the privacy and security of clients is respected and maintained at all times; 2. In addition, the City Manager shall receive the Homeless Commission's recommendations and retain them for future guidance when developing homeless services programs and models; and 3. That the City Council reaffirms its commitment to dignified and client-centered homeless services. Vote: All Ayes.

FISCAL IMPACTS OF RECOMMENDATION

Allocations from Measure P funding regarding emergency services, tents, heating equipment, waste, water purification, food distribution and waste management, sanitation, healthcare, hygiene, and accessibility services.

Sanctioned encampments will provide accessible and accountable avenues for public funding. Supportive services and emergency run visits may become unburdened through harm-reduction models. Rehousing services may become unburdened through partnerships between small-sites, small-property owners, land trusts, cooperatives and resident homeowners.

CURRENT SITUATION AND ITS EFFECTS

*The Peoples First Sanctuary* is a Strategic Plan Priority Project, advancing our goal to create a resilient, safe, connected, and prepared city as well as champion and demonstrate social and racial equity.

BACKGROUND

On January 8, 2020, the Homeless Commission votes as follows:

**Action:** M/S/C Marasovic/ to defer the People's Sanctuary Encampment recommendation for discussion to next month's meeting and direct the Council encampment chart referral back to the encampment subcommittee to be returned to the full Commission at next month's meeting.

**No Vote:** motion died for lack of a second.

**Action:** M/S/C Hill/ Mulligan to approve the People's First Sanctuary Recommendation with the following amendments to the recommendation section:

(i) to include that an oversight agency be named by members of the encampment community, and (ii) refer to the City Manager to fund liability insurance for the agency chosen by the encampment community.

**Vote:** Ayes: Hill, Kealoha-Blake, Mulligan, Behm-Steinberg  
Noes: Andrew. *Abstain:* Marasovic. *Absent:* Hirpara.

Marasovic abstention due to i) Council directive to respond to encampment chart referral, ii) believes in the spirit of self-governance, and iii) the recommendation is not a realistic plan.

According to the 1,000 Person Plan to Address Homelessness, on any given night in Berkeley, there are nearly 1,000 people experiencing homelessness. The City of Berkeley has implemented a number of programs to respond to this crisis, but data from the homeless point-in-time count indicate that, for the past several years, homelessness has nonetheless steadily increased. To understand the resources and interventions required to end homelessness in Berkeley--both by housing the currently unhoused population and by preventing inflow of future homelessness--the City Council asked staff to create a 1000 Person Plan on April 4, 2017.

While all homeless people lack stable housing, not everyone needs the same level of support to obtain housing. To end homelessness in Berkeley, the city needs targeted investments in a variety of interventions, ensuring every person who experiences homelessness in Berkeley receives an appropriate and timely resolution according to their level of need (i.e., a homeless population of size "functional zero"). HHCS staff analyzed ten years of administrative homelessness data to understand the personal characteristics of people experiencing homelessness in Berkeley, how they are

interacting with homeless services in Berkeley, and the factors most predictive of exiting homelessness without eventually returning back to the system.

From these analyses, HHCS staff estimate that over the course of a year, nearly 2000 people experience homelessness in Berkeley. This population has been growing because the population is increasingly harder to serve (longer histories of homelessness and more disabilities) and because housing is too expensive for them to afford on their own.

The types and sizes of all interventions to help Berkeley reach “functional zero” by 2028 are described in this report. To end homelessness for 1000 people in Berkeley, the original referral directive from City Council, the City will need up-front investments in targeted homelessness prevention, light-touch housing problem-solving, rapid rehousing, and permanent subsidies.

#### ENVIRONMENTAL SUSTAINABILITY

There are no identifiable environmental opportunities associated with the content of this report.

#### RATIONALE FOR RECOMMENDATION

The following principles, developed and proposed by unhoused community members have guided the Peoples First sanctuary Encampment Model’s goals to secure the safety of all residents, community members and responsible parties:

That a sanctuary encampment be a peoples first driven model in which the city shall provide capacity-building training for residents of the encampment but shall not interfere with the internal makeup or democratic decision making of encampment members. Collective punishment, regulations, and raids must not occur within a sanctuary encampment. Local authorities may not force safe havens to accept residents without the collective consent of its existing membership.

No protected person’s sovereignty shall be interfered with or may be punished for an offense they have not personally committed. Freedom from surveillance, freedom from confiscation of property, and Privacy rights must be established by the City of Berkeley. Mental Health care and First Responders should be available for consultation. Sanctioned encampment councils should be made up of residents of the sanctioned encampment. Unsheltered people, public and private agencies, boards, councils and commissions coordinating with the sanctuary encampment should communicate the needs of sanctioned encampments to transitional housing services with good faith.

All people sheltering themselves within a sanctuary encampment which a public authority shall provide clean water, sanitation, accessible toilets and trash removal services for the sanctioned encampment.

New Housing developments should consider and prioritize the most vulnerable citizens living in sanctioned encampments. There should be changes to land-use and zoning policies to include affordability covenants, community land trusts, housing cooperatives, section eight housing vouchers as well as reclaiming vacant properties for sanctioned encampments. Rent control ordinances to retain price-control for tenants and small-site property owners.

ALTERNATIVE ACTIONS CONSIDERED

The Commission considered responding to Council encampment chart referral.

CITY MANAGER

See companion report.

CONTACT PERSON

Brittany Carnegie, Commission Secretary, HHCS, 510-981-5415





Office of the City Manager

CONSENT CALENDAR  
January 26, 2021

To: Honorable Mayor and Members of the City Council  
 From: Dee Williams-Ridley, City Manager  
 Submitted by: Lisa Warhuus, Director, Health, Housing, and Community Services  
 Subject: Companion report: A People's First Sanctuary Encampment

RECOMMENDATION

As part of the referral adopted by City Council on January 21, 2020, the City Manager will direct staff to incorporate parts of the Commission's recommendations which do not conflict with guidance already approved by City Council including: providing clean water, sanitation, accessible toilets and trash removal services for the sanctioned encampment, requiring that a future provider of services for the encampment obtain input from residents of the encampment when developing rules for the outdoor shelter and ensure that the privacy and security of residents is respected and maintained.

POLICY COMMITTEE RECOMMENDATION

At the December 14, 2020, meeting the Health, Life Enrichment, Equity & Community Committee moved M/S/C (Kesarwani/Bartlett) the Companion Report with a qualified positive recommendation to the City Council to take the following action: 1. Direct the City Manager to incorporate parts of the Commission's recommendations, including: providing clean water, sanitation, accessible toilets and trash removal services; and requiring that homeless services providers obtain input from clients when developing rules and ensure that the privacy and security of clients is respected and maintained at all times; 2. In addition, the City Manager shall receive the Homeless Commission's recommendations and retain them for future guidance when developing homeless services programs and models; and 3. That the City Council reaffirms its commitment to dignified and client-centered homeless services. Vote: All Ayes.

FISCAL IMPACTS OF RECOMMENDATION

Staff time.

CURRENT SITUATION AND ITS EFFECTS

The Homeless Commission's report recommends that City Council adopt the People's First Sanctuary Encampment Model incorporating all text in their report.

On January 21, 2020 City Council approved \$307,000 in FY20 and \$615,000 in FY21 funding for an Emergency Outdoor Shelter and referred the creation of such a program to the City Manager.

The referral is for the City Manager to establish an outdoor emergency shelter and to consider providing the following amenities: a) climate-controlled, wind-resistant durable tents with wooden pallets for support, b) seeking an agency to manage and oversee the emergency shelter, c) portable toilet service and handwashing service, d) shower and sanitation services, and e) garbage pickup and safe needle disposal.

### BACKGROUND

The Homeless Commission voted on 01/8/20 as follows:

**Action:** M/S/C Marasovic/ to defer the People's Sanctuary Encampment recommendation for discussion to next month's meeting and direct the Council encampment chart referral back to the encampment subcommittee to be returned to the full Commission at next month's meeting.

**No Vote:** motion died for lack of a second.

**Action:** M/S/C Hill/ Mulligan to approve the People's First Sanctuary Recommendation with the following amendments to the recommendation section:

(i) to include that an oversight agency be named by members of the encampment community, and (ii) refer to the City Manager to fund liability insurance for the agency chosen by the encampment community.

**Vote:** Ayes: Hill, Kealoha-Blake, Mulligan, Behm-Steinberg  
Noes: Andrew. *Abstain:* Marasovic. *Absent:* Hirpara.

Marasovic abstention due to i) Council directive to respond to encampment chart referral, ii) believes in the spirit of self-governance, and iii) the recommendation is not a realistic plan.

### ENVIRONMENTAL SUSTAINABILITY

There are no identifiable environmental opportunities associated with the content of this report.

### RATIONALE FOR RECOMMENDATION

The City Manager appreciates the Homeless Commission's emphasis on ensuring that residents of a future outdoor emergency shelter can enjoy a clean and healthy place to live temporarily, and that they are involved in making the outdoor shelter a respectful, accountable and equitable community. To achieve this, the City Manager will develop an outdoor shelter program based on the referral adopted by Council January 21, 2020 that will include hiring a qualified non-profit organization to operate the program. The program model will ensure adequate sanitation services, safety protocols and other security measures are put in place, and that residents are assisted to move on to more permanent housing opportunities.

ALTERNATIVE ACTIONS CONSIDERED

None.

CONTACT PERSON

Brittany Carnegie, Community Services Specialist II, HHCS, 510-981-5415





Office of the Mayor

CONSENT CALENDAR

January 26, 2021

To: Members of the City Council

From: Mayor Jesse Arreguín

Subject: Confirming Community Appointments to Reimagining Public Safety Task Force

RECOMMENDATION:

Adopt a Resolution:

1. Confirming the appointment of \_\_\_\_\_ by the Associated Students of the University of California (ASUC) External Affairs Vice President to the Reimagining Public Safety Task Force
2. Confirming the appointment of \_\_\_\_\_ by the Steering Committee of the Berkeley Community Safety Coalition (BCSC) to the Reimagining Public Safety Task Force

BACKGROUND

On December 15, 2020, the Berkeley City Council unanimously adopted Resolution No. 69,673-N.S. establishing the Reimagining Public Safety Task Force, and on January 19, 2021 approved a revised resolution on January 19, 2021 to clarify the responsibilities and timeline of the Task Force, city staff and the consulting team with the National Institute for Criminal Justice Reform (Attachments 1 and 2).

The enabling legislation for the Task Force requires that the City Council confirm by a majority vote appointments made by the ASUC External Affairs Vice President, Berkeley Community Safety Coalition and the 3 “At-Large” seats appointed by the Task Force. The confirmation of these members will allow them to be seated on the Task Force and for the important work of the Task Force to commence on the intended timeline.

FINANCIAL IMPLICATIONS

There are no direct fiscal impacts from Council confirming the appointments of the ASUC External Affairs Vice President and Berkeley Community Safety Coalition to the Reimagining Public Safety Task Force.

ENVIRONMENTAL SUSTAINABILITY

There are no direct environmental impacts from the appointment of these members to the Reimagining Public Safety Task Force.

CONTACT PERSON

Jesse Arreguín, Mayor, (510) 981-7100

Attachments:

1. Resolution
2. Resolution No. 69,673-N.S, “Establishing Reimagining Public Safety Task Force”
3. “
4. January 19, 2021 City Council item, “Revisions to Enabling Legislation for Reimagining Public Safety Task Force”

RESOLUTION NO.

CONFIRMING APPOINTMENTS TO THE REIMAGINING PUBLIC SAFETY TASK FORCE

WHEREAS, On July 14, 2020, the Berkeley City Council made a historic commitment to reimagine the City's approach to public safety with the passage of an omnibus package of referrals, resolutions and directions; and

WHEREAS, Central to this proposal is a commitment to a robust community process to achieve this "new and transformative model of positive, equitable and community centered safety for Berkeley". Item 18d, Transforming Community Safety, provides direction on the development of a "Community Safety Coalition", goals and a timeline led by a steering committee and guided by professional consultants; and

WHEREAS, on December 15, 2020 the City Council approved Resolution No. 69,673-N.S, "Establishing Reimagining Public Safety Task Force"; and

WHEREAS, Resolution No. 69,673 N.S. established membership comprised of: One (1) representative appointed by each member of the City Council and Mayor, one (1) representative appointed by the Mental Health, Police Review and Youth Commissions, one (1) representative appointed by the Berkeley Community Safety Coalition (BCSC), and three (3) additional members to be appointed "At Large" by the Task Force, all subject to confirmation by the City Council; and

WHEREAS, the Berkeley Community Safety Coalition (BCSC) has nominated \_\_\_\_\_ as their representative on the Reimagining Public Safety Task Force; and

WHEREAS, the Associated Students of the University of California (ASUC) External Affairs Vice President have nominated \_\_\_\_\_ as their representative on the Reimagining Public Safety Task Force;

NOW THEREFORE, BE IT RESOLVED, by the Council of the City of Berkeley that it hereby confirms the appointment of \_\_\_\_\_ by the Berkeley Community Safety Coalition (BCSC) and the appointment of \_\_\_\_\_ by the Associated Students of the University of California (ASUC) External Affairs Vice President to the Reimagining Public Safety Task Force.

RESOLUTION NO. 69,673-N.S.

ESTABLISHING THE REIMAGINING PUBLIC SAFETY TASK FORCE

WHEREAS, On July 14, 2020, the Berkeley City Council made a historic commitment to reimagine the City's approach to public safety with the passage of an omnibus package of referrals, resolutions and directions; and

WHEREAS, Central to this proposal is a commitment to a robust community process to achieve this "new and transformative model of positive, equitable and community centered safety for Berkeley". Item 18d, Transforming Community Safety, provides direction on the development of a "Community Safety Coalition", goals and a timeline led by a steering committee and guided by professional consultants; and

WHEREAS, that item did not specify the structure, exact qualifications or process of appointing this steering committee; and

WHEREAS, To avoid confusion with the community organization that has independently formed since the passage of that referral, this steering committee is now being referred to as the Reimagining Public Safety Task Force.

NOW, THEREFORE BE IT RESOLVED that the City Council does hereby establish the Reimagining Public Safety Task Force.

1. The membership shall be comprised of: One (1) representative appointed by each member of the City Council and Mayor, one (1) representative appointed by the Mental Health, Police Review and Youth Commissions, one (1) representative appointed by the Associated Students of the University of California (ASUC), one (1) representative appointed by the Berkeley Community Safety Coalition (BCSC), and three (3) additional members to be appointed "At Large" by the Task Force, all subject to confirmation by the City Council. The Task Force will be guided by a professional consultant, and will include the participation of City Staff from the City Manager's Office, Human Resources, Health, Housing and Community Services, Berkeley Fire Department, Berkeley Police Department, and Public Works Department. For visual, see Attachment 2.
2. Appointments to the Task Force should be made by January 31, 2021,<sup>1</sup> and reflect a diverse range of experiences, knowledge, expertise and representation. To maintain the Council's July 14, 2020,<sup>2</sup> commitment to centering the voices of those most

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<sup>1</sup> With the exception of the "At Large" appointments, which will be selected by the initial appointees with an eye for adding outstanding perspectives, knowledge and experience.

<sup>2</sup> "Be It Further Resolved that the City Council will engage with every willing community member in Berkeley, centering the voices of Black people, Native American people, people of color, immigrants, LGBTQ+ people, victims of harm, and other stakeholders who have been historically marginalized or



impacted in our process of reimagining community safety appointments should be made with the goal of achieving a balance of the following criteria:

- a. Active Members of Berkeley Community (Required of All)\*<sup>3</sup>
  - b. Representation from Impacted Communities
    - Formerly incarcerated individuals
    - Victims/family members of violent crime
    - Immigrant community
    - Communities impacted by high crime, over-policing and police violence
    - Individuals experiencing homelessness
    - Historically marginalized populations
  - c. Faith-Based Community Leaders
  - d. Expertise/Leadership in Violence Prevention, Youth Services, Crisis Intervention, and Restorative or Transformative Justice
  - e. Health/ Public Health Expertise
  - f. City of Berkeley labor/union representation
  - g. Law Enforcement Operation Knowledge
  - h. City Budget Operations/Knowledge
  - i. Committed to the Goals and Success of The Taskforce (Required of All)
3. The charge of the Task Force is as outlined in the July 14, 2020, City Council Omnibus Action,<sup>4</sup> and should include but is not limited to:
- 1) Building on the work of the City Council, the City Manager, BPD, the PRC and other City commissions and other working groups addressing community health and safety.
  - 2) Research and engagement to define a holistic, anti-racist approach to community safety, including a review and analysis of emerging models, programs and practices that could be applied in Berkeley.
  - 3) Recommend a new, community-centered safety paradigm as a foundation for deep and lasting change, grounded in the principles of *Reduce, Improve and Reinvest* as proposed by the National Institute for Criminal Justice Reform considering,<sup>5</sup> among other things:
    - A. The social determinants of health and changes required to deliver a holistic approach to community-centered safety.

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under-served by our present system. Together, we will identify what safety looks like for everyone.”, Item 18d, Transform Community Safety, July 14, 2020, Berkeley City Council Agenda,

<sup>3</sup> \* At Large Appointees are not required to be Berkeley Residents, as long as they are active, committed Berkeley Stakeholders.

<sup>4</sup> July 14th, 2020, Berkeley City Council Item 18a-e Proposed Omnibus Motion on Public Safety Items

<sup>5</sup> Transforming Police, NICJR

- B. The appropriate response to community calls for help including size, scope of operation and power and duties of a well-trained police force.
- C. Limiting militarized weaponry and equipment.
- D. Identifying alternatives to policing and enforcement to reduce conflict, harm, and institutionalization, introduce alternative and restorative justice models, and reduce or eliminate use of fines and incarceration.
- E. Options to reduce police contacts, stops, arrests, tickets, fines and incarceration and replace these, to the greatest extent possible, with educational, community serving, restorative and other positive programs, policies and systems.
- F. Reducing the Berkeley Police Department budget to reflect its revised mandates, with a goal of a 50% reduction, based on the results of requested analysis and achieved through programs such as the Specialized Care Unit; and

BE IT FURTHER RESOLVED, that the outcome of the Task Force will be a set of recommended programs, structures and initiatives to incorporate into upcoming budget processes for FY 2022-23 and, as a second phase, in the FY 2024-2025 budget processes to ensure that recommended changes will be achieved. The Task Force shall return to City Council an initial plan and timeline by April 1, 2021, to ensure the first phase of changes can be incorporated into the FY 2022-23 Budget Process; and

BE IT FURTHER RESOLVED, the Task Force shall sunset after two years unless otherwise extended by the City Council;

BE IT FURTHER RESOLVED, the Task Force should be subject to the Commissioner's Manual; and

BE IT FURTHER RESOLVED, Berkeley City Council appointments to the Task Force shall be made, and vacancies shall be filled, in accordance with the provisions of Sections 2.04.030 through 2.04.130 of the Berkeley Municipal Code; and

BE IT FURTHER RESOLVED, The appointment of any member of the Task Force shall automatically terminate as set forth in Berkeley Municipal Code Chapter 3.02 due to attendance; and

BE IT FURTHER RESOLVED, The City Clerk shall notify any member whose appointment has automatically terminated and report to the appointing City Councilmember or appointing authority that a vacancy exists on the Task Force and that an appointment should be made to fill the vacancy; and

BE IT FURTHER RESOLVED, Temporary appointments may be made and leaves of absence may be granted by the appointing authority pursuant to Berkeley Municipal Code Section 3.03.030 and the Commissioners' Manual; and

BE IT FURTHER RESOLVED, The Task Force annually shall elect one of its members as the chairperson and one of its members as the vice-chairperson; and

BE IT FURTHER RESOLVED, A majority of the members appointed to the Task Force shall constitute a quorum and the affirmative vote of a majority of the members appointed is required to take any action; and

BE IT FURTHER RESOLVED, The Task Force shall keep an accurate record of its proceedings and transactions; and

BE IT FURTHER RESOLVED, The Task Force may make and alter rules governing its organization and procedures which are not inconsistent with this Resolution or any other applicable ordinance of the city, or any resolution of the city governing commission procedures and conduct; and

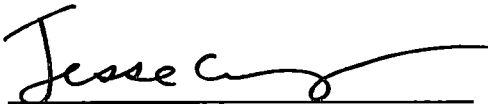
BE IT FURTHER RESOLVED, The Task Force shall establish a regular place and time for meeting. All meetings shall be noticed as required by law and shall be scheduled in a way to allow for maximum input from the public. The frequency of meetings shall be as determined by the Task Force Chair in consultation with City Staff.

The foregoing Resolution was adopted by the Berkeley City Council on December 15, 2020 by the following vote:

Ayes: Bartlett, Droste, Hahn, Harrison, Kesarwani, Robinson, Taplin, Wengraf, and Arreguin.

Noes: None.

Absent: None.

  
\_\_\_\_\_  
Jesse Arreguin, Mayor

Attest:   
\_\_\_\_\_  
Mark Numainville, City Clerk



Office of the Mayor

CONSENT CALENDAR  
January 19, 2021

To: Members of the City Council  
From: Mayor Jesse Arreguín  
Subject: Revisions to Enabling Legislation for Reimagining Public Safety Task Force

RECOMMENDATION:

Adopt a Resolution:

1. Rescinding Resolution No. 69,673-N.S.; and
2. Establishing a Reimagining Public Safety Task Force, comprised of: (a) one representative appointed by each member of the City Council and Mayor pursuant to the Fair Representation Ordinance, B.M.C. Sections 2.04.030-2.04.130, (b) one representative appointed by the Mental Health Commission, Youth Commission, and Police Review Commission (to be replaced by a representative of the Police Accountability Board once it is established), and (c) one representative appointed by the Associated Students of the University of California (ASUC) External Affairs Vice President, one representative appointed by the Berkeley Community Safety Coalition (BCSC) Steering Committee, and three additional members to be appointed "At-Large" by the Task Force, with appointments subject to confirmation by the City Council.

The Task Force will be facilitated by a professional consultant, the National Institute for Criminal Justice Reform (NICJR), with administrative support by the City Manager's office, and will serve as the hub of community engagement for the Reimagining Public Safety effort initiated and guided by the NICJR team. The Task Force will also include the participation of City Staff from the City Manager's Office, Human Resources, Health, Housing and Community Services, Berkeley Fire Department, Berkeley Police Department, and Public Works Department. For visual, see Attachment 3.

With the exception of "At-Large" appointments, appointments to the Task Force should be made by January 31, 2021,<sup>1</sup> and reflect a diverse range of experiences, knowledge, expertise and representation. To maintain the Council's July 14, 2020,<sup>2</sup> commitment to

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<sup>1</sup> With the exception of the "At Large" appointments, which will be selected by the initial appointees with an eye for adding outstanding perspectives, knowledge and experience.

<sup>2</sup> "Be It Further Resolved that the City Council will engage with every willing community member in Berkeley, centering the voices of Black people, Native American people, people of color, immigrants, LGBTQ+ people, victims of harm, and other stakeholders who have been historically marginalized or under-served by our present

centering the voices of those most impacted in our process of reimagining community safety appointments should be made with the goal of achieving a balance of the following criteria:

- a. Active Members of Berkeley Community (Required of All)\*<sup>3</sup>
- b. Representation from Impacted Communities
  - Formerly incarcerated individuals
  - Victims/family members of violent crime
  - Immigrant community
  - Communities impacted by high crime, over-policing and police violence
  - Individuals experiencing homelessness
  - Historically marginalized populations
- c. Faith-Based Community Leaders
- d. Expertise/Leadership in Violence Prevention, Youth Services, Crisis Intervention, and Restorative or Transformative Justice
- e. Health/ Public Health Expertise
- f. City of Berkeley labor/union representation
- g. Law Enforcement Operation Knowledge
- h. City Budget Operations/Knowledge
- i. Committed to the Goals and Success of The Taskforce (Required of All)

As outlined in the July 14, 2020, City Council Omnibus Action,<sup>4</sup> City Council provided direction for the development of a new paradigm of public safety that should include, but is not limited to:

- 1) Building on the work of the City Council, the City Manager, Berkeley Police Department (BPD), the Police Review Commission and other City commissions and other working groups addressing community health and safety.
- 2) Research and engagement to define a holistic, anti-racist approach to community safety, including a review and analysis of emerging models, programs and practices that could be applied in Berkeley.
- 3) Recommend a new, community-centered safety paradigm as a foundation for deep and lasting change, grounded in the principles of *Reduce, Improve and Reinvest* as proposed by the National Institute for Criminal Justice Reform considering,<sup>5</sup> among other things:

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system. Together, we will identify what safety looks like for everyone.”, [Item 18d, Transform Community Safety, July 14, 2020, Berkeley City Council Agenda](#),

<sup>3</sup> \* At Large Appointees are not required to be Berkeley Residents, as long as they are active, committed Berkeley Stakeholders.

<sup>4</sup> [July 14th, 2020, Berkeley City Council Item 18a-e Proposed Omnibus Motion on Public Safety Items](#)

<sup>5</sup> [Transforming Police](#), NICJR

- A. The social determinants of health and changes required to deliver a holistic approach to community-centered safety.
- B. The appropriate response to community calls for help including size, scope of operation and power and duties of a well-trained police force.
- C. Limiting militarized weaponry and equipment.
- D. Identifying alternatives to policing and enforcement to reduce conflict, harm, and institutionalization, introduce alternative and restorative justice models, and reduce or eliminate use of fines and incarceration.
- E. Options to reduce police contacts, stops, arrests, tickets, fines and incarceration and replace these, to the greatest extent possible, with educational, community serving, restorative and other positive programs, policies and systems.
- F. Reducing the Berkeley Police Department budget to reflect its revised mandates, with a goal of a 50% reduction, based on the results of requested analysis and achieved through programs such as the Specialized Care Unit.

Direct the City Manager to ensure that the working group of City Staff as outlined in the October 28th Off-Agenda Memo is coordinating with the Task Force.<sup>6</sup>

The Task Force will provide input to and make recommendations to NICJR and City Staff on a set of recommended programs, structures and initiatives incorporated into a final report and implementation plan developed by NICJR to guide future decision making in upcoming budget processes for FY 2022-23 and, as a second phase produced, in the FY 2024-2025 budget processes.<sup>7</sup>

#### FINANCIAL IMPLICATIONS

City Council allocated \$270,000 in General Fund revenues to support engagement of outside consultants in the Reimagining Public Safety process.

#### BACKGROUND

On July 14, 2020, the Berkeley City Council made a historic commitment to reimagine the City's approach to public safety with the passage of an omnibus package of referrals, resolutions and directions. Central to this proposal is a commitment to a robust community process to achieve this "new and transformative model of positive, equitable and community centered safety for Berkeley". Item 18d, Transforming Community Safety, provides direction on the development of a "Community Safety Coalition", goals and a timeline led by a steering committee and guided by professional consultants. Recommendation 3 above reflects the original scope voted on by the council. However,

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<sup>6</sup>[October 28, 2020 Off-Agenda Memo: Update on Re-Imagining Public Safety](#)

<sup>7</sup> The final report and implementation plan are referenced in the contract approved by the City Council with the NICJR Consultant team on December 15, 2020.

that item did not specify the structure, exact qualifications or process of appointing this steering committee. This item follows the spirit of the original referral, and provides direction on structure, desired qualifications and appointment process.

To avoid confusion with the community organization that has independently formed since the passage of that referral, this steering committee is now being referred to as the Reimagining Public Safety Task Force.

City staff has been diligently been working to implement the referrals in the omnibus motion, including the development, release and evaluation of a request for proposals (RFP) for a consultant to facilitate this process.<sup>8</sup> Initially, the expectation was that the development of a structure and process for the Task Force would be developed in consultation with the professionals selected by this RFP. However, to ensure thorough review of these proposals the timeline for selecting the consultant is longer than initially expected. At the July 18, 2020, meeting, City Council clearly stated that the Task Force will begin meeting no later than January 2021. To meet this timeline, the Council should adopt the proposed framework and appointment process so that the Task Force and our community process can begin shortly after the RFP process is completed.

This resolution is being reintroduced to clarify the process for transitioning appointments from the Police Review Commission to the newly established Police Accountability Board and to ensure that the Task Force works with the NICJR consultant team to develop one report and set of recommendations. The initial resolution was written prior to the finalization of a contract with NICJR. After consultation with city staff and the consultant team, the revised language will set clear expectations and a foundation for successful collaboration between the work of the Task Force and the consultant team.

#### RATIONALE FOR RECOMMENDATION

The proposed structure creates a Task Force with 17 total seats, ensuring representation from each Councilmember and the Mayor, key commissions including the Police Review Commission, the Youth Commission and the Mental Health Commission as well as representation from the ASUC, the Berkeley Community Safety Coalition (BCSC) and three “at-large” members to be selected by the Task Force to fill any unrepresented stakeholder position or subject matter expertise, with the community based organization and at-large appointments subject to confirmation by the City Council.<sup>9</sup>

This model was developed with input from all co-authors, the City Manager, community stakeholders including the ASUC and BCSC as well organizations and experts with experience running community engagement processes. Additionally, the Mayor’s office researched a wide range of public processes that could inform the structure and approach

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<sup>8</sup> Ibid

<sup>9</sup> [The Berkeley Community Safety Coalition](#), initially known as Berkeley United for Community Safety, produced a 40 page report that was shared with the council in July. Their recommendations were referred to the reimagining process as part of the Mayor’s omnibus motion. Co-Founder Moni Law describes BCSC as a “principled coalition that is multiracial, multigenerational and Black and brown centered. We include over 2,000 people and approximately a dozen organizations and growing.”

for Berkeley, including youth-led campaigns, participatory budgeting processes, and long-term initiatives like the California Endowment Building Healthy Communities initiative.<sup>10</sup>

The proposed Task Force structure and process draws most directly on the processes underway in Oakland and in Austin, Texas.<sup>1112</sup> In July, Oakland voted to establish a Reimagining Public Safety Task Force with 17 members, including appointees from all councilmembers and the Mayor, three appointees from their public safety boards, two appointees to represent youth and two at-large appointees selected by their council co-chairs<sup>13</sup>. The model proposed for Berkeley draws heavily from the Oakland approach. A key difference is that, unlike Oakland, this proposed structure does not recommend developing additional community advisory boards. Instead, it is recommended that Berkeley leverage our commissions and community organizations to provide additional input and research to inform the Task Force's work rather than establish additional community advisory boards.

The list of proposed qualifications for appointees (recommendation 2) is also modeled after Oakland's approach. In July, the city council committed to centering the voices of those that are most impacted by our current system of public safety as we reimagine it for the future. The list of qualifications is intended to guide councilmembers and other appointing bodies and organizations to ensure that the makeup of the Task Force reflects that commitment. After all appointments are made, the Task Force will select 3 additional "at large" members to join the Task Force with an eye on adding perspectives, expertise or experience that are missing in initial appointments.

#### ENVIRONMENTAL SUSTAINABILITY

There are no identifiable environmental effects or opportunities associated with the action requested in this report.

#### ALTERNATIVE ACTIONS CONSIDERED

Alternative appointment structures were evaluated, including a citywide application process and an independent selection committee. However, given that the Task Force will ultimately advise the City Council, there was broad agreement that the Council should have a strong role in appointing the Task Force.

#### CONTACT PERSON

Jesse Arreguín, Mayor, (510) 981-7100

#### Attachments:

1. Resolution Establishing Reimagining Public Safety Task Force
2. Resolution No. 69,673-N.S.

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<sup>10</sup> [California Endowment Building Healthy Communities Initiative.](#)

<sup>11</sup> [Austin, Texas Reimagining Public Safety Task Force](#)

<sup>12</sup> [Reimagining Public Safety](#), Oakland website

<sup>13</sup> [Oakland Reimagining Public Safety Task Force Framework](#)



3. Framework for Reimagining Public Safety Task Force
4. July 14, 2020 City Council Item 18d, Transforming Community Safety
5. July 14, 2020 City Council Item a-e, Proposed Omnibus Motion on Public Safety Items

RESOLUTION NO.

ESTABLISHING THE REIMAGINING PUBLIC SAFETY TASK FORCE

WHEREAS, On July 14, 2020, the Berkeley City Council made a historic commitment to reimagine the City's approach to public safety with the passage of an omnibus package of referrals, resolutions and directions; and

WHEREAS, Central to this proposal is a commitment to a robust community process to achieve this "new and transformative model of positive, equitable and community centered safety for Berkeley". Item 18d, Transforming Community Safety, provides direction on the development of a "Community Safety Coalition", goals and a timeline led by a steering committee and guided by professional consultants; and

WHEREAS, on December 15, 2020, the City Council authorized the City Manager to enter into a contract with the National Institute for Criminal Justice Reform (NICJR) who will conduct research, analysis, and use its expertise to develop reports and recommendations for community safety and police reform as well as plan, develop, and lead an inclusive and transparent community engagement process to help the City achieve a new and transformative model of positive, equitable and community-centered safety for Berkeley; and

WHEREAS, the NICJR has agreed to perform the following work:

- Working with the City Auditor on the assessment of emergency and non-emergency calls for service.
- Developing a summary and presentation of new and emerging models of community safety and policing.
- Developing and implementing a communications strategy to ensure that the community is well informed, a robust community engagement process, and managing the Task Force to be established by the City Council.
- Identifying the programs and/or services that are currently provided by the Berkeley Police Department that can be provided by other City departments and / or organizations.
- Developing a final report and implementation plan that will be used to guide future decision making.

WHEREAS, to avoid confusion with the community organization that has independently formed since the passage of that referral, this steering committee is now being referred to as the Reimagining Public Safety Task Force; and

WHEREAS, the purpose of this Resolution is to specify the structure, criteria, and role of the Reimagining Public Safety Task Force.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that Resolution No. 69,673-N.S. is hereby rescinded; and

BE IT FURTHER RESOLVED that the Berkeley City Council does hereby establish the Reimagining Public Safety Task Force.

1. The membership shall be comprised of:
  - a. One (1) representative appointed by each member of the City Council and Mayor, pursuant to the Fair Representation Ordinance, B.M.C. Sections 2.04.030-2.04.130,
  - b. One (1) representative appointed from the Mental Health Commission, Youth Commission and Police Review Commission (to be replaced by a representative of the Police Accountability Board once it is established), and
  - c. Subject to confirmation by the City Council, one (1) representative appointed by the Associated Students of the University of California (ASUC) External Affairs Vice President, one (1) representative appointed by the Berkeley Community Safety Coalition (BCSC) Steering Committee, and three (3) additional members to be appointed “At-Large” by the Task Force.
2. With the exception of the “At-Large” appointments, appointments to the Task Force should be made by January 31, 2021,<sup>14</sup> and reflect a diverse range of experiences, knowledge, expertise and representation. To maintain the Council’s July 14, 2020,<sup>15</sup> commitment to centering the voices of those most impacted in our process of reimagining community safety, appointments should be made with the goal of achieving a balance of the following criteria:
  - a. Active Members of Berkeley Community (Required of All)<sup>\*16</sup>
  - b. Representation from Impacted Communities
    - Formerly incarcerated individuals
    - Victims/family members of violent crime
    - Immigrant community
    - Communities impacted by high crime, over-policing and police violence
    - Individuals experiencing homelessness
    - Historically marginalized populations

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<sup>14</sup> With the exception of the “At Large” appointments, which will be selected by the initial appointees with an eye for adding outstanding perspectives, knowledge and experience.

<sup>15</sup> “Be It Further Resolved that the City Council will engage with every willing community member in Berkeley, centering the voices of Black people, Native American people, people of color, immigrants, LGBTQ+ people, victims of harm, and other stakeholders who have been historically marginalized or under-served by our present system. Together, we will identify what safety looks like for everyone.”, [Item 18d, Transform Community Safety, July 14, 2020, Berkeley City Council Agenda](#).

- c. Faith-Based Community Leaders
  - d. Expertise/Leadership in Violence Prevention, Youth Services, Crisis Intervention, and Restorative or Transformative Justice
  - e. Health/ Public Health Expertise
  - f. City of Berkeley labor/union representation
  - g. Law Enforcement Operation Knowledge
  - h. City Budget Operations/Knowledge
  - i. Committed to the Goals and Success of The Taskforce (Required of All)
3. At Large Appointees are not required to be Berkeley Residents, as long as they are active, committed Berkeley stakeholders.
  4. As outlined in the July 14, 2020, City Council Omnibus Action,<sup>17</sup> City Council provided direction for the development of a new paradigm of public safety that should include, but is not limited to:
    - 1) Building on the work of the City Council, the City Manager, Berkeley Police Department, the Police Review Commission and other City commissions and other working groups addressing community health and safety.
    - 2) Research and engagement to define a holistic, anti-racist approach to community safety, including a review and analysis of emerging models, programs and practices that could be applied in Berkeley.
    - 3) Recommend a new, community-centered safety paradigm as a foundation for deep and lasting change, grounded in the principles of *Reduce, Improve and Reinvest* as proposed by the National Institute for Criminal Justice Reform (NICJR) considering,<sup>18</sup> among other things:
      - A. The social determinants of health and changes required to deliver a holistic approach to community-centered safety.
      - B. The appropriate response to community calls for help including size, scope of operation and power and duties of a well-trained police force.
      - C. Limiting militarized weaponry and equipment.
      - D. Identifying alternatives to policing and enforcement to reduce conflict, harm, and institutionalization, introduce alternative and restorative justice models, and reduce or eliminate use of fines and incarceration.
      - E. Options to reduce police contacts, stops, arrests, tickets, fines and incarceration and replace these, to the greatest extent possible, with

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<sup>17</sup> [July 14th, 2020, Berkeley City Council Item 18a-e Proposed Omnibus Motion on Public Safety Items](#)

<sup>18</sup> [Transforming Police](#), NICJR

educational, community serving, restorative and other positive programs, policies and systems.

- F. Reducing the Berkeley Police Department budget to reflect its revised mandates, with a goal of a 50% reduction, based on the results of requested analysis and achieved through programs such as the Specialized Care Unit; and

BE IT FURTHER RESOLVED, that the Task Force will provide input to and make recommendations to NICJR and City Staff on a set of recommended programs, structures and initiatives incorporated into a final report and implementation plan developed by NICJR to guide future decision making in upcoming budget processes for FY 2022-23 and, as a second phase produced, in the FY 2024-2025 budget processes.<sup>19</sup>; and

BE IT FURTHER RESOLVED, that the City Manager is requested to provide updates and coordinate with the Task Force regarding the work that is underway on various aspects of the July 14, 2020 Omnibus package adopted by City Council including the Specialized Care Unit, BerkDoT, and priority dispatching (For visual, see Attachment 2); and

BE IT FURTHER RESOLVED, the Task Force shall sunset at the earlier of City Council's adoption of the final report and implementation plan developed by NICJR or three years after appointments are made unless the Task Force is otherwise extended by the City Council; and

BE IT FURTHER RESOLVED, the Task Force should be subject to the Commissioner's Manual; and

BE IT FURTHER RESOLVED, Mayor and City Council appointments to the Task Force shall be made, and vacancies shall be filled, in accordance with the provisions of Sections 2.04.030 through 2.04.130 of the Berkeley Municipal Code; and

BE IT FURTHER RESOLVED, The appointment of any member of the Task Force shall automatically terminate as set forth in Berkeley Municipal Code Chapter 3.02 due to attendance; and

BE IT FURTHER RESOLVED, The City Clerk shall notify any member whose appointment has automatically terminated and report to the appointing City Councilmember or appointing authority that a vacancy exists on the Task Force and that an appointment should be made to fill the vacancy; and

BE IT FURTHER RESOLVED, Temporary appointments may be made and leaves of absence may be granted by the appointing authority pursuant to Berkeley Municipal Code Section 3.03.030 and the Commissioners' Manual; and

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<sup>19</sup> The final report and implementation plan are referenced in the contract approved by the City Council with the NICJR Consultant team on December 15, 2020

BE IT FURTHER RESOLVED, A majority of the members appointed to the Task Force shall constitute a quorum and the affirmative vote of a majority of the members appointed is required to take any action; and

BE IT FURTHER RESOLVED, The Task Force shall keep an accurate record of its proceedings and transactions; and

BE IT FURTHER RESOLVED, The Task Force may make and alter rules governing its organization and procedures which are not inconsistent with Resolution or any other applicable ordinance of the city, or any resolution of the city governing commission procedures and conduct; and

BE IT FURTHER AND FINALLY RESOLVED, The Task Force shall establish a regular place and time for meeting. All meetings shall be noticed as required by law and shall be scheduled in a way to allow for maximum input from the public. The frequency of meetings shall be as determined by the Task Force Chair in consultation with NICJR and City Staff.



Rashi Kesarwani  
Councilmember District 1

CONSENT CALENDAR

January 26, 2021

*(Continued from November 10, 2020)*

TO: Honorable Mayor and Members of the City Council

FROM: Councilmember Rashi Kesarwani (author), Mayor Jesse Arreguin and Councilmember Cheryl Davila (co-sponsors)

SUBJECT: Budget Referral to Reinstate Partial Funding for the Gun Buyback Program Previously Authorized by City Council

RECOMMENDATION

Refer to the FY 2020-21 November Amendment to the Annual Appropriations Ordinance (AAO #1) \$40,000 to reinstate partial funding for the Gun Buyback Program—originally proposed by Councilmember Cheryl Davila and authorized by the City Council on Nov. 27, 2018.

FISCAL IMPACTS

Funding of \$40,000 would enable the City of Berkeley to: remove guns from households by providing cash or gift cards to owners of operational rifles and shotguns (value of approximately \$100) and to owners of operational handguns and assault weapons (value of approximately \$200); and cover staff time necessary to support a gun buyback program.

CURRENT SITUATION AND ITS EFFECTS

Gun violence in Berkeley is on the rise, following regional and national trends.<sup>1</sup> According to Berkeleyside, the City of Berkeley saw 20 shootings in 2018, 28 shootings in 2019, and 32 shootings so far in 2020 with more than two months remaining in the year.<sup>2</sup> As a result of this violence, our community has lost four individuals from fatal shootings and at least 10 others have been wounded. Prior to this year, the last fatal

<sup>1</sup> "Shootings and Gun Deaths Continue To Rise At Alarming Rate In Large U.S. Cities," Aug. 2, 2020, Forbes, <https://www.forbes.com/sites/tommybeer/2020/08/02/shootings-and-gun-deaths-continue-to-rise-at-alarming-rate-in-large-us-cities/#234142966f0f>.

<sup>2</sup> "Annual crime report sees shootings rise for the third straight year," Oct. 15, 2020, Berkeleyside, [https://www.berkeleyside.com/2020/10/15/2020-berkeley-crime-report-shootings-rise-use-of-force-stop-data?doing\\_wp\\_cron=1603673460.1734480857849121093750](https://www.berkeleyside.com/2020/10/15/2020-berkeley-crime-report-shootings-rise-use-of-force-stop-data?doing_wp_cron=1603673460.1734480857849121093750).

Budget Referral to Reinstate Partial Funding for Gun Buyback Program

shooting occurred in 2016, when 22-year-old Alex Goodwin Jr. was killed outside his home near San Pablo Park.<sup>3</sup>

Gun buybacks are programs aimed at voluntarily decreasing the prevalence of firearms in a community by offering cash or gift cards in exchange for working guns. A meta-analysis from Dec. 2019 in *Current Trauma Reports* suggests that gun buybacks should be included in broader violence reduction strategies. “Buybacks in conjunction with other methods have been shown to be successful in reducing the number of firearms that could lead to injury and death,” the authors write.<sup>4</sup> Further, according to current academic research, gun buybacks “can influence public perception of how authorities are dealing with gun violence and serve as opportunities to educate communities about gun violence reduction strategies.”<sup>5</sup> A gun buyback program can be a piece of our communal effort to reimagine public safety.

BACKGROUND

Councilmember Cheryl Davila submitted the original referral to fund a gun buyback program to our Annual Appropriations Ordinance Process in Nov. 2018, which was approved on consent (see attachment A). An integral part of this initial Council item referenced a partnership between Berkeley Police Department and a non-profit, the Robby Poblete Foundation (RPF). Given that gun violence has been responsible for four deaths in the last ten months alone, this item recommends reinstating funding for a gun buyback program. According to the RPF website, 190 firearms were removed from the City of Richmond during a gun buyback event; and 900 were removed from San Francisco during a gun buyback held in June 2018.<sup>6</sup>

ENVIRONMENTAL SUSTAINABILITY

No direct impact on environmental sustainability.

CONTACT

Councilmember Rashi Kesarwani, District 1 (510) 981-7110

Attachments:

- A: Item #22 “Budget Referral: Gun Buyback Program and Art of Peace Program

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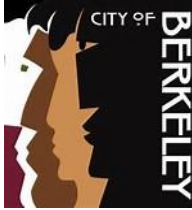
<sup>3</sup> The 2020 Berkeley gunfire map, Updated Oct. 23, Berkeleyside, <https://www.berkeleyside.com/2020/10/03/2020-berkeley-gunfire-map>.

<sup>4</sup> A Review of Gun Buybacks,” Nov. 1, 2019, Current Trauma Reports, <https://link.springer.com/article/10.1007/s40719-019-00180-8>.

<sup>5</sup> “Gun buybacks: What the research says,” Jan. 9, 2020, Harvard Kennedy School Shorenstein Center on Media, Politics and Public Policy, <https://journalistsresource.org/studies/gun-violence/gun-buybacks-what-the-research-says/>.

<sup>6</sup> RPF Gun Buyback Program, <http://robbypobletefoundation.org/rpf-gun-buyback-program/>.





Cheryl Davila  
Councilmember  
District 2

CONSENT CALENDAR  
November 27, 2018

To: Honorable Mayor and Members of the City Council  
From: Councilmember Cheryl Davila  
Subject: Budget Referral: Gun Buyback and Art of Peace Program

RECOMMENDATION

AAO Budget Referral to the FY19 (2018/2019) November 2018 AAO Budget Process to set aside \$60,000 to frontload funds to bring the Robby Poblete Foundation Gun Buyback, Art of Peace and Work in Progress programs to Berkeley.

The Robby Poblete Foundation coordinates all aspects of the programs, including promotional materials, promotion on platforms and local calendars, press releases, press conferences and media contacts, coordinating the buyback with the police department, purchasing and release of gift cards, breaking down the guns free of charge (if desired), recruiting artists, coordinating the artist competition and selection process, coordinating the Art of Peace unveiling and event, and connecting youth and families with apprenticeships, job training and placement programs.

The Robby Poblete Foundation will also partner with the City of Berkeley to reach out to foundations, local businesses and individual donors to cover the costs of the program, including the gift cards. All efforts will be made to fundraise and refund the full \$60,000.

The City of Berkeley needs to provide the following:

- **Police time** to coordinate the gun buyback with the Foundation, the day-of to accept, record and check firearms to ensure that none of those accepted are stolen and to staff the event to ensure safety, as well as transport and storage of guns until they are shipped for breakdown.
- **Front-loading the \$60,000** to cover an estimated 400 firearms at \$100 and \$200 per a buyback. This estimate is based on Berkeley's centrality, timing since the last buyback in the area and recent buyback programs. Any funds not used will be returned to the City. If additional funds are needed, the Foundation covers the cost and works to apply for additional funds. We do not want to turn guns away.
- **Participation:** promoting programs and events, identifying businesses for the Foundation to approach, recruiting and selecting artists, and participating in public and media events.

### FISCAL IMPACTS OF RECOMMENDATION

\$60,000 for a contract with a community youth provider. Staff time creating and reviewing RFP applications, and creating and monitoring the contract.

### BACKGROUND

The Robby Poblete Foundation is a registered 501©(3) nonprofit organization whose mission is to reduce gun violence by collecting unwanted firearms through gun buybacks, and transform them into instruments of hope and opportunity through art and vocational skills programs.

Pati Navalta started the program after she lost her son to gun violence four-years ago. From this tragedy she started the Foundation to stop gun violence and is supporting work across the Bay Area, and Los Angeles and Georgia in replicating the program. The gun buyback program has been implemented in Richmond, Vallejo, San Francisco and Oakland.

The program has collected over 1,000 firearms, including handguns, rifles and assault weapons. In addition, they have collected boxes of stars, rocket launchers and knives. By providing gift cards from local businesses, they are getting firearms off of the streets while supporting the local economy. The gun buyback events include free gun locks, too.

The guns are then broken down and given back to the community to create public art. A design competition is promoted and community artists submit proposals that are reviewed by a community panel. Selected artists use the broken down gun parts and shells to create Art of Peace. The art work is then unveiled during a community event and visited by schools and programs to raise awareness toward violence prevention. Young people who are interested can then participate in the Work in Progress program that works with 5 apprenticeship programs to train young people including their family members, including people who are formerly incarcerated and homeless, in a trade and then place them in employment with life and job coaching support.

Councilmember Davila's office, the Berkeley Police Department and City Manager's office attended a presentation from the Robby Poblete Foundation, and all shared interest in and support for all three programs for Berkeley.

### ENVIRONMENTAL SUSTAINABILITY

The program not only removes guns from the street and community that can be used to harm, but creates public awareness about how communities can participate in gun violence prevention. It creates a culture of hope and possibility to counter the despair and culture of violence that leads to gun-related deaths and injuries.

### CONTACT PERSON

Councilmember Cheryl Davila 510.981.7120

### ATTACHMENTS

- Robby Poblete Foundation overview PowerPoint



Robby Poblete Foundation

*Transforming unwanted firearms into instruments of hope and opportunity*

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## Overview

# Who We Are

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The Robby Poblete Foundation is a registered 501©(3) nonprofit organization whose mission is to reduce gun violence by collecting unwanted firearms through gun buybacks, and transform them into instruments of hope and opportunity through art and vocational skills programs.

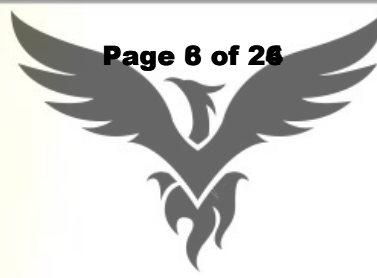


# Our Programs

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- **Annual Gun Buyback:** Prevent unwanted firearms from falling into the wrong hands by holding gun buybacks
- **Art of Peace:** Transform unwanted firearms into instruments of hope and opportunity
- **Work In Progress:** Work with local unions, businesses and county office of education and correctional facilities to raise awareness about opportunities in skilled trades, provide introductory training programs, and help with apprenticeships, certifications and job placement. Focused on youth, young adults and ex offenders.





Robby Poblete Foundation

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# Gun Buyback

# Gun Buyback

AUGUST 26, 2017 // SOLANO COUNTY FAIRGROUNDS

## BUYBACK OUR FUTURE

### 2017 SOLANO COUNTY GUN BUYBACK

**TURN IN GUNS FOR VISA PREPAID CARDS OR GIFT CARDS, NO QUESTIONS ASKED**  
 Please transport your firearms unloaded and in the trunk of your vehicle  
 Up to \$100 in Visa prepaid cards or gift cards for each rifle, shotgun and handgun  
 Up to \$200 in Visa prepaid cards or gift cards for each assault weapon, as classified in the State of CA

THIS EVENT IS BEING PRESENTED BY:



**THE ERIC REYES**  
FOUNDATION

A registered 501(c)(3) nonprofit organization  
Federal Tax ID: 81-3558866



**Robby Poblete Foundation**

A registered 501(c)(3) nonprofit organization  
Federal Tax ID: 82-0740692

SPONSORED BY









IN PARTNERSHIP WITH


Senator Bill Dodd • Assembly Member Wenddy Grayson • Solano County District Attorney's Office • Solano County Supervisor Eric Hanson  
 Solano County Arts Council • Mapa Solano Construction & Building Trades Council • Vallejo City Councilwoman Rozanna Vander-Aalge  
 Vallejo Mayor Bob Sampson • Toyota • Neighborhood Riding • Club Stride • Texas Jai-Also • Dos De Oros • Beer's Bridal

\*Funds are limited. We reserve the right to limit the amount of cash an individual can receive, regardless of the amount of firearms surrendered.

180 firearms:  
 66 handguns  
 111 rifles  
 3 assault  
 weapons

**SOLANO COUNTY**

## GUN BUYBACK 2018




**EXPOSITION HALL, SOLANO COUNTY FAIRGROUNDS, VALLEJO**  
**SATURDAY, NOVEMBER 3, 2018 // 9 AM - 2 PM**


**Turn in guns for gift cards. No questions asked.**  
 Please transport your firearms unloaded and in the trunk of your vehicle  
**Up to \$100** in gift cards for each rifle and shotgun  
**Up to \$200** in gift cards for each handgun and assault weapon, as classified by the State of CA

Ammunition and other weapons, such as throwing stars, butterfly knives, switchblades, brass knuckles, will be accepted; however no gift cards will be given for these items.

This event is being presented by:




**VALLEJO POLICE**



**ROBBY POBLETE FOUNDATION**

A registered 501(c)(3) nonprofit organization  
Federal Tax ID: 82-0740692



**THE ERIC REYES**  
FOUNDATION

A registered 501(c)(3) nonprofit organization  
Federal Tax ID: 81-3558866

\*Funds are limited. We reserve the right to limit the amount of gift cards an individual can receive, regardless of the amount of firearms surrendered.

115 firearms:  
 44 long guns  
 70 handguns  
 1 assault  
 weapon



# Gun Buyback

## 2017 RICHMOND GUN BUYBACK

Turn in guns for gift cards. No questions asked.

Please ensure all firearms are unloaded and kept in the trunk of your car before coming to the gun buyback.

### Up to \$100

in Visa prepaid cards or gift cards for each rifle, shotgun and handgun

### Up to \$200

in Visa prepaid cards or gift cards for each assault weapon, as classified in the State of CA

\* Funds are limited. We reserve the right to limit the amount of cash an individual can receive, regardless of the amount of firearms surrendered.

SUNDAY, DECEMBER 17, 2017  
10 AM - 2 PM

450 CIVIC CENTER PLAZA  
RICHMOND, CA

This event is being presented by:



Robby Poblete Foundation  
robbypobletefoundation.org



48 firearms:  
14 rifles  
6 shotguns  
15 semi-auto  
pistols  
13 revolvers

## 2018 RICHMOND GUN BUYBACK

TURN IN GUNS FOR GIFT CARDS  
NO QUESTIONS ASKED

### UP TO \$100

in gift cards for each rifle, shotgun and handgun

### UP TO \$200

in Visa prepaid cards or gift cards for each assault weapon, as classified in the State of CA

\* Funds are limited. We reserve the right to limit the amount of cash an individual can receive, regardless of the amount of firearms surrendered.

\* PLEASE TRANSPORT YOUR FIREARMS UNLOADED AND IN THE TRUNK OF YOUR VEHICLE.

SATURDAY  
AUGUST 18, 2018  
10 AM - 2 PM

450 CIVIC CENTER PLAZA  
RICHMOND, CA

This event is being presented by:



Robby Poblete Foundation  
robbypobletefoundation.org



51 firearms:  
13 shotguns  
7 pistols  
8 assault  
weapons  
10 rifles  
13 revolvers





# Gun Buyback



Robby Poblete Foundation



187 firearms

**FUTURE SUCCESSORS & AMERICORPS VISTA PRESENT**  
*5th Annual Gun Buyback*



**Date:** August 4, 2018  
**Time:** 9am - 11am  
**Location:** Antioch Baptist Church  
 1454 Florence Street Augusta, GA 30901



Proudly sponsored by  
 the Robby  
 Poblete Foundation

**Turn in your useless UNLOADED firearms  
 in an empty shoebox  
 \$50 giftcard for every firearm turned in  
 No questions asked**




<https://futuresuccessors.org/>



# Solano County Gun Buyback





Robby Poblete Foundation

- *Transforming unwanted firearms into instruments of hope and opportunity*
- 



# Process



Robby Poblete Foundation



- Founded: February 2017      - Planning meeting: April 27      - Call for Entry: June      - Gun Buyback, August 26, 2017



- Gun materials: October 1



Artist pick-up: January 2018



Art of Peace unveiling: May 11, 2018



# Art of Peace Commissioned Art



Robby's Arc, John Ton



Blue Heron, Joel Stockdill



Simorgh, Keyvan Shovir



# Art of Peace Commissioned Art



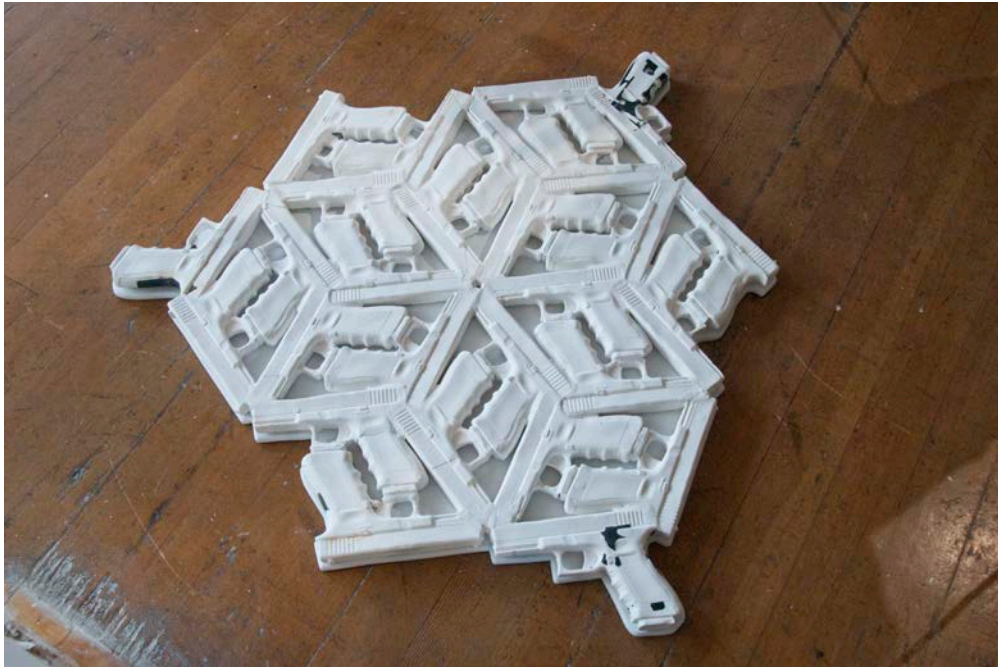
Boarapillar, Karen Lewis



Home, Sweet Home, Tsungwei Moo



# Art of Peace Commissioned Art



Floor Mandala, Matthew Mosher



Memorial Pillar, Kaytea Petro



# Art of Peace Commissioned Art



Wave of Violence, Jean Cherie





# Art of Peace: Scale

---

## Bay Area (Secured):

- ✓ Vallejo
- ✓ Alameda County (Oakland)
- ✓ Richmond (Contra Costa County)
- ✓ San Francisco

## Requests from:

- Los Angeles
- Atlanta, Augusta, Georgia



# Art of Peace: Alameda



# Media Coverage

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 Get Consistent Quality Every Time. Official Site. Regular 60% Sales. [pstprint.com/Discounts](#)

STYLE

## How a mother turned the death of her son to an art-filled mission of peace

[Carolyne Zinko](#) | May 10, 2018 | Updated: May 10, 2018 8:32 p.m.



1 of 2  
 Pati Navalta holds a piece of art created by her son Robby when he was 12, at her home in Fairfield. To turn her anguish of losing her 23-year-old son Robby Poblete to gun violence, she created the Robby ...  
 Photo: Michael Macor / The Chronicle

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- Most Popular**
- Black firefighter on inspection duty in Oakland hills gets videotaped, reported to police
  - Poop, Needles, Rats. Homeless camp pushes SF neighborhood to the edge
  - Wildfire forces thousands to evacuate in Lake County
  - Silicon Valley bus drivers sleep in parking lots. They may have to make way for development

# San Francisco Chronicle

**NORTHERN CALIFORNIA'S LARGEST HUNTING & FISHING**  
**GUNS & FISHING & OTHER STUFF**  
 Dublin | 0708 Arroyo Plaza Rd. | Dublin, CA 94568 | (925) 828-4367 | Vacaville

News > California News

## Dismantled guns, bullets secured for Bay Area 'Art of Peace'





Robby Poblete Foundation



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# Work In Progress

# Apprenticeship Bus Tour



September 29, 2017: 150 students, 5 apprenticeship centers in county



# Work In Progress



Women In Trades, Solano County, Feb. 9, 2018

Hands-On Career Fair, Solano County, April 20, 2018

Women In Trades, Contra Costa County, October 19, 2018



# Work In Progress: Scholarships



Apprenticeships and training programs

\$20,000+ in scholarships - to date

Outreach



TRADESWOMEN, INC.



WORKFORCE DEVELOPMENT BOARD  
OF SOLANO COUNTY





Robby Poblete Foundation



*For more information, please go to [robbypobletefoundation.org](http://robbypobletefoundation.org) or email [info@robbypobletefoundation.org](mailto:info@robbypobletefoundation.org)*

---

**Thank you**





Susan Wengraf  
Councilmember District 6

CONSENT CALENDAR  
January 26, 2021

To: Honorable Mayor and Members of the City Council

From: Councilmember Susan Wengraf (Author), Councilmember Sophie Hahn (Co-sponsor)

Subject: Short Term Referral to City Manager, Disaster and Fire Safety Commission and Planning Commission to Amend Local Accessory Dwelling Unit (ADU) Zoning Ordinance and Berkeley's Fire Code

RECOMMENDATION

Refer to the City Manager, the Disaster and Fire Safety Commission and the Planning Commission to evaluate and recommend to Council within 90 days, a set of ordinance amendments and implementation programs to address emergency access and egress, parking and objective development standards to address the constraints presented by high fire hazard conditions and narrow and curving roadways in Fire Zones 2 and 3. (Attachment 1).

Recommendations to Additional Objective Development Standards in Zones 2 and 3:

Zone 2 and 3 - limit the base maximum size of newly constructed, detached ADUs to 850 sq. feet.

Zone 2 and 3 – require compliance with front yard, side yard and open space and coverage requirements of the applicable zoning district.

Recommendations to amend the Fire Code:

Prohibit parking on streets where egress and ingress will be adversely impacted by additional vehicles and increased population.

Require sprinklers in new construction, consistent with local Fire Code

Explore their authority under California Health and Safety Code Sec. 13869.7 to mitigate the adverse impacts of ADU creation in requiring safe and adequate ingress and egress routes and sufficient off-street parking.

FINANCIAL IMPLICATIONS

Staff Time

## BACKGROUND

On October 9, 2019, Governor Newsom signed three bills into law (Assembly Bill 881, Assembly Bill 68, and Senate Bill 13), requiring local jurisdictions to relax or eliminate restrictions on development of ADUs. The legislation is codified in Government Code sections 65852.2 and 65852.22 and Health and Safety Code section 17980.12 and became effective on January 1, 2020.

The City Council had previously adopted an interim Urgency ADU Ordinance in December, 2019 and an extension of that ordinance in January, 2020 that prohibited the construction of ADUs in the ES-R district (Zone 3) and on any lot with frontage on a roadway of less than 26 feet width in the Hillside Overlay, subject to discretionary review. (Attachment 2.)

The interim ADU Ordinance expired on December 4, 2020. Since then, the City has been operating without any local provisions for ADUs; all ADUs in residential districts are regulated only by State law, allowing their development without regard to street width or parking. City Council may adopt a new local ADU Ordinance within the constraints of the law to address a limited range of local considerations.

The Disaster Fire Safety Commission (DFSC) met on July 6 and July 13, 2020 to discuss the issues related to ADUs in the hillside fire zones, received a presentation from Planning Department and Fire Department staff, and directed that a memo be sent to the Planning Commission with recommendations for zoning code amendments

On August 8, 2020, the Planning Commission received communications from the DFSC and members of the community concerned about the restrictions created by State law and the need for local regulations to address public safety concerns. (Attachment 3.)

The current state legislation includes provisions that on their face require local agencies to approve certain categories of ADU development in all residential and mixed-use districts (See Gov. Code, § 65852.2(e)(1)). Subsequent interpretations adopted by the State Housing and Community Development Department (HCD) made clear that any conflict between the different provisions of the law must be resolved in favor of allowing certain categories of ADUs to be constructed in all residential and mixed-use districts, regardless of public safety concerns. This interpretation is reflected in the final guidance document released by HCD in September and updated in December 2020 (Attachment 4.)

Currently, as codified in Government Code sections 65852.2 and 65852.22 and Health and Safety Code section 17980.12, local jurisdictions have extremely limited discretion to impose restrictions on the development of ADUs, even in high risk areas threatened by wildfire or any other natural disaster, like landslides, earthquake or flood.

Increasingly hot and dry climate conditions in combination with topography and narrow and curvy roads in certain areas of Berkeley create real threats to access for first responders and egress of our residents in the event of a wildfire. Since the City has no authority under the current regulations to require off-street parking for new ADUs nor can we require replacement of off-street parking removed as a result of ADU conversion, I am requesting that the Fire Department impose additional restrictions on street parking when new ADUs are created, in Fire Zones 2 and 3.

Until State Law is amended to allow jurisdictions to be able to protect their communities from increased vulnerability to risk, the City must use every available tool to mitigate the dangerous impacts in high hazard fire zones, where the health, safety and welfare of Berkeley residents will be affected.

Previously, Berkeley's ADU Ordinance prohibited ADUs in Fire Zone 3 and on streets of 26 feet or less in width in Fire Zone 2, subject to discretionary review. As interpreted by the California Department of Housing and Community Development, current regulations make applications to construct a new ADU entirely ministerial and prohibit any discretionary review.

Now that the City's ADU Urgency Ordinance has expired, Berkeley has no local protections in Fire Zones 2 & 3 as designated in local amendments to the State Fire Code, corresponding to the H – Hillside zoning district. The city is currently operating under State law without any local provisions addressing these unique characteristics and threats to life safety.

Therefore, I am referring to the City Manager, the Disaster and Fire Safety Commission and the Planning Commission to evaluate and recommend to Council within 90 days, a set of ordinance amendments and implementation programs to address emergency access and egress, parking and objective development standards to address the constraints presented by high fire hazard conditions and narrow and curving roadways in Fire Zones 2 and 3.

Recommendations to Additional Objective Development Standards in Zones 2 and 3:

Zone 2 and 3 - limit the base maximum size of newly constructed, detached ADUs to 850 sq. feet.

Zone 2 and 3 – require compliance with front yard, side yard and open space and coverage requirements of the applicable zoning district.

Recommendations to amend the Fire Code:

Prohibit parking on streets where egress and ingress will be adversely impacted by additional vehicles and increased population.

Require sprinklers in new construction, consistent with local Fire Code

Explore their authority under California Health and Safety Code Sec. 13869.7 to mitigate the adverse impacts of ADU creation in requiring safe and adequate ingress and egress routes and sufficient off-street parking.

Finally, given the urgency of the matter, I am requesting a short-term referral of 90 days to the City Manager, so that the amendments can return to Council for approval and be codified in a timely manner. Amendments to the Zoning Code need approval from the Planning Commission and amendments to the Fire Code need approval from the State Fire Marshall.

ENVIRONMENTAL SUSTAINABILITY

Aligns with Berkeley's environmental sustainability goals.

CONTACT PERSON

Councilmember Wengraf

Council District 6

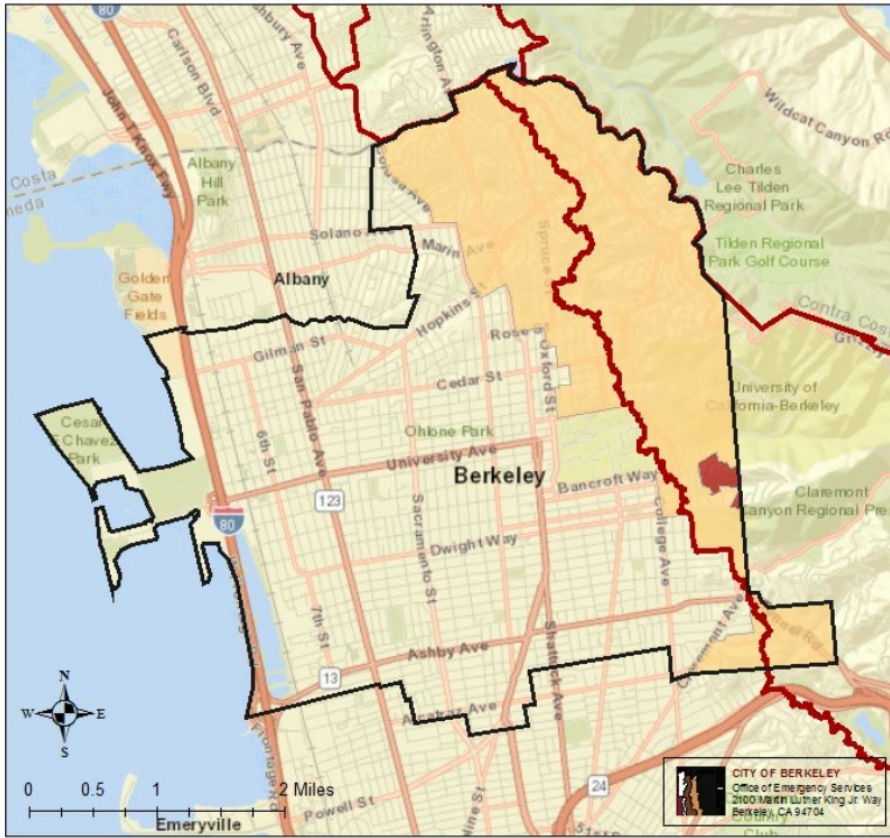
510-981-7160




Attachments:

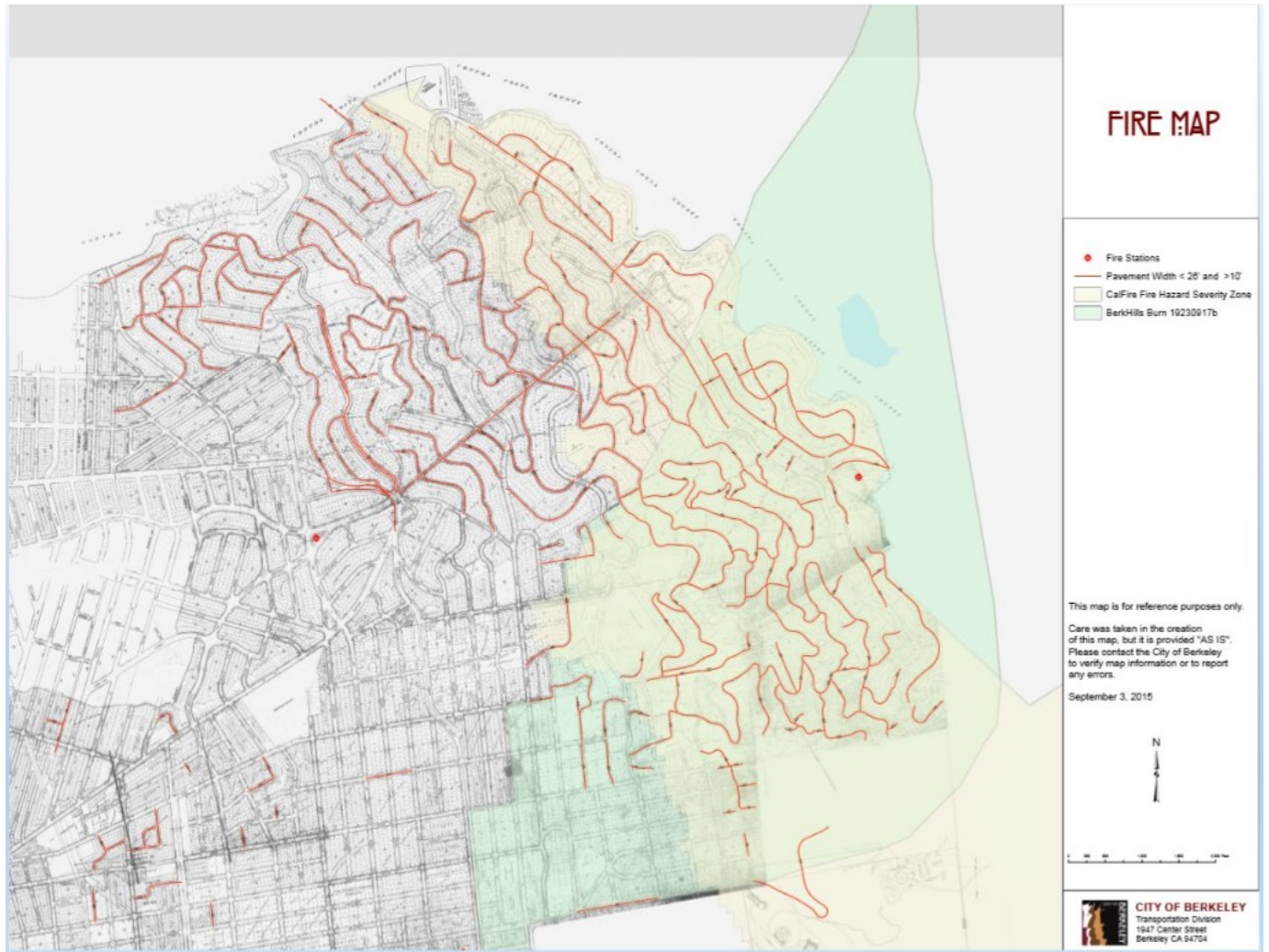
- 1: Maps from Fire Safety Town Hall 2019, Berkeley Fire Department
- 2: Extension of Urgency Ordinance for ADUs, Jan 21, 2020
- 3: Memo from Disaster Fire Safety Commission to Planning Commission, July 20, 2020
- 4: Accessory Dwelling Unit Handbook, California Department of Housing and Community Development, Updated December 2020

EXCERPTS FROM FIRE SAFETY TOWN HALL, 2019

# Wildfire Threat in Berkeley



-  City of Berkeley
-  CA Dept of Forestry, Very High Fire Hazard Potential
- Berkeley Fire Zones**
-  Hazardous Fire Zone 1
-  Hazardous Fire Zone 2
-  Hazardous Fire Zone 3



ORDINANCE NO. 7,685-N.S.

EXTENDING URGENCY ORDINANCE NO. 7,683-N.S. AMENDING  
ACCESSORY  
DWELLING UNIT (ADU) ORDINANCE -ro COMPLY WITH NEW  
STATE LAW AND ESTABLISH INTERIM LIMITS ON  
DEVELOPMENT

BE IT ORDAINED by the Council of the City of Berkeley as follows:

Section 1. Findings

- a. A severe housing crisis exists in the state with the demand for housing outpacing supply.
- b. Accessory dwelling units (ADUs) provide flexible opportunities for infill housing.
- c. On October 9, 2019, Governor Newsom signed into law Assembly Bill (AB) 881 which is intended to increase the state's supply of affordable housing by facilitating the construction of ADUs and Junior ADUs.
- d. AB 881 amends California Government Code Section 65852.2 and, among other limitations on local authority, requires cities, counties, and utility districts to significantly relax regulation of ADUs by requiring a 60-day ministerial approval of ADUs on all lots that allow residential uses. These amendments to California Government Code Section 65852.2 become effective January 1, 2020.
- e. California Government Code Section 65852.2(a)(4), as amended, provides that any existing local ADU ordinance failing to meet the requirements of the new state law shall be null and void unless and until the local agency adopts a new ordinance complying with California Government Code Section 65852.2. In the absence of a valid local ordinance, the new state law instead provides a set of default standards governing local agencies' regulation and approval of ADUs.
- f. Berkeley's current ADU Ordinance, adopted by City Council on May 29, 2018, protects fire hazard areas by 1) prohibiting ADUs in the Environmental Safety Residential District and 2) requiring discretionary review and approval by the Fire Department of ADUs in the Hillside Overlay. These measures were adopted in order to mitigate impacts to public safety.
- g. Amendments to Government Code section 65852.2, effective January 1, 2020, provide no protections for fire hazard areas and provide no mechanism for

discretionary review. However, as amended, Government Code section 65852.2 will allow jurisdictions to prohibit ADUs from areas where their allowance would create an impact to public safety.

- h. Because Government Code section 65852.2 takes effect on January 1, 2020, ADUs would be permitted in high fire risk zones without discretionary review unless the City adopts an ADU ordinance that limiting the construction of ADUs in such zones that complies with the requirements of Government Code section 65852.2

before its effective date. The potential for construction of ADUs in high fire risk zones without discretionary review creates a current and immediate threat to the public health, safety, and welfare, and the approval of Zoning Certificates or building permits in such high fire risk zones would result in such an immediate threat to public health, safety, and welfare.

Section 2. That Berkeley Municipal Code Chapter 23C.24 is amended to read as follows:

## Chapter 23.34 Accessory Dwelling Units

### Sections:

23C.24.010 Applicability of Regulations

23C.24.020 Purposes

23C.24.030 Permit Procedures

### 23C.24.010 Applicability of Regulations

The provisions of this Chapter apply to all lots that are zoned for residential use, except 1) in the following zoning districts: Environmental Safety-Residential (ES-R), Manufacturing (M), Mixed Manufacturing (MM), Mixed Use-Light Industrial (MU-LI), and Unclassified (U); and 2) on a lot with frontage on a roadway with less than 26 feet in pavement width in the Hillside Overlay.

### 23C.24.020 Purposes

The purposes of this Chapter are to:

- A. Implement California Government Code Section 65852.2 and 65852.22.



- B. Increase overall supply and range of housing options in Berkeley.
- C. Expedite small-scale infill development.
- D. Support Housing Element goals of facilitating construction of Accessory Dwelling Units and increasing the number of housing units that are more affordable to Berkeley residents.
- E. Encourage development of Accessory Dwelling Units in zoning districts with compatible land uses and infrastructure.

23C.24.030 Permit Procedures

Zoning Certificates will be issued for Accessory Dwelling Units and Junior Accessory Dwelling Units per California Government Code Section 65852.2 and 65852.22.

Section 3. Votes Required, Immediate Effectiveness

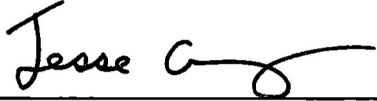
Based on the findings and evidence in Section 1 of this Urgency Ordinance, the Council determines that this Ordinance is necessary for the immediate preservation of the public health, peace and safety in accordance with Article XIV Section 93 of the Charter of the City of Berkeley and must therefore go into effect immediately. This ordinance shall go into effect immediately upon a four-fifths vote of the City Council, in satisfaction of the Charter of the City of Berkeley and Government Code Section 65858.

At a regular meeting of the Council of the City of Berkeley held on January 21, 2020, this Urgency Ordinance was adopted by the following vote:

: Bartlett, Davila, Droste, Hahn, Harrison, Kesarwani, Robinson, Wengraf, and Arreguin.

Noes: None.

Absent: None.  
Jesse Arreguin, Mayor




---

ATTEST:   
Mark Numainville, City Clerk

In effect: Immediately



Disaster and Fire Safety Commission

Date: July 20, 2020  
To: Planning Commission  
From: Disaster and Fire Safety Commission

Submitted by: Gradiva Couzin, Chair, Disaster and Fire Safety Commission

A handwritten signature in black ink, appearing to read 'G. Couzin'.

Subject: Accessory Dwelling Units (ADUs) Ordinance Amendments

#### SUMMARY

This memo responds to the request for feedback from the Disaster and Fire Safety Commission (DFSC) to the Planning Commission as requested by the City Council regarding a local ADU Ordinance with a focus on Fire Zones 2 and 3 and the Hillside Overlay that will replace the January 2020 Urgency Ordinance scheduled to expire in September 2020.

**The DFSC concludes that the prohibition on ADUs in Fire Zones 2 and 3 and the Hillside overlay (Option 1), should remain in effect**

- 1. with additional language to clarify that our response involves "new" ADUs in Fire Zones 2 and 3 and the Hillside Overlay; and**
- 2. the additional inclusion of two designated evacuation routes in Fire Zones 2 and 3 and the Hillside Overlay where ADUs would be prohibited; and**
- 3. a request that the Planning Commission join with the DFSC's recommendation for additional funding: for a citywide alert system; continued work to improve the City's pathway system; implementation of the Safe Passages program that includes definite and continued enforcement of existing code regarding parking restrictions that impede**

**emergency vehicle access; and an expanded vegetation management program.**

In arriving at our recommendations, the DFSC acknowledges that the suggestion to establish an individualized approval process would be preferable. However, that option is unavailable to cities throughout the State due to limitations of California law.

**BACKGROUND**

Members of the DFSC held a virtual Special Session on July 6, 2020 at 7:00 pm at which time they reviewed a staff report and presentation by Katrina Lapira, Assistant Planner, Land Use Planning Division. and Arlene Pearson, Secretary, Berkeley Planning Commission. Members of the public also participated in the meeting. An

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additional virtual Special DFSC Session was held on July 13, 2020 to determine recommendations to be made to the Planning Commission.

The issue, in brief:

- May 29, 2018: Council adopted an ordinance prohibiting ADUs in the Environmental Safety-Residential District (ES-R) and requiring discretionary review and approval by the Fire Department of ADUs in the Hillside Overlay (R1h).
- October 9, 2019: State law (AB 881) mandated a statewide streamlined ADU permitting approval process. It provided no protections for local fire hazard areas, prohibited discretionary review, and allowed only ministerial, i.e., over-the-counter review granted within 60 days. An amendment to this law was later approved that allowed local jurisdictions to prohibit ADUs in areas where their allowance would create an impact on traffic flow and public safety. This law as amended was effective January 1, 2020.
- December 10, 2019 : Council adopted an initial 45-day Urgency Ordinance to allow time to consider what would be needed to provide protections in Fire Zones 2 and 3. The extension was scheduled to expire on January 24, 2020.
- January 21, 2020: Council unanimously adopted an amendment to Berkeley Municipal Code Chapter 23C.24. extending limits on ADU development for a period of 10 months and 15 days pending further analysis and adoption of local regulations that ensure public safety in Fire Zones 2 and 3.
- July 6, 2020: Special Session of DFSC to discuss ADUs in Fire Zones 2 and 3 and the Hillside Overlay.

- July 13, 2020: Special Session of DFSC to determine comments regarding ADUs in Fire Zones 2 and 3 and the Hillside Overlay which would be sent to the Planning Commission. The DFSC understands that after receiving comments from the DFSC, and holding a public hearing, staff will draft Zoning Ordinance amendments for the Planning Commission to consider in their recommendations they will propose to the City Council before expiration of the extension in September.

## DISCUSSION

The July 6, 2020 Staff Memorandum from Ms. Lapira to the DFSC asks the DFSC Commission to consider three policy options that address potential health and safety hazards posed by development of ADUs in the hillside. These include:

1. Continue to prohibit all ADU development:

Existing prohibitions on ADUs in the Hillside Overlay and in the E-SR District would continue. Berkeley Municipal Code 23C.24 defines where existing provisions are currently allowed in Berkeley as follows:

Accessory Dwelling Units: Section 23C.24.010 Applicability of Regulations: The provisions of this Chapter apply to all lots that are zoned for residential use except 1) in the following zoning districts: Environmental Safety-Residential (ES- R), Manufacturing (M), Mixed Manufacturing (MM), Mixed Use-Light Industrial (MU-LI) and Unclassified (U); and 2) on a lot with frontage on a roadway with less than 26 feet in pavement width in the Hillside Overlay.

2. Allow only conversion of ADU development:

Conversion ADUs apply to the conversion of existing areas within a single-family dwelling, or in a legally built accessory structure. Conversions do not allow modification to building footprint/dimensions of legally built structures or buildings. Impacts through conversion would be assessed and protection of residential areas prioritized.

3. Allow only conversion with a set of objective standards which would be determined:

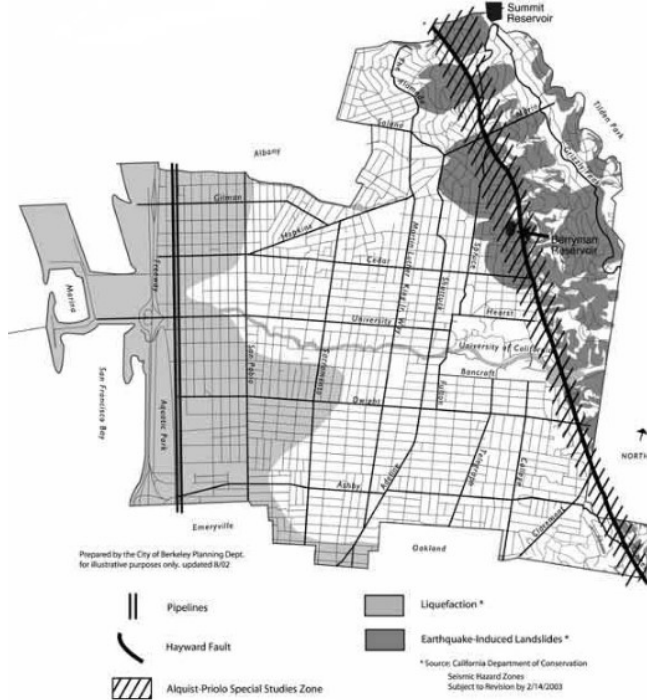
Same as above, but with objective standards that would exceed State standards where ADU development would otherwise be prohibited. ADUs would not be permitted unless objective standards related to fire safety were incorporated into the scope of the ADU project.

In considering each of the above options, there are four factors which must be addressed:

1. Geology:

Berkeley's General Plan which guides development decisions includes a Disaster Preparedness and Safety Element (DPSE). On December 10, 2019, the Council approved resolution 69,236-N.S. to adopt the five-year 2019 Local Hazard Mitigation Plan, to be incorporated into the General Plan as an appendix to the DPSE. In these documents, Earthquakes, Landslides (earthquake and rainfall triggered), and Wildland

and Urban Interface Fire are listed as "Likely" and "Catastrophic" in Fire Zones 2 and 3 and the Hillside Overlay.



The Hayward Fault runs south to north across Berkeley through the Hillside Overlay and Panoramic Way areas. Called the Alquist-Priolo Earthquake Zone, this area sits between other major faults, the San Andreas Fault to the west and the Rodgers Creek Fault to the east. Experts state that it isn't a question of "if" but "when" a major earthquake commonly referred to as the "Big One" will strike in the Bay Area. The U.S. Geologic Survey predicts a 72% probability of one or more magnitude 6.7 or greater earthquakes will strike in the San Francisco Bay Region between 2014 and 2043. The largest percentage predicted for any of the faults - 33% - is that it will occur on

the Hayward Fault during this time period. Berkeley can expect "lurch cracking" resulting in extensive fracturing of pavement, damage to sewer, gas, and water lines and landslides primarily in the hill areas, resulting in significant property damage, injury, and loss of life from this and the fires that often accompany earthquake damage. The map above (Figure 13 from the DPSE) shows the approximate location of areas vulnerable to this combination of hazards.

Geologists estimate that 45 to 65 percent of the landslide-susceptible areas will experience movement ranging from a few inches to 20 feet in an earthquake. It is further noted that most of Berkeley hillside development predates current best practices and codes making them vulnerable to the threat of landslides. This threat is affected by degree of slope, weather, improper grading, alteration of drainage patterns and careless removal of vegetation.

Following the October 1991 Berkeley/ Oakland Tunnel Fire which destroyed 3,500 homes, 2,000 automobiles, killed 25, injured 150 and caused \$3.4 billion in damages calculated in today's dollars, CALFIRE designated Fire Zones 2 and 3 in Berkeley. These

areas were given the highest rating of "very high severity" risk for wildfire. Our City's vulnerability is significantly expanded due to the combination of hazards that are clustered together within our designated fire zone areas.

Among the objectives listed in these plans which were adopted by the City Council, are to reduce the potential for loss of life, injury and economic damage from earthquakes, landslides and wildfires and to improve responder access and community evacuation in Fire Zones 2 and 3.

2. Climate Change:

Since 1991, a series of tragic California fires show a similar pattern of increased size, intensity and speed. An example being the November 2018 Camp Fire which destroyed the town of Paradise, CA. With an economic loss of around \$16.5 billion, the Camp Fire destroyed more than 18,000 structures and killed 85 people. On March 22, 2019, Governor Newsom declared a State of Emergency in California with regard to wildfire risk.

Wildfires have long been associated as starting from a combination of high wind speeds blowing from the northeast, high temperatures and low humidity, a situation referred to as "Diablo Winds." At one time, Diablo Winds occurred in the fall. With climate change this has shifted, and they are now expected to occur at any time of the year. These fires have been fueled by continuing long periods of drought and insect infestation which have promoted the build-up of fuel in the form of tinder dry brush and dead trees.

Development has contributed to this fuel build-up. Recent newspaper reports (July 10, East Bay Times) that the lack of rain this February combined with hot weather in June "has left vegetation in Northern California drier now than it has been in any July since the state's historic five-year drought from 2012 to 2016." The result being high fire risk over the next four or five months, or as one fire official says - this is the time of year when fires get bigger and more difficult to control. It is essential for Berkeley to enact as soon as possible an expanded, careful and rigorous program of vegetation management. This will be more challenging as it must be done within the reality of COVID-19 management.

3. Existing Development/Density:

Development in Fire Zones 2 and 3 and the Hills Overlay area is more dense than is found in most hill areas in other cities largely because development in Berkeley occurred on minimum lot sizes of 5,000 square feet or less. At one time, it was estimated that about 50% of all single-family zoning in Berkeley existed on these smaller lots. At that time, 90% of single-family zoning involved the Berkeley hills. In addition, flexible side setbacks resulted in houses being constructed more closely together. More housing in

smaller spaces, clustered tightly together adds to the problems of the fire spreading more rapidly and placing more people at risk. Adding ADUs to this picture further compounds the problems.

In 1983, the state approved SB 1534 allowing what was then called second units (known also as in-law apartments or "granny flats") in R-1 areas with a discretionary permit granted through the Zoning Adjustments Board. Parking for the second unit was to be provided on site. Because of the review process, which was often controversial, some number of people constructed second units without permit. The number of these illegal units is unknown, but it is commonly known that they exist, were built without permit so some may or may not fully meet code requirements, and some rented without paying the appropriate level of federal, state and local taxes. Second units are now considered as a component of ADUs. A current discussion is whether these older second units and subsequent ADUs should be placed under rent control regulation. This report does not take a position regarding rent control, but it does maintain that whether the Rent Board regulates them or not, such units which already exist should be "grandfathered in" and those built without a permit, should be legalized through inspection, and brought up to code. All, existing units should be subject to current COVID-19 related eviction regulations as part of the effort to prevent homelessness.

The number of housing units in the ES-R and Hill Overlay is not known. An attempt should be made to determine this factor and establish reliable density data. It should also be acknowledged that there are an unknown number of seniors and people with mobility challenges living in the ES-R and Hillside Overlay areas.

#### 4. Evacuation of Residents:

The estimation of approximate population composition in these hazard areas is important from the standpoint of understanding what services need to be present to reduce fatalities and ensure safe evacuation of these most vulnerable residents. While pathways are rightly included in evacuation planning, fleeing a fire on foot by the elderly, disabled and parents with small children who need to be carried is not a good option. Most of this group will require early evacuation by car and ultimately evacuation of most residents in the Fire Zones 2 and 3 and the Overlay area will leave by car which will have to be done over narrow, winding roads which are, at times, blocked by parked vehicles. Many have been advised to leave their homes early and seek shelter elsewhere during high risk fire periods and Power Safety Shut Offs, if they have the resources to do so. However, many, not just in the hills but throughout the City, will not have the resources to periodically leave their homes, so the DFSC recommends that the City should consider providing temporary shelter for the early evacuation of vulnerable residents in safer locations during these times.



It is extremely important to understand that a response to a wildfire emergency involves BOTH access to the fire by responding equipment and personnel AND egress from the area by fleeing residents. State law does not require replacement of parking for the primary building if an ADU replaces an existing garage, car port or covered parking structure. Even if replacement parking were required, ADUs generate cars that are additional to cars associated with the primary building. Additional cars end up frequently being parked on the street. More cars on the street further clog both access and egress traffic.

In a 12/3/2019 report, the DFSC Commission noted that the problem of emergency equipment access problems in the hills has been known for at least 41 years. Despite numerous recommendations, only a few narrow streets have had parking restrictions enacted. While to date, there is increased awareness of the problem by residents and subsequent cooperation, misunderstandings and complaints about inappropriate and dangerous parking are still occurring far too often. In a wildfire scenario, rapid evacuation of residents is necessary and access must be assured. Both directions - up and out - must be accommodated. Experience has indicated that no one can out-run a wildfire and prompt fire suppression efforts are essential to establishing control which helps protect the entire City. It is essential that steps be taken as soon as possible to enforce existing code regarding parking restrictions.

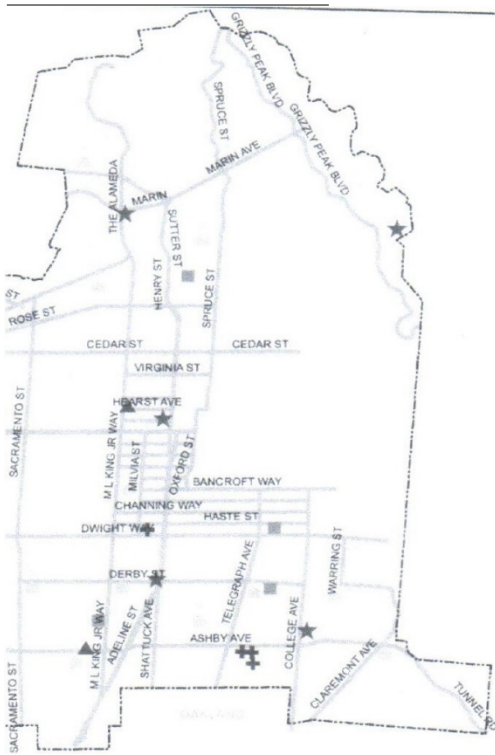
Option 1 as presented prohibits ADUs on streets that are less than 26 feet wide. A map indicating the location of such streets in the City is attached and the City has also produced a seven-page list of those streets by address. Most narrow streets are located in the hill areas, but there are a few in other parts of the City. In this report as requested, the DFSC considered only those streets in the ES-R and the Hillside Overlay. However, we recommend that the Planning Commission consider the other streets in the City that are less than 26 feet as a separate issue regarding ADUs, but in doing so, emergency vehicle access must be assured to those streets as well.

The DFSC is concerned, however, that designated evacuation routes have not been included for streets where ADUs should be prohibited, regardless of street width. Evacuation routes in the ES-R District and Hillside Overlay areas include: Marin Avenue, from The Circle to Grizzly Peak which is the most important and only east west evacuation route in the north hill area except for a very small portion of Cedar Street. Both of these streets are less than 26 feet wide so fall within the ADU prohibition guidelines. North south designated evacuation routes are parts of Spruce, Grizzly Peak Blvd (except for a portion at Fairlawn), are streets that are wider than 26 feet. The DFSC believes that all of Grizzly Peak and that portion of Spruce which are designated as evacuation routes should also fall within the ADU prohibited area. Because these streets

require two lanes of traffic - one for emergency vehicle traffic and one for fleeing residents, adding ADUs will increase on-street parking and hence hinder evacuation efforts in both directions. From any standpoint mass evacuation from Fire Zones 2 and 3 will be very difficult, given the population density, the speed of the wildfire and the lack of effective east west routes. Many people have died in their cars while fleeing from wildfires.

In discussions of this matter over the years, it has been said that so-called "pinch points" on otherwise adequate width streets that impede emergency vehicles should be recognized. If this is correct, such "pinch points" should be included in the area where ADUs are prohibited. These "pinch points" have not been sufficiently named for inclusion at this time, but continuation of the Safe Passage Program should identify them so parking restrictions can be enacted in the future.

**EMERGENCY ACCESS AND EVACUATION NETWORK**  
June 13, 2011



While important efforts such as Wildfire Evacuation Drills and initiation of the Safe Passages Program have been made within the last year, much remains to be done as soon as possible. Some important components of the work that needs to be done includes the following:

- Initiation of a citywide alert system, including a method for early evacuation and possible shelter for our most vulnerable residents throughout the City, during periods of high risk and power outages;
- Full funding of the Safe Passages

Program which seeks to work with residents in designating where parking must be restricted. This program was initiated, then referred to a later budget for consideration, then put on hold due to the COVID-19 pandemic. Safe Passages has been considered to be a pilot program. While some details might vary from time to time in its implementation, it must be officially recognized that its purpose is to identify and enforce restricting parking based on existing code in certain locations because it is an essential component of the City's fire safety actions. The Program must begin and continue wherever it is needed as without

such restrictions in place, the discussion of added density in high risk fire areas has little meaning;

- Funding to continue the work to create a network of safe paths throughout the City. See map attached for a list of Unbuilt Pathways in Districts 5 and 6. Pathways that are clear, with railings and lights, as appropriate, remain an important part of the City's evacuation planning.; and
- Funding for an increased vegetation management program that could proceed within the requirements necessitated by COVID-19 safety precautions.

Vegetation management is important for the whole City in that controlling a fire when and where it first starts protects the rest of the City as the wind direction will carry embers to start new fires in areas far from an initial fire, until the whole City is aflame. Fire officials are reporting that of this date, the State is at heightened risk of wildfire.

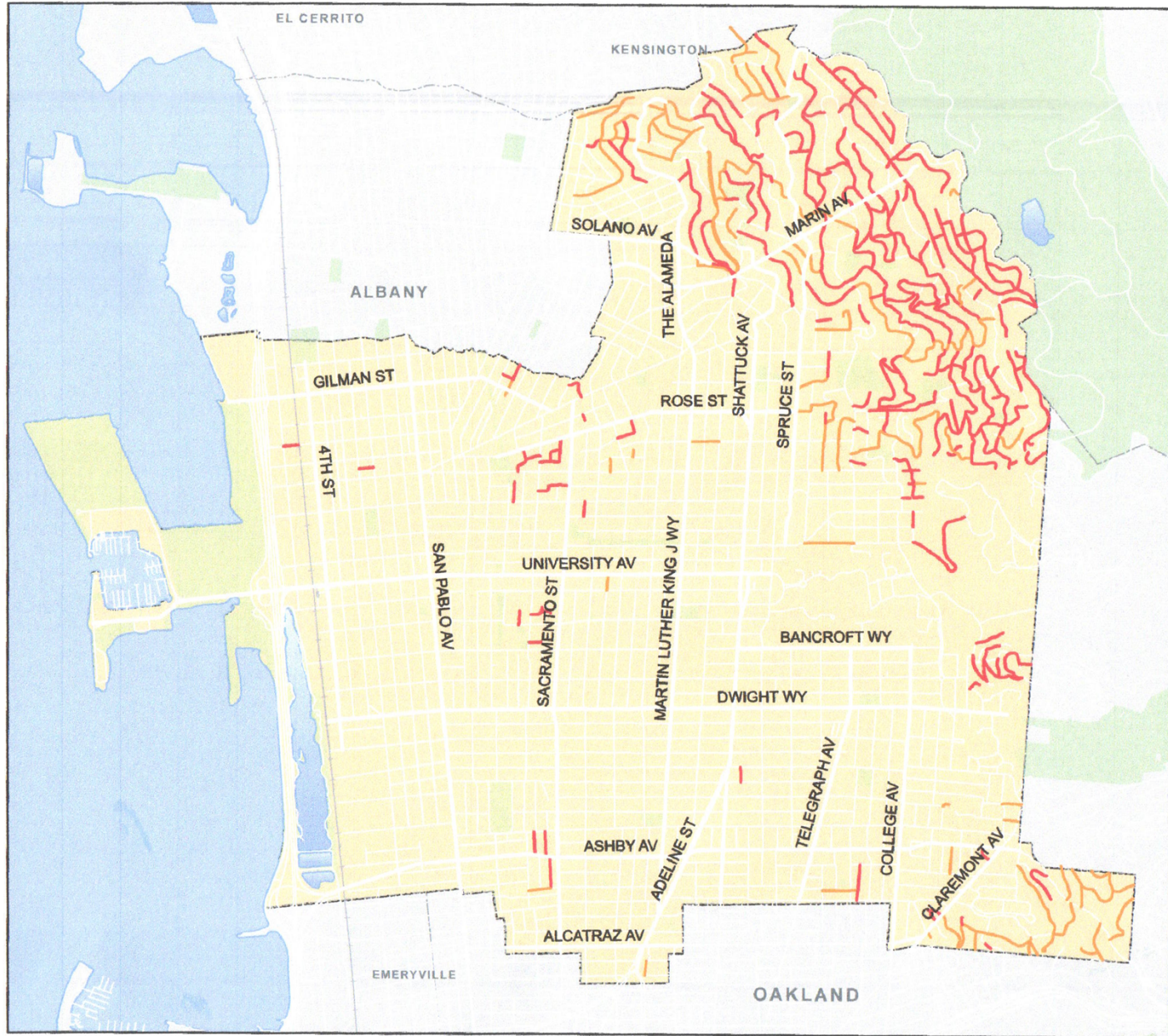
Additional funding is therefore an essential part of what needs to be set in place to ensure that we will save as many lives and protect property as is possible. In making this recommendation for additional funding, it should be noted that on October 15, 2020, the City Council adopted Resolution 69,147-N.S. making wildfire prevention and safety a top priority and that wildfire prevention and safety be addressed as the highest priority on the next updates to the City's General Plan, Climate Action Plan, Local Hazard Mitigation Plan, Resiliency Strategy, 2050 Vision and any other plans where it may be appropriate, and be reflected in City policies and allocation of resources.

A citywide ballot measure is in the process of being written. The DFSC has yet to receive any language to review.

## CONCLUSION

1. That the DFSC sends to the Planning Commission that we support Option 1 to continue existing prohibitions on new ADUs in the ES-R District and Hillside Overlay on
  - a. streets less than 26 feet wide, and
  - b. additionally on those positions of Grizzly Peak Boulevard and Spruce that are designated evacuation routes in the ES-R District and Hillside Overlay, and
  - c. additionally on streets of wider width where there are "pinch points" that will not allow emergency vehicle access.
2. That we leave to the Planning Commission the issue of additional ADUs on streets less than 26 feet that are not in the ES-R, Fire Zones or Hillside Overlay, but in so doing, recommend that these streets must also have unimpeded emergency vehicle access.
3. That we include in our response to the Planning Commission the request that they join us in recommending to the Council funding for a citywide alert system with consideration of special temporary funding for low income vulnerable individuals during high risk days and power outages, full funding for the Safe Passage Program for the purpose of immediate

and continued enforcement of existing code regarding parking restrictions wherever needed, and a more rigorous vegetation management program.



### FIRE ACCESS MAP

- Pavement Width Less than 24 ft
- Pavement Width Less than 26 ft
- Parks
- City Limits

This map is for reference purposes only.

Care was taken in the creation of this map, but it is provided "AS IS". Please contact the City of Berkeley to verify map information or to report any errors.

October 2, 2015



0 1,000 2,000 Feet



**CITY OF BERKELEY**  
Land Use Planning Division  
Dept of Planning & Development  
2120 Milvia Street, 2nd Floor  
Berkeley, CA 94704



California Department of Housing and  
Community Development

# Accessory Dwelling Unit Handbook



Where foundations begin

*Updated December 2020*



California Department of Housing and  
Community Development

# Accessory Dwelling Unit Handbook

*December 2020*



Where foundations begin

Table of Contents

**Understanding Accessory Dwelling Units (ADUs) and Their Importance.....3**

**Summary of Recent Changes to Accessory Dwelling Unit Laws.....5**

**Frequently Asked Questions: .....8**

    1. Legislative Intent .....8

    2. Zoning, Development and Other Standards.....9

        A) Zoning and Development Standards .....9

        B) Size Requirements..... 11

        C) Parking Requirements ..... 12

        D) Setbacks ..... 13

        E) Height Requirements ..... 13

        F) Bedrooms ..... 13

        G) Impact Fees ..... 14

        H) Conversion of Existing Space in Single Family, Accessory and Multifamily Structures and Other Statewide Permissible ADUs (Subdivision (e))..... 15

        I) Nonconforming Zoning Standards..... 16

        J) Renter and Owner-occupancy ..... 17

        K) Fire Sprinkler Requirements ..... 17

        L) Solar Panel Requirements ..... 17

    3. Junior Accessory Dwelling Units (JADUs) – Government Code Section 65852.22 ..... 18

    4. Manufactured Homes and ADUs..... 18

    5. ADUs and the Housing Element..... 19

    6. Homeowners Association ..... 20

    7. Enforcement ..... 20

    8. Other ..... 20

**Resources.....22**

    Attachment 1: Statutory Changes (Strikeout/Italics and Underline) .....23

    Attachment 2: State Standards Checklist.....37

    Attachment 3: Bibliography ..... 38



### Understanding Accessory Dwelling Units (ADUs) and Their Importance



California's housing production is not keeping pace with demand. In the last decade, less than half of the homes needed to keep up with the population growth were built. Additionally, new homes are often constructed away from job-rich areas. This lack of housing that meets people's needs is impacting affordability and causing average housing costs, particularly for renters in California, to rise significantly. As affordable housing becomes less accessible, people drive longer distances between housing they can afford and their workplace or pack themselves into smaller shared spaces, both of which reduce quality of life and produce negative

environmental impacts.

\*\*\*\*\*

Beyond traditional construction, widening the range of housing types can increase the housing supply and help more low-income Californians thrive. Examples of some of these housing types are Accessory Dwelling Units (ADUs - also referred to as second units, in-law units, casitas, or granny flats) and Junior Accessory Dwelling Units (JADUs).

#### **What is an ADU?**

An ADU is an accessory dwelling unit with complete independent living facilities for one or more persons and has a few variations:

- Detached: The unit is separated from the primary structure.
- Attached: The unit is attached to the primary structure.
- Converted Existing Space: Space (e.g., master bedroom, attached garage, storage area, or similar use, or an accessory structure) on the lot of the primary residence that is converted into an independent living unit.
- Junior Accessory Dwelling Unit (JADU): A specific type of conversion of existing space that is contained entirely within an existing or proposed single-family residence.

ADUs tend to be significantly less expensive to build and offer benefits that address common development barriers such as affordability and environmental quality. Because ADUs must be built on lots with existing or proposed housing, they do not require paying for new land, dedicated parking or other costly infrastructure required to build a new single-family home. Because they are contained inside existing single-family homes, JADUs require relatively modest renovations and are much more

affordable to complete. ADUs are often built with cost-effective one or two-story wood frames, which are also cheaper than other new homes. Additionally, prefabricated ADUs can be directly purchased and save much of the time and money that comes with new construction. ADUs can provide as much living space as apartments and condominiums and work well for couples, small families, friends, young people, and seniors.

Much of California's housing crisis comes from job-rich, high-opportunity areas where the total housing stock is insufficient to meet demand and exclusionary practices have limited housing choice and inclusion. Professionals and students often prefer living closer to jobs and amenities rather than spending hours commuting. Parents often want better access to schools and do not necessarily require single-family homes to meet their needs. There is a shortage of affordable units, and the units that are available can be out of reach for many people. To address our state's needs, homeowners can construct an ADU on their lot or convert an underutilized part of their home into a JADU. This flexibility benefits both renters and homeowners who can receive extra monthly rent income.

ADUs also give homeowners the flexibility to share independent living areas with family members and others, allowing seniors to age in place as they require more care, thus helping extended families stay together while maintaining privacy. The space can be used for a variety of reasons, including adult children who can pay off debt and save up for living on their own.

New policies are making ADUs even more affordable to build, in part by limiting the development impact fees and relaxing zoning requirements. A 2019 study from the Turner Center on Housing Innovation noted that one unit of affordable housing in the Bay Area costs about \$450,000. ADUs and JADUs can often be built at a fraction of that price and homeowners may use their existing lot to create additional housing, without being required to provide additional infrastructure. Often the rent generated from the ADU can pay for the entire project in a matter of years.

ADUs and JADUs are a flexible form of housing that can help Californians more easily access job-rich, highopportunity areas. By design, ADUs are more affordable and can provide additional income to homeowners. Local governments can encourage the development of ADUs and improve access to jobs, education, and services for many Californians.

#### Summary of Recent Changes to Accessory Dwelling Unit Laws



In Government Code Section 65852.150, the California Legislature found and declared that, among other things, allowing accessory dwelling units (ADUs) in zones that allow single-family and multifamily uses provides additional rental housing, and is an essential component in addressing California's housing needs. Over the years, ADU law has been revised to improve its effectiveness at creating more housing units. Changes to ADU laws effective January 1, 2021, further reduce barriers, better streamline approval processes, and expand capacity to

accommodate the development of ADUs and junior accessory dwelling units (JADUs).

ADUs are a unique opportunity to address a variety of housing needs and provide affordable housing options for family members, friends, students, the elderly, in-home health care providers, people with disabilities, and others. Further, ADUs offer an opportunity to maximize and integrate housing choices within existing neighborhoods.

Within this context, the California Department of Housing and Community Development (HCD) has prepared this guidance to assist local governments, homeowners, architects, and the general public in encouraging the development of ADUs. The following is a summary of recent legislation that amended ADU law: AB 3182 (2020) and SB 13, AB 68, AB 881, AB 587, AB 670, and AB 671 (2019). Please see Attachment 1 for the complete statutory changes for AB 3182 (2020) and SB 13, AB 68, AB 881, AB 587, AB 670, and AB 671 (2019).

### **AB 3182 (Ting)**

Chapter 198, Statutes of 2020 (Assembly Bill 3182) builds upon recent changes to ADU law (Gov. Code, § 65852.2 and Civil Code Sections 4740 and 4741) to further address barriers to the development and use of ADUs and JADUs.

This recent legislation, among other changes, addresses the following:

- States that an application for the creation of an ADU or JADU shall be *deemed approved* (not just subject to ministerial approval) if the local agency has not acted on the completed application within 60 days.
- Requires ministerial approval of an application for a building permit within a residential or mixed-use zone to create one ADU *and* one JADU per lot (not one or the other), within the proposed or existing singlefamily dwelling, if certain conditions are met.
- Provides for the rental or leasing of a separate interest ADU or JADU in a common interest development, notwithstanding governing documents that otherwise appear to prohibit renting or leasing of a unit, *and* without regard to the date of the governing documents.
- Provides for not less than 25 percent of the separate interest units within a common interest development be allowed as rental or leasable units.

### **AB 68 (Ting), AB 881 (Bloom), and SB 13 (Wieckowski)**

Chapter 653, Statutes of 2019 (Senate Bill 13, Section 3), Chapter 655, Statutes of 2019 (Assembly Bill 68, Section 2) and Chapter 659 (Assembly Bill 881, Section 1.5 and 2.5) build upon recent changes to ADU and JADU law (Gov. Code § 65852.2, 65852.22) and further address barriers to the development of ADUs and JADUs.

This legislation, among other changes, addresses the following:

- Prohibits local agencies from including in development standards for ADUs requirements on minimum lot size (Gov. Code, § 65852.2, subd. (a)(1)(B)(i)).
- Clarifies areas designated by local agencies for ADUs may be based on the adequacy of water and sewer services as well as impacts on traffic flow and public safety (Gov. Code, § 65852.2, subd. (a)(1)(A)).

- Eliminates all owner-occupancy requirements by local agencies for ADUs approved between January 1, 2020, and January 1, 2025 (Gov. Code, § 65852.2, subd. (a)(6)).
- Prohibits a local agency from establishing a maximum size of an ADU of less than 850 square feet, or 1,000 square feet if the ADU contains more than one bedroom and requires approval of a permit to build an ADU of up to 800 square feet (Gov. Code, § 65852.2, subds. (c)(2)(B) & (C)).
- Clarifies that when ADUs are created through the conversion of a garage, carport or covered parking structure, replacement of offstreet parking spaces cannot be required by the local agency (Gov. Code, § 65852.2, subd. (a)(1)(D)(xi)).
- Reduces the maximum ADU and JADU application review time from 120 days to 60 days (Gov. Code, § 65852.2, subd. (a)(3) and (b)).
- Clarifies that “public transit” includes various means of transportation that charge set fees, run on fixed routes and are available to the public (Gov. Code, § 65852.2, subd. (j)(10)).
- Establishes impact fee exemptions and limitations based on the size of the ADU. ADUs up to 750 square feet are exempt from impact fees (Gov. Code § 65852.2, subd. (f)(3)); ADUs that are 750 square feet or larger may be charged impact fees but only such fees that are proportional in size (by square foot) to those for the primary dwelling unit (Gov. Code, § 65852.2, subd. (f)(3)).
- Defines an “accessory structure” to mean a structure that is accessory or incidental to a dwelling on the same lot as the ADU (Gov. Code, § 65852.2, subd. (j)(2)).
- Authorizes HCD to notify the local agency if HCD finds that their ADU ordinance is not in compliance with state law (Gov. Code, § 65852.2, subd. (h)(2)).
- Clarifies that a local agency may identify an ADU or JADU as an adequate site to satisfy Regional Housing Needs Allocation (RHNA) housing needs (Gov. Code, §§ 65583.1, subd. (a), and 65852.2, subd. (m)).
- Permits JADUs even where a local agency has not adopted an ordinance expressly authorizing them (Gov. Code, § 65852.2, subds. (a)(3), (b), and (e)).
- Allows a permitted JADU to be constructed within the walls of the proposed or existing single-family residence and eliminates the required inclusion of an existing bedroom or an interior entry into the singlefamily residence (Gov. Code § 65852.22, subd. (a)(4); former Gov. Code § 65852.22, subd. (a)(5)).
- Requires, upon application and approval, a local agency to delay enforcement against a qualifying substandard ADU for five (5) years to allow the owner to correct the violation, so long as the violation is not a health and safety issue, as determined by the enforcement agency (Gov. Code, § 65852.2, subd. (n); Health & Safety Code, § 17980.12).

**AB 587 (Friedman), AB 670 (Friedman), and AB 671 (Friedman)**

In addition to the legislation listed above, AB 587 (Chapter 657, Statutes of 2019), AB 670 (Chapter 178, Statutes of 2019), and AB 671 (Chapter 658, Statutes of 2019) also have an impact on state ADU law,

particularly through Health and Safety Code Section 17980.12. These pieces of legislation, among other changes, address the following:

- AB 587 creates a narrow exemption to the prohibition for ADUs to be sold or otherwise conveyed separately from the primary dwelling by allowing deed-restricted sales to occur if the local agency adopts an ordinance. To qualify, the primary dwelling and the ADU are to be built by a qualified nonprofit corporation whose mission is to provide units to low-income households (Gov. Code, § 65852.26).
- AB 670 provides that covenants, conditions and restrictions (CC&Rs) that either effectively prohibit or unreasonably restrict the construction or use of an ADU or JADU on a lot zoned for single-family residential use are void and unenforceable (Civ. Code, § 4751).
- AB 671 requires local agencies' housing elements to include a plan that incentivizes and promotes the creation of ADUs that can offer affordable rents for very low, low-, or moderate-income households and requires HCD to develop a list of state grants and financial incentives in connection with the planning, construction and operation of affordable ADUs (Gov. Code, § 65583; Health & Safety Code, § 50504.5).

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## Frequently Asked Questions:

# Accessory Dwelling Units<sup>1</sup>

## 1. Legislative Intent

### a. Should a local ordinance encourage the development of accessory dwelling units?

Yes. Pursuant to Government Code Section 65852.150, the California Legislature found and declared that, among other things, California is facing a severe housing crisis and ADUs are a valuable form of housing that meets the needs of family members, students, the elderly, in-home health care providers, people with disabilities and others. Therefore, ADUs are an essential component of California's housing supply.

ADU law and recent changes intend to address barriers, streamline approval,

### Government Code 65852.150:

(a) *The Legislature finds and declares all of the following:*

- (1) *Accessory dwelling units are a valuable form of housing in California.*
  - (2) *Accessory dwelling units provide housing for family members, students, the elderly, in-home health care providers, the disabled, and others, at below market prices within existing neighborhoods.*
  - (3) *Homeowners who create accessory dwelling units benefit from added income, and an increased sense of security.*
  - (4) *Allowing accessory dwelling units in single-family or multifamily residential zones provides additional rental housing stock in California.*
  - (5) *California faces a severe housing crisis.*
  - (6) *The state is falling far short of meeting current and future housing demand with serious consequences for the state's economy, our ability to build green infill consistent with state greenhouse gas reduction goals, and the well-being of our citizens, particularly lower and middle-income earners.*
  - (7) *Accessory dwelling units offer lower cost housing to meet the needs of existing and future residents within existing neighborhoods, while respecting architectural character.*
  - (8) *Accessory dwelling units are, therefore, an essential component of California's housing supply.*
- (b) *It is the intent of the Legislature that an accessory dwelling unit ordinance adopted by a local agency has the effect of providing for the creation of accessory dwelling units and that provisions in this ordinance relating to matters including unit size, parking, fees, and other requirements, are not so arbitrary, excessive, or burdensome so as to unreasonably restrict the ability of homeowners to create accessory dwelling units in zones in which they are authorized by local ordinance.*

<sup>1</sup> Note: Unless otherwise noted, the Government Code section referenced is 65852.2.

and expand potential capacity for ADUs, recognizing their unique importance in addressing California's housing needs. The preparation, adoption, amendment, and implementation of local ADU ordinances must be carried out consistent with Government Code, Section 65852.150 and must not unduly constrain the creation of ADUs. Local governments adopting ADU ordinances should carefully weigh the adoption of zoning, development standards, and other provisions for impacts on the development of ADUs.

In addition, ADU law is the statutory minimum requirement. Local governments may elect to go beyond this statutory minimum and further the creation of ADUs. Many local governments have embraced the importance of ADUs as an important part of their overall housing policies and have pursued innovative strategies. (Gov. Code, § 65852.2, subd. (g)).

## 2. Zoning, Development and Other Standards

### **A) Zoning and Development Standards**

- **Are ADUs allowed jurisdiction wide?**

No. ADUs proposed pursuant to subdivision (e) must be considered in any residential or mixed-use zone. For other ADUs, local governments may, by ordinance, designate areas in zones where residential uses are permitted that will also permit ADUs. However, any limits on where ADUs are permitted may only be based on the adequacy of water and sewer service, and the impacts on traffic flow and public safety. Further, local governments may not preclude the creation of ADUs altogether, and any limitation should be accompanied by detailed findings of fact explaining why ADU limitations are required and consistent with these factors.

Examples of public safety include severe fire hazard areas and inadequate water and sewer service and includes cease and desist orders. Impacts on traffic flow should consider factors like lesser car ownership rates for ADUs and the potential for ADUs to be proposed pursuant to Government Code section 65852.2, subdivision (e). Finally, local governments may develop alternative procedures, standards, or special conditions with mitigations for allowing ADUs in areas with potential health and safety concerns. (Gov. Code, § 65852.2, subd. (e))

Residential or mixed-use zone should be construed broadly to mean any zone where residential uses are permitted by-right or by conditional use.

- **Can a local government apply design and development standards?**

Yes. A local government may apply development and design standards that include, but are not limited to, parking, height, setback, landscape, architectural review, maximum size of a unit, and

standards that prevent adverse impacts on any real property that is listed in the California Register of Historic Resources.

However, these standards shall be sufficiently objective to allow ministerial review of an ADU. (Gov. Code, § 65852.2, subd. (a)(1)(B)(i))

ADUs created under subdivision (e) of Government Code 65852.2 shall not be subject to design and development standards except for those that are noted in the subdivision.

What does objective mean?

“objective zoning standards” and “objective design review standards” mean standards that involve no personal or subjective judgment by a public official and are uniformly verifiable by reference to an external and uniform benchmark or criterion available and knowable by both the development applicant or proponent and the public official prior to submittal. Gov Code § 65913.4, subd. (a)(5)

ADUs that do not meet objective and ministerial development and design standards may still be permitted through an ancillary discretionary process if the applicant chooses to do so. Some jurisdictions with compliant ADU ordinances apply additional processes to further the creation of ADUs that do not otherwise comply with the minimum standards necessary for ministerial review. Importantly, these processes are intended to provide additional opportunities to create ADUs that would not otherwise be permitted, and a discretionary process may not be used to review ADUs that are fully compliant with ADU law. Examples of these processes include areas where additional health and safety concerns must be considered, such as fire risk.

- **Can ADUs exceed general plan and zoning densities?**

Yes. An ADU is an accessory use for the purposes of calculating allowable density under the general plan and zoning that does not count toward the allowable density. For example, if a zoning district allows one unit per 7,500 square feet, then an ADU would not be counted as an additional unit. Further, local governments could elect to allow more than one ADU on a lot, and ADUs are automatically a residential use deemed consistent with the general plan and zoning. (Gov. Code, § 65852.2, subd. (a)(1)(C).)

- **Are ADUs permitted ministerially?**

Yes. ADUs must be considered, approved, and permitted ministerially, without discretionary action. Development and other decision-making standards must be sufficiently objective to allow for ministerial review. Examples include numeric and fixed standards such as heights or setbacks, or design standards such as colors or materials. Subjective standards require judgement and can be interpreted in multiple ways such as privacy, compatibility with neighboring properties or promoting harmony and balance in the community; subjective standards shall not be imposed for ADU development. Further, ADUs must not be subject to a hearing or any ordinance regulating the issuance of variances or special use permits and must be considered ministerially. (Gov. Code, § 65852.2, subd. (a)(3).)

- **Can I create an ADU if I have multiple detached dwellings on a lot?**



Yes. A lot where there are currently multiple detached single-family dwellings is eligible for creation of one ADU per lot by converting space within the proposed or existing space of a single-family dwelling or existing structure or a new construction detached ADU subject to certain development standards.

- **Can I build an ADU in a historic district, or if the primary residence is subject to historic preservation?**

Yes. ADUs are allowed within a historic district, and on lots where the primary residence is subject to historic preservation. State ADU law allows for a local agency to impose standards that prevent adverse impacts on any real property that is listed in the California Register of Historic Resources. However, these standards do not apply to ADUs proposed pursuant to Government Code section 65852.2, subdivision (e).

As with non-historic resources, a jurisdiction may impose objective and ministerial standards that are sufficiently objective to be reviewed ministerially and do not unduly burden the creation of ADUs. Jurisdictions are encouraged to incorporate these standards into their ordinance and submit these standards along with their ordinance to HCD. (Gov. Code, § 65852.2, subds. (a)(1)(B)(i) & (a)(5).)

## **B) Size Requirements**

- **Is there a minimum lot size requirement?**

No. While local governments may impose standards on ADUs, these standards shall not include minimum lot size requirements. Further, lot coverage requirements cannot preclude the creation of a statewide exemption ADU (800 square feet ADU with a height limitation of 16 feet and 4 feet side and rear yard setbacks). If lot coverage requirements do not allow such an ADU, an automatic exception or waiver should be given to appropriate development standards such as lot coverage, floor area or open space requirements. Local governments may continue to enforce building and health and safety standards and may consider design, landscape, and other standards to facilitate compatibility.

What is a statewide exemption ADU?

A statewide exemption ADU is an ADU of up to 800 square feet, 16 feet in height, as potentially limited by a local agency, and with 4 feet side and rear yard setbacks. ADU law requires that no lot coverage, floor area ratio, open space, or minimum lot size will preclude the construction of a statewide exemption ADU. Further, ADU law allows the construction of a detached new construction statewide exemption ADU to be combined on the same lot with a JADU in a single-family residential zone. In addition, ADUs are allowed in any residential or mixed uses regardless of zoning and development standards imposed in an ordinance. See more discussion below.

- **Can minimum and maximum unit sizes be established for ADUs?**

Yes. A local government may, by ordinance, establish minimum and maximum unit size requirements for both attached and detached ADUs. However, maximum unit size requirements must be at least 850 square feet and 1,000 square feet for ADUs with more than one bedroom. For local agencies without an ordinance, maximum unit sizes are 1,200 square feet for a new detached ADU and up to 50 percent of the floor area of the existing primary dwelling for an

attached ADU (at least 800 square feet). Finally, the local agency must not establish by ordinance a minimum square footage requirement that prohibits an efficiency unit, as defined in Health and Safety Code section 17958.1.

The conversion of an existing accessory structure or a portion of the existing primary residence to an ADU is not subject to size requirements. For example, an existing 3,000 square foot barn converted to an ADU would not be subject to the size requirements, regardless if a local government has an adopted ordinance.

Should an applicant want to expand an accessory structure to create an ADU beyond 150 square feet, this ADU would be subject to the size maximums outlined in state ADU law, or the local agency's adopted ordinance.

- **Can a percentage of the primary dwelling be used for a maximum unit size?**

Yes. Local agencies may utilize a percentage (e.g., 50 percent) of the primary dwelling as a maximum unit size for attached or detached ADUs but only if it does not restrict an ADU's size to less than the standard of at least 850 square feet (or at least 1000 square feet for ADUs with more than one bedroom). Local agencies must not, by ordinance, establish any other minimum or maximum unit sizes, including based on a percentage of the primary dwelling, that precludes a statewide exemption ADU. Local agencies utilizing percentages of the primary dwelling as maximum unit sizes could consider multi-pronged standards to help navigate these requirements (e.g., shall not exceed 50 percent of the dwelling or 1,000 square feet, whichever is greater).

- **Can maximum unit sizes exceed 1,200 square feet for ADUs?**

Yes. Maximum unit sizes, by ordinance, can exceed 1,200 square feet for ADUs. ADU law does not limit the authority of local agencies to adopt less restrictive requirements for the creation of ADUs (Gov. Code, § 65852.2, subd. (g)).

Larger unit sizes can be appropriate in a rural context or jurisdictions with larger lot sizes and is an important approach to creating a full spectrum of ADU housing choices.

### C) Parking Requirements

- **Can parking requirements exceed one space per unit or bedroom?**

No. Parking requirements for ADUs shall not exceed one parking space per unit or bedroom, whichever is less. These spaces may be provided as tandem parking on a driveway. Guest parking spaces shall not be required for ADUs under any circumstances.

What is Tandem Parking?

Tandem parking means two or more automobiles that are parked on a driveway or in any other location on a lot, lined up behind one another. (Gov. Code, § 65852.2, subs. (a)(1)(D)(x)(I) and (j)(11).)

Local agencies may choose to eliminate or reduce parking requirements for ADUs such as requiring zero or half a parking space per each ADU.

- **Is flexibility for siting parking required?**

Yes. Local agencies should consider flexibility when siting parking for ADUs. Offstreet parking spaces for the ADU shall be permitted in setback areas in locations determined by the local agency or through tandem parking, unless specific findings are made. Specific findings must be based on specific site or regional topographical or fire and life safety conditions.

When a garage, carport, or covered parking structure is demolished in conjunction with the construction of an ADU, or converted to an ADU, the local agency shall not require that those offstreet parking spaces for the primary unit be replaced. (Gov. Code, § 65852.2, subd. (a)(D)(xi).)

- **Can ADUs be exempt from parking?**

Yes. A local agency shall not impose ADU parking standards for any of the following, pursuant to Government Code section 65852.2, subdivisions (d)(1-5) and (j)(10).

- (1) Accessory dwelling unit is located within one-half mile walking distance of public transit.
- (2) Accessory dwelling unit is located within an architecturally and historically significant historic district.
- (3) Accessory dwelling unit is part of the proposed or existing primary residence or an accessory structure.
- (4) When on-street parking permits are required but not offered to the occupant of the accessory dwelling unit.
- (5) When there is a car share vehicle located within one block of the accessory dwelling unit.

*Note: For the purposes of state ADU law, a jurisdiction may use the designated areas where a car share vehicle may be accessed. Public transit is any location where an individual may access buses, trains, subways and other forms of transportation that charge set fares, run on fixed routes and are available to the general public. Walking distance is defined as the pedestrian shed to reach public transit. Additional parking requirements to avoid impacts to public access may be required in the coastal zone.*

## D) Setbacks

- **Can setbacks be required for ADUs?**

Yes. A local agency may impose development standards, such as setbacks, for the creation of ADUs. Setbacks may include front, corner, street, and alley setbacks. Additional setback requirements may be required in the coastal zone if required by a local coastal program. Setbacks may also account for utility easements or recorded setbacks. However, setbacks must not unduly constrain the creation of ADUs and cannot be required for ADUs proposed pursuant

to subdivision (e). Further, a setback of no more than four feet from the side and rear lot lines shall be required for an attached or detached ADU. (Gov. Code, § 65852.2, subd. (a)(1)(D)(vii).)

A local agency may also allow the expansion of a detached structure being converted into an ADU when the existing structure does not have four-foot rear and side setbacks. A local agency may also allow the expansion area of a detached structure being converted into an ADU to have no setbacks, or setbacks of less than four feet, if the existing structure has no setbacks, or has setbacks of less than four feet. A local agency shall not require setbacks of more than four feet for the expanded area of a detached structure being converted into an ADU.

A local agency may still apply front yard setbacks for ADUs, but front yard setbacks cannot preclude a statewide exemption ADU and must not unduly constrain the creation of all types of ADUs. (Gov. Code, § 65852.2, subd. (c).)

## E) Height Requirements

- **Is there a limit on the height of an ADU or number of stories?**

Not in state ADU law, but local agencies may impose height limits provided that the limit is no less than 16 feet. (Gov. Code, § 65852.2, subd. (a)(1)(B)(i).)

## F) Bedrooms

- **Is there a limit on the number of bedrooms?**

State ADU law does not allow for the limitation on the number of bedrooms of an ADU. A limit on the number of bedrooms could be construed as a discriminatory practice towards protected classes, such as familial status, and would be considered a constraint on the development of ADUs.

## G) Impact Fees

- **Can impact fees be charged for an ADU less than 750 square feet?**

No. An ADU is exempt from incurring impact fees from local agencies, special districts, and water corporations if less than 750 square feet. Should an ADU be 750 square feet or larger, impact fees shall be charged proportionately in relation to the square footage of the ADU to the square footage of the primary dwelling unit.

What is "Proportionately"?

"Proportionately" is some amount that corresponds to a total amount, in this case, an impact fee for a single-family dwelling. For example, a 2,000 square foot primary dwelling with a proposed 1,000 square foot ADU could result in 50 percent of the impact fee that would be charged for a new primary dwelling on the same site. In all cases, the impact fee for the ADU must be less than the primary dwelling. Otherwise, the fee is not calculated proportionately. When utilizing proportions, careful consideration should be given to the impacts on costs, feasibility, and ultimately, the creation of ADUs. In the case of the example above, anything greater than 50 percent of the primary dwelling could be considered a constraint on the development of ADUs.

For purposes of calculating the fees for an ADU on a lot with a multifamily dwelling, the proportionality shall be based on the average square footage of the units within that multifamily dwelling structure. For ADUs converting existing space with a 150 square foot expansion, a total ADU square footage over 750 square feet could trigger the proportionate fee requirement. (Gov. Code, § 65852.2, subd. (f)(3)(A).)

- **Can local agencies, special districts or water corporations waive impact fees?**

Yes. Agencies can waive impact and any other fees for ADUs. Also, local agencies may also use fee deferrals for applicants.

- **Can school districts charge impact fees?**

Yes. School districts are authorized but do not have to levy impact fees for ADUs greater than 500 square feet pursuant to Section 17620 of the Education Code. ADUs less than 500 square feet are not subject to school impact fees. Local agencies are encouraged to coordinate with school districts to carefully weigh the importance of promoting ADUs, ensuring appropriate nexus studies and appropriate fees to facilitate construction or reconstruction of adequate school facilities.

- **What types of fees are considered impact fees?**

Impact fees charged for the construction of ADUs must be determined in accordance with the Mitigation Fee Act and generally include any monetary exaction that is charged by a local agency in connection with the approval of an ADU, including impact fees, for the purpose of defraying all or a portion of the cost of public facilities relating to the ADU. A local agency, special district or water corporation shall not consider ADUs as a new residential use for the purposes of calculating connection fees or capacity charges for utilities, including water and sewer services. However, these provisions do not apply to ADUs that are constructed concurrently with a new single-family home. (Gov. Code, §§ 65852.2, subd. (f), and 66000)

- **Can I still be charged water and sewer connection fees?**

ADUs converted from existing space and JADUs shall not be considered by a local agency, special district or water corporation to be a new residential use for purposes of calculating connection fees or capacity charges for utilities, unless constructed with a new single-family dwelling. The connection fee or capacity charge shall be proportionate to the burden of the proposed ADU, based on its square footage or plumbing fixtures as compared to the primary dwelling. State ADU law does not cover monthly charge fees. (Gov. Code, § 65852.2, subd. (f)(2)(A).)

## **H) Conversion of Existing Space in Single Family, Accessory and Multifamily Structures and Other Statewide Permissible ADUs (Subdivision (e))**

- **Are local agencies required to comply with subdivision (e)?**

Yes. All local agencies must comply with subdivision (e). This subdivision requires the ministerial approval of ADUs within a residential or mixed-use zone. The subdivision creates four categories of ADUs that should not be subject to other specified areas of ADU law, most notably zoning and development standards. For example, ADUs under this subdivision should not have

to comply with lot coverage, setbacks, heights, and unit sizes. However, ADUs under this subdivision must meet the building code and health and safety requirements. The four categories of ADUs under subdivision (e) are:

- b. One ADU and one JADU are permitted per lot within the existing or proposed space of a single-family dwelling, or a JADU within the walls of the single family residence, or an ADU within an existing accessory structure, that meets specified requirements such as exterior access and setbacks for fire and safety.**
- c. One detached new construction ADU that does not exceed four-foot side and rear yard setbacks. This ADU may be combined on the same lot with a JADU and may be required to meet a maximum unit size requirement of 800 square feet and a height limitation of 16 feet.**
- d. Multiple ADUs within the portions of multifamily structures that are not used as livable space. Local agencies must allow at least one of these types of ADUs and up to 25 percent of the existing multifamily structures.**
- e. Up to two detached ADUs on a lot that has existing multifamily dwellings that are subject to height limits of 16 feet and 4-foot rear and side yard setbacks.**

The above four categories are not required to be combined. For example, local governments are not required to allow (a) and (b) together or (c) and (d) together. However, local agencies may elect to allow these ADU types together.

Local agencies shall allow at least one ADU to be created within the non-livable space within multifamily dwelling structures, or up to 25 percent of the existing multifamily dwelling units within a structure and may also allow not more than two ADUs on the lot detached from the multifamily dwelling structure. New detached units are subject to height limits of 16 feet and shall not be required to have side and rear setbacks of more than four feet.

The most common ADU that can be created under subdivision (e) is a conversion of proposed or existing space of a single-family dwelling or accessory structure into an ADU, without any prescribed size limitations, height, setback, lot coverage, architectural review, landscape, or other development standards. This would enable the conversion of an accessory structure, such as a 2,000 square foot garage, to an ADU without any additional requirements other than compliance with building standards for dwellings. These types of ADUs are also eligible for a 150 square foot expansion (see discussion below).

ADUs created under subdivision (e) shall not be required to provide replacement or additional parking. Moreover, these units shall not, as a condition for ministerial approval, be required to correct any existing or created nonconformity. Subdivision (e) ADUs shall be required to be rented for terms longer than 30 days, and only require fire sprinklers if fire sprinklers are required for the primary residence. These ADUs shall not be counted as units when calculating density for the general plan and are not subject to owneroccupancy.

- **Can I convert my accessory structure into an ADU?**

Yes. The conversion of garages, sheds, barns, and other existing accessory structures, either attached or detached from the primary dwelling, into ADUs is permitted and promoted through the state ADU law. These conversions of accessory structures are not subject to any additional development standard, such as unit size, height, and lot coverage requirements, and shall be from existing space that can be made safe under building and safety codes. A local agency should not set limits on when the structure was created, and the structure must meet standards for health and safety. Finally, local governments may also consider the conversion of illegal existing space and could consider alternative building standards to facilitate the conversion of existing illegal space to minimum life and safety standards.

- **Can an ADU converting existing space be expanded?**

Yes. An ADU created within the existing or proposed space of a single-family dwelling or accessory structure can be expanded beyond the physical dimensions of the structure. In addition, an ADU created within an existing accessory structure may be expanded up to 150 square feet without application of local development standards, but this expansion shall be limited to accommodating ingress and egress. An example of where this expansion could be applicable is for the creation of a staircase to reach a second story ADU. These types of ADUs shall conform to setbacks sufficient for fire and safety.

A local agency may allow for an expansion beyond 150 square feet, though the ADU would have to comply with the size maximums as per state ADU law, or a local agency's adopted ordinance.

As a JADU is limited to being created within the walls of a primary residence, this expansion of up to 150 square feet does not pertain to JADUs.

## I) Nonconforming Zoning Standards

- **Does the creation of an ADU require the applicant to carry out public improvements?**

No physical improvements shall be required for the creation or conversion of an ADU. Any requirement to carry out public improvements is beyond what is required for the creation of an ADU, as per state law. For example, an applicant shall not be required to improve sidewalks, carry out street improvements, or access improvements to create an ADU. Additionally, as a condition for ministerial approval of an ADU, an applicant shall not be required to correct nonconforming zoning conditions. (Gov. Code, § 65852.2, subd. (e)(2).)

## J) Renter and Owner-occupancy

- **Are rental terms required?**

Yes. Local agencies may require that the property be used for rentals of terms longer than 30 days. ADUs permitted ministerially, under subdivision (e), shall be rented for terms longer than 30 days. (Gov. Code, § 65852.2, subds. (a)(6) & (e)(4).)

- **Are there any owner-occupancy requirements for ADUs?**

No. Prior to recent legislation, ADU laws allowed local agencies to elect whether the primary dwelling or ADU was required to be occupied by an owner. The updates to state ADU law removed the owner-occupancy allowance for newly created ADUs effective January 1, 2020. The new owner-occupancy exclusion is set to expire on December 31, 2024. Local agencies may not retroactively require owner occupancy for ADUs permitted between January 1, 2020, and December 31, 2024.

However, should a property have both an ADU and JADU, JADU law requires owner-occupancy of either the newly created JADU, or the single-family residence. Under this specific circumstance, a lot with an ADU would be subject to owner-occupancy requirements. (Gov. Code, § 65852.2, subd. (a)(2).)

## **K) Fire Sprinkler Requirements**

- **Are fire sprinklers required for ADUs?**

No. Installation of fire sprinklers may not be required in an ADU if sprinklers are not required for the primary residence. For example, a residence built decades ago would not have been required to have fire sprinklers installed under the applicable building code at the time. Therefore, an ADU created on this lot cannot be required to install fire sprinklers. However, if the same primary dwelling recently undergoes significant remodeling and is now required to have fire sprinklers, any ADU created after that remodel must likewise install fire sprinklers. (Gov. Code, § 65852.2, subds. (a)(1)(D)(xii) and (e)(3).)

Please note, for ADUs created on lots with multifamily residential structures, the entire residential structure shall serve as the “primary residence” for the purposes of this analysis. Therefore, if the multifamily structure is served by fire sprinklers, the ADU can be required to install fire sprinklers.

## **L) Solar Panel Requirements**

- **Are solar panels required for new construction ADUs?**

Yes, newly constructed ADUs are subject to the Energy Code requirement to provide solar panels if the unit(s) is a newly constructed, non-manufactured, detached ADU. Per the California Energy Commission (CEC), the panels can be installed on the ADU or on the primary dwelling unit. ADUs that are constructed within existing space, or as an addition to existing homes, including detached additions where an existing detached building is converted from non-residential to residential space, are not subject to the Energy Code requirement to provide solar panels.

Please refer to the CEC on this matter. For more information, see the CEC’s website [www.energy.ca.gov](http://www.energy.ca.gov).



You may email your questions to: [title24@energy.ca.gov](mailto:title24@energy.ca.gov), or contact the Energy Standards Hotline at 800-772-3300. CEC memos can also be found on HCD's website at <https://www.hcd.ca.gov/policyresearch/AccessoryDwellingUnits.shtml>.

### 3. Junior Accessory Dwelling Units (JADUs) – Government Code Section 65852.22

- **Are two JADUs allowed on a lot?**

No. A JADU may be created on a lot zoned for single-family residences with one primary dwelling. The JADU may be created within the walls of the proposed or existing single-family residence, including attached garages, as attached garages are considered within the walls of the existing single-family residence. Please note that JADUs created in the attached garage are not subject to the same parking protections as ADUs and could be required by the local agency to provide replacement parking.

JADUs are limited to one per residential lot with a single-family residence. Lots with multiple detached single-family dwellings are not eligible to have JADUs. (Gov. Code, § 65852.22, subd. (a)(1).)

- **Are JADUs allowed in detached accessory structures?**

No, JADUs are not allowed in accessory structures. The creation of a JADU must be within the singlefamily residence. As noted above, attached garages are eligible for JADU creation. The maximum size for a JADU is 500 square feet. (Gov. Code, § 65852.22, subds. (a)(1), (a)(4), and (h)(1).)

- **Are JADUs allowed to be increased up to 150 square feet when created within an existing structure?**

No. Only ADUs are allowed to add up to 150 square feet “beyond the physical dimensions of the existing accessory structure” to provide for ingress. (Gov. Code, § 65852.2, subd. (e)(1)(A)(i).)

This provision extends only to ADUs and excludes JADUs. A JADU is required to be created within the single-family residence.

- **Are there any owner-occupancy requirements for JADUs?**

Yes. There are owner-occupancy requirements for JADUs. The owner must reside in either the remaining portion of the primary residence, or in the newly created JADU. (Gov. Code, § 65852.22, subd. (a)(2).)

### 4. Manufactured Homes and ADUs

- **Are manufactured homes considered to be an ADU?**

Yes. An ADU is any residential dwelling unit with independent facilities and permanent provisions for living, sleeping, eating, cooking and sanitation. An ADU includes a manufactured home (Health & Saf. Code, § 18007).

Health and Safety Code section 18007, subdivision (a): “**Manufactured home**,” for the purposes of this part, means a structure that was constructed on or after June 15, 1976, is

transportable in one or more sections, is eight body feet or more in width, or 40 body feet or more in length, in the traveling mode, or, when erected on site, is 320 or more square feet, is built on a permanent chassis and designed to be used as a single-family dwelling with or without a foundation when connected to the required utilities, and includes the plumbing, heating, air conditioning, and electrical systems contained therein. "Manufactured home" includes any structure that meets all the requirements of this paragraph except the size requirements and with respect to which the manufacturer voluntarily files a certification and complies with the standards established under the National Manufactured Housing Construction and Safety Act of 1974 (42 U.S.C., Sec. 5401, and following).

## 5. ADUs and the Housing Element

- **Do ADUs and JADUs count toward a local agency's Regional Housing Needs Allocation?**

Yes. Pursuant to Government Code section 65852.2 subdivision (m), and section 65583.1, ADUs and

JADUs may be utilized towards the Regional Housing Need Allocation (RHNA) and Annual Progress Report (APR) pursuant to Government Code section 65400. To credit a unit toward the RHNA, HCD and the Department of Finance (DOF) utilize the census definition of a housing unit. Generally, an ADU, and a JADU with shared sanitation facilities, and any other unit that meets the census definition, and is reported to DOF as part of the DOF annual City and County Housing Unit Change Survey, can be credited toward the RHNA based on the appropriate income level. The housing element or APR must include a reasonable methodology to demonstrate the level of affordability. Local governments can track actual or anticipated affordability to assure ADUs and JADUs are counted towards the appropriate income category. For example, some local governments request and track information such as anticipated affordability as part of the building permit or other applications.

- **Is analysis required to count ADUs toward the RHNA in the housing element?**

Yes. To calculate ADUs in the housing element, local agencies must generally use a three-part approach:

(1) development trends, (2) anticipated affordability and (3) resources and incentives.

Development trends must consider ADUs permitted in the prior planning period and may also consider more recent trends.

Anticipated affordability can use a variety of methods to estimate the affordability by income group. Common approaches include rent surveys of ADUs, using rent surveys and square footage assumptions and data available through the APR pursuant to Government Code section 65400. Resources and incentives include policies and programs to encourage ADUs, such as prototype plans, fee waivers, expedited procedures and affordability monitoring programs.

- **Are ADUs required to be addressed in the housing element?**

Yes. The housing element must include a description of zoning available to permit ADUs, including development standards and analysis of potential constraints on the development of ADUs. The element must include programs as appropriate to address identified constraints. In addition, housing elements must include a plan that incentivizes and promotes the creation of ADUs that can offer affordable rents for very low, low-, or moderate-income households and requires HCD to develop a list of state grants and financial incentives in connection with the planning, construction and operation of affordable ADUs. (Gov. Code, § 65583 and Health & Saf. Code, § 50504.5.)

## 6. Homeowners Association

- **Can my local Homeowners Association (HOA) prohibit the construction of an ADU or JADU?**

No. Assembly Bill 670 (2019) and AB 3182 (2020) amended Section 4751, 4740, and 4741 of the Civil Code to preclude common interest developments from prohibiting or unreasonably restricting the construction or use, including the renting or leasing of, an ADU on a lot zoned for single-family residential use. Covenants, conditions and restrictions (CC&Rs) that either effectively prohibit or unreasonably restrict the construction or use of an ADU or JADU on such lots are void and unenforceable or may be liable for actual damages and payment of a civil penalty. Applicants who encounter issues with creating ADUs or JADUs within CC&Rs are encouraged to reach out to HCD for additional guidance.

## 7. Enforcement

- **Does HCD have enforcement authority over ADU ordinances?**

Yes. After adoption of the ordinance, HCD may review and submit written findings to the local agency as to whether the ordinance complies with state ADU law. If the local agency's ordinance does not comply, HCD must provide a reasonable time, no longer than 30 days, for the local agency to respond, and the local agency shall consider HCD's findings to amend the ordinance to become compliant. If a local agency does not make changes and implements an ordinance that is not compliant with state law, HCD may refer the matter to the Attorney General.

In addition, HCD may review, adopt, amend, or repeal guidelines to implement uniform standards or criteria that supplement or clarify ADU law.

## 8. Other

- **Are ADU ordinances existing prior to new 2020 laws null and void?**

No. Ordinances existing prior to the new 2020 laws are only null and void to the extent that existing ADU ordinances conflict with state law. Subdivision (a)(4) of Government Code Section 65852.2 states an ordinance that fails to meet the requirements of subdivision (a) shall be null and void and shall apply the state standards (see Attachment 3) until a compliant ordinance is adopted. However, ordinances that substantially comply with ADU law may continue to enforce the existing ordinance to the extent it complies with state law. For example, local governments may continue the compliant provisions of an ordinance and apply the state standards where pertinent until the ordinance is amended or replaced to fully comply with ADU law. At the same

time, ordinances that are fundamentally incapable of being enforced because key provisions are invalid -- meaning there is not a reasonable way to sever conflicting provisions and apply the remainder of an ordinance in a way that is consistent with state law -- would be fully null and void and must follow all state standards until a compliant ordinance is adopted.

- **Do local agencies have to adopt an ADU ordinance?**

No. Local governments may choose not to adopt an ADU ordinance. Should a local government choose to not adopt an ADU ordinance, any proposed ADU development would be only subject to standards set in state ADU law. If a local agency adopts an ADU ordinance, it may impose zoning, development, design, and other standards in compliance with state ADU law. (See Attachment 4 for a state standards checklist.)

- **Is a local government required to send an ADU ordinance to the California Department of Housing and Community Development (HCD)?**

Yes. A local government, upon adoption of an ADU ordinance, must submit a copy of the adopted ordinance to HCD within 60 days after adoption. After the adoption of an ordinance, the Department may review and submit written findings to the local agency as to whether the ordinance complies with this section. (Gov. Code, § 65852.2, subd. (h)(1).)

Local governments may also submit a draft ADU ordinance for preliminary review by HCD. This provides local agencies the opportunity to receive feedback on their ordinance and helps to ensure compliance with the new state ADU law.

- **Are charter cities and counties subject to the new ADU laws?**

Yes. ADU law applies to a local agency which is defined as a city, county, or city and county, whether general law or chartered. (Gov. Code, § 65852.2, subd. (j)(5)).

Further, pursuant to Chapter 659, Statutes of 2019 (AB 881), the Legislature found and declared ADU law as “...a matter of statewide concern rather than a municipal affair, as that term is used in Section 5 of Article XI of the California Constitution” and concluded that ADU law applies to all cities, including charter cities.

- **Do the new ADU laws apply to jurisdictions located in the Coastal Zone?**

Yes. ADU laws apply to jurisdictions in the Coastal Zone, but do not necessarily alter or lessen the effect or application of Coastal Act resource protection policies. (Gov. Code, § 65852.22, subd. (l)).

Coastal localities should seek to harmonize the goals of protecting coastal resources and addressing housing needs of Californians. For example, where appropriate, localities should amend Local Coastal Programs for California Coastal Commission review to comply with the California Coastal Act and new ADU laws. For more information, see the [California Coastal Commission 2020 Memo](#) and reach out to the locality’s local Coastal Commission district office.

- **What is considered a multifamily dwelling?**

For the purposes of state ADU law, a structure with two or more attached dwellings on a single lot is considered a multifamily dwelling structure. Multiple detached single-unit dwellings on the same lot are not considered multifamily dwellings for the purposes of state ADU law.

**Resources**



Attachment 1: Statutory Changes (Strikeout/Italics and Underline)

**GOV. CODE: TITLE 7, DIVISION 1, CHAPTER 4, ARTICLE 2  
Combined changes from (AB 3182 Accessory Dwelling  
Units) and (AB 881, AB 68 and SB 13 Accessory  
Dwelling Units)**

(Changes noted in strikeout, underline/italics)

Effective January 1, 2021, Section 65852.2 of the Government Code is amended to read:

**65852.2.**

(a) (1) A local agency may, by ordinance, provide for the creation of accessory dwelling units in areas zoned to allow single-family or multifamily dwelling residential use. The ordinance shall do all of the following:

(A) Designate areas within the jurisdiction of the local agency where accessory dwelling units may be permitted. The designation of areas may be based on the adequacy of water and sewer services and the impact of accessory dwelling units on traffic flow and public safety. A local agency that does not provide water or sewer services shall consult with the local water or sewer service provider regarding the adequacy of water and sewer services before designating an area where accessory dwelling units may be permitted.

(B) (i) Impose standards on accessory dwelling units that include, but are not limited to, parking, height, setback, landscape, architectural review, maximum size of a unit, and standards that prevent adverse impacts on any real property that is listed in the California Register of Historic Resources. These standards shall not include requirements on minimum lot size.

(ii) Notwithstanding clause (i), a local agency may reduce or eliminate parking requirements for any accessory dwelling unit located within its jurisdiction.

(C) Provide that accessory dwelling units do not exceed the allowable density for the lot upon which the accessory dwelling unit is located, and that accessory dwelling units are a residential use that is consistent with the existing general plan and zoning designation for the lot.

(D) Require the accessory dwelling units to comply with all of the following:

(i) The accessory dwelling unit may be rented separate from the primary residence, but may not be sold or otherwise conveyed separate from the primary residence.

(ii) The lot is zoned to allow single-family or multifamily dwelling residential use and includes a proposed or existing dwelling.

(iii) The accessory dwelling unit is either attached to, or located within, the proposed or existing primary dwelling, including attached garages, storage areas or similar uses, or an accessory structure or detached from the proposed or existing primary dwelling and located on the same lot as the proposed or existing primary dwelling. (iv) If there is an existing primary dwelling, the total floor area of an attached accessory dwelling unit shall not exceed 50 percent of the existing primary dwelling.

(v) The total floor area for a detached accessory dwelling unit shall not exceed 1,200 square feet.

(vi) No passageway shall be required in conjunction with the construction of an accessory dwelling unit.

(vii) No setback shall be required for an existing living area or accessory structure or a structure constructed in the same location and to the same dimensions as an existing structure that is converted to an accessory dwelling unit or to a portion of an accessory dwelling unit, and a setback of no more than four feet from the side and rear lot lines shall be required for an accessory dwelling unit that is not converted from an existing structure or a new structure constructed in the same location and to the same dimensions as an existing structure.

(viii) Local building code requirements that apply to detached dwellings, as appropriate.

(ix) Approval by the local health officer where a private sewage disposal system is being used, if required. (x) (I) Parking requirements for accessory dwelling units shall not exceed one parking space per accessory dwelling unit or per bedroom, whichever is less. These spaces may be provided as tandem parking on a driveway. (II) Offstreet parking shall be permitted in setback areas in locations determined by the local agency or through tandem parking, unless specific findings are made that parking in setback areas or tandem parking is not feasible based upon specific site or regional topographical or fire and life safety conditions.

(III) This clause shall not apply to an accessory dwelling unit that is described in subdivision (d).

(xi) When a garage, carport, or covered parking structure is demolished in conjunction with the construction of an accessory dwelling unit or converted to an accessory dwelling unit, the local agency shall not require that those offstreet parking spaces be replaced.

(xii) Accessory dwelling units shall not be required to provide fire sprinklers if they are not required for the primary residence.

(2) The ordinance shall not be considered in the application of any local ordinance, policy, or program to limit residential growth.

(3) A permit application for an accessory dwelling unit or a junior accessory dwelling unit shall be considered and approved ministerially without discretionary review or a hearing, notwithstanding Section 65901 or 65906 or any local ordinance regulating the issuance of variances or special use permits. The permitting agency shall act on the application to create an accessory dwelling unit or a junior accessory dwelling unit within 60 days from the date the local agency receives a completed application if there is an existing single-family or multifamily dwelling on the lot. If the permit application to create an accessory dwelling unit or a junior accessory dwelling unit is submitted with a permit application to create a new single-family dwelling on the lot, the permitting agency may delay acting on the permit application for the accessory dwelling unit or the junior accessory dwelling unit until the permitting agency acts on the permit application to create the new single-family dwelling, but the application to create the accessory dwelling unit or junior accessory dwelling unit shall be considered without discretionary review or hearing. If the applicant requests a delay, the 60-day time period shall be tolled for the period of the delay. If the local agency has not acted upon the completed application within 60 days, the application shall be deemed approved. A local agency may charge a fee to reimburse it for costs incurred to implement this paragraph, including the costs of adopting or amending any ordinance that provides for the creation of an accessory dwelling unit.

(4) An existing ordinance governing the creation of an accessory dwelling unit by a local agency or an accessory dwelling ordinance adopted by a local agency shall provide an approval process that includes only ministerial provisions for the approval of accessory dwelling units and shall not include any discretionary processes, provisions, or requirements for those units, except as otherwise provided in this subdivision. If a local agency has an existing accessory dwelling unit ordinance that fails to meet the requirements of this subdivision, that ordinance shall be null and void and that agency shall thereafter apply the standards established in this subdivision for the approval of accessory dwelling units, unless and until the agency adopts an ordinance that complies with this section.

(5) No other local ordinance, policy, or regulation shall be the basis for the delay or denial of a building permit or a use permit under this subdivision.

(6) This subdivision establishes the maximum standards that local agencies shall use to evaluate a proposed accessory dwelling unit on a lot that includes a proposed or existing single-family dwelling. No additional standards, other than those provided in this subdivision, shall be used or imposed, including any owner-occupant requirement, except that a local agency may require that the property be used for rentals of terms longer than 30 days.

(7) A local agency may amend its zoning ordinance or general plan to incorporate the policies, procedures, or other provisions applicable to the creation of an accessory dwelling unit if these provisions are consistent with the limitations of this subdivision.

(8) An accessory dwelling unit that conforms to this subdivision shall be deemed to be an accessory use or an accessory building and shall not be considered to exceed the allowable density for the lot upon which it is located, and shall be deemed to be a residential use that is consistent with the existing general plan and zoning designations for the lot. The accessory dwelling unit shall not be considered in the application of any local ordinance, policy, or program to limit residential growth.

(b) When a local agency that has not adopted an ordinance governing accessory dwelling units in accordance with subdivision (a) receives an application for a permit to create an accessory dwelling unit pursuant to this subdivision, the local agency shall approve or disapprove the application ministerially without discretionary review pursuant to subdivision (a). The permitting agency shall act on the application to create an accessory dwelling unit or a junior accessory dwelling unit within 60 days from the date the local agency receives a completed application if there is an existing single-family or multifamily dwelling on the lot. If the permit application to create an accessory dwelling unit or a junior accessory dwelling unit is submitted with a permit application to create a new single-family dwelling on the lot, the permitting agency may delay acting on the permit application for the accessory dwelling unit or the junior accessory dwelling unit until the permitting agency acts on the permit application to create the new single-family dwelling, but the application to create the accessory dwelling unit or junior accessory dwelling unit shall still be considered ministerially without discretionary review or a hearing. If the applicant requests a delay, the 60-day time period shall be tolled for the period of the delay. If the local agency has not acted upon the completed application within 60 days, the application shall be deemed approved.

- (c) (1) Subject to paragraph (2), a local agency may establish minimum and maximum unit size requirements for both attached and detached accessory dwelling units.
- (2) Notwithstanding paragraph (1), a local agency shall not establish by ordinance any of the following:
- (A) A minimum square footage requirement for either an attached or detached accessory dwelling unit that prohibits an efficiency unit.
- (B) A maximum square footage requirement for either an attached or detached accessory dwelling unit that is less than either of the following:
- (i) 850 square feet.
  - (ii) 1,000 square feet for an accessory dwelling unit that provides more than one bedroom.
- (C) Any other minimum or maximum size for an accessory dwelling unit, size based upon a percentage of the proposed or existing primary dwelling, or limits on lot coverage, floor area ratio, open space, and minimum lot size, for either attached or detached dwellings that does not permit at least an 800 square foot accessory dwelling unit that is at least 16 feet in height with four-foot side and rear yard setbacks to be constructed in compliance with all other local development standards.
- (d) Notwithstanding any other law, a local agency, whether or not it has adopted an ordinance governing accessory dwelling units in accordance with subdivision (a), shall not impose parking standards for an accessory dwelling unit in any of the following instances:
- (1) The accessory dwelling unit is located within one-half mile walking distance of public transit.
  - (2) The accessory dwelling unit is located within an architecturally and historically significant historic district.
  - (3) The accessory dwelling unit is part of the proposed or existing primary residence or an accessory structure.
  - (4) When on-street parking permits are required but not offered to the occupant of the accessory dwelling unit.
  - (5) When there is a car share vehicle located within one block of the accessory dwelling unit.
- (e) (1) Notwithstanding subdivisions (a) to (d), inclusive, a local agency shall ministerially approve an application for a building permit within a residential or mixed-use zone to create any of the following:
- (A) One accessory dwelling unit ~~or~~ *and* one junior accessory dwelling unit per lot with a proposed or existing single-family dwelling if all of the following apply:
- (i) The accessory dwelling unit or junior accessory dwelling unit is within the proposed space of a single-family dwelling or existing space of a single-family dwelling or accessory structure and may include an expansion of not more than 150 square feet beyond the same physical dimensions as the existing accessory structure. An expansion beyond the physical dimensions of the existing accessory structure shall be limited to accommodating ingress and egress.
  - (ii) The space has exterior access from the proposed or existing single-family dwelling.
  - (iii) The side and rear setbacks are sufficient for fire and safety.
  - (iv) The junior accessory dwelling unit complies with the requirements of Section 65852.22.
- (B) One detached, new construction, accessory dwelling unit that does not exceed four-foot side and rear yard setbacks for a lot with a proposed or existing single-family dwelling. The accessory dwelling unit may be combined with a junior accessory dwelling unit described in subparagraph (A). A local agency may impose the following conditions on the accessory dwelling unit:
- (i) A total floor area limitation of not more than 800 square feet.
  - (ii) A height limitation of 16 feet.
- (C) (i) Multiple accessory dwelling units within the portions of existing multifamily dwelling structures that are not used as livable space, including, but not limited to, storage rooms, boiler rooms, passageways, attics, basements, or garages, if each unit complies with state building standards for dwellings.
- (ii) A local agency shall allow at least one accessory dwelling unit within an existing multifamily dwelling and shall allow up to 25 percent of the existing multifamily dwelling units.
- (D) Not more than two accessory dwelling units that are located on a lot that has an existing multifamily dwelling, but are detached from that multifamily dwelling and are subject to a height limit of 16 feet and four-foot rear yard and side setbacks.
- (2) A local agency shall not require, as a condition for ministerial approval of a permit application for the creation of an accessory dwelling unit or a junior accessory dwelling unit, the correction of nonconforming zoning conditions.



(3) The installation of fire sprinklers shall not be required in an accessory dwelling unit if sprinklers are not required for the primary residence.

(4) A local agency shall require that a rental of the accessory dwelling unit created pursuant to this subdivision be for a term longer than 30 days.

(5) A local agency may require, as part of the application for a permit to create an accessory dwelling unit connected to an onsite wastewater treatment system, a percolation test completed within the last five years, or, if the percolation test has been recertified, within the last 10 years.

(6) Notwithstanding subdivision (c) and paragraph (1) a local agency that has adopted an ordinance by July 1, 2018, providing for the approval of accessory dwelling units in multifamily dwelling structures shall ministerially consider a permit application to construct an accessory dwelling unit that is described in paragraph (1), and may impose standards including, but not limited to, design, development, and historic standards on said accessory dwelling units. These standards shall not include requirements on minimum lot size.

(f) (1) Fees charged for the construction of accessory dwelling units shall be determined in accordance with Chapter 5 (commencing with Section 66000) and Chapter 7 (commencing with Section 66012).

(2) An accessory dwelling unit shall not be considered by a local agency, special district, or water corporation to be a new residential use for purposes of calculating connection fees or capacity charges for utilities, including water and sewer service, unless the accessory dwelling unit was constructed with a new single-family dwelling.

(3) (A) A local agency, special district, or water corporation shall not impose any impact fee upon the development of an accessory dwelling unit less than 750 square feet. Any impact fees charged for an accessory dwelling unit of 750 square feet or more shall be charged proportionately in relation to the square footage of the primary dwelling unit.

(B) For purposes of this paragraph, "impact fee" has the same meaning as the term "fee" is defined in subdivision (b) of Section 66000, except that it also includes fees specified in Section 66477. "Impact fee" does not include any connection fee or capacity charge charged by a local agency, special district, or water corporation.

(4) For an accessory dwelling unit described in subparagraph (A) of paragraph (1) of subdivision (e), a local agency, special district, or water corporation shall not require the applicant to install a new or separate utility connection directly between the accessory dwelling unit and the utility or impose a related connection fee or capacity charge, unless the accessory dwelling unit was constructed with a new single-family home.

(5) For an accessory dwelling unit that is not described in subparagraph (A) of paragraph (1) of subdivision (e), a local agency, special district, or water corporation may require a new or separate utility connection directly between the accessory dwelling unit and the utility. Consistent with Section 66013, the connection may be subject to a connection fee or capacity charge that shall be proportionate to the burden of the proposed accessory dwelling unit, based upon either its square feet or the number of its drainage fixture unit (DFU) values, as defined in the Uniform Plumbing Code adopted and published by the International Association of Plumbing and Mechanical Officials, upon the water or sewer system. This fee or charge shall not exceed the reasonable cost of providing this service.

(g) This section does not limit the authority of local agencies to adopt less restrictive requirements for the creation of an accessory dwelling unit.

(h) (1) A local agency shall submit a copy of the ordinance adopted pursuant to subdivision (a) to the Department of Housing and Community Development within 60 days after adoption. After adoption of an ordinance, the department may submit written findings to the local agency as to whether the ordinance complies with this section. (2) (A) If the department finds that the local agency's ordinance does not comply with this section, the department shall notify the local agency and shall provide the local agency with a reasonable time, no longer than 30 days, to respond to the findings before taking any other action authorized by this section.

(B) The local agency shall consider the findings made by the department pursuant to subparagraph (A) and shall do one of the following:

(i) Amend the ordinance to comply with this section.

- (ii) Adopt the ordinance without changes. The local agency shall include findings in its resolution adopting the ordinance that explain the reasons the local agency believes that the ordinance complies with this section despite the findings of the department.
- (3) (A) If the local agency does not amend its ordinance in response to the department's findings or does not adopt a resolution with findings explaining the reason the ordinance complies with this section and addressing the department's findings, the department shall notify the local agency and may notify the Attorney General that the local agency is in violation of state law.  
(B) Before notifying the Attorney General that the local agency is in violation of state law, the department may consider whether a local agency adopted an ordinance in compliance with this section between January 1, 2017, and January 1, 2020.
- (i) The department may review, adopt, amend, or repeal guidelines to implement uniform standards or criteria that supplement or clarify the terms, references, and standards set forth in this section. The guidelines adopted pursuant to this subdivision are not subject to Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2.
- (j) As used in this section, the following terms mean:
  - (1) "Accessory dwelling unit" means an attached or a detached residential dwelling unit that provides complete independent living facilities for one or more persons and is located on a lot with a proposed or existing primary residence. It shall include permanent provisions for living, sleeping, eating, cooking, and sanitation on the same parcel as the single-family or multifamily dwelling is or will be situated. An accessory dwelling unit also includes the following:
    - (A) An efficiency unit.
    - (B) A manufactured home, as defined in Section 18007 of the Health and Safety Code.
  - (2) "Accessory structure" means a structure that is accessory and incidental to a dwelling located on the same lot.
  - (3) "Efficiency unit" has the same meaning as defined in Section 17958.1 of the Health and Safety Code.
  - (4) "Living area" means the interior habitable area of a dwelling unit, including basements and attics, but does not include a garage or any accessory structure.
  - (5) "Local agency" means a city, county, or city and county, whether general law or chartered.
  - (6) "Nonconforming zoning condition" means a physical improvement on a property that does not conform with current zoning standards.
  - (7) "Passageway" means a pathway that is unobstructed clear to the sky and extends from a street to one entrance of the accessory dwelling unit.
  - (8) "Proposed dwelling" means a dwelling that is the subject of a permit application and that meets the requirements for permitting.
  - (9) "Public transit" means a location, including, but not limited to, a bus stop or train station, where the public may access buses, trains, subways, and other forms of transportation that charge set fares, run on fixed routes, and are available to the public.
  - (10) "Tandem parking" means that two or more automobiles are parked on a driveway or in any other location on a lot, lined up behind one another.
- (k) A local agency shall not issue a certificate of occupancy for an accessory dwelling unit before the local agency issues a certificate of occupancy for the primary dwelling.
- (l) Nothing in this section shall be construed to supersede or in any way alter or lessen the effect or application of the California Coastal Act of 1976 (Division 20 (commencing with Section 30000) of the Public Resources Code), except that the local government shall not be required to hold public hearings for coastal development permit applications for accessory dwelling units.
- (m) A local agency may count an accessory dwelling unit for purposes of identifying adequate sites for housing, as specified in subdivision (a) of Section 65583.1, subject to authorization by the department and compliance with this division.
- (n) In enforcing building standards pursuant to Article 1 (commencing with Section 17960) of Chapter 5 of Part 1.5 of Division 13 of the Health and Safety Code for an accessory dwelling unit described in paragraph (1) or (2) below, a local agency, upon request of an owner of an accessory dwelling unit for a delay in enforcement, shall delay enforcement of a building standard, subject to compliance with Section 17980.12 of the Health and Safety Code:
  - (1) The accessory dwelling unit was built before January 1, 2020.

- (2) The accessory dwelling unit was built on or after January 1, 2020, in a local jurisdiction that, at the time the accessory dwelling unit was built, had a noncompliant accessory dwelling unit ordinance, but the ordinance is compliant at the time the request is made.
- (o) This section shall remain in effect only until January 1, 2025, and as of that date is repealed.  
**(Becomes operative on January 1, 2025)**

Section 65852.2 of the Government Code is amended to read (changes from January 1, 2021 statute noted in underline/italic):

**65852.2.**

(a) (1) A local agency may, by ordinance, provide for the creation of accessory dwelling units in areas zoned to allow single-family or multifamily dwelling residential use. The ordinance shall do all of the following:

- (A) Designate areas within the jurisdiction of the local agency where accessory dwelling units may be permitted. The designation of areas may be based on the adequacy of water and sewer services and the impact of accessory dwelling units on traffic flow and public safety. A local agency that does not provide water or sewer services shall consult with the local water or sewer service provider regarding the adequacy of water and sewer services before designating an area where accessory dwelling units may be permitted.
- (B) (i) Impose standards on accessory dwelling units that include, but are not limited to, parking, height, setback, landscape, architectural review, maximum size of a unit, and standards that prevent adverse impacts on any real property that is listed in the California Register of Historic Resources. These standards shall not include requirements on minimum lot size.  
(ii) Notwithstanding clause (i), a local agency may reduce or eliminate parking requirements for any accessory dwelling unit located within its jurisdiction.
- (C) Provide that accessory dwelling units do not exceed the allowable density for the lot upon which the accessory dwelling unit is located, and that accessory dwelling units are a residential use that is consistent with the existing general plan and zoning designation for the lot.
- (D) Require the accessory dwelling units to comply with all of the following:
  - (i) The accessory dwelling unit may be rented separate from the primary residence, but may not be sold or otherwise conveyed separate from the primary residence.
  - (ii) The lot is zoned to allow single-family or multifamily dwelling residential use and includes a proposed or existing dwelling.
  - (iii) The accessory dwelling unit is either attached to, or located within, the proposed or existing primary dwelling, including attached garages, storage areas or similar uses, or an accessory structure or detached from the proposed or existing primary dwelling and located on the same lot as the proposed or existing primary dwelling. (iv) If there is an existing primary dwelling, the total floor area of an attached accessory dwelling unit shall not exceed 50 percent of the existing primary dwelling.
  - (v) The total floor area for a detached accessory dwelling unit shall not exceed 1,200 square feet.
  - (vi) No passageway shall be required in conjunction with the construction of an accessory dwelling unit.
  - (vii) No setback shall be required for an existing living area or accessory structure or a structure constructed in the same location and to the same dimensions as an existing structure that is converted to an accessory dwelling unit or to a portion of an accessory dwelling unit, and a setback of no more than four feet from the side and rear lot lines shall be required for an accessory dwelling unit that is not converted from an existing structure or a new structure constructed in the same location and to the same dimensions as an existing structure.
  - (viii) Local building code requirements that apply to detached dwellings, as appropriate.
  - (ix) Approval by the local health officer where a private sewage disposal system is being used, if required. (x) (I) Parking requirements for accessory dwelling units shall not exceed one parking space per accessory dwelling unit or per bedroom, whichever is less. These spaces may be provided as tandem parking on a driveway. (II) Offstreet parking shall be permitted in setback areas in locations determined by the local agency or through tandem parking, unless specific findings are

made that parking in setback areas or tandem parking is not feasible based upon specific site or regional topographical or fire and life safety conditions.

(III) This clause shall not apply to an accessory dwelling unit that is described in subdivision (d).

(xi) When a garage, carport, or covered parking structure is demolished in conjunction with the construction of an accessory dwelling unit or converted to an accessory dwelling unit, the local agency shall not require that those offstreet parking spaces be replaced.

(xii) Accessory dwelling units shall not be required to provide fire sprinklers if they are not required for the primary residence.

(2) The ordinance shall not be considered in the application of any local ordinance, policy, or program to limit residential growth.

(3) A permit application for an accessory dwelling unit or a junior accessory dwelling unit shall be considered and approved ministerially without discretionary review or a hearing, notwithstanding Section 65901 or 65906 or any local ordinance regulating the issuance of variances or special use permits. The permitting agency shall act on the application to create an accessory dwelling unit or a junior accessory dwelling unit within 60 days from the date the local agency receives a completed application if there is an existing single-family or multifamily dwelling on the lot. If the permit application to create an accessory dwelling unit or a junior accessory dwelling unit is submitted with a permit application to create a new single-family dwelling on the lot, the permitting agency may delay acting on the permit application for the accessory dwelling unit or the junior accessory dwelling unit until the permitting agency acts on the permit application to create the new single-family dwelling, but the application to create the accessory dwelling unit or junior accessory dwelling unit shall be considered without discretionary review or hearing. If the applicant requests a delay, the 60-day time period shall be tolled for the period of the delay. If the local agency has not acted upon the completed application within 60 days, the application shall be deemed approved. A local agency may charge a fee to reimburse it for costs incurred to implement this paragraph, including the costs of adopting or amending any ordinance that provides for the creation of an accessory dwelling unit.

(4) An existing ordinance governing the creation of an accessory dwelling unit by a local agency or an accessory dwelling ordinance adopted by a local agency shall provide an approval process that includes only ministerial provisions for the approval of accessory dwelling units and shall not include any discretionary processes, provisions, or requirements for those units, except as otherwise provided in this subdivision. If a local agency has an existing accessory dwelling unit ordinance that fails to meet the requirements of this subdivision, that ordinance shall be null and void and that agency shall thereafter apply the standards established in this subdivision for the approval of accessory dwelling units, unless and until the agency adopts an ordinance that complies with this section.

(5) No other local ordinance, policy, or regulation shall be the basis for the delay or denial of a building permit or a use permit under this subdivision.

(6) (A) This subdivision establishes the maximum standards that local agencies shall use to evaluate a proposed accessory dwelling unit on a lot that includes a proposed or existing single-family dwelling. No additional standards, other than those provided in this subdivision, shall be used or ~~imposed, including any owner-occupant requirement, except that~~ imposed except that, subject to subparagraph (B), a local agency may require an applicant for a permit issued pursuant to this subdivision to be an owner-occupant or that the property be used for rentals of terms longer than 30 days.

(B) Notwithstanding subparagraph (A), a local agency shall not impose an owner-occupant requirement on an accessory dwelling unit permitted between January 1, 2020, to January 1, 2025, during which time the local agency was prohibited from imposing an owner-occupant requirement.

(7) A local agency may amend its zoning ordinance or general plan to incorporate the policies, procedures, or other provisions applicable to the creation of an accessory dwelling unit if these provisions are consistent with the limitations of this subdivision.

(8) An accessory dwelling unit that conforms to this subdivision shall be deemed to be an accessory use or an accessory building and shall not be considered to exceed the allowable density for the lot upon which it is located, and shall be deemed to be a residential use that is consistent with the existing general plan and zoning designations for the lot. The accessory dwelling unit shall not be considered in the application of any local ordinance, policy, or program to limit residential growth.

(b) When a local agency that has not adopted an ordinance governing accessory dwelling units in accordance with subdivision (a) receives an application for a permit to create an accessory dwelling unit pursuant to this subdivision, the local agency shall approve or disapprove the application ministerially without discretionary review pursuant to subdivision (a). The permitting agency shall act on the application to create an accessory dwelling unit or a junior accessory dwelling unit within 60 days from the date the local agency receives a completed application if there is an existing single-family or multifamily dwelling on the lot. If the permit application to create an accessory dwelling unit or a junior accessory dwelling unit is submitted with a permit application to create a new single-family dwelling on the lot, the permitting agency may delay acting on the permit application for the accessory dwelling unit or the junior accessory dwelling unit until the permitting agency acts on the permit application to create the new single-family dwelling, but the application to create the accessory dwelling unit or junior accessory dwelling unit shall still be considered ministerially without discretionary review or a hearing. If the applicant requests a delay, the 60-day time period shall be tolled for the period of the delay. If the local agency has not acted upon the completed application within 60 days, the application shall be deemed approved.

(c) (1) Subject to paragraph (2), a local agency may establish minimum and maximum unit size requirements for both attached and detached accessory dwelling units.

(2) Notwithstanding paragraph (1), a local agency shall not establish by ordinance any of the following: (A) A minimum square footage requirement for either an attached or detached accessory dwelling unit that prohibits an efficiency unit.

(B) A maximum square footage requirement for either an attached or detached accessory dwelling unit that is less than either of the following: (i) 850 square feet.

(ii) 1,000 square feet for an accessory dwelling unit that provides more than one bedroom.

(C) Any other minimum or maximum size for an accessory dwelling unit, size based upon a percentage of the proposed or existing primary dwelling, or limits on lot coverage, floor area ratio, open space, and minimum lot size, for either attached or detached dwellings that does not permit at least an 800 square foot accessory dwelling unit that is at least 16 feet in height with four-foot side and rear yard setbacks to be constructed in compliance with all other local development standards.

(d) Notwithstanding any other law, a local agency, whether or not it has adopted an ordinance governing accessory dwelling units in accordance with subdivision (a), shall not impose parking standards for an accessory dwelling unit in any of the following instances:

(1) The accessory dwelling unit is located within one-half mile walking distance of public transit.

(2) The accessory dwelling unit is located within an architecturally and historically significant historic district.

(3) The accessory dwelling unit is part of the proposed or existing primary residence or an accessory structure.

(4) When on-street parking permits are required but not offered to the occupant of the accessory dwelling unit.

(5) When there is a car share vehicle located within one block of the accessory dwelling unit.

(e) (1) Notwithstanding subdivisions (a) to (d), inclusive, a local agency shall ministerially approve an application for a building permit within a residential or mixed-use zone to create any of the following:

(A) One accessory dwelling unit ~~or~~ *and* one junior accessory dwelling unit per lot with a proposed or existing single-family dwelling if all of the following apply:

(i) The accessory dwelling unit or junior accessory dwelling unit is within the proposed space of a single-family dwelling or existing space of a single-family dwelling or accessory structure and may include an expansion of not more than 150 square feet beyond the same physical dimensions as the existing accessory structure. An expansion beyond the physical dimensions of the existing accessory structure shall be limited to accommodating ingress and egress.

(ii) The space has exterior access from the proposed or existing single-family dwelling.

(iii) The side and rear setbacks are sufficient for fire and safety.

(iv) The junior accessory dwelling unit complies with the requirements of Section 65852.22.

(B) One detached, new construction, accessory dwelling unit that does not exceed four-foot side and rear yard setbacks for a lot with a proposed or existing single-family dwelling. The accessory dwelling

unit may be combined with a junior accessory dwelling unit described in subparagraph (A). A local agency may impose the following conditions on the accessory dwelling unit:

(i) A total floor area limitation of not more than 800 square feet. (ii) A height limitation of 16 feet.

(C) (i) Multiple accessory dwelling units within the portions of existing multifamily dwelling structures that are not used as livable space, including, but not limited to, storage rooms, boiler rooms, passageways, attics, basements, or garages, if each unit complies with state building standards for dwellings.

(ii) A local agency shall allow at least one accessory dwelling unit within an existing multifamily dwelling and shall allow up to 25 percent of the existing multifamily dwelling units.

(D) Not more than two accessory dwelling units that are located on a lot that has an existing multifamily dwelling, but are detached from that multifamily dwelling and are subject to a height limit of 16 feet and four-foot rear yard and side setbacks.

(2) A local agency shall not require, as a condition for ministerial approval of a permit application for the creation of an accessory dwelling unit or a junior accessory dwelling unit, the correction of nonconforming zoning conditions.

(3) The installation of fire sprinklers shall not be required in an accessory dwelling unit if sprinklers are not required for the primary residence.

(4) A local agency may require owner occupancy for either the primary dwelling or the accessory dwelling unit on a single-family lot, subject to the requirements of paragraph (6) of subdivision (a).

~~(4)~~ (5) A local agency shall require that a rental of the accessory dwelling unit created pursuant to this subdivision be for a term longer than 30 days.

~~(5)~~ (6) A local agency may require, as part of the application for a permit to create an accessory dwelling unit connected to an onsite wastewater treatment system, a percolation test completed within the last five years, or, if the percolation test has been recertified, within the last 10 years.

~~(6)~~ (7) Notwithstanding subdivision (c) and paragraph (1) a local agency that has adopted an ordinance by July 1, 2018, providing for the approval of accessory dwelling units in multifamily dwelling structures shall ministerially consider a permit application to construct an accessory dwelling unit that is described in paragraph (1), and may impose standards including, but not limited to, design, development, and historic standards on said accessory dwelling units. These standards shall not include requirements on minimum lot size.

(f) (1) Fees charged for the construction of accessory dwelling units shall be determined in accordance with Chapter 5 (commencing with Section 66000) and Chapter 7 (commencing with Section 66012).

(2) An accessory dwelling unit shall not be considered by a local agency, special district, or water corporation to be a new residential use for purposes of calculating connection fees or capacity charges for utilities, including water and sewer service, unless the accessory dwelling unit was constructed with a new single-family dwelling.

(3) (A) A local agency, special district, or water corporation shall not impose any impact fee upon the development of an accessory dwelling unit less than 750 square feet. Any impact fees charged for an accessory dwelling unit of 750 square feet or more shall be charged proportionately in relation to the square footage of the primary dwelling unit.

(B) For purposes of this paragraph, "impact fee" has the same meaning as the term "fee" is defined in subdivision (b) of Section 66000, except that it also includes fees specified in Section 66477. "Impact fee" does not include any connection fee or capacity charge charged by a local agency, special district, or water corporation.

(4) For an accessory dwelling unit described in subparagraph (A) of paragraph (1) of subdivision (e), a local agency, special district, or water corporation shall not require the applicant to install a new or separate utility connection directly between the accessory dwelling unit and the utility or impose a related connection fee or capacity charge, unless the accessory dwelling unit was constructed with a new single-family ~~home.~~ dwelling.

(5) For an accessory dwelling unit that is not described in subparagraph (A) of paragraph (1) of subdivision (e), a local agency, special district, or water corporation may require a new or separate utility connection directly between the accessory dwelling unit and the utility. Consistent with Section 66013, the connection may be subject to a connection fee or capacity charge that shall be proportionate to the burden of the proposed accessory dwelling unit, based upon either its square feet or the number of its

drainage fixture unit (DFU) values, as defined in the Uniform Plumbing Code adopted and published by the International Association of Plumbing and Mechanical Officials, upon the water or sewer system. This fee or charge shall not exceed the reasonable cost of providing this service.

(g) This section does not limit the authority of local agencies to adopt less restrictive requirements for the creation of an accessory dwelling unit.

(h) (1) A local agency shall submit a copy of the ordinance adopted pursuant to subdivision (a) to the Department of Housing and Community Development within 60 days after adoption. After adoption of an ordinance, the department may submit written findings to the local agency as to whether the ordinance complies with this section. (2) (A) If the department finds that the local agency's ordinance does not comply with this section, the department shall notify the local agency and shall provide the local agency with a reasonable time, no longer than 30 days, to respond to the findings before taking any other action authorized by this section.

(B) The local agency shall consider the findings made by the department pursuant to subparagraph (A) and shall do one of the following:

(i) Amend the ordinance to comply with this section.

(ii) Adopt the ordinance without changes. The local agency shall include findings in its resolution adopting the ordinance that explain the reasons the local agency believes that the ordinance complies with this section despite the findings of the department.

(3) (A) If the local agency does not amend its ordinance in response to the department's findings or does not adopt a resolution with findings explaining the reason the ordinance complies with this section and addressing the department's findings, the department shall notify the local agency and may notify the Attorney General that the local agency is in violation of state law.

(B) Before notifying the Attorney General that the local agency is in violation of state law, the department may consider whether a local agency adopted an ordinance in compliance with this section between January 1, 2017, and January 1, 2020.

(i) The department may review, adopt, amend, or repeal guidelines to implement uniform standards or criteria that supplement or clarify the terms, references, and standards set forth in this section. The guidelines adopted pursuant to this subdivision are not subject to Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2.

(j) As used in this section, the following terms mean:

(1) "Accessory dwelling unit" means an attached or a detached residential dwelling unit that provides complete independent living facilities for one or more persons and is located on a lot with a proposed or existing primary residence. It shall include permanent provisions for living, sleeping, eating, cooking, and sanitation on the same parcel as the single-family or multifamily dwelling is or will be situated. An accessory dwelling unit also includes the following:

(A) An efficiency unit.

(B) A manufactured home, as defined in Section 18007 of the Health and Safety Code.

(2) "Accessory structure" means a structure that is accessory and incidental to a dwelling located on the same lot.

(3) "Efficiency unit" has the same meaning as defined in Section 17958.1 of the Health and Safety Code.

(4) "Living area" means the interior habitable area of a dwelling unit, including basements and attics, but does not include a garage or any accessory structure.

(5) "Local agency" means a city, county, or city and county, whether general law or chartered.

(6) "Nonconforming zoning condition" means a physical improvement on a property that does not conform with current zoning standards.

(7) "Passageway" means a pathway that is unobstructed clear to the sky and extends from a street to one entrance of the accessory dwelling unit.

(8) "Proposed dwelling" means a dwelling that is the subject of a permit application and that meets the requirements for permitting.

(9) "Public transit" means a location, including, but not limited to, a bus stop or train station, where the public may access buses, trains, subways, and other forms of transportation that charge set fares, run on fixed routes, and are available to the public.

- (10) "Tandem parking" means that two or more automobiles are parked on a driveway or in any other location on a lot, lined up behind one another.
- (k) A local agency shall not issue a certificate of occupancy for an accessory dwelling unit before the local agency issues a certificate of occupancy for the primary dwelling.
- (l) Nothing in this section shall be construed to supersede or in any way alter or lessen the effect or application of the California Coastal Act of 1976 (Division 20 (commencing with Section 30000) of the Public Resources Code), except that the local government shall not be required to hold public hearings for coastal development permit applications for accessory dwelling units.
- (m) A local agency may count an accessory dwelling unit for purposes of identifying adequate sites for housing, as specified in subdivision (a) of Section 65583.1, subject to authorization by the department and compliance with this division.
- (n) In enforcing building standards pursuant to Article 1 (commencing with Section 17960) of Chapter 5 of Part 1.5 of Division 13 of the Health and Safety Code for an accessory dwelling unit described in paragraph (1) or (2) below, a local agency, upon request of an owner of an accessory dwelling unit for a delay in enforcement, shall delay enforcement of a building standard, subject to compliance with Section 17980.12 of the Health and Safety Code:
- (1) The accessory dwelling unit was built before January 1, 2020.
- (2) The accessory dwelling unit was built on or after January 1, 2020, in a local jurisdiction that, at the time the accessory dwelling unit was built, had a noncompliant accessory dwelling unit ordinance, but the ordinance is compliant at the time the request is made.
- (o) This section shall ~~remain in effect only until January 1, 2025, and as of that date is repealed.~~ *become operative on January 1, 2025.*

Effective January 1, 2021, Section 4740 of the Civil Code is amended to read (changes noted in strikeout, underline/italics) (AB 3182 (Ting)):

**4740.**

- (a) An owner of a separate interest in a common interest development shall not be subject to a provision in a governing document or an amendment to a governing document that prohibits the rental or leasing of any of the separate interests in that common interest development to a renter, lessee, or tenant unless that governing document, or amendment thereto, was effective prior to the date the owner acquired title to ~~his or her~~ *their* separate interest.
- (b) ~~Notwithstanding the provisions of this section, an owner of a separate interest in a common interest development may expressly consent to be subject to a governing document or an amendment to a governing document that prohibits the rental or leasing of any of the separate interests in the common interest development to a renter, lessee, or tenant.~~
- (c) *(b)* For purposes of this section, the right to rent or lease the separate interest of an owner shall not be deemed to have terminated if the transfer by the owner of all or part of the separate interest meets at least one of the following conditions:
- (1) Pursuant to Section 62 or 480.3 of the Revenue and Taxation Code, the transfer is exempt, for purposes of reassessment by the county tax assessor.
- (2) Pursuant to subdivision (b) of, solely with respect to probate transfers, or subdivision (e), (f), or (g) of, Section 1102.2, the transfer is exempt from the requirements to prepare and deliver a Real Estate Transfer Disclosure Statement, as set forth in Section 1102.6.
- (d) (c)* Prior to renting or leasing ~~his or her~~ *their* separate interest as provided by this section, an owner shall provide the association verification of the date the owner acquired title to the separate interest and the name and contact information of the prospective tenant or lessee or the prospective tenant's or lessee's representative. ~~(e) (d)~~
- ~~(e) (d)~~ Nothing in this section shall be deemed to revise, alter, or otherwise affect the voting process by which a common interest development adopts or amends its governing documents.
- ~~(f) This section shall apply only to a provision in a governing document or a provision in an amendment to a governing document that becomes effective on or after January 1, 2012.~~



Effective January 1, 2021 of the *Section 4741 is added to the Civil Code, to read (AB 3182 (Ting))*:

**4741.**

*(a) An owner of a separate interest in a common interest development shall not be subject to a provision in a governing document or an amendment to a governing document that prohibits, has the effect of prohibiting, or unreasonably restricts the rental or leasing of any of the separate interests, accessory dwelling units, or junior accessory dwelling units in that common interest development to a renter, lessee, or tenant.*

*(b) A common interest development shall not adopt or enforce a provision in a governing document or amendment to a governing document that restricts the rental or lease of separate interests within a common interest to less than 25 percent of the separate interests. Nothing in this subdivision prohibits a common interest development from adopting or enforcing a provision authorizing a higher percentage of separate interests to be rented or leased. (c) This section does not prohibit a common interest development from adopting and enforcing a provision in a governing document that prohibits transient or short-term rental of a separate property interest for a period of 30 days or less.*

*(d) For purposes of this section, an accessory dwelling unit or junior accessory dwelling unit shall not be construed as a separate interest.*

*(e) For purposes of this section, a separate interest shall not be counted as occupied by a renter if the separate interest, or the accessory dwelling unit or junior accessory dwelling unit of the separate interest, is occupied by the owner.*

*(f) A common interest development shall comply with the prohibition on rental restrictions specified in this section on and after January 1, 2021, regardless of whether the common interest development has revised their governing documents to comply with this section. However, a common interest development shall amend their governing documents to conform to the requirements of this section no later than December 31, 2021.*

*(g) A common interest development that willfully violates this section shall be liable to the applicant or other party for actual damages, and shall pay a civil penalty to the applicant or other party in an amount not to exceed one thousand dollars (\$1,000).*

*(h) In accordance with Section 4740, this section does not change the right of an owner of a separate interest who acquired title to their separate interest before the effective date of this section to rent or lease their property.*

Effective January 1, 2020, Section 65852.22 of the Government Code is was amended to read (AB 68 (Ting)):

**65852.22.**

(a) Notwithstanding Section 65852.2, a local agency may, by ordinance, provide for the creation of junior accessory dwelling units in single-family residential zones. The ordinance may require a permit to be obtained for the creation of a junior accessory dwelling unit, and shall do all of the following:

(1) Limit the number of junior accessory dwelling units to one per residential lot zoned for single-family residences with a single-family residence built, or proposed to be built, on the lot.

(2) Require owner-occupancy in the single-family residence in which the junior accessory dwelling unit will be permitted. The owner may reside in either the remaining portion of the structure or the newly created junior accessory dwelling unit. Owner-occupancy shall not be required if the owner is another governmental agency, land trust, or housing organization.

(3) Require the recordation of a deed restriction, which shall run with the land, shall be filed with the permitting agency, and shall include both of the following:

(A) A prohibition on the sale of the junior accessory dwelling unit separate from the sale of the single-family residence, including a statement that the deed restriction may be enforced against future purchasers.

(B) A restriction on the size and attributes of the junior accessory dwelling unit that conforms with this section.

(4) Require a permitted junior accessory dwelling unit to be constructed within the walls of proposed or existing single-family residence.

- (5) Require a permitted junior accessory dwelling to include a separate entrance from the main entrance to the proposed or existing single-family residence.
- (6) Require the permitted junior accessory dwelling unit to include an efficiency kitchen, which shall include all of the following:
  - (A) A cooking facility with appliances.
  - (B) A food preparation counter and storage cabinets that are of reasonable size in relation to the size of the junior accessory dwelling unit.
- (b) (1) An ordinance shall not require additional parking as a condition to grant a permit.
- (2) This subdivision shall not be interpreted to prohibit the requirement of an inspection, including the imposition of a fee for that inspection, to determine if the junior accessory dwelling unit complies with applicable building standards.
- (c) An application for a permit pursuant to this section shall, notwithstanding Section 65901 or 65906 or any local ordinance regulating the issuance of variances or special use permits, be considered ministerially, without discretionary review or a hearing. The permitting agency shall act on the application to create a junior accessory dwelling unit within 60 days from the date the local agency receives a completed application if there is an existing single-family dwelling on the lot. If the permit application to create a junior accessory dwelling unit is submitted with a permit application to create a new single-family dwelling on the lot, the permitting agency may delay acting on the permit application for the junior accessory dwelling unit until the permitting agency acts on the permit application to create the new single-family dwelling, but the application to create the junior accessory dwelling unit shall still be considered ministerially without discretionary review or a hearing. If the applicant requests a delay, the 60-day time period shall be tolled for the period of the delay. A local agency may charge a fee to reimburse the local agency for costs incurred in connection with the issuance of a permit pursuant to this section.
- (d) For purposes of any fire or life protection ordinance or regulation, a junior accessory dwelling unit shall not be considered a separate or new dwelling unit. This section shall not be construed to prohibit a city, county, city and county, or other local public entity from adopting an ordinance or regulation relating to fire and life protection requirements within a single-family residence that contains a junior accessory dwelling unit so long as the ordinance or regulation applies uniformly to all single-family residences within the zone regardless of whether the single-family residence includes a junior accessory dwelling unit or not.
- (e) For purposes of providing service for water, sewer, or power, including a connection fee, a junior accessory dwelling unit shall not be considered a separate or new dwelling unit.
- (f) This section shall not be construed to prohibit a local agency from adopting an ordinance or regulation, related to parking or a service or a connection fee for water, sewer, or power, that applies to a single-family residence that contains a junior accessory dwelling unit, so long as that ordinance or regulation applies uniformly to all singlefamily residences regardless of whether the single-family residence includes a junior accessory dwelling unit.
- (g) If a local agency has not adopted a local ordinance pursuant to this section, the local agency shall ministerially approve a permit to construct a junior accessory dwelling unit that satisfies the requirements set forth in subparagraph (A) of paragraph (1) of subdivision (e) of Section 65852.2 and the requirements of this section.
- (h) For purposes of this section, the following terms have the following meanings:
  - (1) "Junior accessory dwelling unit" means a unit that is no more than 500 square feet in size and contained entirely within a single-family residence. A junior accessory dwelling unit may include separate sanitation facilities, or may share sanitation facilities with the existing structure.
  - (2) "Local agency" means a city, county, or city and county, whether general law or chartered.

Effective January 1, 2020 Section 17980.12 is was added to the Health and Safety Code, immediately following Section 17980.11, to read (SB 13 (Wieckowski)):

**17980.12.**

(a) (1) An enforcement agency, until January 1, 2030, that issues to an owner of an accessory dwelling unit described in subparagraph (A) or (B) below, a notice to correct a violation of any provision of any building standard pursuant to this part shall include in that notice a statement that the owner of the unit has a right to request a delay in enforcement pursuant to this subdivision:

(A) The accessory dwelling unit was built before January 1, 2020.

(B) The accessory dwelling unit was built on or after January 1, 2020, in a local jurisdiction that, at the time the accessory dwelling unit was built, had a noncompliant accessory dwelling unit ordinance, but the ordinance is compliant at the time the request is made.

(2) The owner of an accessory dwelling unit that receives a notice to correct violations or abate nuisances as described in paragraph (1) may, in the form and manner prescribed by the enforcement agency, submit an application to the enforcement agency requesting that enforcement of the violation be delayed for five years on the basis that correcting the violation is not necessary to protect health and safety.

(3) The enforcement agency shall grant an application described in paragraph (2) if the enforcement determines that correcting the violation is not necessary to protect health and safety. In making this determination, the enforcement agency shall consult with the entity responsible for enforcement of building standards and other regulations of the State Fire Marshal pursuant to Section 13146.

(4) The enforcement agency shall not approve any applications pursuant to this section on or after January 1, 2030. However, any delay that was approved by the enforcement agency before January 1, 2030, shall be valid for the full term of the delay that was approved at the time of the initial approval of the application pursuant to paragraph (3).

(b) For purposes of this section, "accessory dwelling unit" has the same meaning as defined in Section 65852.2. (c) This section shall remain in effect only until January 1, 2035, and as of that date is repealed.

**GOV. CODE: TITLE 7, DIVISION 1, CHAPTER 4,  
ARTICLE 2**

**AB 587 Accessory Dwelling Units**

Effective January 1, 2020 Section 65852.26 is added to the Government Code, immediately following Section 65852.25, to read (AB 587 (Friedman)):

**65852.26.**

(a) Notwithstanding clause (i) of subparagraph (D) of paragraph (1) of subdivision (a) of Section 65852.2, a local agency may, by ordinance, allow an accessory dwelling unit to be sold or conveyed separately from the primary residence to a qualified buyer if all of the following apply:

(1) The property was built or developed by a qualified nonprofit corporation.

(2) There is an enforceable restriction on the use of the land pursuant to a recorded contract between the qualified buyer and the qualified nonprofit corporation that satisfies all of the requirements specified in paragraph (10) of subdivision (a) of Section 402.1 of the Revenue and Taxation Code.

(3) The property is held pursuant to a recorded tenancy in common agreement that includes all of the following:

(A) The agreement allocates to each qualified buyer an undivided, unequal interest in the property based on the size of the dwelling each qualified buyer occupies.

(B) A repurchase option that requires the qualified buyer to first offer the qualified nonprofit corporation to buy the property if the buyer desires to sell or convey the property.

(C) A requirement that the qualified buyer occupy the property as the buyer's principal residence.

(D) Affordability restrictions on the sale and conveyance of the property that ensure the property will be preserved for low-income housing for 45 years for owner-occupied housing units and will be sold or resold to a qualified buyer.

(4) A grant deed naming the grantor, grantee, and describing the property interests being transferred shall be recorded in the county in which the property is located. A Preliminary Change of Ownership Report shall be filed concurrently with this grant deed pursuant to Section 480.3 of the Revenue and Taxation Code.

(5) Notwithstanding subparagraph (A) of paragraph (2) of subdivision (f) of Section 65852.2, if requested by a utility providing service to the primary residence, the accessory dwelling unit has a separate water, sewer, or electrical connection to that utility.

(b) For purposes of this section, the following definitions apply:

(1) "Qualified buyer" means persons and families of low or moderate income, as that term is defined in Section 50093 of the Health and Safety Code.

(2) "Qualified nonprofit corporation" means a nonprofit corporation organized pursuant to Section 501(c)(3) of the Internal Revenue Code that has received a welfare exemption under Section 214.15 of the Revenue and Taxation Code for properties intended to be sold to low-income families who participate in a special no-interest loan program.

**CIVIL CODE: DIVISION 4, PART 5, CHAPTER 5,  
ARTICLE 1**

**AB 670 Accessory Dwelling Units**

Effective January 1, 2020, Section 4751 is was added to the Civil Code, to read (AB 670 (Friedman)):  
**4751.**

(a) Any covenant, restriction, or condition contained in any deed, contract, security instrument, or other instrument affecting the transfer or sale of any interest in a planned development, and any provision of a governing document, that either effectively prohibits or unreasonably restricts the construction or use of an accessory dwelling unit or junior accessory dwelling unit on a lot zoned for single-family residential use that meets the requirements of Section 65852.2 or 65852.22 of the Government Code, is void and unenforceable.

(b) This section does not apply to provisions that impose reasonable restrictions on accessory dwelling units or junior accessory dwelling units. For purposes of this subdivision, "reasonable restrictions" means restrictions that do not unreasonably increase the cost to construct, effectively prohibit the construction of, or extinguish the ability to otherwise construct, an accessory dwelling unit or junior accessory dwelling unit consistent with the provisions of Section 65852.2 or 65852.22 of the Government Code.

**GOV. CODE: TITLE 7, DIVISION 1, CHAPTER 3,  
ARTICLE 10.6**

**AB 671 Accessory Dwelling Units**

Effective January 1, 2020, Section 65583(c)(7) of the Government Code is was added to read (sections of housing element law omitted for conciseness) (AB 671 (Friedman)):  
**65583(c)(7).**

Develop a plan that incentivizes and promotes the creation of accessory dwelling units that can be offered at affordable rent, as defined in Section 50053 of the Health and Safety Code, for very low, low-, or moderate-income households. For purposes of this paragraph, "accessory dwelling units" has the same meaning as "accessory dwelling unit" as defined in paragraph (4) of subdivision (i) of Section 65852.2.

Effective January 1, 2020, Section 50504.5 is was added to the Health and Safety Code, to read (AB 671 (Friedman)):

**50504.5.**

- (a) The department shall develop by December 31, 2020, a list of existing state grants and financial incentives for operating, administrative, and other expenses in connection with the planning, construction, and operation of an accessory dwelling unit with affordable rent, as defined in Section 50053, for very low, low-, and moderate-income households.
- (b) The list shall be posted on the department's internet website by December 31, 2020.
- (c) For purposes of this section, "accessory dwelling unit" has the same meaning as defined in paragraph (4) of subdivision (i) of Section 65852.2 of the Government Code.

## Attachment 2: State Standards Checklist

| YES/NO | STATE STANDARD*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | GOVERNMENT CODE SECTION                 |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
|        | Unit is not intended for sale separate from the primary residence and may be rented.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 65852.2(a)(1)(D)(i)                     |
|        | Lot is zoned for single-family or multifamily use and contains a proposed, or existing, dwelling.                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 65852.2(a)(1)(D)(ii)                    |
|        | The accessory dwelling unit is either attached to, or located within, the proposed or existing primary dwelling, including attached garages, storage areas or similar uses, or an accessory structure, or detached from the proposed or existing dwelling and located on the same lot as the proposed or existing primary dwelling.                                                                                                                                                                                                                                 | 65852.2(a)(1)(D)(iii)                   |
|        | Increased floor area of an attached accessory dwelling unit does not exceed 50 percent of the existing primary dwelling but shall be allowed to be at least 800/850/1000 square feet.                                                                                                                                                                                                                                                                                                                                                                               | 65852.2(a)(1)(D)(iv),<br>(c)(2)(B) & C) |
|        | Total area of floor area for a detached accessory dwelling unit does not exceed 1,200 square feet.                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 65852.2(a)(1)(D)(v)                     |
|        | Passageways are not required in conjunction with the construction of an accessory dwelling unit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 65852.2(a)(1)(D)(vi)                    |
|        | Setbacks are not required for an existing living area or accessory structure or a structure constructed in the same location and to the same dimensions as an existing structure that is converted to an accessory dwelling unit or to a portion of an accessory dwelling unit, and a setback of no more than four feet from the side and rear lot lines shall be required for an accessory dwelling unit that is not converted from an existing structure or a new structure constructed in the same location and to the same dimensions as an existing structure. | 65852.2(a)(1)(D)(vii)                   |
|        | Local building code requirements that apply to detached dwellings are met, as appropriate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 65852.2(a)(1)(D)(viii)                  |
|        | Local health officer approval where a private sewage disposal system is being used, if required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 65852.2(a)(1)(D)(ix)                    |
|        | Parking requirements do not exceed one parking space per accessory dwelling unit or per bedroom, whichever is less. These spaces may be provided as tandem parking on an existing driveway.                                                                                                                                                                                                                                                                                                                                                                         | 65852.2(a)(1)(D)(x)(l)                  |

### Attachment 3: Bibliography

#### [ACCESSORY DWELLING UNITS: CASE STUDY](#) (26 pp.)

By the United States Department of Housing and Urban Development, Office of Policy Development and Research. (2008)

Introduction: Accessory dwelling units (ADUs) — also referred to as accessory apartments, ADUs, or granny flats — are additional living quarters on single-family lots that are independent of the primary dwelling unit. The separate living spaces are equipped with kitchen and bathroom facilities and can be either attached or detached from the main residence. This case study explores how the adoption of ordinances, with reduced regulatory restrictions to encourage ADUs, can be advantageous for communities. Following an explanation of the various types of ADUs and their benefits, this case study provides examples of municipalities with successful ADU legislation and programs. Section titles include: History of ADUs; Types of Accessory Dwelling Units; Benefits of Accessory Dwelling Units; and Examples of ADU Ordinances and Programs.

#### [THE MACRO VIEW ON MICRO UNITS](#) (46 pp.)

By Bill Whitlow, et al. – Urban Land Institute (2014)  
Library Call #: H43 4.21 M33 2014

The Urban Land Institute Multifamily Housing Councils were awarded a ULI Foundation research grant in fall 2013 to evaluate from multiple perspectives the market performance and market acceptance of micro and small units.

#### [SECONDARY UNITS AND URBAN INFILL: A Literature Review](#) (12 pp.)

By Jake Wegmann and Alison Nemirow (2011)  
UC Berkeley: IURD  
Library Call # D44 4.21 S43 2011

This literature review examines the research on both infill development in general, and secondary units in particular, with an eye towards understanding the similarities and differences between infill as it is more traditionally understood – i.e., the development or redevelopment of entire parcels of land in an already urbanized area – and the incremental type of infill that secondary unit development constitutes.

#### [RETHINKING PRIVATE ACCESSORY DWELLINGS](#) (5 pp.)

By William P. Macht. Urbanland online. (March 6, 2015)  
Library Location: Urbanland 74 (1/2) January/February 2015, pp. 87-91.

One of the large impacts of single-use, single-family detached zoning has been to severely shrink the supply of accessory dwellings, which often were created in or near primary houses. Detached single-family dwelling zones—the largest housing zoning category—typically preclude more than one dwelling per lot except under stringent regulation, and then only in some jurisdictions. Bureaucratically termed “accessory dwelling units” that are allowed by some jurisdictions may encompass market-derived names such as granny flats, granny cottages, mother-in-law suites, secondary suites, backyard cottages, casitas, carriage flats, sidekick houses, basement apartments, attic apartments, laneway houses, multigenerational homes, or home-within-a-home.

[Regulating ADUs in California: Local Approaches & Outcomes](#) (44 pp.)

By Deidra Pfeiffer  
Turner Center for Housing and Innovation, UC Berkeley

Accessory dwelling units (ADU) are often mentioned as a key strategy in solving the nation's housing problems, including housing affordability and challenges associated with aging in place. However, we know little about whether formal ADU practices—such as adopting an ordinance, establishing regulations, and permitting—contribute to these goals. This research helps to fill this gap by using data from the Turner California Residential Land Use Survey and the U.S. Census Bureau to understand the types of communities engaging in different kinds of formal ADU practices in California, and whether localities with adopted ordinances and less restrictive regulations have more frequent applications to build ADUs and increasing housing affordability and aging in place. Findings suggest that three distinct approaches to ADUs are occurring in California: 1) a more restrictive approach in disadvantaged communities of color, 2) a moderately restrictive approach in highly advantaged, predominately White and Asian communities, and 3) a less restrictive approach in diverse and moderately advantaged communities. Communities with adopted ordinances and less restrictive regulations receive more frequent applications to build ADUs but have not yet experienced greater improvements in housing affordability and aging in place. Overall, these findings imply that 1) context-specific technical support and advocacy may be needed to help align formal ADU practices with statewide goals, and 2) ADUs should be treated as one tool among many to manage local housing problems.

[ADU Update: Early Lessons and Impacts of California's State and Local Policy Changes](#) (8 p.)

By David Garcia (2017)  
Turner Center for Housing and Innovation, UC Berkeley

As California's housing crisis deepens, innovative strategies for creating new housing units for all income levels are needed. One such strategy is building Accessory Dwelling Units (ADUs) by private homeowners. While large scale construction of new market rate and affordable homes is needed to alleviate demand-driven rent increases and displacement pressures, ADUs present a unique opportunity for individual homeowners to create more housing as well. In particular, ADUs can increase the supply of housing in areas where there are fewer opportunities for larger-scale developments, such as neighborhoods that are predominantly zoned for and occupied by single-family homes. In two of California's major metropolitan areas -- Los Angeles and San Francisco -- well over three quarters of the total land area is comprised of neighborhoods where single-family homes make up at least 60 percent of the community's housing stock. Across the state, single-family detached units make up 56.4 percent of the overall housing stock. Given their prevalence in the state's residential land use patterns, increasing the number of singlefamily homes that have an ADU could contribute meaningfully to California's housing shortage.

[Jumpstarting the Market for Accessory Dwelling Units: Lessons Learned from Portland, Seattle and Vancouver](#) (29 pp.)

By Karen Chapple et al (2017)  
Turner Center for Housing and Innovation, UC Berkeley



Despite government attempts to reduce barriers, a widespread surge of ADU construction has not materialized.

The ADU market remains stalled. To find out why, this study looks at three cities in the Pacific Northwest of the United States and Canada that have seen a spike in construction in recent years: Portland, Seattle, and

Vancouver. Each city has adopted a set of zoning reforms, sometimes in combination with financial incentives and outreach programs, to spur ADU construction. Due to these changes, as well as the acceleration of the housing crisis in each city, ADUs have begun blossoming.

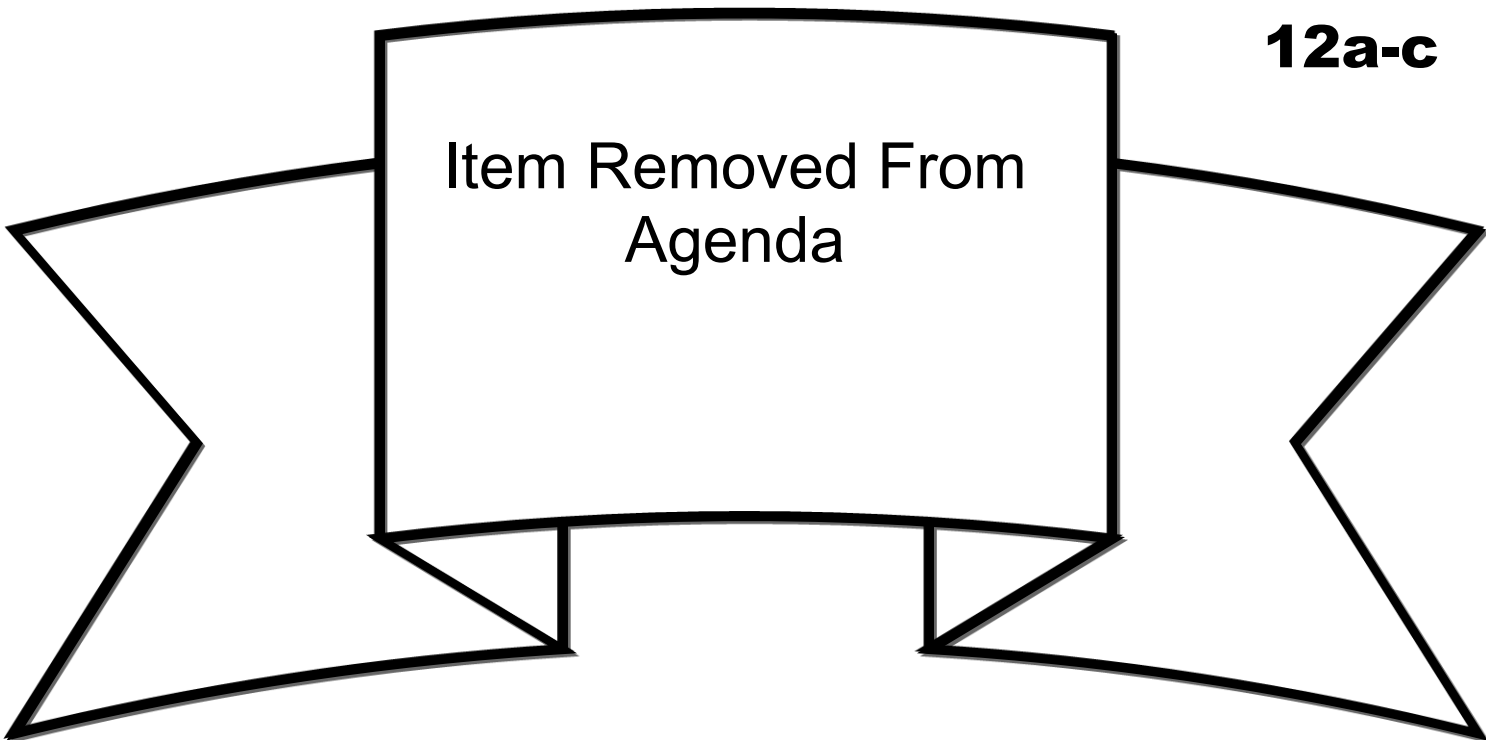
[Accessory Dwelling Units as Low-Income Housing: California's Faustian Bargain](#) (37 pp.)

By Darrel Ramsey-Musolf (2018)

University of Massachusetts Amherst, ScholarWorks@UMass Amherst

In 2003, California allowed cities to count accessory dwelling units (ADU) towards low-income housing needs. Unless a city's zoning code regulates the ADU's maximum rent, occupancy income, and/or effective period, then the city may be unable to enforce low-income occupancy. After examining a stratified random sample of 57 low-, moderate-, and high-income cities, the high-income cities must proportionately accommodate more low-income needs than low-income cities. By contrast, low-income cities must quantitatively accommodate three times the low-income needs of high-income cities. The sample counted 750 potential ADUs as low-income housing. Even though 759 were constructed, no units were identified as available low-income housing. In addition, none of the cities' zoning codes enforced low-income occupancy. Inferential tests determined that cities with colleges and high incomes were more probable to count ADUs towards overall and low-income housing needs. Furthermore, a city's count of potential ADUs and cities with high proportions of renters maintained positive associations with ADU production, whereas a city's density and prior compliance with state housing laws maintained negative associations. In summary, ADUs did increase local housing inventory and potential ADUs were positively associated with ADU production, but ADUs as low-income housing remained a paper calculation.





**Item Removed From  
Agenda**

**12a. Public Hearing: ZAB Appeal: 1850 Arch Street, Use Permit #ZP2019-021**

**12b. Public Hearing: ZAB Appeal: 1862 Arch Street, Use Permits #ZP2019-0213**

**12c. ZAB Appeals: 1850 and 1862 Arch Street, Use Permits #ZP2019-0212 and ZP2019-0213**

This item has been removed from the agenda by the City Manager.

If you have questions regarding this report, please contact the person noted on the agenda.

**City Clerk Department**  
2180 Milvia Street  
Berkeley, CA 94704  
(510) 981-6900

or from:

**The City of Berkeley, City Council's Web site**  
<http://www.cityofberkeley.info/citycouncil/>





Office of the City Manager

## ACTION CALENDAR

January 26, 2021

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: Berkeley 2020 Pedestrian Plan

### RECOMMENDATION

Adopt a Resolution approving the Berkeley 2020 Pedestrian Plan and directing the City Manager to pursue implementation of the Plan as funding and staffing permit.

### FISCAL IMPACTS OF RECOMMENDATION

The completed Berkeley 2020 Pedestrian Plan (Plan) identifies project costs for ten priority high-injury streets that were identified through crash analysis and application of prioritization factors. The total cost to implement the recommended projects on the ten priority high-injury streets is estimated to be up to \$80,337,500 (includes up to \$60,337,500 in construction costs plus about \$20 million in design costs). Once adopted by Council, these planned projects will be added to future Public Works Capital Improvement Plans (CIPs) as funding, staffing, and consultant support are identified.

Potential funding sources for the recommended projects on the ten priority high-injury streets include discretionary federal, State, and local grants in strategic conjunction with Alameda County Measure B and BB Transportation Sales Tax Direct Local Distribution funding and other staff-identified funding sources as specific projects are added to each CIP.

### CURRENT SITUATION AND ITS EFFECTS

The Plan has been developed as a multi-year blueprint to achieve the vision of Berkeley as “a model walkable City where traveling on foot or by assistive device is safe, comfortable, and convenient for people of all races, ethnicities, incomes, ages, and abilities.” The Plan goals are as follows.

- Increase safety and comfort for people walking
- Increase equity and transportation choices for all
- Improve public health and environmental sustainability

The Plan includes policies, programs, and projects consistent with the City’s adopted Vision Zero Action Plan in order to make progress for pedestrians toward meeting the Vision Zero target of zero traffic deaths and severe injuries by 2028. The Plan identifies the City’s pedestrian high-injury streets using an analysis of severe and fatal crashes.

Together, the City's pedestrian high-injury streets account for only 14% of Berkeley's street miles but a staggering 93% of Berkeley's severe and fatal pedestrian injuries. The Berkeley pedestrian high-injury street map is shown on page 28 of the Plan.

The Plan includes recommendations and construction cost estimates for capital projects on ten priority high-injury streets. These streets were identified through an analysis that weighted streets as follows.

- Equity (30%) - in historically underserved neighborhoods based on federal Home Owners' Loan Corporation (HOLC) redlining maps
- Safety (30%) - concentration of fatal and severe collisions
- Connectivity (20%) - walking demand due to proximity to land uses, transit services
- Existing Plan (20%) - streets with unbuilt projects from the 2010 Pedestrian Plan

A map of the ten priority high-injury streets is shown on page 32 of the Plan.

The Plan also includes recommendations for new programs and policies to help make walking safer and more comfortable and to increase accessibility for seniors and people with disabilities. These are in the areas of street infrastructure design and operations, evaluation and planning, project implementation (funding, coordination), and safety education. The Plan has no recommendations for traffic enforcement by police officers and defers to the Vision Zero Program concerning this issue. The Plan has only a recommendation to support state-wide traffic safety legislation allowing automated speed enforcement by local agencies and to utilize existing legislated automated strategies, as a potential alternative to utilizing police officers for traffic enforcement.

Notably, the Plan is consistent with applicable recommendations in the Berkeley Commission on Disability's *Navigable Cities Framework*. Specifically, the Plan recommends that the City do the following based on public input into the Plan.

- Design curb ramps to align with the direction of the crosswalk where technically feasible.
- Develop a strategy to prioritize repaving crosswalks in the near term to eliminate tripping hazards, even if the street in question will be repaved farther in the future.
- Adopt the Caltrans *Temporary Pedestrian Access Routes Handbook* (2020) to minimize construction impacts on people with disabilities.
- Propose a property tax or other assessment to voters to create a stable funding stream for public sidewalk and public pathway maintenance.

## BACKGROUND

The existing Berkeley Pedestrian Master Plan was adopted by City Council in 2010. The 2020 Plan is a comprehensive update of the 2010 Plan, and reflects the evolution of pedestrian transportation policy, planning, and design that has occurred over the past ten years.<sup>1</sup> The Alameda County Transportation Commission, the Metropolitan Transportation Commission, and the State of California all require that cities regularly

---

<sup>1</sup> For the 2020 Pedestrian Plan, see <https://walkberkeley.info>.

update their pedestrian and bicycle transportation plans in order to maintain eligibility for County, Regional, and State competitive transportation grant funding sources.

### **Public Outreach and Public Comment**

The Plan results from an ambitious and innovative public outreach process that sought to reach Berkeley community members who may traditionally be less likely to attend and participate in public meetings. City staff and consultants thus conducted a public survey that reached people by way of the Pedestrian Plan website and through “Pop-Up” tabling at nearly a dozen different farmer’s markets, street fairs, and public events. This engagement was in addition to public opportunities for input on the Pedestrian Plan at two public open houses, three Transportation Commission (TC) meetings, and two TC Pedestrian Subcommittee meetings. About 880 public comments were received at in-person events and nearly 260 comments were received online. Key themes from public comments are summarized in Appendix A of the Plan.

### **Plan Approval and Next Steps**

The Draft 2020 Pedestrian Plan was first released to the public on September 10, 2020. The Berkeley Transportation Commission, at its September 17, 2020 meeting, recommended approval of the Draft Plan by the City Council with certain changes, as shown in Attachment 2. A revised Draft Plan dated October 2020, which incorporated the changes requested by the Transportation Commission, was released to the public for review and comment on October 6, 2020. As of the October 31, 2020 close of the public comment period, City staff had logged 41 public comments received. Most of these concerned the condition of sidewalks and the impact of their condition on accessibility by seniors and people with disabilities. In order to address this concern, which had also been expressed at the public open houses and in public survey comments, the Plan includes a recommendation to bring an assessment to voters to raise funds for maintenance of sidewalks as an alternative to continuing to rely primarily on individual private financing by adjoining property owners for maintenance of public sidewalks.

The California Code of Regulations Title 14 Section 15262 (14 CCR § 15262) provides a statutory exemption from California Environmental Quality Act (CEQA) review for feasibility and planning studies concerning possible future actions where those actions would require a future environmental review under CEQA in order to be implemented. In accordance with this statute, individual projects from the 2020 Pedestrian Plan will be subject to CEQA analysis and clearance as appropriate before implementation.

### **ENVIRONMENTAL SUSTAINABILITY**

The 2020 Pedestrian Plan supports the Berkeley Climate Action Plan, which has a target of reducing transportation emissions 33% below year 2000 levels by 2020, and 80% below year 2000 levels by 2050. Specifically, the Climate Action Plan states transportation modes, such as public transit, walking, and cycling, must become the primary means of fulfilling the City’s mobility needs in order to meet this target.

### **RATIONALE FOR RECOMMENDATION**

Approving the Plan ensures Berkeley’s continued eligibility for a variety of grant funds available from County, regional, and State sources for which an approved Pedestrian

Plan is required. Further, approval of the Plan would help meet the target of the Vision Zero Action Plan to eliminate traffic deaths and severe injuries in the City by 2028.

ALTERNATIVE ACTIONS CONSIDERED

Council may opt to not approve the Plan, which would result in the City forgoing transportation funding from County, regional, and State sources that require an approved Pedestrian Plan.

CONTACT PERSON

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Ryan P. Murray, Associate Planner, Public Works, 981-7062

Attachments:

1: Resolution

Exhibit A: Berkeley 2020 Pedestrian Plan

2: Berkeley Transportation Commission Action – September 17, 2020



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

CITY OF BERKELEY PEDESTRIAN PLAN

WHEREAS, the Berkeley General Plan Transportation Element directs the City to “Create a model bicycle- and pedestrian-friendly city where bicycling and walking are safe, attractive, easy, and convenient forms of transportation and recreation for people of all ages and abilities”; and

WHEREAS, regularly updating the Berkeley Pedestrian Plan is required for the City to maintain eligibility for grant funding for transportation projects from the Alameda County Transportation Commission, Metropolitan Transportation Commission, and certain State sources; and

WHEREAS, promoting walking as a form of transportation will help the City meet the Berkeley Climate Action Plan greenhouse gas reduction targets; and

WHEREAS, the Berkeley 2020 Pedestrian Plan identifies pedestrian high-injury streets consistent with the adopted Berkeley Vision Zero Action Plan, recommends additional programs and policies to improve pedestrian safety and accessibility, and provides construction cost estimates to deliver safety projects on ten priority high-injury streets; and

WHEREAS, the City of Berkeley Department of Public Works has received and responded to comments from the public and revised the 2020 Pedestrian Plan where appropriate.

NOW THEREFORE, BE IT RESOLVED that the Council of the City of Berkeley approves the Berkeley 2020 Pedestrian Plan (Exhibit A) and directs the City Manager to pursue implementation of the Plan as funding and staffing permit.

# 2020 PEDESTRIAN PLAN

# CITY OF BERKELEY



## ACKNOWLEDGMENTS

Efforts from the following organizations made the Berkeley Pedestrian Plan possible:

- Mayor/City Council
- Transportation Commission
- Pedestrian Subcommittee of the Transportation Commission
- Interagency Staff Working Group
- City staff - Transportation Division
- Alta Planning and Design - City staff support
- Toole Design Group - Subconsultant
- Kittelson & Associates, Inc. - Prime consultant

# TABLE OF CONTENTS

|                                                 |             |
|-------------------------------------------------|-------------|
| <b>EXECUTIVE SUMMARY</b>                        | <b>ES-1</b> |
| PLAN CONTEXT                                    | ES-3        |
| WHAT WE HEARD ABOUT WALKING IN BERKELEY         | ES-3        |
| VISION & GOALS                                  | ES-6        |
| EXISTING CONDITIONS /NEEDS ANALYSIS             | ES-8        |
| RECOMMENDATIONS                                 | ES-10       |
| <br>                                            |             |
| <b>PEDESTRIAN PLAN VISION &amp; GOALS</b>       | <b>1</b>    |
| VISION                                          | 2           |
| GOALS                                           | 3           |
| PERFORMANCE MEASURES                            | 4           |
| <br>                                            |             |
| <b>EXISTING WALKING CONDITIONS</b>              | <b>5</b>    |
| PROGRESS SUMMARY                                | 7           |
| INFRASTRUCTURE INVENTORY                        | 9           |
| PEDESTRIAN DEMAND                               | 18          |
| PEDESTRIAN SAFETY                               | 21          |
| <br>                                            |             |
| <b>IMPROVEMENTS &amp; RECOMMENDATIONS</b>       | <b>29</b>   |
| PRIORITIZATION FRAMEWORK                        | 30          |
| PROJECT RECOMMENDATIONS                         | 33          |
| <br>                                            |             |
| <b>COST ESTIMATES &amp; FUNDING</b>             | <b>62</b>   |
| COST ESTIMATES                                  | 63          |
| FUNDING AND REVENUE SOURCES                     | 66          |
| <br>                                            |             |
| <b>APPENDICES</b>                               | <b>A-1</b>  |
| APPENDIX A: PUBLIC ENGAGEMENT SUMMARY           | A-2         |
| APPENDIX B: ENGINEERING & DESIGN GUIDANCE       | B-1         |
| APPENDIX C: TECHNICAL ANALYSIS METHODOLOGIES    | C-1         |
| APPENDIX D: PROGRAM AND POLICY RECOMMENDATIONS  | D-1         |
| APPENDIX E: COST ESTIMATES                      | E-1         |
| APPENDIX F: PEDESTRIAN LIGHTING NEEDS INVENTORY | F-1         |



# EXECUTIVE SUMMARY



Walking is a core transportation mode in Berkeley. Everyone travels by foot or with an assistive device, ranging from a short portion of a trip to the entire length of a journey. Improving walking in Berkeley means improving networks within neighborhoods, providing linkages to local destinations and transit, and providing opportunities for play and exercise. Whether walking to the bus stop or playing on the sidewalk, residents, visitors, students, commuters, and families bring Berkeley's pedestrian network to life.

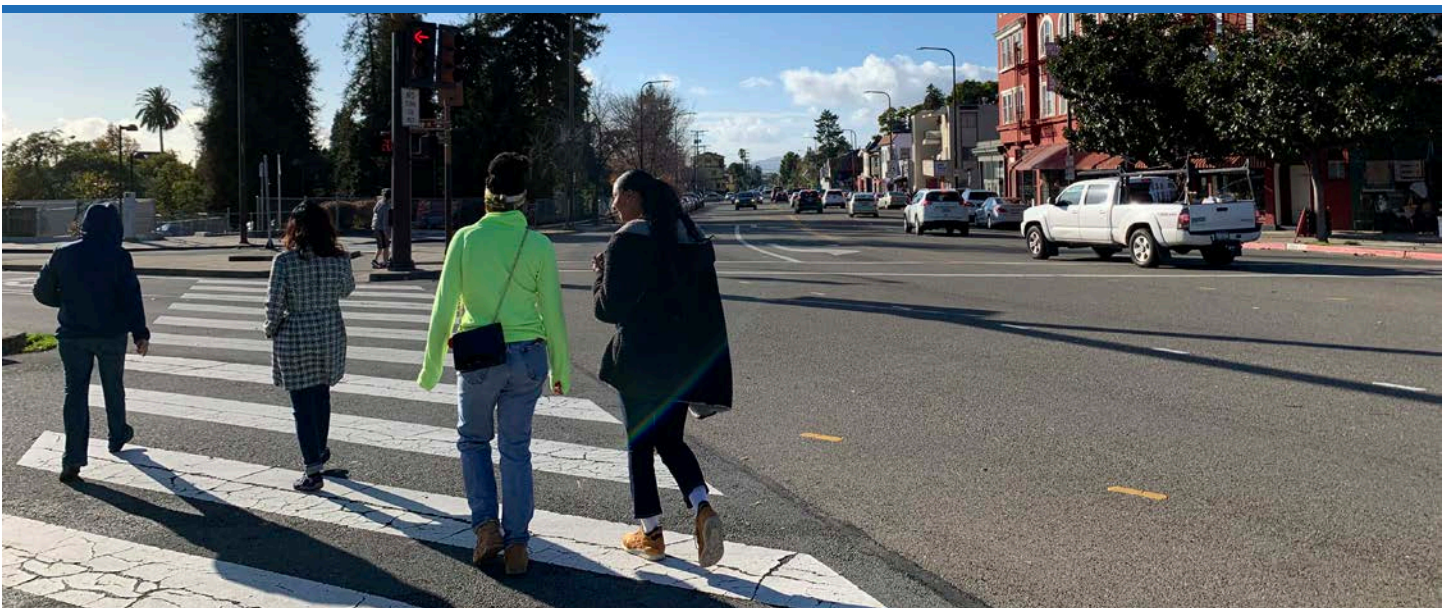
Improving walkability makes Berkeley safer, more inclusive, and more connected. As the most accessible and affordable form of transportation, walking lies at the core of an equitable mobility network and a healthy place. Safe and comfortable access to pedestrian infrastructure makes reaching Berkeley's many destinations more feasible for every individual. In addition to enhancing Berkeley's quality of life, improving walking will help the City to achieve its Vision Zero Policy goal of zero traffic deaths and severe injuries.

The Berkeley Pedestrian Plan Update (Plan) is a critical component of the City's efforts to meet diverse travel needs and improve mobility for everyone who is walking and traveling with an assistive device in Berkeley. In this Plan, we refer to "walking" as any person traveling on foot or with an

assistive device. This Plan identifies and addresses critical gaps and needs, while offering opportunities to improve experiences of walking in Berkeley. Key corridors and projects are identified with cost estimates and potential funding sources. The vision, goals, and priorities of this Plan align with other City planning efforts already underway, ensuring that recommended mobility improvements are both appropriate and coordinated.

## How This Plan is Organized

The Plan outlines a citywide vision and a set of goals that guide recommendations for how to invest resources that will improve walking ([Chapter 1](#)). An existing conditions analysis identifies critical gaps and needs within the City's network of sidewalks, paths, and stairs ([Chapter 2](#)). Projects, programs, and policies that fill these gaps and that meet these needs are prioritized to align with planning efforts and current projects and to advance the City's overarching goals to improve safety, equity, and health ([Chapter 3](#)). An estimate of costs to implement this Plan's recommended projects, programs, and policies are provided, alongside a list of funding and revenue sources ([Chapter 4](#)). The Plan's appendices ([Chapter 5](#)) detail the specific components of this Plan, including public engagement, engineering and design guidance, and technical analysis methodologies.



## PLAN CONTEXT

The Plan builds upon Berkeley's first Pedestrian Plan, adopted in 2010. The 2010 Pedestrian Plan set six principles for creating a more pedestrian-oriented City:

- Accessibility
- Environmental Sustainability
- Equity
- Personal and Community Safety
- Health and Well-Being
- Community Cohesion and Vitality

This Plan builds upon these principles and now aligns with the City's most recent efforts to improve mobility in Berkeley, like Vision Zero. This Plan will complement the following planning efforts that are currently underway or already completed in Berkeley:

- General Plan (2003)
- Pedestrian Charter Principles (2004)
- Climate Action Plan (2009)
- Pedestrian Plan (2010)
- Resilience Strategy (2016)
- Berkeley Strategic Transportation Plan (BeST) (2016)
- Berkeley bicycle Plan (2017)
- 2018-19 Strategic Plan (2018)
- Vision Zero Action Plan (2020)

## WHAT WE HEARD ABOUT WALKING IN BERKELEY

Community engagement was a critical component of creating this Plan. Participants shared comments, stories, experiences, impressions, concerns, and ideas that shaped the findings and recommendations of this Plan. Coupled with quantitative data collection and analysis, input from community members provided the basis of a holistic approach to identifying projects, programs, and policies to improve walking in Berkeley. In this Plan, both in-person events and online engagement tools were used to hear from community members. Community engagement materials were translated into Spanish, and in-person events were located in settings and locations all across the city to reach different population groups. Engagement also included working with disability rights advocates and ADA staff inside the city to incorporate the needs of people who roll into this plan.

**In-person events** were held in conjunction with other local events, like farmer's markets and holiday festivals, between June and August 2018. More than 500 total comments were received at these events. Comments ranged from describing challenges at specific locations to expressing general concerns throughout Berkeley to providing innovative ideas intended to spark pedestrian activity and enhance safety for people walking.



Meeting with community members at the Fourth of July party at the Berkeley Marina in 2018.



Comments from community members highlighted several key themes:

- **Accessibility concerns** on broken, deteriorating, or blocked sidewalks
- **Unsafe or uncomfortable crossing conditions**, including crossings where lighting is poor, where collisions have occurred, where vehicle speeds are too high, and where pedestrian crossing times are too short
- **Lacking pedestrian-oriented or pedestrian-only spaces**, like plazas and walking paths, and **pedestrian amenities**, like street trees and seating
- **Confusing or unsafe roadway design** for pedestrians to navigate
- **Insufficient or low-quality pedestrian connections to access transit stations**
- **Feelings of insecurity** on isolated paths or on missing or narrow sidewalks
- **Unsafe driver behavior** at pedestrian crossings

**Open houses** provided another in-person opportunity to hear from community members. The first open house was held on December 1, 2018 at the Frances Albrier Community Center, and the second was held on December 7, 2019 at Ed Roberts Campus. Together, more than 60 people attended the open houses to comment, identify priorities, and speak with staff regarding how to improve walking in Berkeley based on their own experiences, observations, and knowledge. Open houses were also an opportunity for the project team to share the Plan's technical approach and recommendations with community members.

Comments from open house attendees highlighted several key themes.

- Crossing certain streets is **perceived as dangerous** or risky. This can be improved by slowing vehicle speeds and making pedestrians more visible at such locations.
- Drivers should adhere to traffic laws, and enforcement of those laws should be done in a way that minimizes or **eliminates potential for bias**.
- **Improving human-scale lighting** is needed at crosswalks to increase both comfort for people crossing the street and visibility of people walking to drivers.

- Providing ample and automatic **time for people to cross the street** is preferable to relying on buttons that pedestrians have to push to cross the street.
- Maintaining a high degree of **sidewalk quality** and reducing the prevalence of cracked sidewalks is a priority across Berkeley.

A **project website**, which was linked to the City's online presence, augmented in-person outreach activities. Here, community members read a project overview, viewed the schedule with a calendar of outreach events, and engaged with a "WikiMap," which allowed individuals to identify their current walking routes and suggest improvements to the pedestrian network. Respondents provided the most WikiMap feedback in the following locations:

- Downtown Berkeley, South Berkeley, and Westbrae neighborhoods
- UC Berkeley campus
- In the vicinity of all three Berkeley BART stations
- Commercial corridors including Shattuck Avenue, University Avenue, and Adeline Street



Soliciting public feedback on the Berkeley Pedestrian Plan at the Fourth of July Party at Adventure Playground on July 4th, 2018.

An **online survey** linked on the project website invited community members to provide more detailed information on their current walking habits and decisions. In total, more than 400 people completed the survey, with an additional 200 people completing only select portions of the survey.

Each City Council District in Berkeley was represented and **Figure ES-1** shows the percentage of respondents from each. The survey was developed to help answer the following key questions. The input obtained was used to guide the development of the Plan.

- 1. Travel Trends:** What kinds of trips do you make by walking, how often are these trips made, and how far do you walk?
- 2. Key Destinations:** Where do you walk and where would you like to walk?
- 3. Attitudes:** What factors do you consider when choosing whether to walk? What factors discourage you or your children from walking?
- 4. Priorities:** What types of projects and programs should the City of Berkeley prioritize? Where should investments be prioritized?
- 5. Demographics:** Who is walking and how can the City of Berkeley better serve their needs?

The survey responses revealed that:

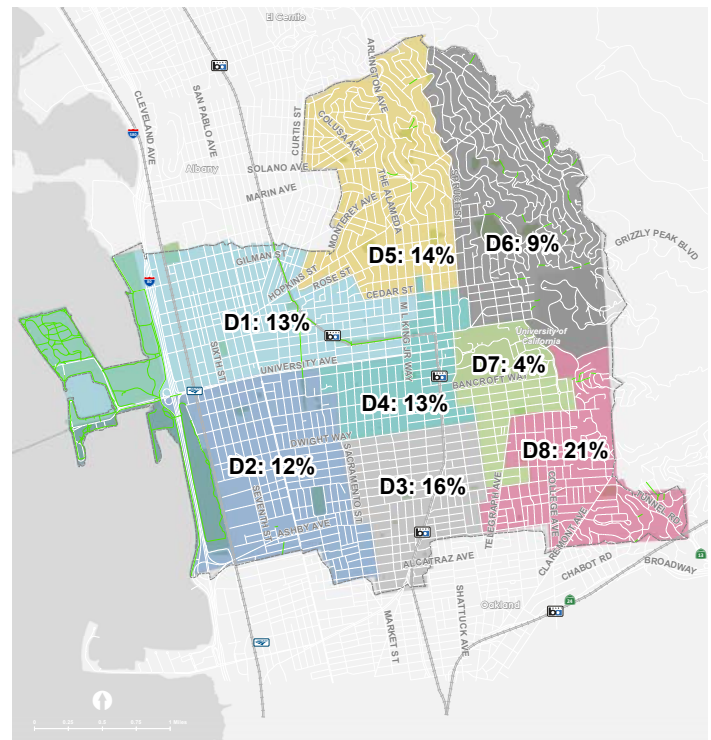
- A majority of respondents **walk at least once a week** to work or school or for other trips, indicating the importance of a connected and safe pedestrian network in Berkeley.
- Many walking trips are combined with another mode of transportation, especially when **used to access public transit**.
- Many respondents expressed that they do not walk or let their children walk to school because of **traffic safety concerns and perceived walking distances**.
- When considering walking to key destinations, respondents indicated that **safety and connectivity were critical to deciding when to walk rather than using another mode of transportation**.

Survey respondents were able to choose multiple types of pedestrian projects that they wanted the City to prioritize. Overall, 60 percent of survey respondents want to see projects implemented that address pedestrian collisions, and almost half (45 percent) of survey respondents want to see projects implemented that provide access to key destinations such as schools, transit, parks, and libraries along or across busy streets.

The Plan also includes feedback from **stakeholder engagement** through the Transportation Commission and its Pedestrian Subcommittee, and an Interagency Staff Working Group that consisted of representatives of various City departments, UC Berkeley, the Alameda-Contra Costa Transit District (AC Transit), and Lawrence Berkeley National Lab shuttle service. Meetings with stakeholders provided opportunities to share the Plan’s findings and recommendations and hear insight from diverse stakeholders’ perspectives. Their comments and feedback shaped the technical analysis and informed the findings and recommendations presented in this Plan.

Input gathered through community engagement and outreach processes has been incorporated into each element of this Plan, and the community’s voice is ever-present in this Plan. A public engagement summary is included in **Appendix A: Public Engagement Summary**.

FIGURE ES-1: PERCENTAGE OF SURVEY RESPONDENTS BY BERKELEY COUNCIL DISTRICT

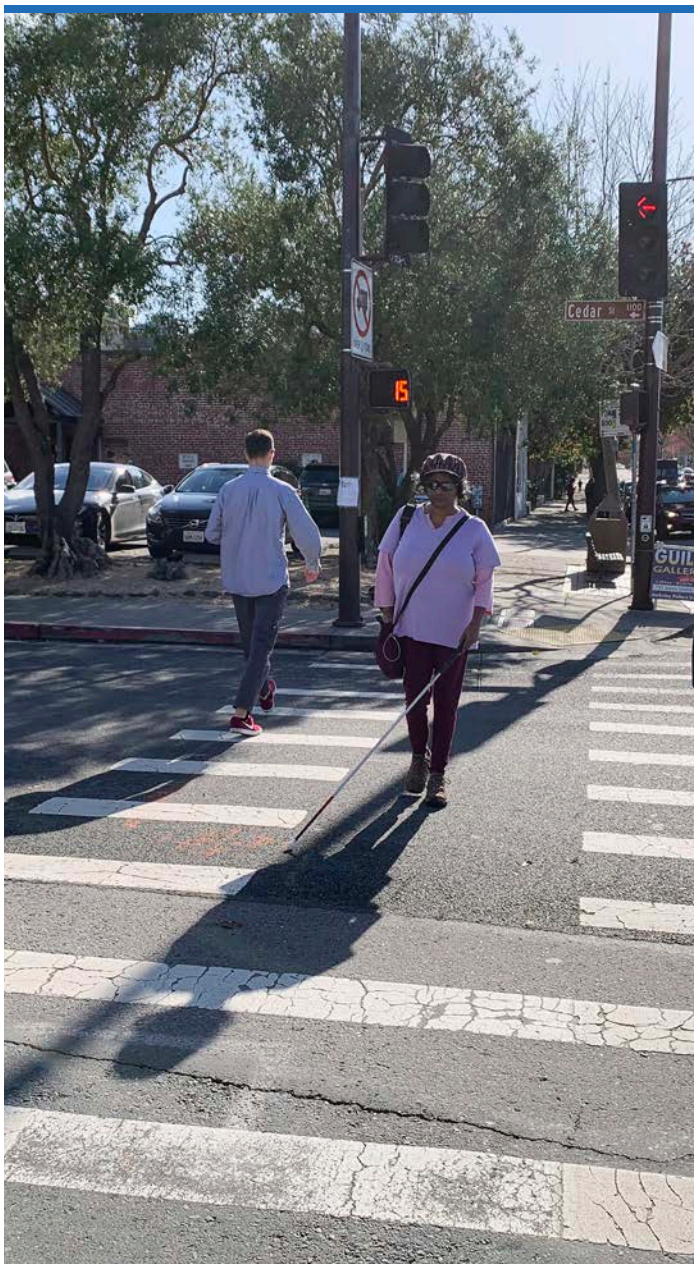


## VISION & GOALS

The Plan's vision sets a course for improving walking in Berkeley:

Berkeley is a model walkable city where traveling on foot or with an assistive device is safe, comfortable, and convenient for people of all races, ethnicities, incomes, ages and abilities.

Adapted from the 2010 Pedestrian Plan, the vision was updated to reflect the City of Berkeley's renewed commitment to shaping an inclusive and equitable city through mobility.



The vision also sets the framework for the Plan's goals and performance measures to improve travel on foot. The goals of this Plan are to:

### Goal: Increase SAFETY & COMFORT for People Walking

Berkeley is one of the more walkable cities in the state of California, and indeed, many residents, workers, and visitors do feel comfortable walking in the City. While Berkeley has the highest number of pedestrian collisions compared to cities in California with similar population sizes, it has a low number compared to these cities when the high amount of walking in Berkeley is taken into account. In fact, Berkeley has the highest rate of commute trips by walking of any city in California with a population of at least 20,000, and the second highest rate among medium sized cities in the country, according to the US Census American Community Survey.

### Goal: Increase EQUITY and Transportation Choices for All

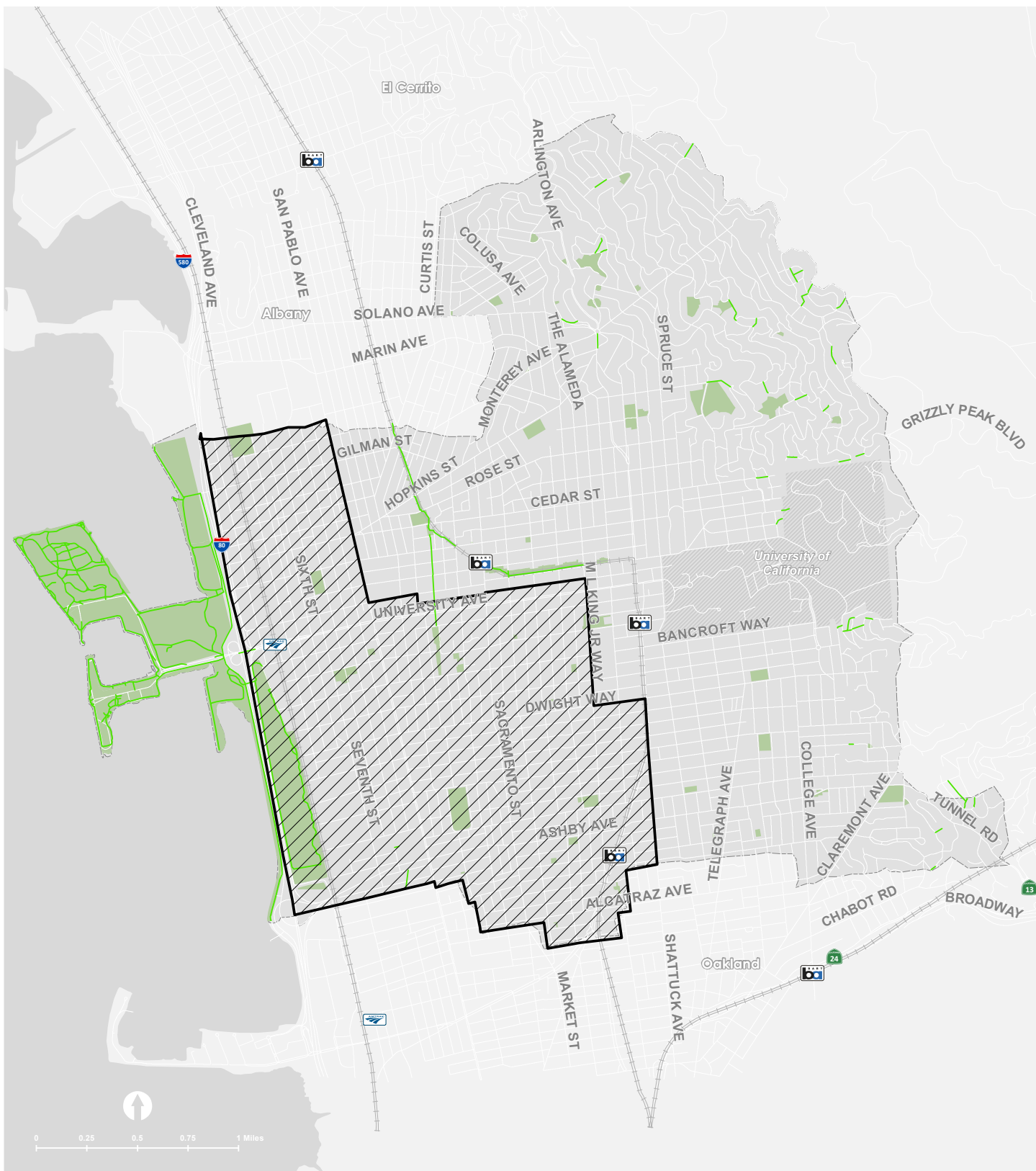
Equity means ensuring that residents of historically underserved neighborhoods of Berkeley have input in the development of the Plan, and proposing a distribution of benefits that recognizes and addresses underinvestment in these historically underserved areas of the City. **Figure ES-2** shows an outline of the historically underserved areas of Berkeley.

### Goal: Improve PUBLIC HEALTH & ENVIRONMENTAL SUSTAINABILITY

Walking has a positive impact on individuals' health and the environment. Increased walking is linked to reduced obesity and decreased mortality from various chronic diseases.

**Chapter 1** explores what these three goals are, why these goals were chosen, and what performance measures are in place to measure progress toward achieving these goals.

FIGURE ES-2: HISTORICALLY UNDERSERVED AREAS OF BERKELEY



Historically Underserved Areas of Berkeley

Amtrak Station

BART Station

Railroad

Parks/Recreation

Berkeley City Boundary

## EXISTING CONDITIONS / NEEDS ANALYSIS

Understanding the current quality and conditions of pedestrian infrastructure in Berkeley is foundational to making the most appropriate and necessary recommendations. This analysis connects the everyday experiences of walking and traveling throughout Berkeley’s pedestrian network to data analysis included in this Plan and provides the holistic understanding of pedestrian infrastructure that is necessary for identifying its needs and gaps. The existing conditions/needs analysis is comprised of:

- An inventory of current infrastructure
- A measurement of pedestrian demand
- An assessment of pedestrian safety

The **infrastructure inventory** focuses on walkability, land use, sidewalks, and crossings and identifies pedestrian facilities, infrastructure conditions, and additional pedestrian amenities throughout Berkeley.

The purpose of estimating **pedestrian demand** in Berkeley is to better understand where pedestrians are and where they are going. This informs which improvement projects and programs to recommend. The pedestrian demand analysis identified four key intersections with the highest pedestrian volumes. Each of these intersections is located in Berkeley’s downtown core, near the Downtown Berkeley BART station:

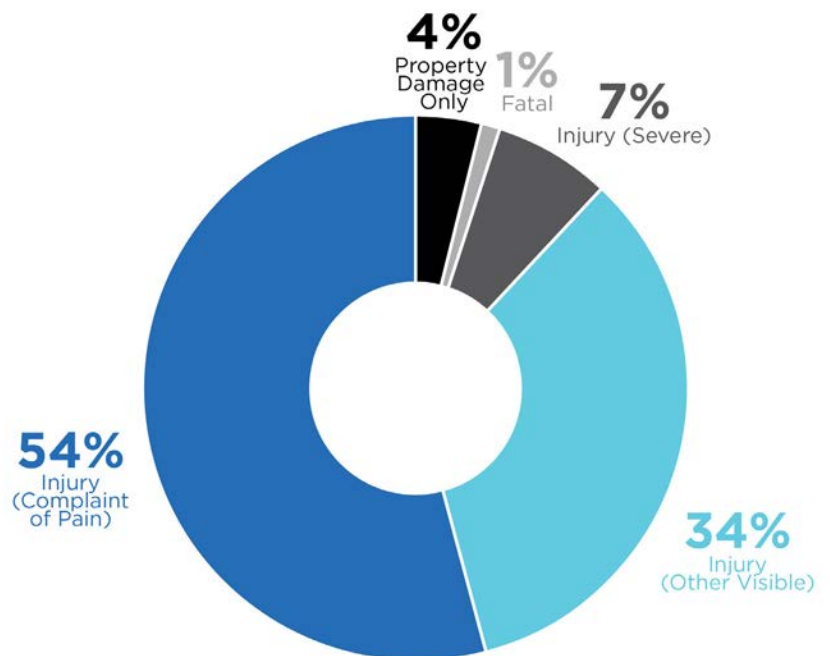
- Shattuck East at Addison Street
- Shattuck West at Addison Street
- Shattuck Avenue at Center Street
- Shattuck Avenue at Allston Way

Measuring **pedestrian safety** through collision data is critical to both understanding and improving safety when walking in Berkeley. Pedestrian safety efforts presented in this Plan are consistent with the City’s Vision Zero Action Plan, adopted in March 2020.

Vision Zero is a movement started in Sweden in 1997, which has since been adopted by many countries and cities throughout the world, that seeks to eliminate all traffic fatalities and severe injuries. Consistent with the Vision Zero philosophy, the Berkeley Vision Zero program uses a data-driven approach in developing engineering strategies to redesign the streets to achieve zero traffic fatalities and severe injuries in the City by 2028. This Plan works toward accomplishing this Vision Zero goal by aligning tools and metrics for analyzing collisions involving pedestrians.

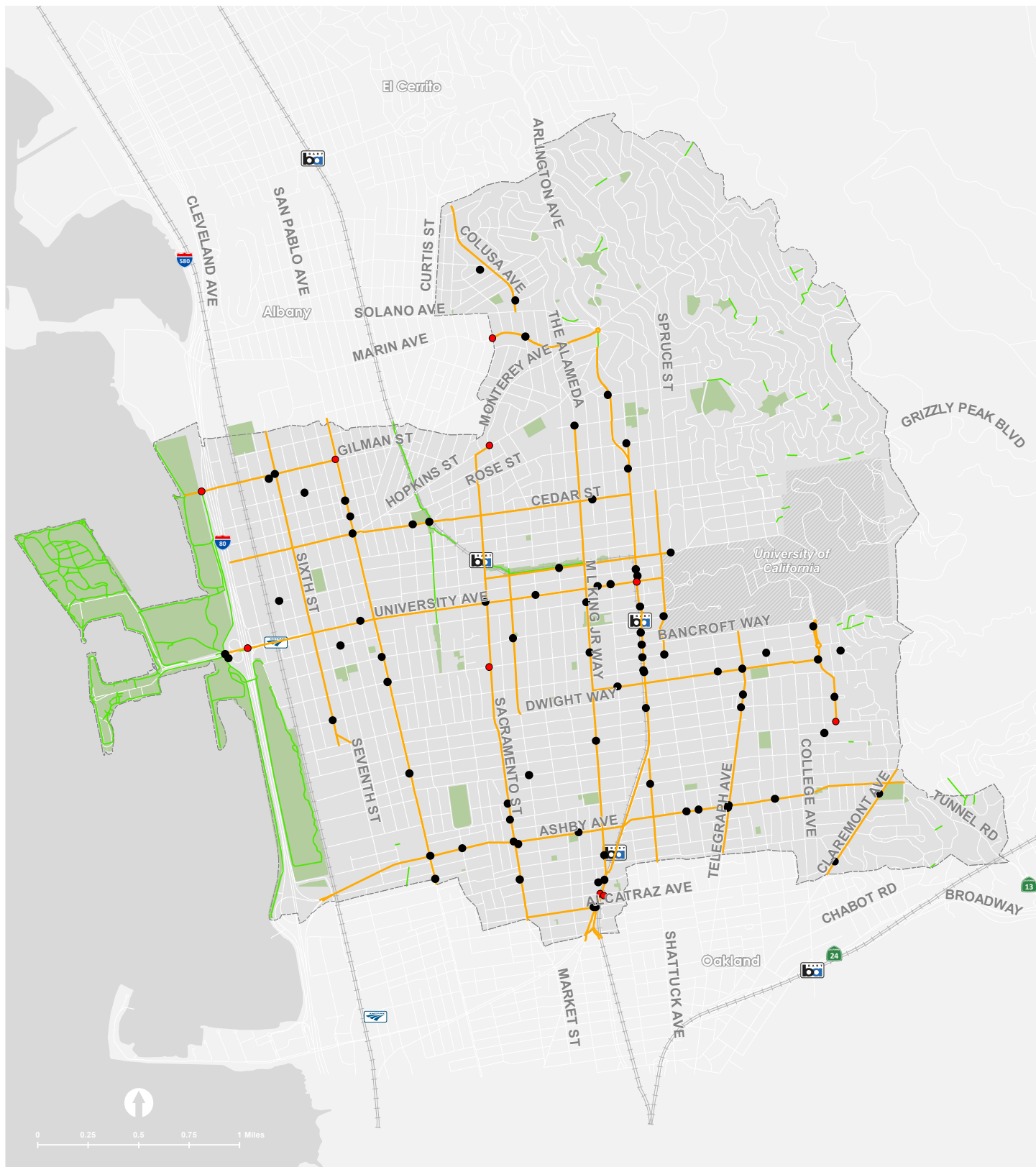
Improving pedestrian safety is a key priority of this Plan. In keeping with this priority, collisions involving pedestrians are analyzed along with several safety metrics, including collision factors, the locations of pedestrian collisions, the severity of collisions, the demographics of pedestrians, and driver actions preceding collision. As shown in **Figure ES-3**, of the 1,071 total collisions involving pedestrians in Berkeley between 2008 and 2017, 10 were fatal (1 percent) and 79 led to a severe injury (7 percent). The collisions resulting in a fatality or severe injury were given additional weight when prioritizing improvements. The high-injury streets, where the most severe pedestrian collisions occur in Berkeley, are shown in **Figure ES-4**.

FIGURE ES-3: COLLISIONS IN BERKELEY INVOLVING PEDESTRIANS AND VEHICLES, 2008-2017



Source: SWITRS 2008-2017

FIGURE ES-4: HIGH-INJURY STREETS IN BERKELEY



**Fatal and Severe Injury Collisions, 2008-2017**

- Fatal
- Severe Injury
- High Injury Streets

- Amtrak Station
- BART Station
- Railroad
- Sidewalk Presence
- Multi-Use Trails/Stairways
- Parks/Recreation
- Berkeley City Boundary

## RECOMMENDATIONS

Actionable projects, programs, and policies recommended in this Plan respond to the findings from the existing conditions and needs analysis. These recommendations also align with the goals and vision of this Plan and build upon the City's ongoing planning efforts.

Several factors, including equity, concentration of severe crashes, and proximity to key pedestrian destinations were used to identify capital projects on ten priority street segments (**Figure ES-5**):

- **San Pablo Avenue** from University Avenue to Dwight Way
- **Martin Luther King Jr. Way** from Hearst Avenue to Dwight Way
- **Ashby Avenue** from San Pablo Avenue to Shattuck Avenue
- **Adeline Street** from Ashby Avenue to Berkeley City Limits
- **University Avenue** from San Pablo Avenue to Oxford Street
- **Shattuck Avenue** from Adeline Street to Berkeley City Limits
- **Martin Luther King Jr. Way** from Dwight Way to Adeline Street
- **Alcatraz Avenue** from Sacramento Street to Adeline Street
- **Cedar Street** from Sixth Street to Stannage Street
- **Sacramento Street** from Dwight Way to Berkeley City Limits



This pedestrian crossing at Alcatraz Avenue and King Street has faded crosswalk markings and worn pavement, which may make crossing the street more challenging.

FIGURE ES-5: PRIORITIZED HIGH-INJURY STREETS



— Prioritized High-Injury Streets

- Amtrak Station
- BART Station
- Railroad
- Parks/Recreation
- Berkeley City Boundary



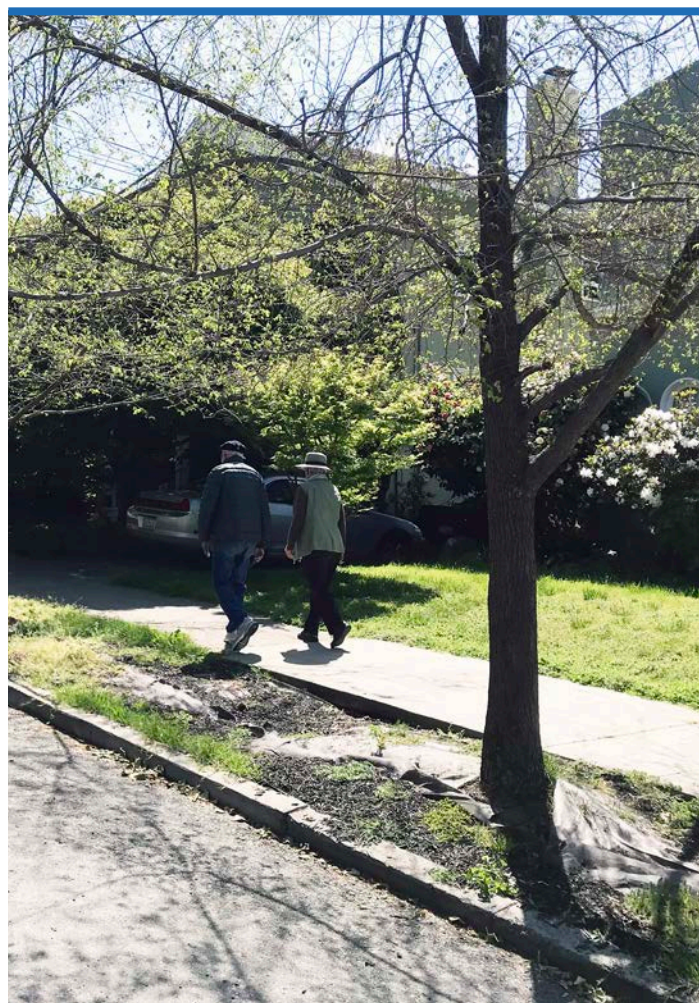
In addition to these projects on the ten priority street segments, implementing key identified programs and policies throughout Berkeley will help meet pedestrian needs and fill existing gaps.

The programs and policies fit within the following three themes:

- Reducing conflicts between pedestrians and vehicles
- Making pedestrians more visible on the street
- Upgrading and adding enhanced crosswalks

Within each area are specific priority topics that together create a comprehensive approach to improving Berkeley’s pedestrian network and an action plan of policies, programs, and practices. Some recommendations will be addressed through this Plan, while others inform and support the City’s Vision Zero Action Plan and other ongoing efforts.

Categories of recommended improvements are shown in callout boxes and augment the four priority areas by providing additional means and methods for improving the experience of walking in Berkeley.



## **INFRASTRUCTURE AND OPERATIONS**

### **STREET DESIGN**

### **PEDESTRIAN CROSSINGS**

### **SPEED MANAGEMENT AND TRAFFIC CALMING**

### **ACCESSIBILITY**

## **EVALUATION AND PLANNING**

### **PEDESTRIAN VOLUMES**

### **PEDESTRIAN SAFETY**

## **PROJECT IMPLEMENTATION**

### **FUNDING**

### **INTRA- AND INTER-AGENCY COORDINATION**

## **EDUCATION AND ENFORCEMENT**

### **SAFETY EDUCATION**

### **EQUITABLE ENFORCEMENT**

Recommended projects, programs, and policies are described in greater detail in [Chapter 3](#).

# 1

## PEDESTRIAN PLAN

## VISION & GOALS



The vision, goals, and performance measures described in this section led the Plan's development and will guide how it is implemented. The core principles of the vision, goals, and performance measures reach beyond this Plan, building collectively on the City's goals and priorities to improve mobility in Berkeley.

- The **vision** provides an overarching direction and long-term vision for walking within the City of Berkeley.
- The **goals** provide guidance on how to reach the vision and make clear connections to other City goals.
- Each goal includes **performance measures** to assess progress toward achieving the goals.

Developing the vision, goals, and performance measures in this section required aligning the Plan with existing goals and priorities in other City documents. The documents listed below inform the Plan's vision, goals, and performance measures:

- General Plan (2003)
- Pedestrian Charter Principles (2004)
- [Climate Action Plan](#) (2009)
- [Pedestrian Plan](#) (2010)
- [Resilience Strategy](#) (2016)
- [Berkeley Strategic Transportation Plan \(BeST\)](#) (2016)
- [Berkeley Bicycle Plan](#) (2017)
- [2018-19 Strategic Plan](#) (2018)
- Vision Zero Action Plan (2020)

## VISION

The Berkeley Pedestrian Plan Update's vision provides the foundation for improving walking in Berkeley:

**Berkeley is a model walkable city where traveling on foot or with an assistive device is safe, comfortable, and convenient for people of all races, ethnicities, incomes, ages and abilities.**

The Plan envisions Berkeley as a walkable city where all people choose to walk to school, to shop, to the bus stop, to work, and just for the sheer pleasure of it. This vision sets the framework for the Plan's goals and performance measures. It also guides the development of the policies, actions, and prioritization criteria, which are described in [Chapter 3](#).

### VISION ZERO

Vision Zero is a data-driven strategy to eliminate all traffic fatalities and severe injuries while increasing safe, healthy, and equitable mobility for all. Berkeley Vision Zero is, first and foremost, an engineering strategy that aims to design and build our streets to eliminate all severe and fatal traffic injuries. City Council approved Berkeley's Vision Zero Action Plan in March 2020.

## GOALS

The Plan's goals provide direction for achieving the vision. These goals are:

- Increase **safety and comfort** for people walking
- Increase **equity** and transportation choices for all
- Improve **public health and environmental sustainability**

Like the vision, the goals are aligned with other City goals and efforts, such as the goals established in the Berkeley Strategic Transportation Plan (BeST). For example, the first goal of BeST is to increase mobility and access for all mode choices. This Plan is specifically focused on achieving this goal for people walking.

The Plan's goals are described in greater detail on the following pages.



### Goal: Increase **SAFETY & COMFORT** for People Walking

Berkeley is one of the more walkable cities in the state of California, and indeed, many residents, workers, and visitors do feel comfortable walking in the City. While Berkeley has the highest number of pedestrian collisions compared to cities in California with similar population sizes, it has a low number compared to these cities when the high amount of walking in Berkeley is taken into account. In fact, Berkeley has the highest rate of commute trips by walking of any city in California with a population of at least 20,000, and the second highest rate among medium sized cities in the country, according to the US Census American Community Survey.

Increasing safety means lowering the number of pedestrian collisions and decreasing collision risk for pedestrians. Increasing comfort will naturally occur as a result of increasing safety, since areas with lower collision risk typically feel more comfortable. Streets with high numbers of injuries and fatalities reported on them, known as high-injury streets, are targeted in this goal.

Meeting this goal will protect the City's most vulnerable users, move toward the City's Vision Zero Policy goal of zero traffic deaths and severe injuries by 2028 and encourage other people to consider walking for transportation or recreation.

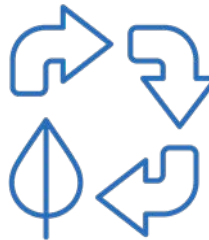


### Goal: Increase **EQUITY** and Transportation Choices for All

Equity means ensuring that residents of historically underserved neighborhoods of Berkeley have input in the development of the Plan, and proposing a distribution of benefits that recognizes and addresses underinvestment in these historically underserved areas of the City.

To achieve this goal, the Plan sought broad and diverse feedback from a wide array of voices through an inclusive public engagement process. In terms of outcomes, walking is the most accessible and affordable form of transportation and recreation and is at the core of an equitable transportation system.

Achieving equity means Berkeley will be walkable and accessible for everyone, regardless of race, ethnicity, class, income, age, ability, sexual orientation, and/or gender expression/identity.



### Goal: Improve **PUBLIC HEALTH & ENVIRONMENTAL SUSTAINABILITY**

Walking has a positive impact on individuals' health and the environment. Increased walking is linked to reduced obesity and decreased mortality from various chronic diseases.

Additionally, increasing the number of people choosing to walk for transportation has the potential to: replace vehicle trips, reduce consumption of fossil fuels, and contribute to environmental sustainability goals.


# PERFORMANCE MEASURES

Within each goal in the Plan is a set of performance measures and strategies to track the progress of reaching the goal. In this Plan, performance measures set a benchmark and track progress towards goals over time. The performance measures in the Plan will be used with three purposes:


- Assess walking conditions
- Align decisions with community goals
- Track progress toward the goals

Improvements and project recommendations to advance progress toward achieving this Plan’s goals are described in [Chapter 3](#).


## Goal: Increase SAFETY & COMFORT for People Walking

| Goal                                                                                                               | Performance Measures                                               | Strategy                                                                                                                                                      |
|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br><b>Safety &amp; Comfort</b> | Reducing pedestrian fatalities and severe injuries to zero by 2028 | Safety treatments implemented on high-injury streets                                                                                                          |
|                                                                                                                    | Speed reduction on high-injury streets                             | 100 percent of high-injury streets subjected to speed studies by 2025<br><br>Traffic calming measures installed on 100 percent of high-injury streets by 2028 |

## Goal: Increase EQUITY and Transportation Choices for All

| Goal                                                                                               | Performance Measures                                                                                           | Strategy                                                                                        |
|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| <br><b>Equity</b> | Pedestrian improvements completed in Berkeley’s historically underserved areas (as shown in <b>Figure 13</b> ) | 70 percent of pedestrian-related investments made within historically underserved areas by 2028 |
|                                                                                                    | ADA improvements completed citywide                                                                            | Implementation of ADA Transition Plan by 2040                                                   |

## Goal: Improve PUBLIC HEALTH & ENVIRONMENTAL SUSTAINABILITY

| Goal                                                                                                                                   | Performance Measures          | Strategy                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------------------------------|
| <br><b>Health &amp; Environmental Sustainability</b> | Increase in amount of walking | Maintain Berkeley’s position as California’s top-ranked city for walking commute rate |

# 2

## EXISTING WALKING

## CONDITIONS



This chapter examines current conditions for people walking to identify deficiencies and gaps. The Plan’s goals and performance measures are informed by the data evaluated through this process. Experiences, stories, impressions, and input gathered from the Plan’s community and stakeholder engagement process have also informed improvements and recommendations.

This chapter is organized into the following sections:

- **Progress Summary.** This section summarizes the progress made on implementing the 34 high-priority projects that were identified in the 2010 Pedestrian Plan.
- **Infrastructure Inventory.** This section describes Berkeley’s existing pedestrian network, including a discussion of land use and walkability, sidewalks, crossings, and other facilities and amenities.
- **Pedestrian Demand.** This section summarizes key findings from the pedestrian demand model analysis to show expected pedestrian volumes within Berkeley.
- **Pedestrian Safety.** This section describes Berkeley’s recent history of pedestrian safety and evaluates severe injuries and fatalities caused by collisions. The analysis reviews collisions that occurred between 2008 and 2017 from police reports to determine intersection and street segment locations with a high number of severe pedestrian injuries and fatalities. These locations make up Berkeley’s high-injury streets, which are listed in this section.



# PROGRESS SUMMARY

## PROGRESS ON IMPLEMENTING THE 2010 PEDESTRIAN PLAN

The 2010 Berkeley Pedestrian Plan established three goals:

1. Plan, build and maintain pedestrian-supportive infrastructure
2. Provide universally safe and equal access
3. Develop pedestrian-supportive encouragement and enforcement programs

Using these goals as a framework, the 2010 Plan established 34 high-priority pedestrian projects. Ten years later, how much progress has the City made on completing these projects?

### CASE STUDY: THE ALAMEDA/HOPKINS STREET

The intersection at The Alameda and Hopkins Street was a high-priority pedestrian project. There were three pedestrian collisions between 2012 and 2016, and a Berkeleyside article reported five pedestrian collisions and one bicycle collision between 2005 and 2010<sup>1</sup>.

In 2016, the City of Berkeley made intersection changes to improve safety for pedestrians and bicyclists. Barriers and refuge islands shorten the distance for pedestrians crossing the street and force right-turning vehicles to slow down. Bike lanes between the barriers and the curb allow bicyclists to benefit, as well. The intersection is now the first protected intersection in Berkeley.

Collisions occurring after the project was completed may be carefully considered by the City to further improve this intersection. Refinements continue to be made at the intersection, and this is an example of the City working to make walking safer in Berkeley.

### PRIORITY PROJECT IMPLEMENTATION

Berkeley has used a variety of funding sources to implement the high-priority pedestrian projects.

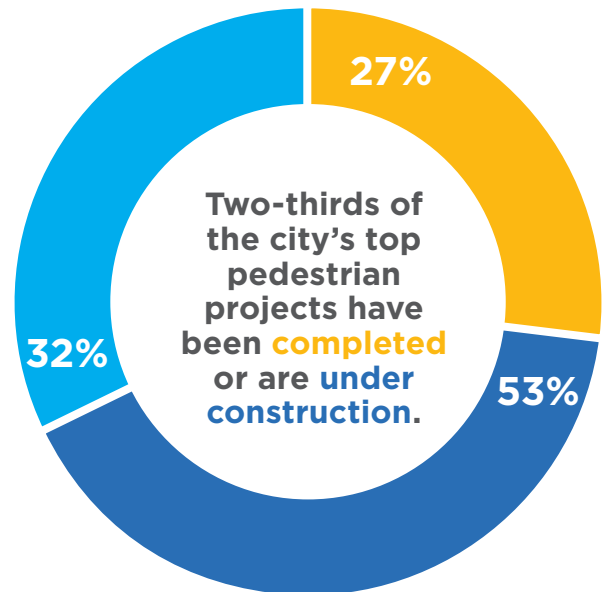
- The Caltrans Active Transportation Program, created in 2013, funds pedestrian, bicycle, and Safe Routes to School projects.
- Alameda County Transportation Commission discretionary grants fund local street infrastructure projects that include pedestrian improvements.
- Federal grants awarded by the Metropolitan Transportation Commission fund large transportation projects that include pedestrian improvements.

<sup>1</sup> <https://www.berkeleyside.com/2017/06/22/berkeley-makes-safety-improvements-alameda-hopkins-intersection>



Protected intersection at The Alameda and Hopkins Street

FIGURE 1: 2010 PEDESTRIAN PLAN PROJECT STATUS



34 High-Priority Projects

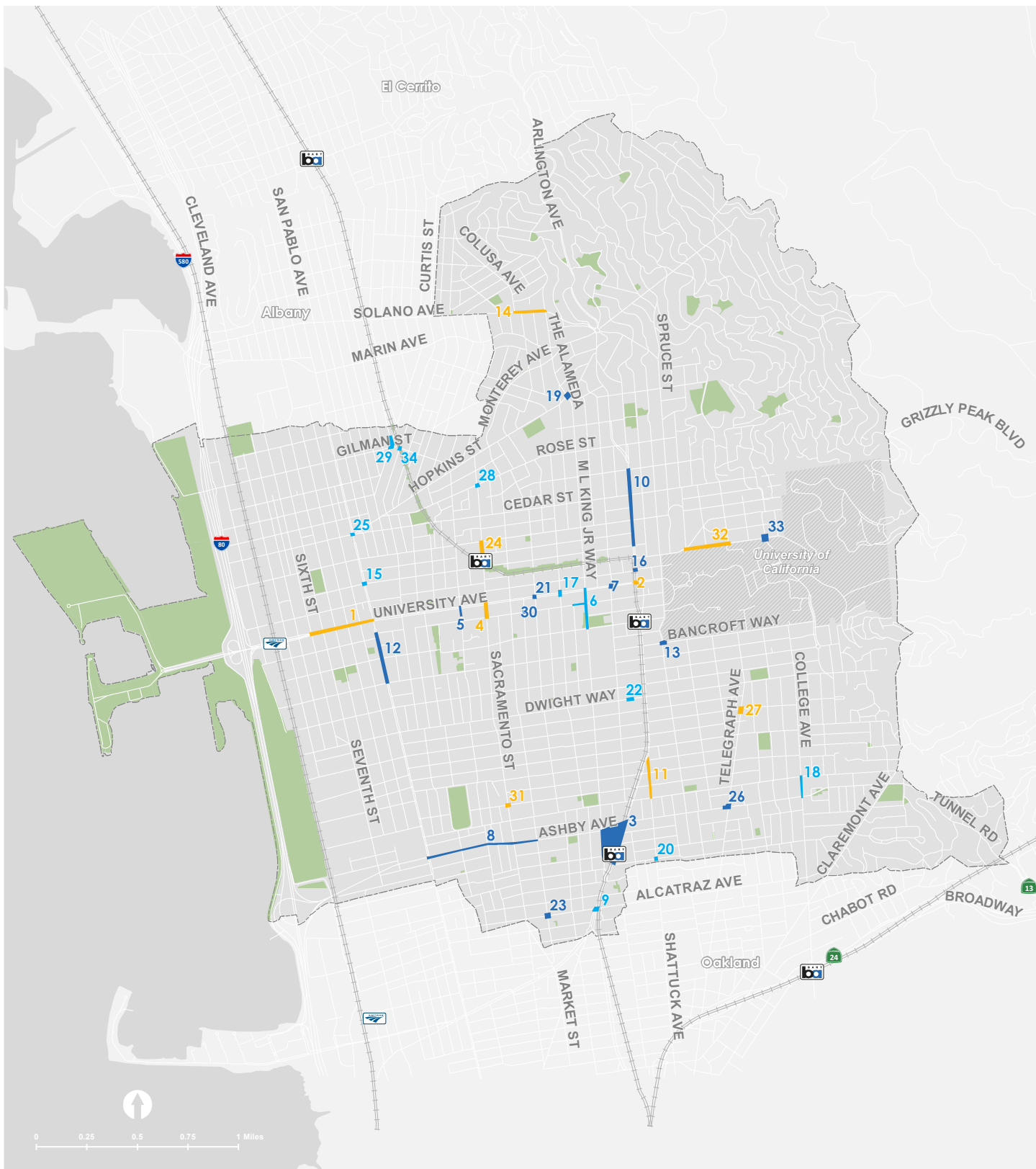
**9 Completed Projects**

**14 Projects Underway**

**11 Projects to be Built**



FIGURE 2: 2010 PEDESTRIAN PLAN PROJECT STATUS



- |                               |                        |
|-------------------------------|------------------------|
| <b>High Priority Projects</b> | Amtrak Station         |
| Completed Projects            | BART Station           |
| Projects Underway             | Railroad               |
| Projects to be Built          | Parks/Recreation       |
|                               | Berkeley City Boundary |

**2010 PEDESTRIAN PLAN  
PROJECT STATUS**

**CITY OF BERKELEY**



More information on projects can be found [here](#).

# INFRASTRUCTURE INVENTORY

This section documents the current quality and conditions of pedestrian infrastructure in Berkeley. The infrastructure inventory connects the everyday experiences of walking and traveling in Berkeley with this Plan's data analysis, providing the holistic understanding of pedestrian infrastructure necessary to identifying its needs and gaps. This inventory is organized in the following sections:

- **Walkability and land use**, which also highlights the location of schools and parks in Berkeley
- **Sidewalks**, including the path, stair, and trail network
- **Crossings**, such as intersections with traffic signals and marked crosswalks

## Walkability and Land Use

Being able to walk to a destination reaps numerous benefits for individuals and the broader community. Walking is part of a healthy lifestyle, and more people walking makes a neighborhood a safer place to be. Walkable communities are a boost to businesses, property values, and overall economic vitality. Walking to destinations does not produce any carbon emissions. **Figure 3** shows pedestrian destinations in Berkeley.

Downtown Berkeley is a major employment node and destination in the city and the region. It is home to mixed-use spaces, major commercial arteries, higher-density housing, a major research university, and Berkeley High School.

Single-family housing is the predominant land use in Berkeley. Higher-density housing types are found in Downtown Berkeley, around the UC Berkeley campus, near the Amtrak Capitol Corridor Station in West Berkeley, and in mixed-use development projects along commercial streets, particularly along Shattuck Avenue north and south of Downtown and along University and San Pablo Avenues.

Commercial corridors follow several of Berkeley's major arterial streets. The majority of Berkeley's commercial land outside of Downtown follows Shattuck Avenue, Adeline Street, Telegraph Avenue, San Pablo Avenue, University Avenue, and Solano Avenue. There are also about a dozen neighborhood commercial centers throughout Berkeley.

Two designated mixed-use zones in West Berkeley are transitioning from commercial and industrial uses into spaces that incorporate more housing and live-work spaces. These zones are not easily accessible on foot from Berkeley's three BART stations. However, part of one of these zones is located near the Amtrak Capito Corridor station with service to Silicon Valley, and the other zone is located near San Pablo Avenue bus routes to downtown Oakland.

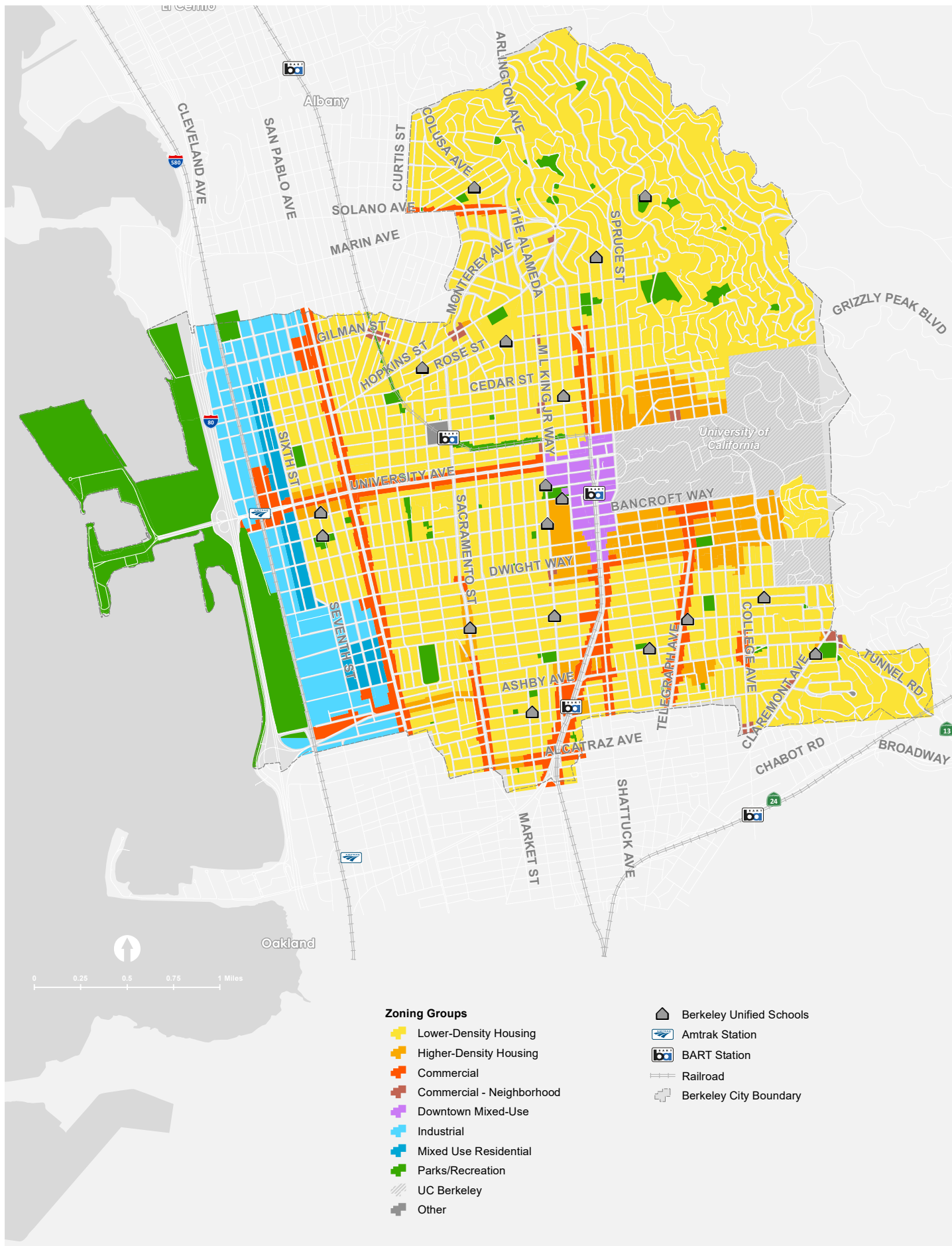
Each of the three BART stations are surrounded by a different mix of land uses. The Ashby BART station serves a diverse array of commercial, institutional, and housing land uses. Community destinations, such as the Berkeley Bowl supermarket, the Ed Roberts Campus, and nearby senior living facilities. Farmers' markets and the Ashby Flea Market are events held near the station. The Downtown Berkeley BART station provides convenient access to the central business district and UC Berkeley campus. The North Berkeley BART station is surrounded by low-density housing.

Berkeley's public schools are located in different land use areas based on grade level. Berkeley High School is located downtown, and the three middle schools are on Telegraph Avenue, Sacramento Street, and Rose Street. The elementary schools are spread across Berkeley but are generally found in lower-density residential neighborhoods.

Pedestrians walking along Shattuck Avenue at Virginia Street just north of Downtown Berkeley. Photo: Amanda Leahy, Kittelson



FIGURE 3: PEDESTRIAN DESTINATIONS AND LAND USES IN BERKELEY



## WHAT ABOUT SIDEWALK QUALITY?

At various public involvement events in Berkeley, we heard a common refrain about sidewalks: there are numerous places around Berkeley where broken or uneven sidewalks become difficult or impossible to navigate. While Berkeley's sidewalk network may have very few gaps, the sidewalk quality in some places can be similar to having no sidewalk at all. Uneven or broken sidewalks can be a hazard for anyone, and they are a critical issue for people with wheelchairs, people using canes or walkers, or people who have other mobility or balance challenges.

## Sidewalks

Berkeley has a well-connected sidewalk network, but a few areas in the City warrant further discussion.<sup>2</sup> **Figure 4** shows sidewalks, pedestrian paths, and shared-use paths in Berkeley.

### SIDEWALK COVERAGE

**Figure 4** shows that the majority of roads in Berkeley have sidewalks that are five feet or wider. When roads from the UC Berkeley campus and I-80 overpasses and interchanges are removed from the data, only 10.5 percent of Berkeley's road miles do not have sidewalks. Not all sidewalks are equal, however, as 17.4 percent of Berkeley's road miles either have no sidewalk or have sidewalks less than five feet in width.

### NORTH BERKELEY HILLS

The North Berkeley Hills in the northeast part of town have narrow or non-existent sidewalks on many roads. Given the topography and constrained right-of-way, adding sidewalks likely is not an option on many of these streets. Instead, pedestrians can access a series of east-west paths and stairs throughout the neighborhood.

### CLAREMONT

The Claremont neighborhood, east of Claremont Avenue, has narrow sidewalks (less than five feet in width) and sidewalk gaps. Pedestrian paths provide connectivity around the neighborhood. Like the North Berkeley Hills, this part of town is located on the side of a hill, which constrains right-of-way and makes adding sidewalks a challenge.

### NORTHWEST BERKELEY

Northwest Berkeley, a more auto-oriented part of Berkeley due to its proximity to I-80 (and the Eastshore Highway before it), has industrial, commercial, and residential uses west of San Pablo Avenue, and primarily residential uses with some commercial nodes east of San Pablo Avenue. There are several sidewalk gaps west of San Pablo Avenue, especially on north-south streets, and the City added sidewalks at a half-dozen different locations in Northwest Berkeley in summer 2019, which helped fill the gaps around Gilman Street.

<sup>2</sup> The areas discussed in this section were selected based on land use and geography and do not represent neighborhood boundaries.

### DOWNTOWN BERKELEY

As shown in the Pedestrian Destinations map, Downtown Berkeley is a local and regional destination. This area of town is observed to have some of the widest sidewalks in Berkeley, but, as shown in **Figure 4**, much of the existing sidewalk data in this part of Berkeley does not include widths. Sidewalk clear-widths can vary substantially on the same block, due to sidewalk bulbouts, BART station entrances, bus stops, and street furniture such as benches.

### I-80 AND THE SAN FRANCISCO BAY TRAIL

Access to the San Francisco Bay Trail and the Berkeley Marina is limited for pedestrians. At the I-80 interchange at Ashby Avenue, no pedestrian access is provided. At the I-80 interchange at University Avenue, a stairway up to the University Avenue bridge crosses I-80, but it is in a dark and secluded area. Additionally, no at-grade sidewalk leads to the base of this stairway. The sidewalk on the south side of the University Avenue bridge over I-80 leads to a crossing of the exit from I-80 westbound which includes a slip lane and lacks marked sidewalks, crosswalks, and wheelchair ramps. Of the 10 pedestrians killed in collisions with vehicles in Berkeley over the 10-year period studied, one was located on the University Avenue overpass.<sup>3</sup> A pedestrian and bicycle bridge over I-80 is located about a block to the south of this interchange.

<sup>3</sup> <https://www.berkeleyaside.com/2013/07/15/hit-and-run-kills-pedestrian-on-university-ave-overpass>

### I-80/GILMAN STREET INTERCHANGE

The third interchange, at I-80 and Gilman Street, has a continuous sidewalk on the north side of Gilman Street, but a pedestrian must navigate highway on- and off-ramps. Future construction here will improve pedestrian access, but the short-term impact will likely further limit pedestrian access to the San Francisco Bay Trail.<sup>4</sup>

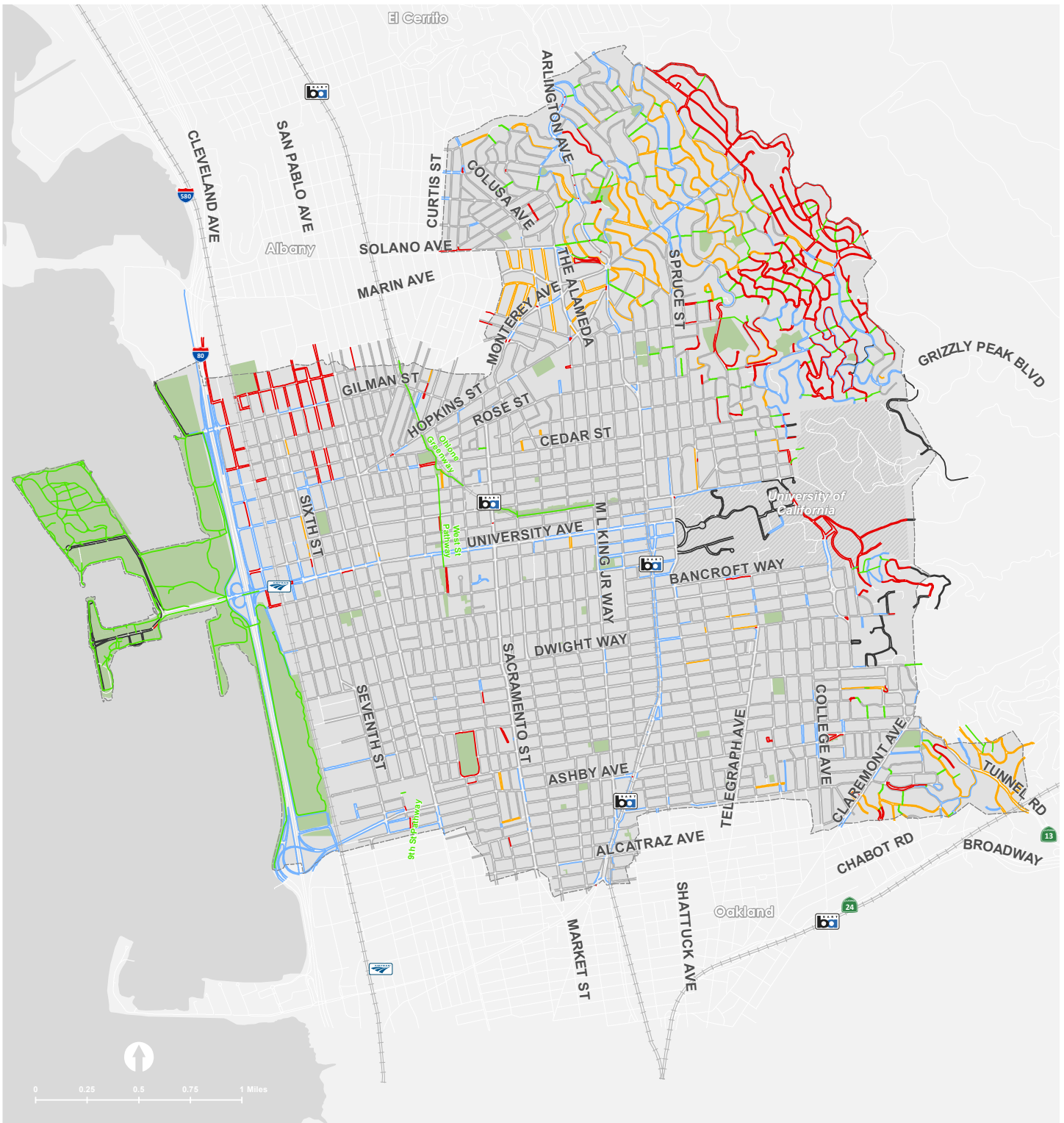
<sup>4</sup> [https://www.alamedactc.org/files/managed/Document/21172/1381000\\_I-80\\_Gilman\\_Interchange.pdf](https://www.alamedactc.org/files/managed/Document/21172/1381000_I-80_Gilman_Interchange.pdf)














Covert Path provides a connection between Keith Avenue, Cragmont Avenue, and Keeler Avenue in the North Berkeley Hills. Photo: Amanda Leahy, Kittelson.

## 2. Existing Walking Conditions

FIGURE 4: EXISTING SIDEWALK COVERAGE IN BERKELEY



-  Amtrak Station
-  BART Station
-  Railroad
-  Sidewalks 5 feet or wider
-  Sidewalks < 5 feet wide
-  Multi-Use Trails/Stairways
-  Sidewalk Presence Width Unknown
-  No Sidewalk
-  No Data Available
-  Parks/Recreation
-  Berkeley City Boundary

## Crossings

Street crossings are essential for being able to walk from place to place. Each crossing, whether located on an arterial or local street, needs to provide a level of comfort and safety for the pedestrian to reach their destination. A network of well-marked and signalized crossings can help meet this goal.

**Figure 5** shows all marked crosswalks and signalized intersections in Berkeley.

Broadly speaking, Berkeley's larger, arterial streets have marked crosswalks located at regular frequencies. While not every arterial intersection has a marked crossing on all sides, there is likely a marked crossing at a nearby intersection.

The highest concentration of signalized intersections in Berkeley is in Downtown and just south of the UC Berkeley campus. These intersections generally have marked crosswalks on most or all sides of the intersection. Outside of these areas, intersections where the two intersecting streets are not perpendicular tend to have fewer marked crossings.

There are notable places in Berkeley where marked crossings are not present. Berkeley Way is an east-west road between University Avenue and the Ohlone Greenway that must be crossed for people trying to connect between these two major pedestrian destinations. However, there are few marked crosswalks on Berkeley Way.

There are several primarily-residential neighborhoods where marked crossings are lacking. These include an area bounded by Allston Street, Sacramento Street, Russell Street, and San Pablo Avenue in West Berkeley, and an area bounded by the Ohlone Greenway, Sacramento Street, Hopkins Street, and Martin Luther King Jr Way. Additionally, there are few marked crossings in the Berkeley Hills.

In general, flashing don't-walk signs at signalized pedestrian crossings are calibrated for someone to be able to cross the road who is walking at a speed of 3.5 feet per second. Many people, primarily younger and older people, and those with a disability, or walking with an assistive device, walk at slower speeds and may be at higher risk of being involved in a collision with a vehicle inside a marked crosswalk after the flashing don't-walk phase has ended. Persons using wheelchairs or other mobility devices may not be able to cross an intersection at this speed either, and those who can cross at this speed could still have issues navigating on or off the curb. These are also issues for street crossings with rectangular rapid flashing beacons and pedestrian hybrid beacons.

**Table 1** examines existing marked crossings on six major streets in Berkeley. Of these chosen streets, Ashby Avenue (a state highway) has the highest average distance between crossings and has the longest single distance between two marked pedestrian crossings. This analysis does not differentiate between crossings with or without traffic control devices, such as traffic signals or stop signs. **Figure 5** shows the locations of marked crossings in Berkeley.



A pedestrian crosses Hearst Avenue at a marked crosswalk. This crossing has a rapid flashing beacon and a median island. Photo: Amanda Leahy, Kittelson

## CONCERNS ABOUT CROSSINGS

Several key themes emerged across several community events. First, many people reported that vehicles do not always stop at unsignalized crossings to **yield the right-of-way** to pedestrians. Streets that were mentioned several times include Sacramento Street and Martin Luther King Jr. Way. People also reported that traffic circles can feel difficult to navigate as drivers often **encroach on pedestrian crossings** as they maneuver through intersections with traffic circles. A few intersections where **right-turning vehicles** were particularly challenging for pedestrians include: Telegraph Avenue and Parker Street, Sacramento Street and Dwight Way, and Gilman Street and I-80 Interchange.

TABLE 1: CROSSING FREQUENCY ON MAJOR ROADS IN BERKELEY

| Street                    | Street Length | Marked Crossing Locations | Longest Distance Between Crossings | Average length Between Crossings |
|---------------------------|---------------|---------------------------|------------------------------------|----------------------------------|
| Ashby Avenue              | 2.6 Miles     | 25                        | 875 Feet                           | 560 Feet                         |
| Dwight Way                | 2.9 Miles     | 31                        | 730 Feet                           | 490 Feet                         |
| Martin Luther King Jr Way | 2.4 Miles     | 29                        | 620 Feet                           | 430 Feet                         |
| Sacramento Street         | 2.3 Miles     | 27                        | 760 Feet                           | 455 Feet                         |
| San Pablo Avenue          | 2.3 Miles     | 32                        | 625 Feet                           | 380 Feet                         |
| University Avenue         | 1.8 Miles     | 23                        | 690 Feet                           | 400 Feet                         |

For each major road, the longest distances between crossings are located at:

- Ashby Avenue between Pine Avenue and Claremont Avenue (875 feet)
- Dwight Way between Fulton Street and Ellsworth Street (730 feet)
- Martin Luther King Jr. Way between Channing Way and Bancroft Way (620 feet)
- Sacramento Street between Rose Street and Cedar Street (760 feet)
- San Pablo Avenue between Gilman Street and Harrison Street (625 feet)
- University Avenue between San Pablo Avenue and Curtis Street (690 feet)



FIGURE 5: MARKED CROSSINGS IN BERKELEY



- Signalized Intersections
- Multiuse
- Marked Crosswalks
- Amtrak Station
- BART Station
- Railroad
- Major Streets
- Parks/Recreation
- Berkeley City Boundary

2. Existing Walking Conditions

## Other Facilities and Amenities

### PATHS AND STAIRS

There are about 136 public paths and stairways in Berkeley. They are used for recreation and neighborhood connections to public transit, and can be critical for evacuations in emergency situations. For the past 20 years, the Berkeley Path Wanderers Association, an all-volunteer non-profit organization operating under Berkeley Partners for Parks, has been maintaining the paths and raising awareness to eventually complete the path network. Their work significantly contributed to this inventory.

### SHARED USE PATHS

There are four shared-use paths in Berkeley: the Ohlone Greenway, the West Street Path, the Aquatic Park Path, and the San Francisco Bay Trail. Two paths – the Ohlone Greenway and the West Street Path – are located close to Downtown Berkeley and provide connections between housing and amenities. The Ohlone Greenway runs from just northwest of Downtown Berkeley along the BART right-of-way both where the BART line is below and above ground. The West Street Pathway is a north-south route that extends from Strawberry Creek Park to the Ohlone Greenway just south of Cedar Rose Park.

The other two paths serve primarily recreational purposes. The Aquatic Park Path is a two-mile loop around a lagoon in Southwest Berkeley. The San Francisco Bay Trail runs along the Bay at Berkeley's western edge. With only two access points, at Gilman Street and at a bicycle/pedestrian bridge just south of University Avenue, it is not well connected to the rest of Berkeley's pedestrian network.

### AMENITIES

While sidewalks, paths, and crossings provide the means to reach a destination on foot, the amenities along the way also matter. Trees can provide shade from the sun and protection from the rain; however, a tree root system can lead to sidewalks or paved paths buckling. For longer walks or older people, benches can be vital to ensure that it is possible to reach a destination on foot. Drinking fountains and public restrooms provide an additional level of comfort. Wayfinding signage can help ensure that people can find their way to a local destination. The presence of these facilities and amenities helps encourage more people to walk by making the walking journey more comfortable and enjoyable.

### IMPROVING AMENITIES

When we asked how walking in Berkeley could be improved, several common requests about improved amenities emerged. The most common were **more benches and more green spaces** for pedestrians to use and enjoy. People also noted that **streetlights were lacking or in poor condition** and should be improved for nighttime walking. In addition, we also heard people ask for more public restrooms, more even sidewalks, and wider sidewalks for people with mobility devices and people pushing strollers.



The Ohlone Greenway provides connections between Downtown Berkeley, the North Berkeley BART station, and Northwest Berkeley.  
Photo: Amanda Leahy, Kittelson

# PEDESTRIAN DEMAND

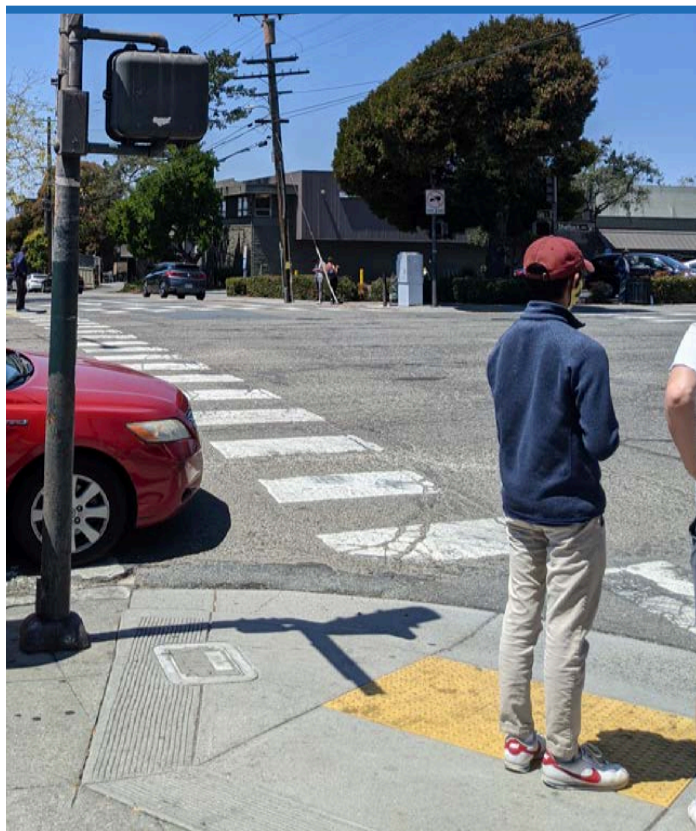
The purpose of estimating pedestrian demand in Berkeley is to better understand where pedestrians are going. This informs which improvement projects and programs to recommend. The information from the pedestrian demand analysis was used in the prioritization process because this analysis identifies locations that should be top priorities for pedestrian improvements, based on the number of people walking in those locations now.

It is important to note that these model outcomes reflect estimated volumes for where pedestrians are in Berkeley.

## Process

The analysis applies a methodology<sup>5</sup> to estimate weekly pedestrian crossing volumes at intersections using publicly accessible data as shown in **Figure 6**.

The estimated pedestrian volumes were also assigned to segments of streets. Additional information about the methodology can be found in **Appendix C: Technical Analysis Methodologies**.



5 Developed by: Schneider, R., Arnold, L., & Ragland, D. (2009). Pilot model for estimating pedestrian intersection crossing volumes. Transportation Research Record: Journal of the Transportation Research Board, (2140), 13-26. Available online at <https://cloudfront.escholarship.org/dist/prd/content/qt3nr8h66j/qt3nr8h66j.pdf>

## 2. Existing Walking Conditions

FIGURE 6: ESTIMATING PEDESTRIAN DEMAND



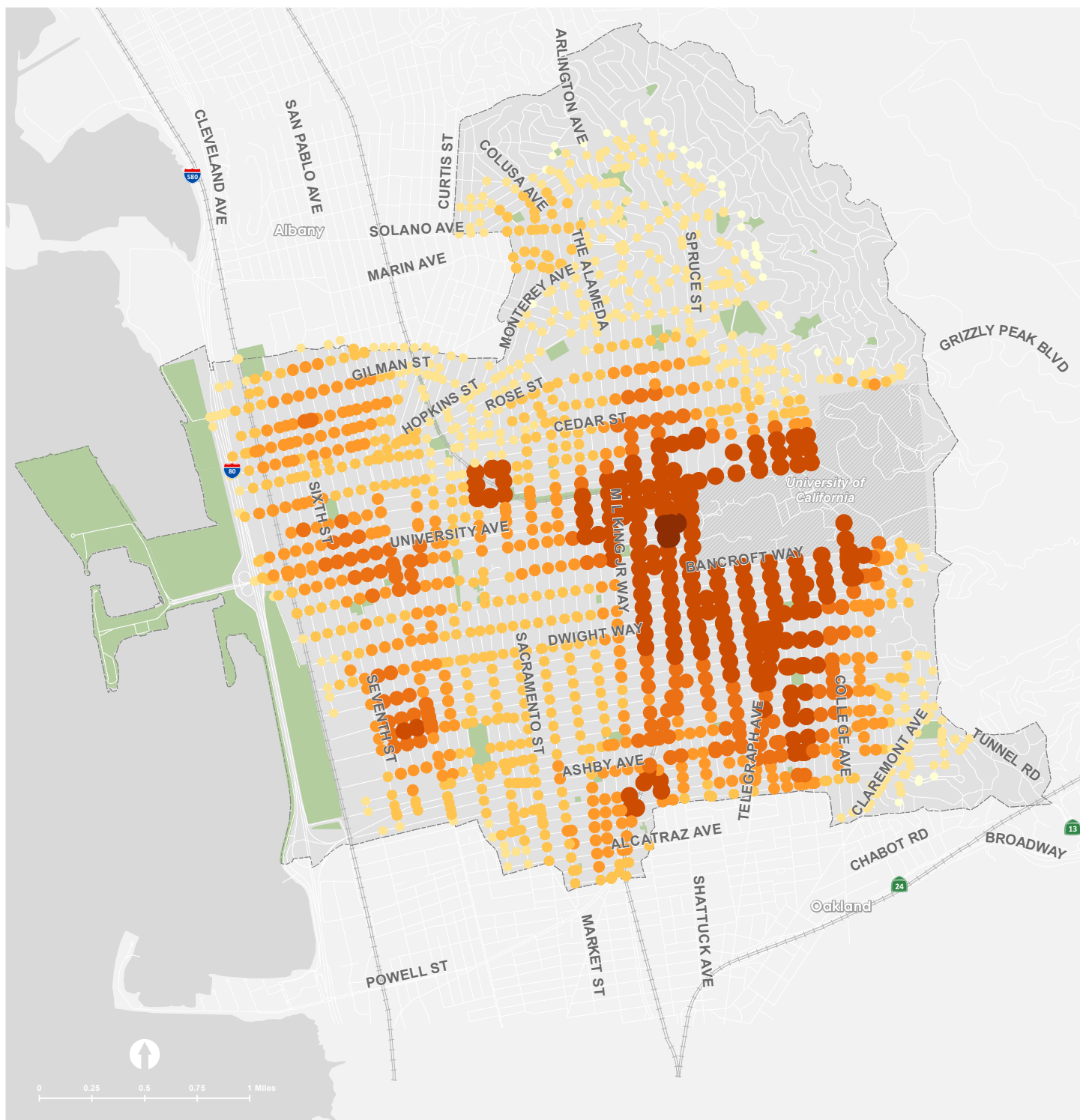
## Results

The pedestrian demand estimates indicate that the intersections with the highest weekly pedestrian volumes are clustered around the perimeter of the UC Berkeley campus, in Downtown Berkeley, and around the North Berkeley and Ashby BART stations. The top 20 intersections with the highest estimated pedestrian volumes are shown in **Table 2**. **Figure 7** illustrates the pedestrian volume estimates at intersections and along street segments, respectively.

TABLE 2: TOP 20 HIGHEST INTERSECTIONS FOR WEEKLY PEDESTRIAN DEMAND ESTIMATES

| Intersection Ranking | Street 1      | Street 2                  | Estimated Weekly Pedestrian Volume |
|----------------------|---------------|---------------------------|------------------------------------|
| 1                    | Shattuck East | Addison St                | 107,250                            |
| 2                    | Shattuck West | Addison St                | 105,050                            |
| 3                    | Shattuck Ave  | Center St                 | 103,000                            |
| 4                    | Shattuck Ave  | Allston Way               | 95,550                             |
| 5                    | Adeline St    | Woolsey St                | 70,300                             |
| 6                    | Adeline St    | Essex St                  | 69,600                             |
| 7                    | Woolsey St    | Martin Luther King Jr Way | 69,550                             |
| 8                    | Emerson St    | Adeline St                | 69,350                             |
| 9                    | Tremont St    | Essex St                  | 68,400                             |
| 10                   | Prince St     | Martin Luther King Jr Way | 68,300                             |
| 11                   | Tremont St    | Prince St                 | 68,250                             |
| 12                   | Sacramento St | Delaware St               | 64,550                             |
| 13                   | Short St      | Delaware St               | 64,150                             |
| 14                   | Delaware St   | Acton St                  | 62,950                             |
| 15                   | Bowditch St   | Bancroft Way              | 62,200                             |
| 16                   | Sacramento St | Francisco St              | 61,750                             |
| 17                   | Francisco St  | Acton St                  | 60,850                             |
| 18                   | Virginia St   | Sacramento St             | 59,700                             |
| 19                   | Short St      | Virginia St               | 59,600                             |
| 20                   | Acton St      | Virginia St               | 59,250                             |

FIGURE 7: ESTIMATED PEDESTRIAN VOLUMES AT INTERSECTIONS



**Estimated Weekly Pedestrian Volumes**

- 0 - 250
- 251 - 5,000
- 5,001 - 10,000
- 10,001 - 15,000
- 15,001 - 20,000
- 20,001 - 100,000
- > 100,000

- +— Railroad
- Parks/Recreation
- Berkeley City Boundary

## PEDESTRIAN SAFETY

Pedestrian safety efforts presented in this Plan support the Berkeley Vision Zero Policy, adopted in March 2018, and are consistent with the Berkeley Vision Zero Action Plan adopted in March 2020. Vision Zero is a movement started in Sweden in 1997, which has since been adopted by many countries and cities throughout the world, that seeks to eliminate all traffic fatalities and severe injuries. Consistent with the Vision Zero philosophy, the Berkeley Vision Zero program uses a data-driven approach in developing engineering strategies to redesign the streets to achieve zero traffic fatalities and severe injuries in the City by 2028.

This section addresses pedestrian safety through the following analysis topics:

- **Pedestrian collisions** to provide an overview of the collision history in Berkeley
- **Collision factors and characteristics** that include contributing factors to collisions, time of day when collisions occurred, and pedestrian characteristics
- **High Injury Streets** to identify where the vast majority of severe collisions in Berkeley have occurred

### Pedestrian Collisions

This analysis examines the reported collisions involving a pedestrian in Berkeley. The Statewide Integrated Traffic Records System (SWITRS) database from the California Highway Patrol reports the following outcomes for pedestrian-involved collisions, listed from most to least severe:

- **Fatal:** A pedestrian fatality from a collision
- **Injury (Severe):** Life-threatening or otherwise major injury to a pedestrian. This category is defined by SWITRS to include all collisions resulting in a broken bone or laceration. It therefore does include some injuries that the general public would not consider severe.
- **Injury (Other Visible):** Visible, non-major pedestrian injury
- **Injury (Complaint of Pain):** No visible injury, but the pedestrian complains of pain
- **Property Damage Only (PDO):** No injuries from a collision

The SWITRS database reported 1,071 collisions involving a pedestrian from 2008 to 2017 – the 10 most recent years with complete data. The majority of collisions took place at or within 250 feet of an intersection. Collisions involving pedestrians on Interstate 80 were excluded from this analysis.

The California Office of Traffic Safety collects collision data for each city and county in California and ranks cities of similar sizes (based on population) along collision parameters. The most recent year of data is from 2015, when Berkeley had 119,997 residents. Of the 57 cities with 100,000 to 250,000 residents, Berkeley was:

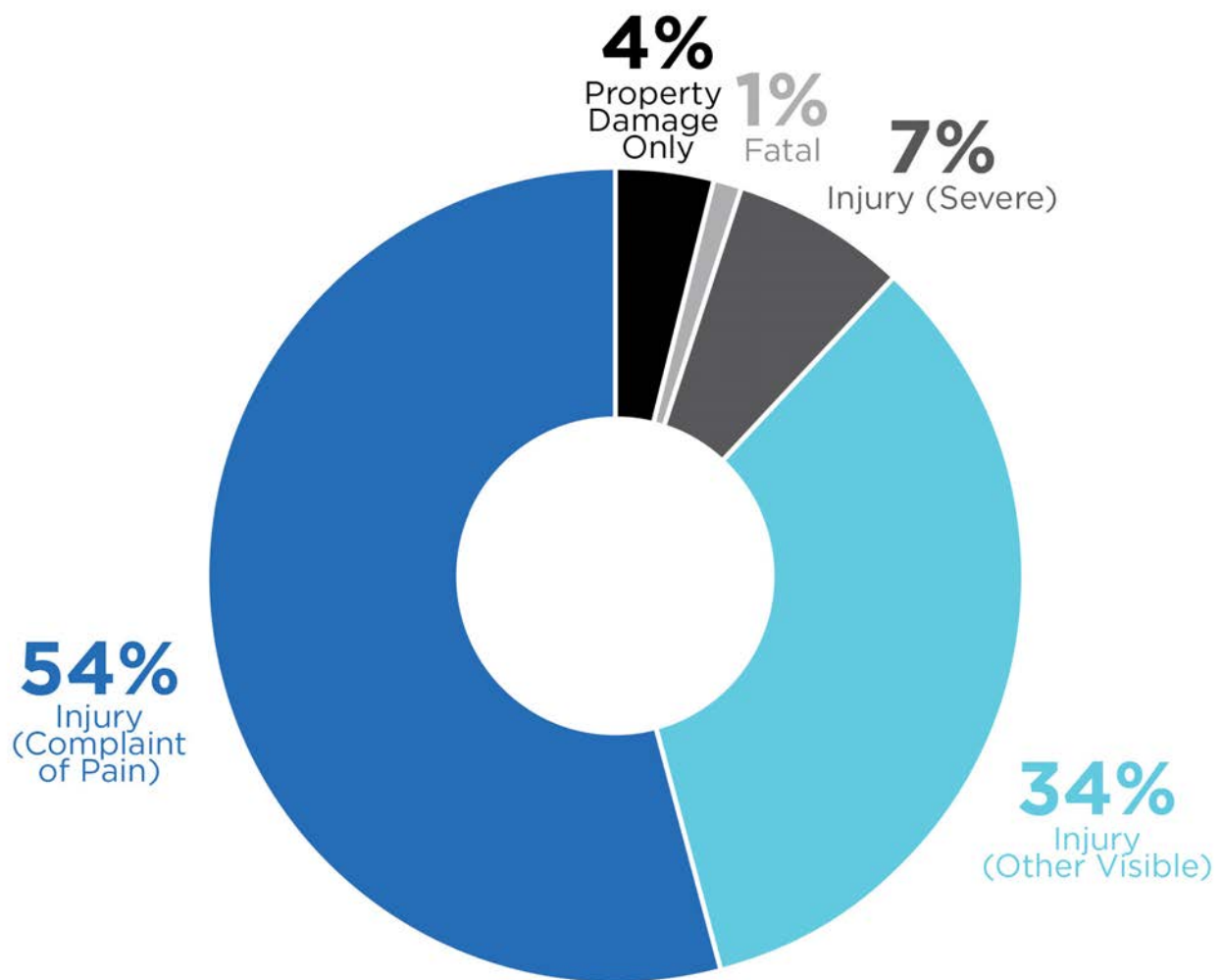
- **First** in total collisions involving pedestrians (116 collisions)
- **First** in total collisions involving bicyclists (173 collisions)
- **Second** in total collisions involving pedestrians over the age of 65 (18 collisions)
- **Eighth** in total collisions that were speed related (218 collisions)

These rankings must be held within the context of Berkeley's very high levels of walking and its density compared to other similarly-sized California cities. Berkeley has the highest rate of commute trips by walking of any city in California with a population of at least 20,000, and the second highest rate among medium sized cities in the country, according to the US Census American Community Survey. However, these rankings also prompt urgency to further analyze and reduce pedestrian collisions through this Plan's recommendations and other pedestrian safety efforts, consistent with Vision Zero.

TABLE 3: FATAL PEDESTRIAN COLLISIONS IN BERKELEY, 2008-2017

| Collision Location                                          | Collision Date |
|-------------------------------------------------------------|----------------|
| Warring Street/Derby Street Intersection                    | 2/27/2009      |
| Adeline Street/Harmon Street Intersection                   | 4/29/2009      |
| Adeline Street/Harmon Street Intersection                   | 3/10/2010      |
| San Pablo Avenue/Gilman Street Intersection                 | 10/23/2010     |
| Gilman Street and Frontage Road                             | 11/26/2011     |
| Tulare Avenue/Marin Avenue Intersection                     | 1/30/2012      |
| University Avenue on Overpass over Interstate 80            | 7/15/2013      |
| Sacramento Street/Bancroft Way Intersection                 | 4/4/2014       |
| University Avenue Between Shattuck Avenue and Milvia Street | 9/27/2016      |
| Monterey Avenue/Hopkins Street Intersection                 | 4/15/2017      |

FIGURE 8: PEDESTRIAN COLLISIONS IN BERKELEY, 2008-2017 USING SWITRS INJURY COLLISION TYPES



Source: SWITRS 2008-2017

## COLLISION HISTORY

Pedestrian-involved collisions reported in the SWITRS collision database include collision outcomes, ranging from fatalities and injuries to property damage only. Notably, reported injuries from collision are simply a police officer's account at the time of the collision; a reported injury could become more severe or chronic over time, which cannot be captured in an officer's point-in-time report. Collision records are updated if a person dies of complications from the collision.

This section provides an overview of the key findings from the SWITRS collision data analysis. The complete set of findings can be found in **Appendix C: Technical Analysis Methodologies**. The key findings are:

- **Of the 1,071 total collisions involving pedestrians in Berkeley between 2008 and 2017, 10 were fatal and 79 led to a severe injury.** These totals represent collisions that were reported to the police and likely undercount the number of actual collisions involving a pedestrian in Berkeley.
- **31 (3%) of the total collisions took place along a street segment (more than 250 feet away from an intersection).** However, three of the ten fatal collisions (30%) took place along a street segment: these included two collisions on University Avenue and one on Gilman Street.
- **The majority of pedestrian collisions in Berkeley occurred at intersections.** The intersections in Berkeley with the highest number of collisions were generally located around downtown, south of the UC Berkeley campus, and along major arterials, such as Ashby Avenue, San Pablo Avenue, Shattuck Avenue, and University Avenue. Five intersections in Berkeley have had 10 or more reported pedestrian collisions between 2008 and 2017. Three of the 10 fatal pedestrian collisions occurred at an intersection that had at least eight reported pedestrian collisions during the study period.
- **The streets with the most pedestrian collisions are generally larger, arterial streets with high vehicle volumes and streets that run through downtown or close to the UC Berkeley campus** (see **Table 4**). Shattuck Avenue, which meets both of these criteria, had 122 pedestrian collisions between 2008 and 2017. Ashby Avenue and San Pablo Avenue, both of which are state highways, had 88 pedestrian-involved collisions each during this time period. These numbers are especially high considering that Ashby and San Pablo Avenue do not have high pedestrian volumes.

TABLE 4: STREETS BY TOTAL NUMBER OF PEDESTRIAN COLLISIONS, 2008-2017\*

| Street                    | Number of Collisions |
|---------------------------|----------------------|
| Shattuck Avenue           | 122                  |
| Ashby Avenue              | 88                   |
| San Pablo Avenue          | 88                   |
| Martin Luther King Jr Way | 76                   |
| University Avenue         | 74                   |
| Bancroft Way              | 65                   |
| Sacramento Street         | 56                   |
| Telegraph Avenue          | 56                   |
| Channing Way              | 52                   |
| Hearst Avenue             | 51                   |
| College Avenue            | 48                   |
| Adeline Street            | 42                   |
| Addison Street            | 40                   |
| Milvia Street             | 36                   |
| Dwight Way                | 35                   |

Source: SWITRS 2008-2017

\*Intersection collisions are tallied for both streets at the intersection.



## Collision Factors and Characteristics

Many factors are involved in any collision. When a collision is reported, police respond to the incident and try to identify what caused the collision. Using the information available to them, they attempt to determine the actions of each party prior to the collision and the pedestrian location in the roadway at the moment that the pedestrian was struck. Other information is recorded to document the collision, like time of day, day of week, month, street lighting conditions, and pedestrian characteristics. This data is later compiled into the SWITRS collision database.

This section synthesizes the key findings from analyzing all reported collision factors and characteristics. Greater detail and data visualizations of collision factors and characteristics can be found in **Appendix C: Technical Analysis Methodologies**.

SWITRS provides several data points for each collision, including collision factor, pedestrian action, and driver action. The primary collision factor is reporting officer’s best judgment as to the primary contributing factor to the collision. This element represents an officer’s opinion and is used to examine collision trends.

Definitions of these collision factors are below:

- **Violation of the Pedestrian Right of Way:** Driver fails to yield to the pedestrian who has the right of way and then collides with the pedestrian.
- **Pedestrian Violation:** Pedestrian fails to yield the right-of-way to a vehicle.

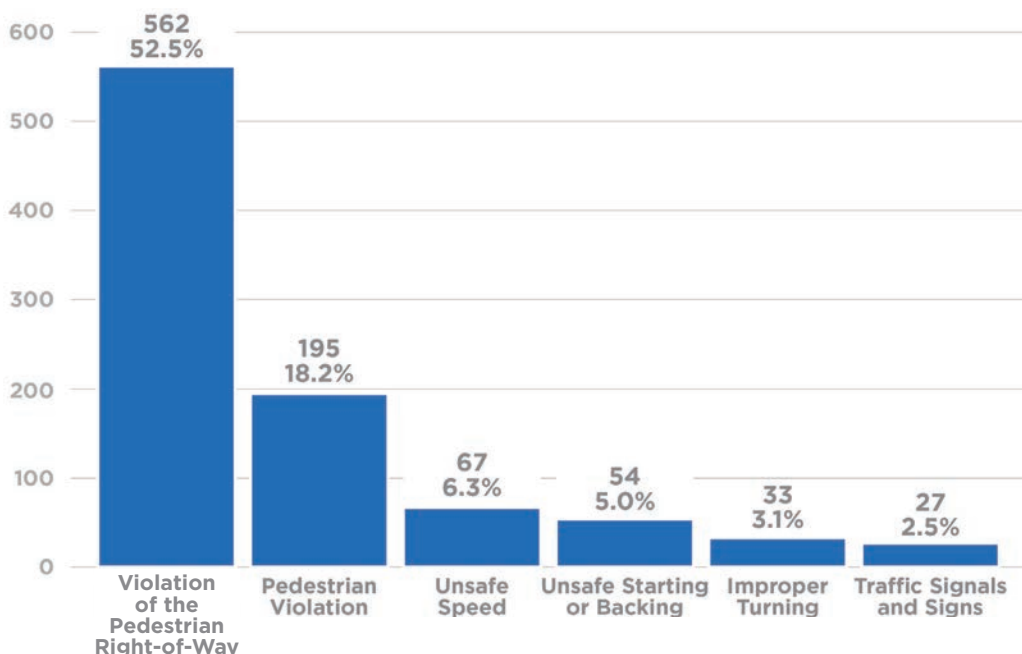
- **Unsafe Speed:** Driver travels above the posted speed limit or at an unsafe speed for conditions.
- **Unsafe Starting or Backing:** Driver backs up a vehicle or enters traffic from a stopped or parked position that results in a collision.
- **Improper Turning:** Driver makes an illegal or unsafe turn movement that results in a collision.
- **Traffic Signals and Signs:** Driver fails to stop at a stop sign or obey or notice a traffic signal, resulting in a collision.

The following collision factors emerged from the data:

- **The majority of pedestrian collisions in Berkeley occurred when a driver failed to yield the right of way to a pedestrian.** Of the 10 fatal collisions, six pedestrian violations were the collision factor for three collisions: six pedestrians were crossing in a crosswalk at an intersection, two were in the road, one was crossing not at a crosswalk, and one was crossing at a mid-block crosswalk.
- **Drivers were more than two times likelier to be making a left turn prior to colliding with a pedestrian than making a right turn.** Prior to the collision, the majority of drivers were either proceeding straight or making a left turn.

**Appendix C: Technical Analysis Methodologies** shows the top six primary collision factors identified in pedestrian collisions in Berkeley from 2008 to 2017, the top five driver actions from more than a dozen reported actions, and more details from the findings.

FIGURE 9: PRIMARY COLLISION FACTOR FOR PEDESTRIAN COLLISIONS IN BERKELEY, 2008-2017



**COLLISION OCCURRENCE**

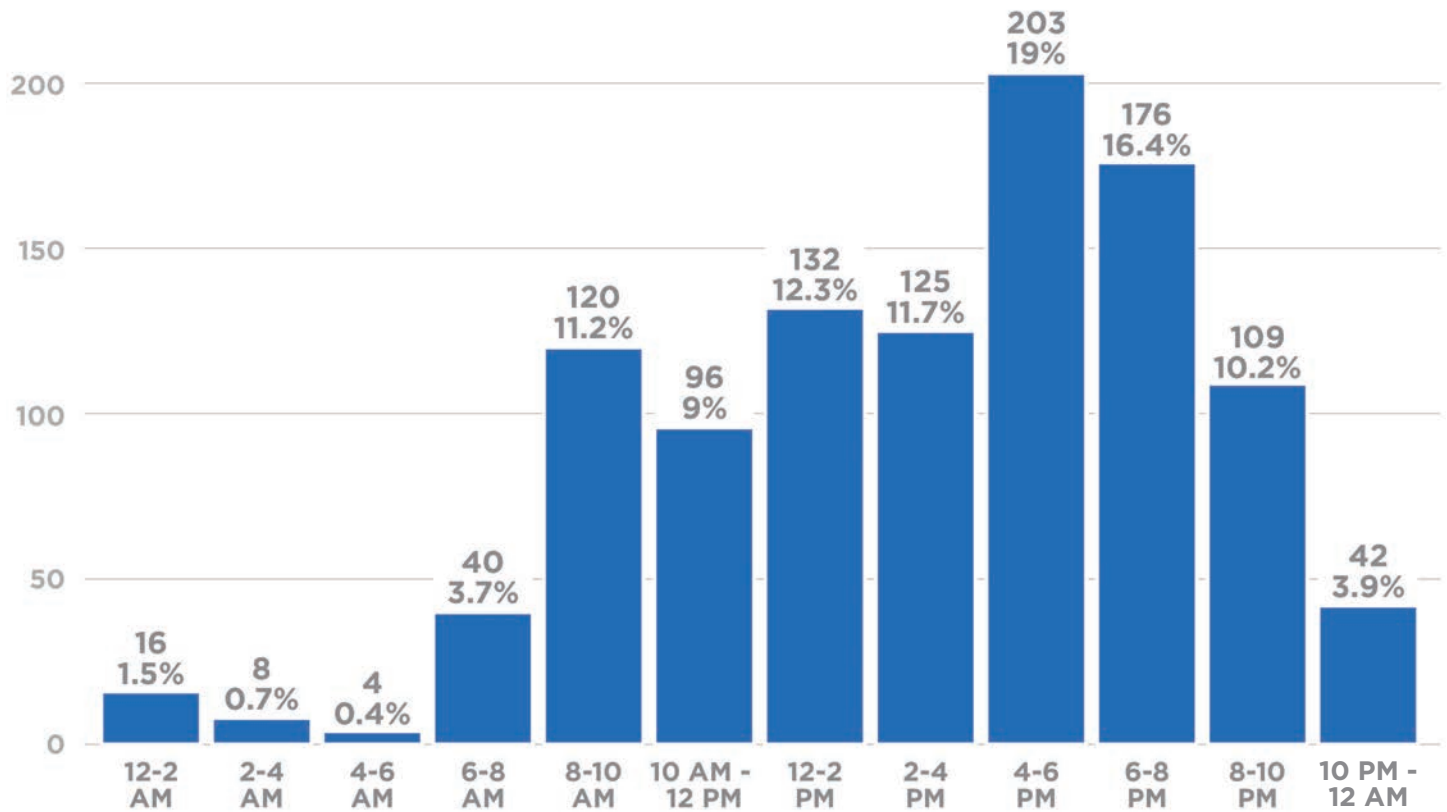
The reported time of day, weekday, month, and streetlight conditions of collisions were used to analyze when collisions occur. Key findings from this analysis are described below:

- **Pedestrian collisions are more likely to take place in the afternoon and early evening than in the morning.** More than 35 percent of reported collisions in Berkeley between 2008 and 2017 took place between 4pm and 8pm, which captures the afternoon/evening rush hour. The morning rush hour has fewer collisions - only 15 percent took place between 6am and 10am. Of the 10 fatal pedestrian collisions, seven took place between the hours of 6:30 PM and midnight (see **Figure 10**).
- **Nearly two-thirds of Berkeley’s reported pedestrian collisions took place during the daylight hours, while seven of the 10 fatal pedestrian collisions took place at night.**

- **The most collisions take place on Tuesdays, Wednesdays, and Thursdays, with fewer collisions on Mondays and Fridays.** This corresponds with the days where most people are at work and are commuting at the same peak periods, increasing their exposure to other commuters and possibly collisions. Of the 10 fatal pedestrian collisions, two occurred on a Monday, one occurred on a Tuesday, two occurred on a Wednesday, two occurred on a Friday, and three occurred on a Saturday.
- **There is a clear drop off in pedestrian collisions during June, July, and August.** This could be due to two factors. First, these summer months have longer daylight hours, which improve visibility for pedestrians and drivers. Second, UC Berkeley runs many fewer summer classes during these months compared with the standard school year, so the number of people in Berkeley decreases.

Graphs and tables provide greater detail and context of these key findings in **Appendix C: Technical Analysis Methodologies**.

FIGURE 10: PEDESTRIAN COLLISIONS BY TIME OF DAY



**PEDESTRIAN CHARACTERISTICS**

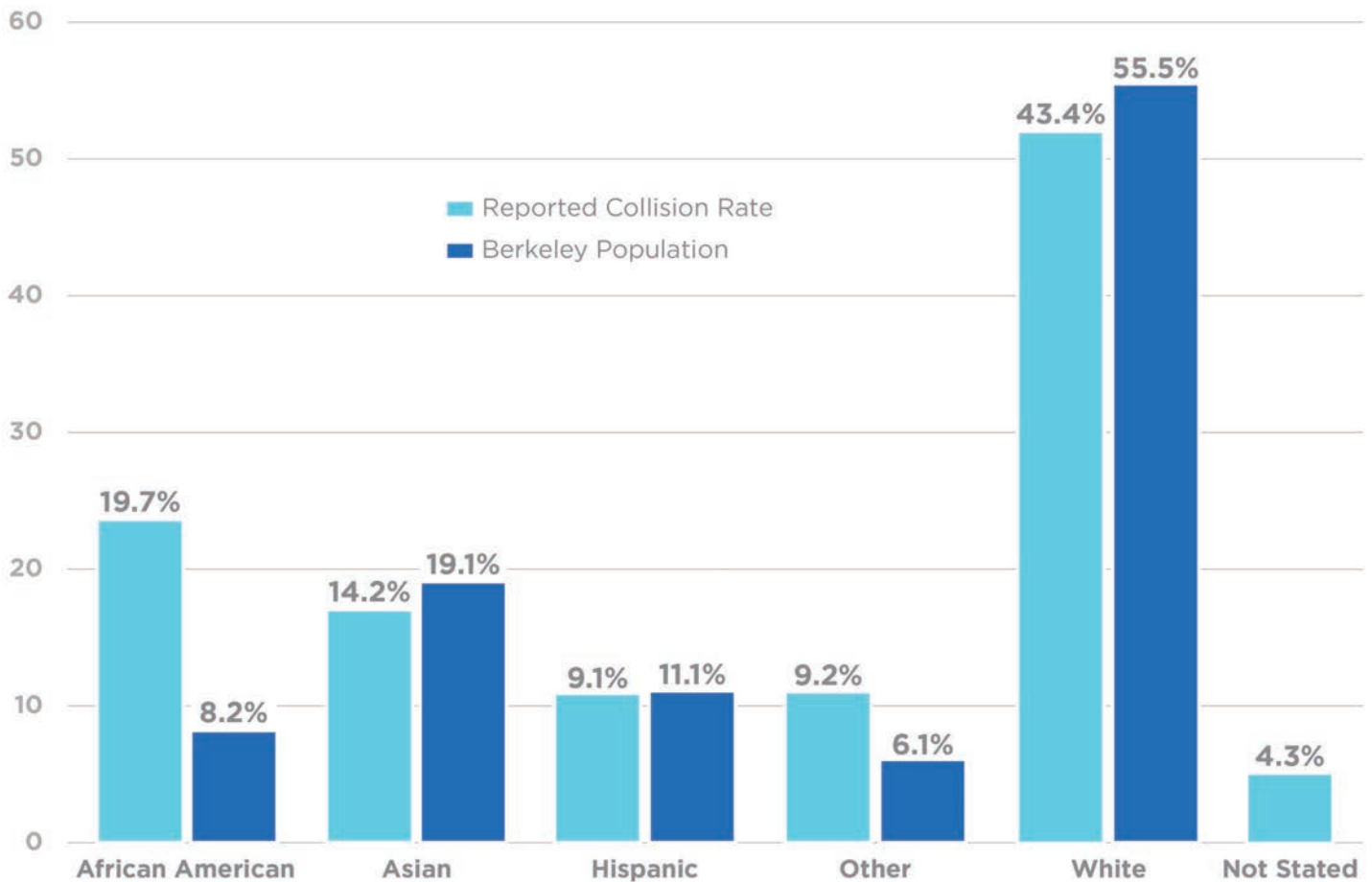
This section describes trends of the age, race, and gender of the pedestrians involved in collisions with vehicles based on data in the SWITRS collision report. This analysis uses American Community Survey (ACS) 2012-2016 5-Year Estimates to capture demographic information for the city’s population. According to Census rules, people should be counted at a residence if they live there most of the time or stay there more than any other place they might live or stay. This means that college students should be counted at their college address, and college students are included in this analysis. Key findings emerged when analyzing this data:

- **Berkeley residents between the ages of 45 and 64 represent 20 percent of Berkeley’s population, but they accounted for 27 percent of pedestrians in collisions in Berkeley between 2008 and 2017.** Conversely, children under 15 years of age accounted for 10 percent of Berkeley’s population, and seven percent of pedestrians involved in collisions. The ages of the pedestrians struck by vehicles and killed in Berkeley from 2008 to 2017 range from five to 98.

- **African Americans are overrepresented in pedestrian collisions.** Over eight percent of residents are African American, but nearly 20 percent of pedestrians involved in collisions in Berkeley from 2008 to 2017 were African American (see **Figure 11**). Of the 10 fatal pedestrian collisions, four were White, three were African American, one was Other, and two were Not Stated.
- **From 2008 to 2017, 54 percent of reported pedestrian collisions involved a female pedestrian.** Of the 10 fatal pedestrian collisions, seven pedestrians were male, two were female, and one did not have a gender reported.

More detail supporting these findings, including graphs summarizing data, are described in **Appendix C: Technical Analysis Methodologies**.

FIGURE 11: PEDESTRIAN COLLISIONS BY RACE/ETHNICITY



## High Injury Streets

When analyzing collision data and trends, identifying High Injury Streets became a critical method for connecting the most severe collisions in Berkeley with the locations where they occurred. The core concept and a list of High Injury Streets are presented in this section, and the full methodology is provided in **Appendix C: Technical Analysis Methodologies**.

The High Injury Streets capture the locations where high densities of fatal and severe injury collisions occurred. In total, High Injury Streets have a higher incidence of fatal and severe injury collisions compared to other streets where collisions occurred. High Injury Streets and their respective number of reported fatal and severe collisions are shown in **Table 5**.

The High Injury Streets make up only 14 percent of Berkeley's street miles, but account for 93 percent of pedestrian fatalities and severe injuries. Berkeley's High Injury Streets are shown in **Figure 12** along with the location of the most severe pedestrian collisions between 2008 and 2017.

Of the 89 most severe pedestrian collisions in Berkeley from 2008 to 2017, 80 collisions (90 percent) occurred on a High Injury Street. All fatal pedestrian collisions from 2008 to 2017 are located on a High Injury Street. San Pablo Avenue and Ashby Avenue, the two state highways that run through Berkeley, are second and third for streets in Berkeley with the highest number of fatal or severe pedestrian injury collisions, behind Shattuck Avenue. Their numbers are especially high considering that Ashby and San Pablo Avenue have relatively low pedestrian volumes compared to Shattuck.

TABLE 5: LOCATION OF FATAL OR SEVERE PEDESTRIAN INJURY COLLISIONS ON HIGH INJURY STREET IN BERKELEY, 2008-2017

| Collision Location        | Number of Fatal or Severe Collisions |
|---------------------------|--------------------------------------|
| Shattuck Avenue           | 12                                   |
| Ashby Avenue              | 10                                   |
| San Pablo Avenue          | 9                                    |
| University Avenue         | 9                                    |
| Sacramento Street         | 7                                    |
| Adeline Street            | 5                                    |
| Martin Luther King Jr Way | 5                                    |
| Telegraph Avenue          | 5                                    |
| Cedar Street              | 4                                    |
| Gilman Street             | 4                                    |
| Haste Street              | 4                                    |



This pedestrian crossing at Sacramento Street and 66th Street includes a median refuge island, allowing pedestrians to cross two lanes of traffic at a time.

FIGURE 12: HIGH INJURY STREETS IN BERKELEY



**Fatal and Severe Injury Collisions, 2008-2017**

- Fatal
- Severe Injury
- High Injury Streets

- Amtrak Station
- BART Station
- Railroad
- Sidewalk Presence
- Multi-Use Trails/Stairways
- Parks/Recreation
- Berkeley City Boundary

# 3

## IMPROVEMENTS &

## RECOMMENDATIONS



This chapter describes the recommended projects, policies, programs, and practices that are intended to fill the gaps identified in [Chapter 2](#). Guided by the Plan’s vision and goals, the recommendations and improvements are prioritized using a set of criteria and a framework that is detailed in this chapter.

## PRIORITIZATION FRAMEWORK

In order to prioritize projects for improving walking conditions in Berkeley, factors consistent with existing City policies and public feedback received can be applied and weighted relative to each other. The prioritization framework presented in this section was used to identify the ten highest-priority locations for pedestrian improvements in Berkeley. The prioritization framework follows a methodology<sup>1</sup> recommended by the National Cooperative Highway

Research Program of the Transportation Research Board. The full methodology and framework with maps for individual criteria are shown in **Appendix C: Technical Analysis Methodologies**.

The prioritization factors and criteria are summarized in **Table 6**. These were applied to the High Injury Streets listed in [Chapter 2](#) to determine the priority segments.

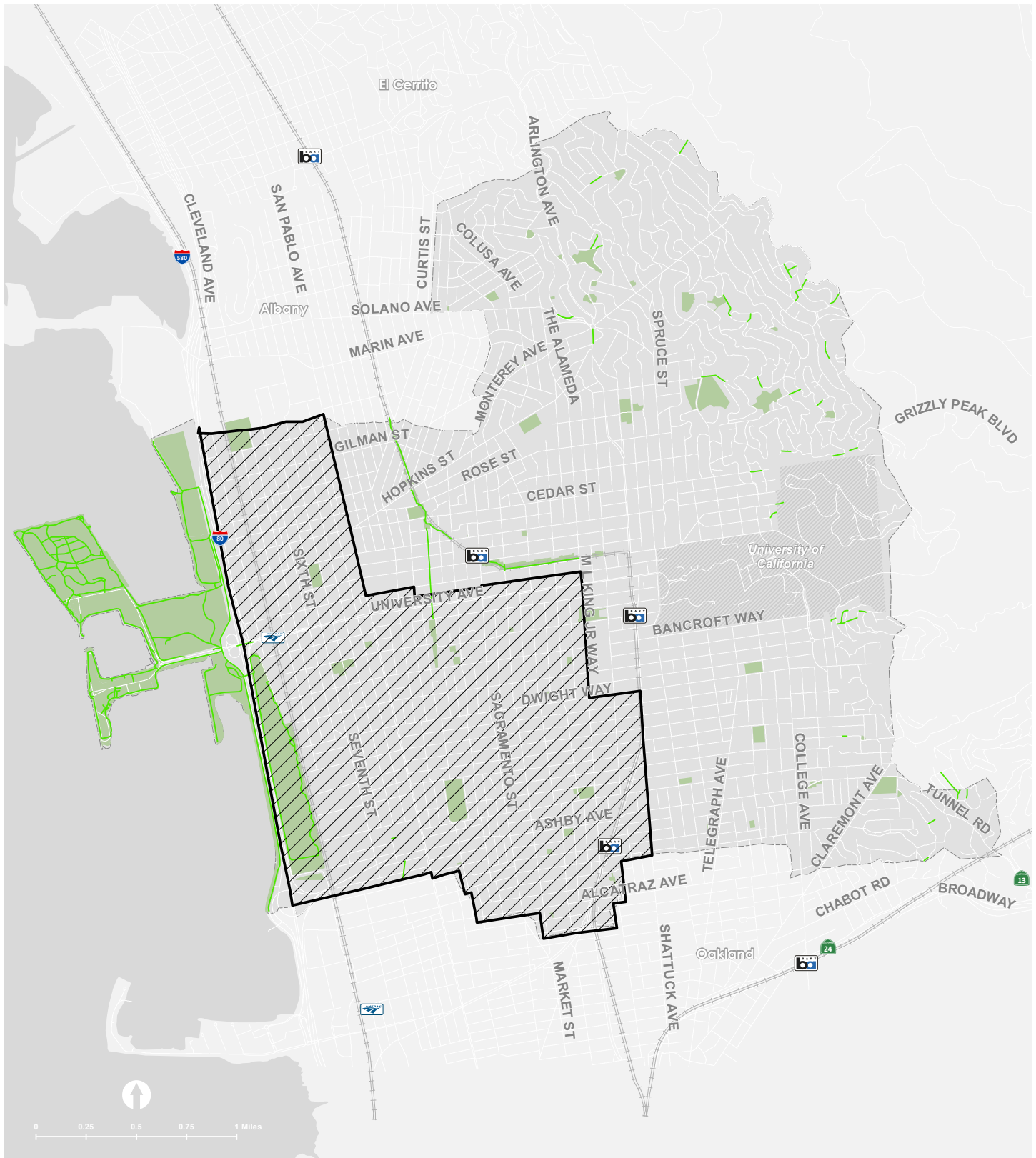
**Figure 14** is a visual representation of the outcome of the prioritization process. Each High Injury Street was scored in relation to all the streets analyzed to determine the 10 highest priority street segments. The 10 highest scoring street segments are shown. A high score represents the greatest priority in improving walkability.

TABLE 6: PRIORITIZATION FACTORS AND CRITERIA

| FACTOR               | CRITERIA                                                                                                                     | WEIGHT | NOTES                                                                                                                                                                                           |
|----------------------|------------------------------------------------------------------------------------------------------------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Safety</b>        | Concentration of fatal and severe collisions                                                                                 | 30%    | Captures locations with a high concentration of pedestrian fatalities, injuries, and collisions, as noted City priority.                                                                        |
| <b>Equity</b>        | Locations in historically underserved neighborhoods (shown in <b>Figure 13</b> )                                             | 30%    | Uses historic redlining maps with adjustments based on most recent (2010) Census data, current property values, and locations of community centers serving historically redlined neighborhoods. |
| <b>Connectivity</b>  | Pedestrian Demand: Land uses attracting most pedestrian trips including BART and Amtrak stations (High Demand Intersections) | 13.5%  | Uses pedestrian demand estimates to identify where pedestrians are walking. Top 30% of intersections are used, with each top 10% intersection group by demand receiving a different weight.     |
|                      | Transit Access: Proximity to major bus lines                                                                                 | 6.5%   | Uses distance of 0.25-mile from major AC Transit routes as defined in the AC Transit Major Corridors Study completed in 2016.                                                                   |
| <b>Existing Plan</b> | Unbuilt projects from 2010 Pedestrian Plan                                                                                   | 20%    | Recognizes existing work from the 2010 Berkeley Pedestrian Plan.                                                                                                                                |

<sup>1</sup> The prioritization methodology comes from the Transportation Research Board’s National Cooperative Highway Research Program (NCHRP) Report 803: ActiveTrans Priority Tool.


FIGURE 13: HISTORICALLY UNDERSERVED AREAS OF BERKELEY



 Historically Underserved Areas of Berkeley

 Amtrak Station

 BART Station

 Railroad







 Parks/Recreation

 Berkeley City Boundary



FIGURE 14: MAP OF PRIORITY STREETS



-  Prioritized High-Injury Streets
-  Amtrak Station
-  BART Station
-  Railroad
-  Parks/Recreation
-  Berkeley City Boundary

## PROJECT RECOMMENDATIONS

After applying the weights and criteria from the prioritization framework and analyzing Berkeley's existing walking conditions, two categories of recommendations emerged: **priority projects** and **citywide programs**. Priority projects are improvements and countermeasures identified for the top ten high-injury street segments identified during the prioritization process. Citywide programs are improvements that can be applied systematically throughout Berkeley's pedestrian network.

Both priority projects and citywide programs are intended to reduce pedestrian collisions and increase safety and comfort for those walking.

Recommended pedestrian safety treatments for each priority street segment are shown in this chapter.

Priority street segments are important to identify for the purpose of project implementation; however, this does not mean that streets not listed in **Table 7** will not be improved for people walking. The analysis provided in this report may direct future investments in street segments to improve walking conditions.



The Martin Luther King Jr. Way and Dwight Way intersection.

TABLE 7: PRIORITY STREET SEGMENTS

| SEGMENT                           | EXTENTS                         |
|-----------------------------------|---------------------------------|
| Adeline Street                    | Ashby to Southern City Limits   |
| Alcatraz Avenue                   | Sacramento to Adeline           |
| Ashby Avenue                      | San Pablo to Shattuck           |
| Cedar Street                      | Sixth to Stannage               |
| Martin Luther King Jr Way (North) | Hearst to Dwight                |
| Martin Luther King Jr Way (South) | Dwight to Adeline               |
| Sacramento Street                 | Dwight to Southern City Limits  |
| San Pablo Avenue                  | University To Dwight            |
| Shattuck Avenue                   | Adeline to Southern City Limits |
| University Avenue                 | San Pablo to Oxford             |

## PROPOSED INTERSECTION AND CROSSING TREATMENTS

The following list indicates the range of treatments that were identified for intersections and midblock crossings along the ten selected street segments. Each treatment has a representative icon for use on the project maps. The description following each icon provides detail as to what these treatments do and how they are intended to be used.



**Restrict right turns on red** to prevent right-turning vehicles from conflicting with crossing pedestrians.



**Improve sightlines at intersections** by providing red curb in advance of crosswalks to increase visibility of pedestrians and cross traffic.



A **STOP sign** indicates to drivers to stop at an intersection, increasing the likelihood that drivers will see and stop for pedestrians.



**Stripe high-visibility crosswalks** to increase conspicuity of pedestrian crossing locations.



**Reduce number of through lanes** to reduce the pedestrian crossing distance and traffic speeds and to simplify and clarify vehicle movements at the intersection.



**Remove right-turn lanes** to reduce intersection footprint and minimize vehicular conflicts with pedestrians.



**Narrow vehicle lanes** to provide space for pedestrian infrastructure and reduce pedestrian crossing distance and vehicle speeds.



**Install advance yield markings** and corresponding signage to indicate where drivers are to yield to pedestrians in advance of the crosswalk such that the vehicle of the yielding driver does not block the view of the pedestrian from the adjacent lane.



A **rectangular rapid flashing beacon (RRFB)** uses push button activated flashing lights to make motorists aware of crossing pedestrians and increase yielding behavior.



**Consolidate driveways** to reduce conflicts and pedestrian exposure to vehicles at or near intersections corners.



**Curb extensions** (aka “bulb-outs”) are widened sidewalks at crossings, shortening the crossing distance for pedestrians and slowing down turning traffic. Temporary curb extensions using striping and a vertical feature (such as bollards) quickly create safer crossing conditions.



**Median refuges** provide pedestrians the opportunity to cross in two stages, reducing pedestrian exposure to traffic and simplifying crossings. A temporary median refuge island can be constructed using low-cost and quick-build materials.



A **pedestrian hybrid beacon (PHB)** is a traffic device that assists pedestrians to cross the street by providing a hybrid between a traffic signal and a flashing beacon. Installing a full traffic signal is an alternative to this device that can also be considered as funding allows.



A **hardened centerline** creates physical separation between travel directions, guides motorists, and reduces their turning speed.



A **raised crossing** provides vertical deflection to slow drivers and increase yielding for crossing pedestrians.



**Widen sidewalk at bus stops** (aka “bus bulbs”) to improve transit operations and pedestrian

conditions.



**Realign intersection** to reduce conflicts and increase safety for all users by straightening skewed intersections or other geometric changes.



**All-way pedestrian crossing** (aka “pedestrian scramble”) stops all vehicular movement at a signalized intersection to allow all pedestrians to cross in the same phase (including diagonally).

## UNIVERSAL TREATMENTS ON EACH STREET SEGMENT

In addition, there are several treatments that should be universally applied when specific conditions are met.

**A leading pedestrian interval (LPI)** gives pedestrians a 3-7 second head start to increase their visibility in the crosswalk. LPIs will be programmed into all signalized intersections along the 10 priority segments.

**Overhead lighting of crosswalks** increases nighttime visibility of crossing pedestrians. Lighting will be added at every intersection corner or side of a midblock crosswalk where lighting is not yet provided.

**Advance yield markings** and corresponding signage will be added at all uncontrolled (unsignalized or lacking a stop sign) intersection crosswalks on multi-lane streets.

**Protected left-turn phasing** will be added to reduce left-turning conflicts between vehicles and pedestrians. This includes traffic lane realignments to add left-turn pockets where needed.

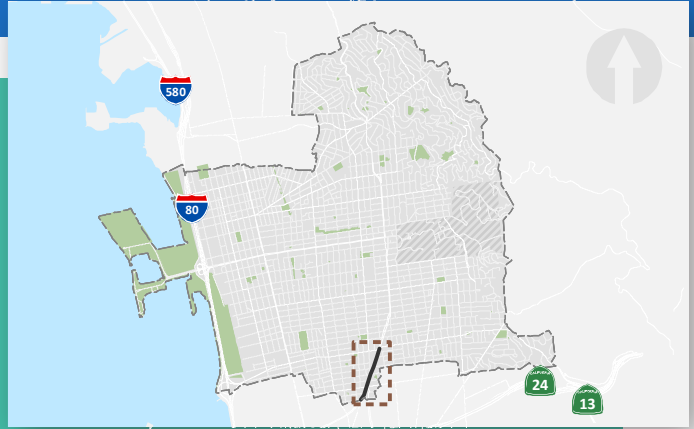
**Stop bars at signalized intersections** will be added for all approaches if not already installed.

Each street segment summarized on the following pages has two cost estimates - a low estimate and a high estimate - based on a summation of all recommended safety treatments along a segment. These planning level cost estimates have been rounded to the nearest \$5,000. **Appendix E: Cost Estimates** provides the spreadsheet calculations for the cost estimates organized by segment.



# Adeline Street

## Ashby Avenue to Southern City Limits



### SEGMENT CHARACTERISTICS

- Adeline Street is classified as a Major Street. The cross-section varies along the segment and includes two lanes in each direction north of Martin Luther King Jr. Way/Woolsey Street, and three lanes in each direction south of Martin Luther King Jr. Way/Woolsey Street. Adeline Street is divided by a median and includes turn lanes at the signalized intersections.
- There are diagonal parking bays along Adeline Street between Fairview Street and the southern intersection with Martin Luther King Jr. Way.
- The posted speed limit on this segment is 25 mph.
- This street segment includes Class II bike lanes between Martin Luther King, Jr. Way/Woolsey Street and Ashby Avenue.
- The 0.6-mile segment includes 10 intersections—4 signalized and 6 unsignalized intersections, with one mid-block crossing at the Ed Roberts Campus.

### PEDESTRIAN COLLISIONS, 2008–2017

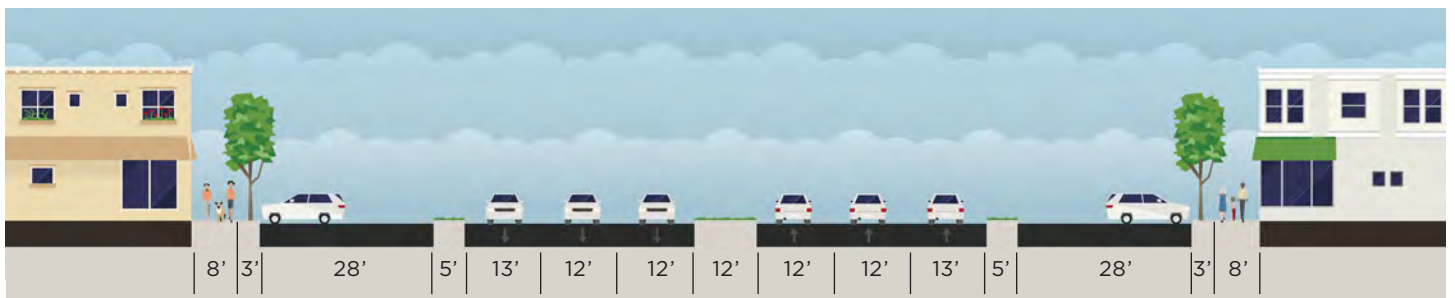
|                                           | Daylight | Dawn/Dusk/Night |
|-------------------------------------------|----------|-----------------|
| Crossing in Crosswalk at Intersection     | 12       | 11              |
| Crossing in Crosswalk not at intersection | 0        | 1               |
| Crossing not in Crosswalk                 | 5        | 3               |
| In Road, Including Shoulder               | 1        | 2               |
| Not In Road                               | 1        | 0               |
| Not Stated                                | 1        | 0               |



Adeline Street at Alcatraz Avenue. Large intersections expose pedestrians to vehicle traffic.

Severe Injury Collisions Other Injury Collisions Fatal Injury Collisions

### EXISTING CROSS-SECTION Adeline Street, Ashby Avenue to Southern City Limits



# Adeline Street Proposed Intersection Improvements

## OBSERVATIONS

- Several skewed intersections along the segment create complicated intersection geometries and undesirable walking conditions.
- Street frontage along the corridor includes parking lots with access at intersections.
- Median refuge islands along the corridor make uncontrolled crossings safer. And where they exist, rectangular rapid flashing beacons help promote motor vehicle yielding to pedestrians.

## ADELINE CORRIDOR SPECIFIC PLAN

The Adeline Corridor Specific Plan is a long-range plan for the Adeline Corridor to promote transit-oriented development and safe access for users of all modes of transportation. The planning process began in 2015 and the community was involved heavily.

The Specific Plan's study area starts on Shattuck Avenue from Dwight Way to Adeline Street, continuing on Adeline from Shattuck until the southern City limits.

The Pedestrian Plan recommendations for Adeline Street incorporate the recommended design features identified in the Specific Plan, such as reducing the number of lanes. The Specific Plan notes that "detailed design of pedestrian and bicycle treatments at intersections will occur in later design phases." Recommendations from the Pedestrian Plan will be worked into that detailed intersection design. In addition, the City is conducting a study funded by BART on whether to reduce the number of mixed-traffic lanes on Adeline north of Martin Luther King Jr. Way.



Add a **leading pedestrian interval** for all crossings at signalized intersections.

Add **audible indication** for when the RRFB at the Ed Roberts Campus is flashing

Modify all signalized intersections to include a **left-turn phase** that is **fully separate from the conflicting pedestrian crossing phase** wherever this conflict exists. Signalized intersections will be reconfigured to add left-turn pockets where these do not exist.

On roads with more than two lanes, add **advanced yield lines** prior to all marked crosswalks where traffic control is lacking in the conflicting direction.

Add **stop bars** to all approaches at signalized intersections.

Add **overhead lighting to crosswalks** that cross the major street where no such lighting exists.

**Low Estimate**  
\$2,540,000

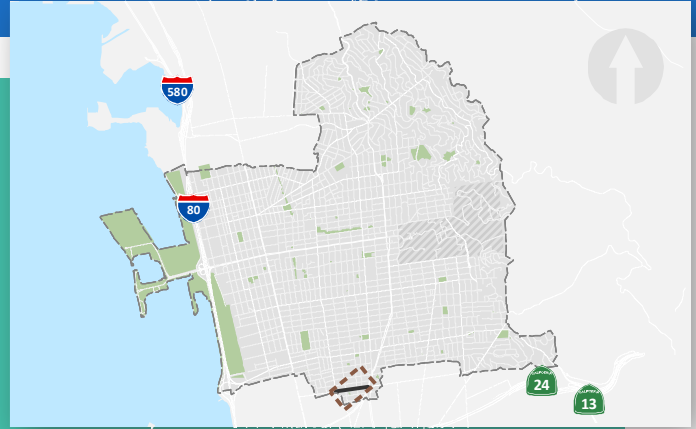
**High Estimate**  
\$4,730,000

# Alcatraz Avenue

Sacramento Street to Adeline Street

## SEGMENT CHARACTERISTICS

- The study segment is a 2-lane Collector street. There are 25 mph speed limit signs posted throughout the segment.
- There are 5 intersections (2 signalized and 3 unsignalized) in 0.35 miles.
- This segment is in a historically underserved area.



## PEDESTRIAN COLLISIONS, 2008–2017

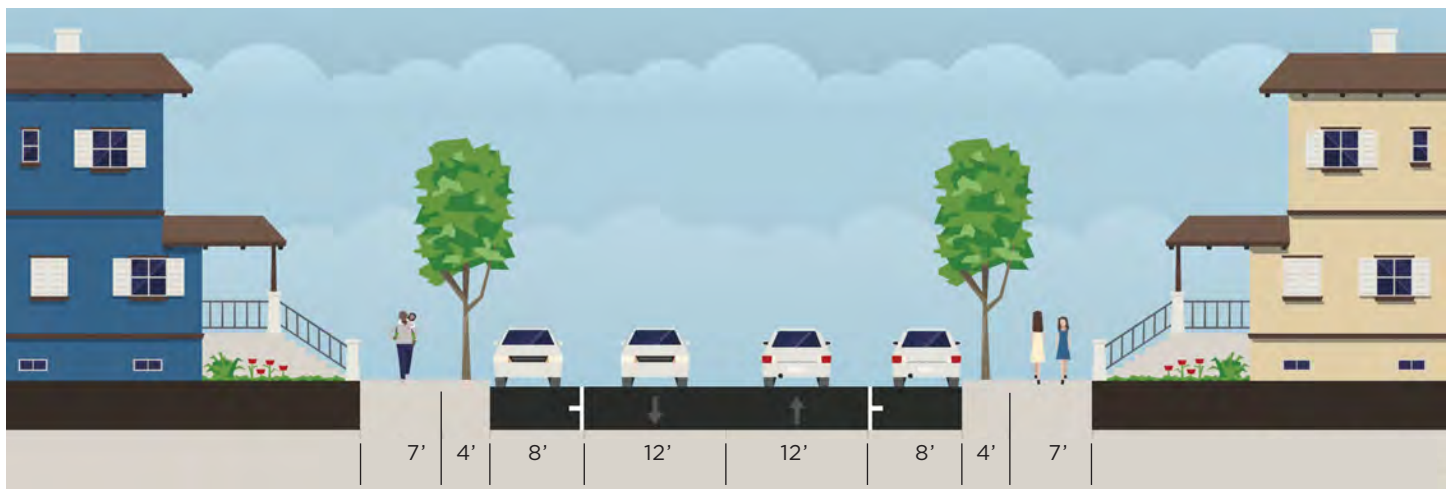
|                                       | Daylight | Dawn/Dusk/Night |
|---------------------------------------|----------|-----------------|
| Crossing in Crosswalk at Intersection | 6        | 4               |
| Crossing not in Crosswalk             | 0        | 1               |
| Not In Road                           | 1        | 0               |

Severe Injury Collisions Other Injury Collisions



Alcatraz Avenue at King Street. Faded crosswalk markings decrease pedestrian visibility and awareness.

## EXISTING CROSS-SECTION Alcatraz Avenue – Sacramento Street to Adeline Street





# Alcatraz Avenue Proposed Intersection Improvements

## OBSERVATIONS

- The crosswalk across Alcatraz Avenue at Ellis Street lands at a driveway. The crosswalk could be moved to the east side of the intersection to eliminate this pedestrian conflict.
- The Pedestrian Plan's recommendations for the Adeline Street/Alcatraz Avenue intersection take into account the recommended design features identified in the Adeline Corridor Specific Plan, such as reducing the number of lanes. The Adeline Corridor Specific Plan notes that "detailed design of pedestrian and bicycle treatments at intersections will occur in later design phases." In the later design phases, recommendations from the Pedestrian Plan will be worked into the detailed design of the Adeline Corridor.
- King Street is a bike boulevard, but bicyclists and pedestrians both currently have a difficult time crossing Alcatraz Avenue.

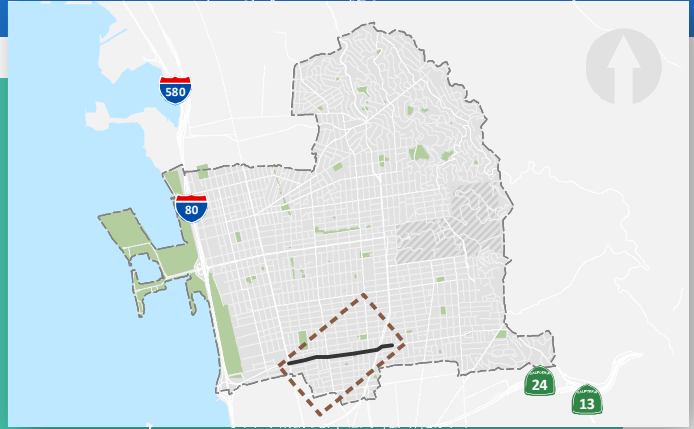


**Low Estimate**  
**\$315,000**

**High Estimate**  
**\$1,055,000**

# Ashby Avenue

## San Pablo Avenue to Shattuck Avenue



### SEGMENT CHARACTERISTICS

- The study segment, also known as State Route 13, is a 4-lane, Major Street. There is a part-time curbside parking lane in both directions for vehicles outside of peak hour times. There are left- and right-turn pockets at several intersections and 25 mph speed limit signs posted.
- There are 17 intersections (7 signalized and 10 unsignalized) in 1.2 miles.
- The Ashby BART station is located on the south side of Ashby Avenue between Martin Luther King Jr. Way and Adeline Street.
- This segment is in a historically underserved area.

### PEDESTRIAN COLLISIONS, 2008–2017

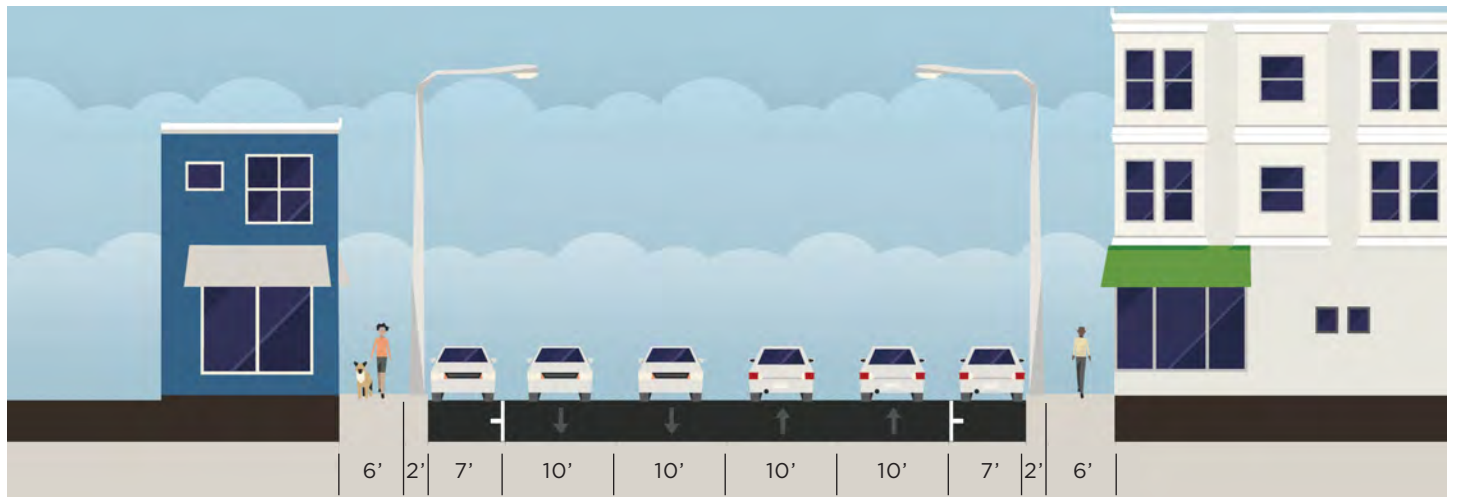
|                                       | Daylight                                                                     | Dawn/Dusk/Night                         |
|---------------------------------------|------------------------------------------------------------------------------|-----------------------------------------|
| Crossing in Crosswalk at Intersection | 28 <span style="color: orange;">■</span> <span style="color: gray;">■</span> | 9 <span style="color: gray;">■</span>   |
| Crossing not in Crosswalk             | 7 <span style="color: gray;">■</span>                                        | 2 <span style="color: gray;">■</span>   |
| In Road, Including Shoulder           | 0                                                                            | 3 <span style="color: gray;">■</span>   |
| Not In Road                           | 4 <span style="color: gray;">■</span>                                        | 1 <span style="color: orange;">■</span> |

Severe Injury Collisions ■ Other Injury Collisions ■  
 Fatal Injury Collisions ■



Ashby Avenue at Adeline Street. This intersection next to a BART station does not foster a welcoming pedestrian environment.

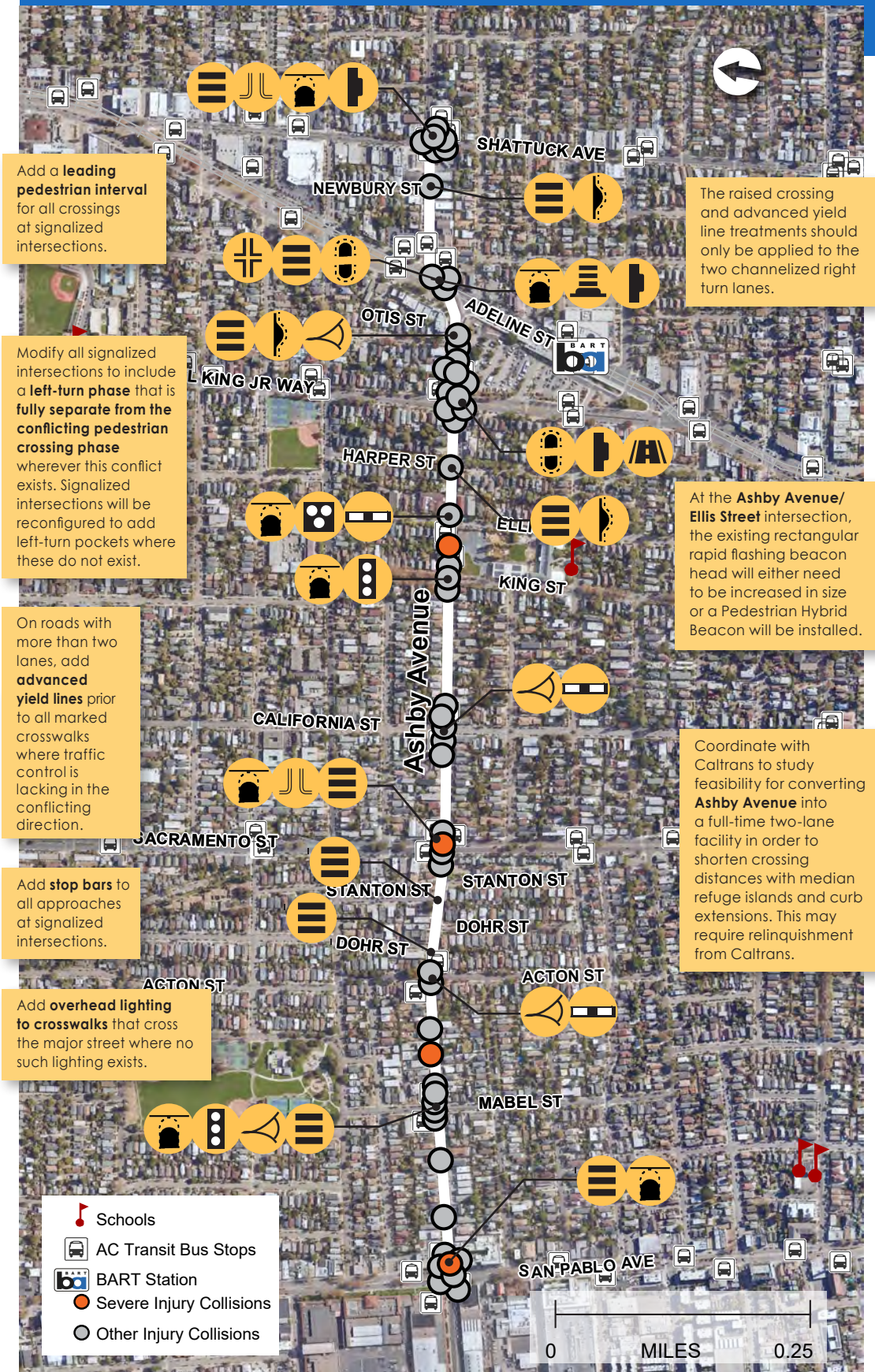
### EXISTING CROSS-SECTION Ashby Avenue – San Pablo Avenue to Shattuck Avenue



# Ashby Avenue Proposed Intersection Improvements

## OBSERVATIONS

- Several intersections lack pedestrian-scale lighting, which impacts pedestrians' safety and comfort when crossing minor streets adjacent to Ashby Avenue.
- There are traffic signals and rectangular rapid flashing beacons to help students cross Ashby Avenue from Malcolm X Elementary School, but these students must cross four lanes of traffic.
- Buses run along Ashby Avenue and on intersecting streets, such as San Pablo Avenue Sacramento Street, Martin Luther King Jr. Way, Adeline Street, and Shattuck Avenue. There are no bus bulbs on this segment, which would prioritize pedestrian access to transit.



Add a **leading pedestrian interval** for all crossings at signalized intersections.

Modify all signalized intersections to include a **left-turn phase** that is **fully separate from the conflicting pedestrian crossing phase** wherever this conflict exists. Signalized intersections will be reconfigured to add left-turn pockets where these do not exist.

On roads with more than two lanes, add **advanced yield lines** prior to all marked crosswalks where traffic control is lacking in the conflicting direction.

Add **stop bars** to all approaches at signalized intersections.

Add **overhead lighting to crosswalks** that cross the major street where no such lighting exists.

The raised crossing and advanced yield line treatments should only be applied to the two channelized right turn lanes.

At the **Ashby Avenue/Ellis Street** intersection, the existing rectangular rapid flashing beacon head will either need to be increased in size or a Pedestrian Hybrid Beacon will be installed.

Coordinate with Caltrans to study feasibility for converting **Ashby Avenue** into a full-time two-lane facility in order to shorten crossing distances with median refuge islands and curb extensions. This may require relinquishment from Caltrans.

**Low Estimate**  
**\$2,155,000**

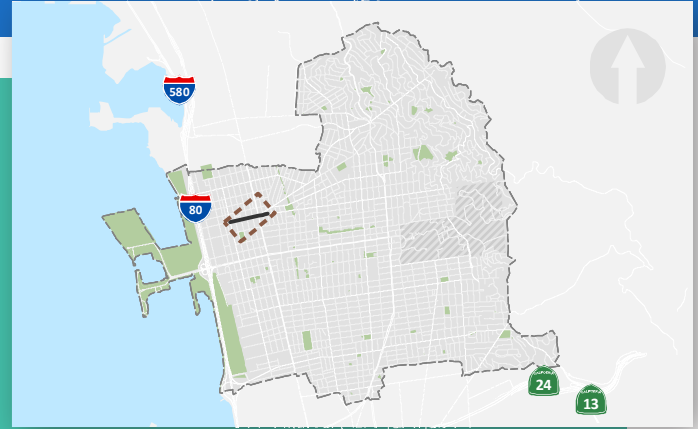
**High Estimate**  
**\$7,075,000**

# Cedar Street

## Sixth Street to Stannage Avenue

### SEGMENT CHARACTERISTICS

- The study segment, classified as a Collector Street, is a 2-lane roadway with a splitter island at Hopkins Street. There are 25 mph speed limit signs posted throughout the segment.
- There are 8 intersections (2 signalized and 6 unsignalized intersections) in 0.4 mile.
- This segment is in a historically underserved area.



### PEDESTRIAN COLLISIONS, 2008–2017

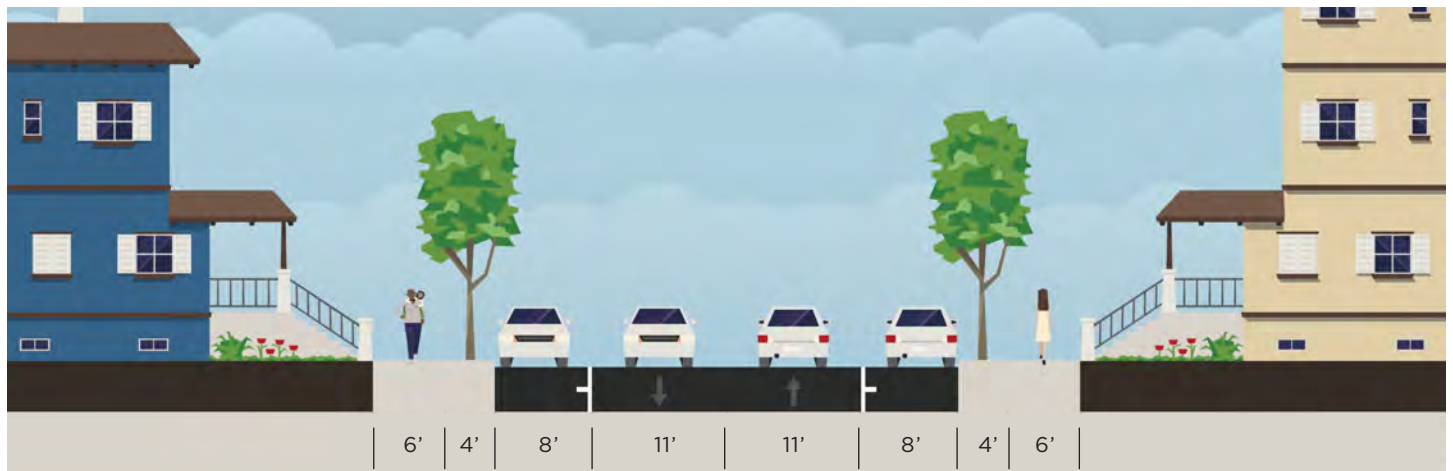
|                                       | Daylight | Dawn/Dusk/Night |
|---------------------------------------|----------|-----------------|
| Crossing in Crosswalk at Intersection | 2        | 2               |
| In Road, Including Shoulder           | 1        | 0               |

Severe Injury Collisions Other Injury Collisions



Cedar Street at San Pablo Avenue. The wide vehicle lanes and lack of refuge space leads to long crossings.

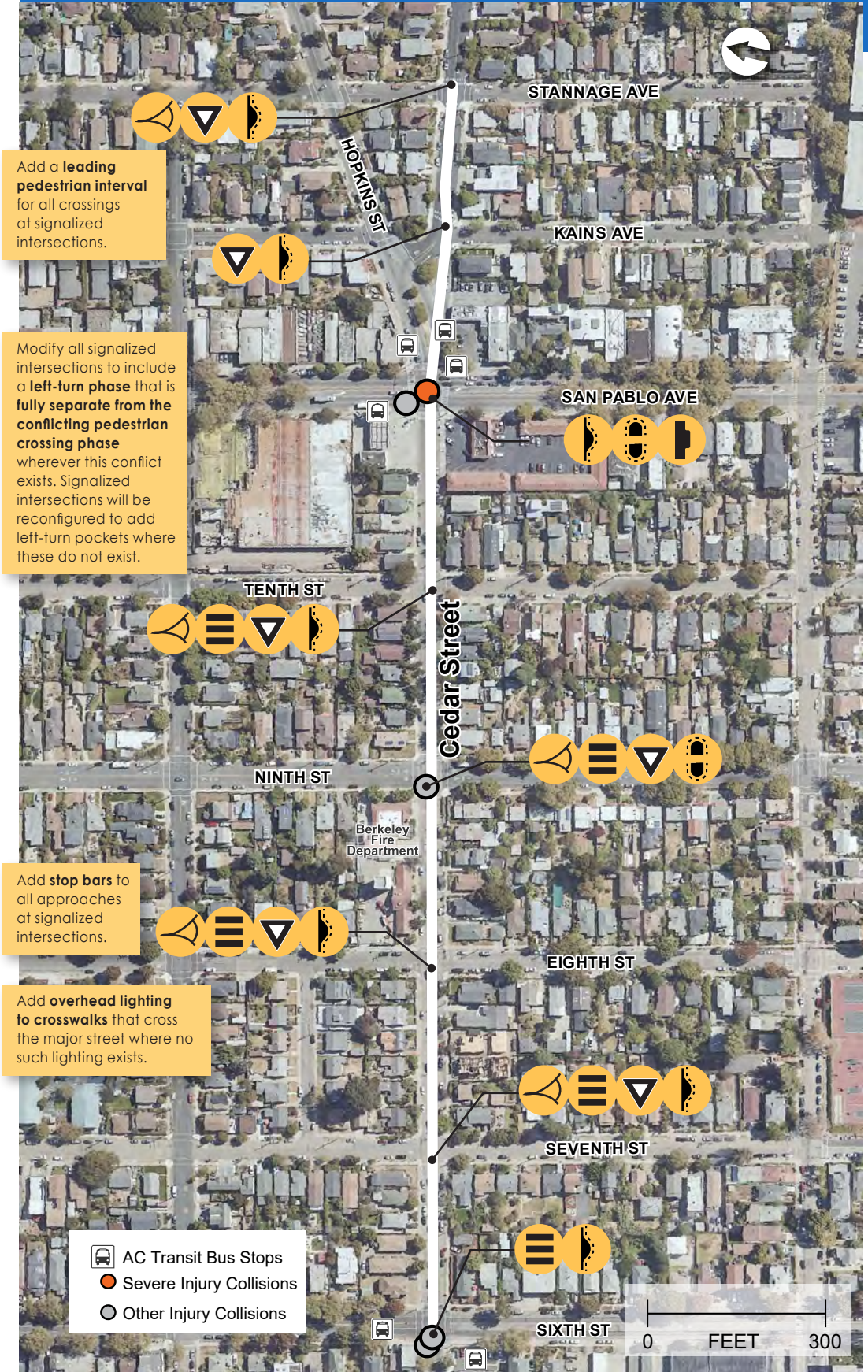
### EXISTING CROSS-SECTION Cedar Street – Sixth Street to Stannage Avenue



# Cedar Street Proposed Intersection Improvements

## OBSERVATIONS

- Several intersections lack crosswalk striping or have faded transverse striping
- One of the city's seven fire stations is located between Eighth Street and Ninth Street
- There are no curb extensions for pedestrians looking to cross Cedar Street, except along the western crosswalk at the Cedar Street/Stannage Avenue intersection



Add a **leading pedestrian interval** for all crossings at signalized intersections.

Modify all signalized intersections to include a **left-turn phase** that is **fully separate from the conflicting pedestrian crossing phase** wherever this conflict exists. Signalized intersections will be reconfigured to add left-turn pockets where these do not exist.

Add **stop bars** to all approaches at signalized intersections.

Add **overhead lighting to crosswalks** that cross the major street where no such lighting exists.

**Low Estimate**  
**\$855,000**

**High Estimate**  
**\$3,310,000**

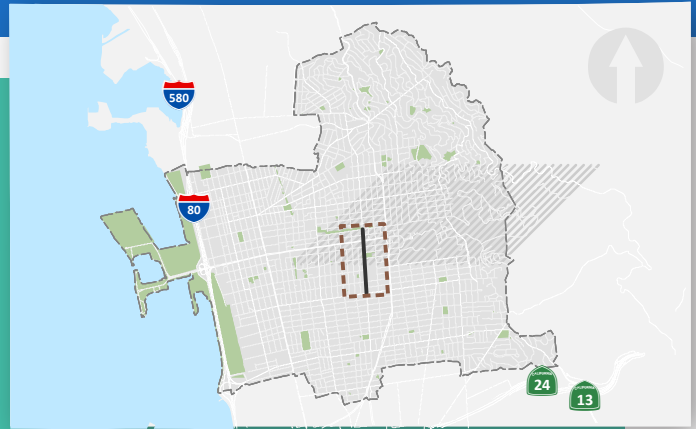
- AC Transit Bus Stops
- Severe Injury Collisions
- Other Injury Collisions

# Martin Luther King Jr. Way North

Hearst Avenue to Dwight Way

## SEGMENT CHARACTERISTICS

- The segment, classified as a Major Street, is generally a 4-lane roadway with two travel lanes in each direction, on-street parking on both sides, and a posted 25 mph speed limit throughout.
- There are 10 intersections (9 signalized and 1 unsignalized) in 0.7 miles.
- This segment is in a historically underserved area.



## PEDESTRIAN COLLISIONS, 2008–2017

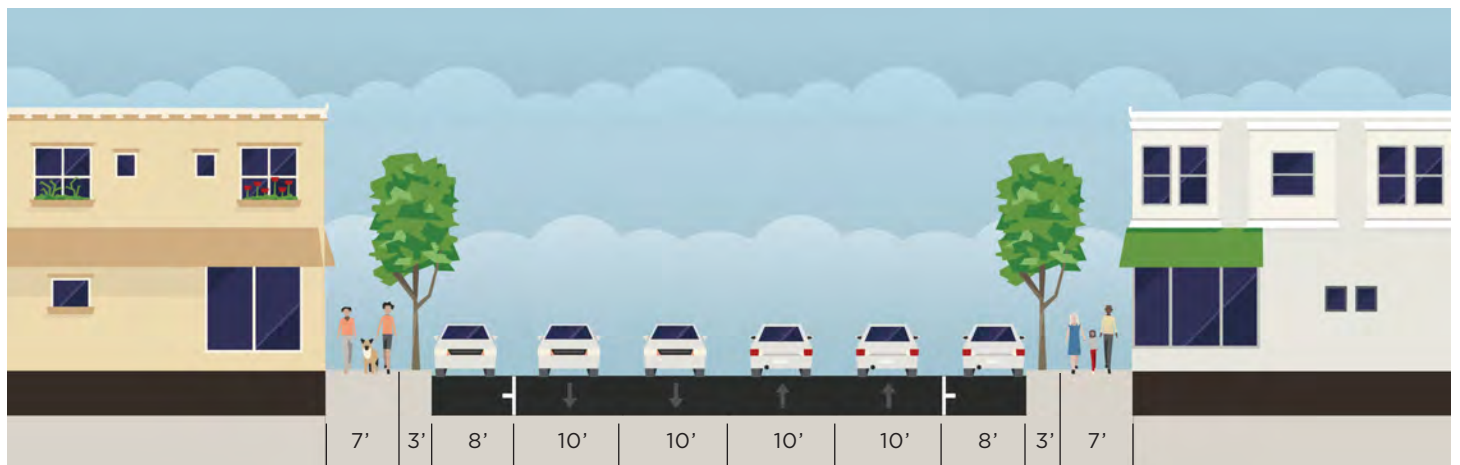
|                                       | Daylight | Dawn/Dusk/Night |
|---------------------------------------|----------|-----------------|
| Crossing in Crosswalk at Intersection | 15       | 5               |
| Crossing not in Crosswalk             | 2        | 1               |
| In Road, Including Shoulder           | 2        | 2               |
| Not In Road                           | 1        | 0               |

Severe Injury Collisions Other Injury Collisions



Martin Luther King Jr. Way at Allston Way. Crossing pedestrians and left-turning vehicles are in conflict.

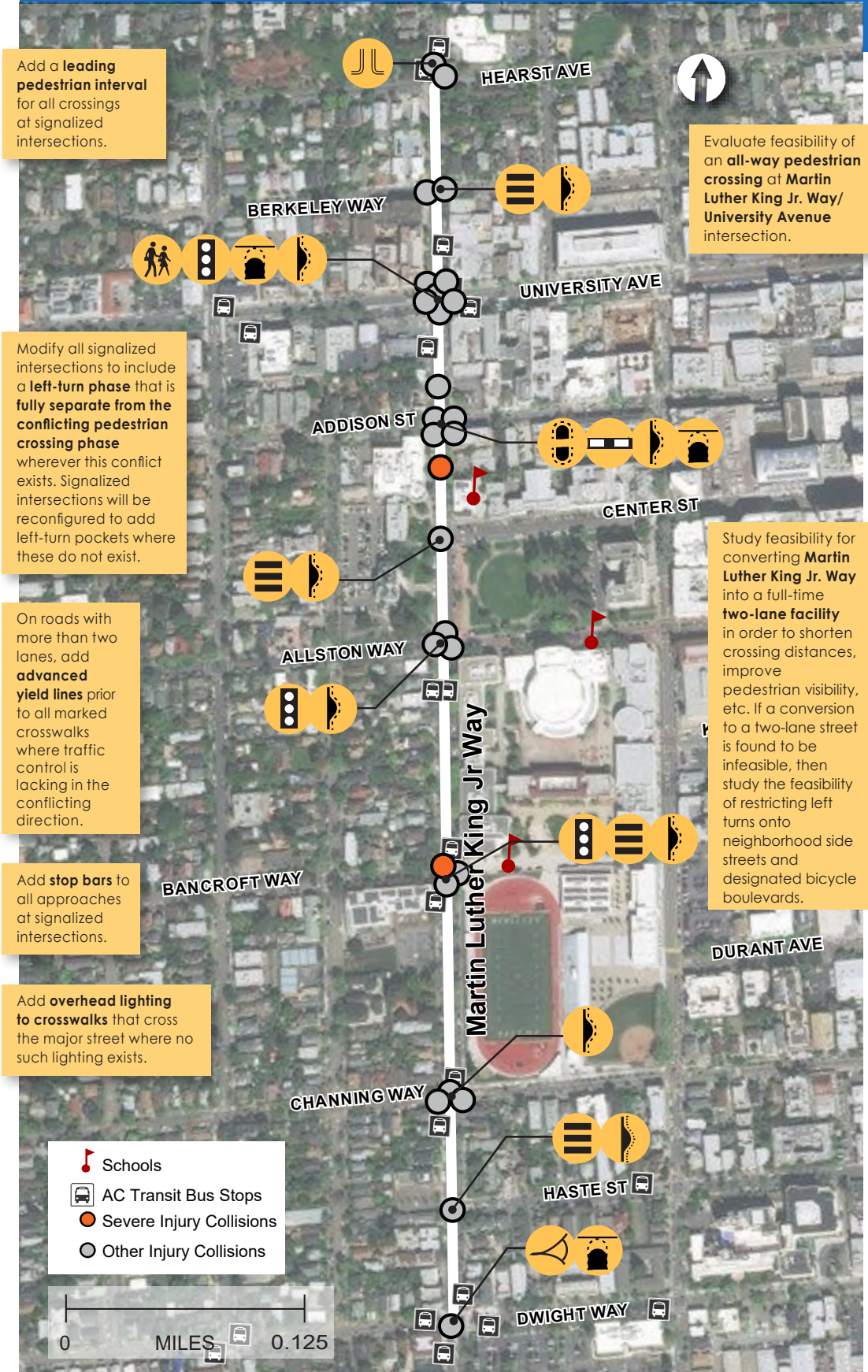
## EXISTING CROSS-SECTION Martin Luther King Jr. Way – Hearst Avenue to Dwight Way



# Martin Luther King Jr. Way North Proposed Intersection Improvements

## OBSERVATIONS

- There are two westbound approach lanes at Martin Luther King Jr. Way and Allston Way, but there are no pavement markings to show where there are left-turn, through, or right-turn lanes.
- AC Transit bus lines 12 and 25 run along this segment of Martin Luther King Jr. Way. Moving bus stops from the near side to the far side of intersections can increase visibility of crossing pedestrians.
- There are nine signalized intersections in this segment, and every signal (except at Haste Street, where one-way traffic makes this impossible) allows permitted left-turns, which creates vehicle-pedestrian conflicts.
- There is on-street parking at several intersections. Parked cars can block sightlines.



Add a **leading pedestrian interval** for all crossings at signalized intersections.

Evaluate feasibility of an **all-way pedestrian crossing** at Martin Luther King Jr. Way/ University Avenue intersection.

Modify all signalized intersections to include a **left-turn phase** that is **fully separate from the conflicting pedestrian crossing phase** wherever this conflict exists. Signalized intersections will be reconfigured to add left-turn pockets where these do not exist.

Study feasibility for converting **Martin Luther King Jr. Way** into a full-time **two-lane facility** in order to shorten crossing distances, improve pedestrian visibility, etc. If a conversion to a two-lane street is found to be infeasible, then study the feasibility of restricting left turns onto neighborhood side streets and designated bicycle boulevards.

On roads with more than two lanes, add **advanced yield lines** prior to all marked crosswalks where traffic control is lacking in the conflicting direction.

Add **stop bars** to all approaches at signalized intersections.

Add **overhead lighting to crosswalks** that cross the major street where no such lighting exists.

**Low Estimate**  
**\$1,665,000**

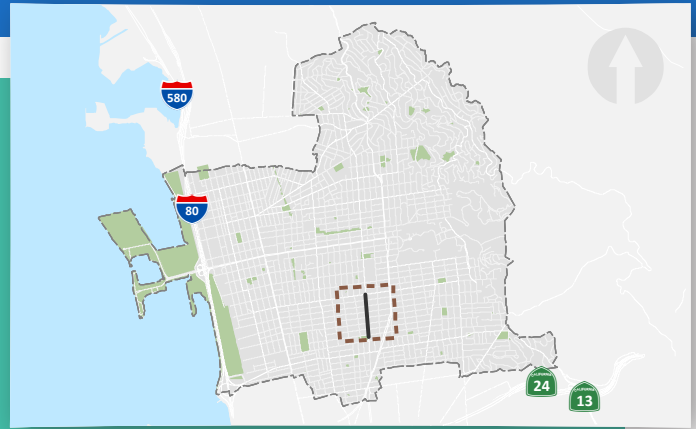
**High Estimate**  
**\$8,980,000**

# Martin Luther King Jr. Way South

Dwight Way to Adeline Street

## SEGMENT CHARACTERISTICS

- The segment, classified as a Major Street, is generally a 4-lane roadway with two travel lanes in each direction, on-street parking on both sides, and a posted 25 mph speed limit throughout. There is a median between Ashby and Adeline.
- The 0.9-mile study segment includes 14 intersections (5 signalized and 9 unsignalized intersections).
- This segment is in a historically underserved area.



## PEDESTRIAN COLLISIONS, 2008–2017

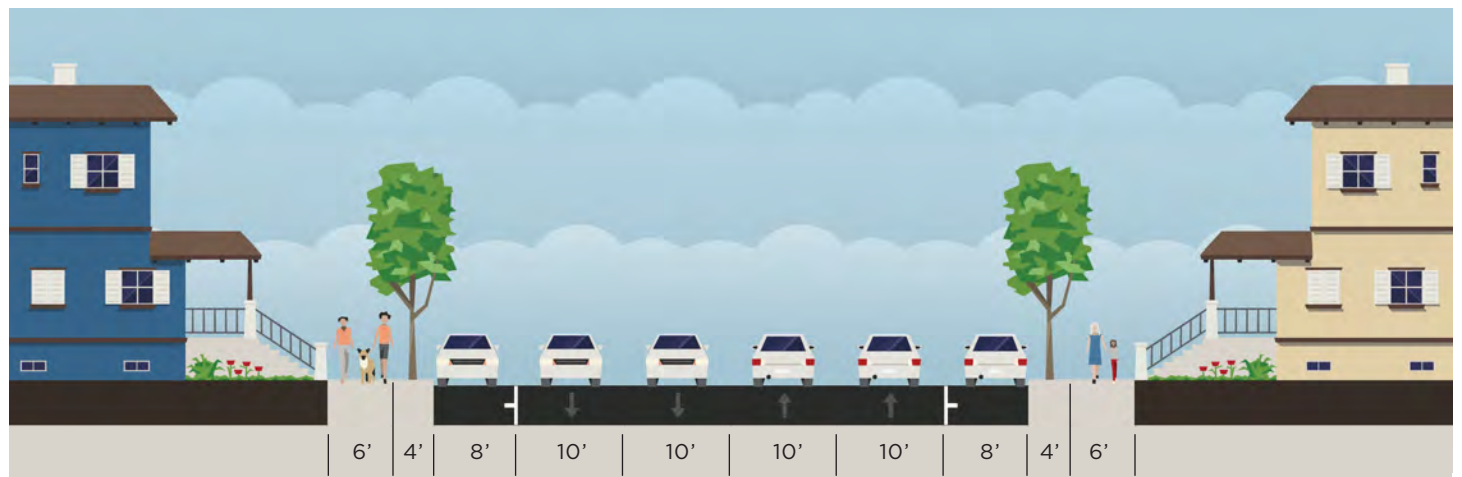
|                                           | Daylight | Dawn/Dusk/Night |
|-------------------------------------------|----------|-----------------|
| Crossing in Crosswalk at Intersection     | 16       | 11              |
| Crossing in Crosswalk not at intersection | 0        | 3               |
| Crossing not in Crosswalk                 | 3        | 4               |
| In Road, Including Shoulder               | 1        | 1               |
| Not Stated                                | 1        | 0               |

Severe Injury Collisions Other Injury Collisions



Martin Luther King Jr. Way at Carleton Street. All along this segment, pedestrians must cross four lanes of traffic.

## EXISTING CROSS-SECTION Martin Luther King Jr. Way – Dwight Way to Adeline Street





# Martin Luther King Jr. Way South Proposed Intersection Improvements

## OBSERVATIONS

- Several multi-lane crossings include two or three lanes in each direction with a median separating travel directions. Where possible, curb extensions can further reduce this exposure.
- There are several major pedestrian destinations along this section of Martin Luther King Jr. Way, including Ashby BART, Grove Park, Berkeley Technology Academy, and Ashby Super Market. Adding rectangular rapid flashing beacons at locations near pedestrian destinations would make crossing pedestrians more visible.

Add a **leading pedestrian interval** for all crossings at signalized intersections.

Modify all signalized intersections to include a **left-turn phase** that is **fully separate from the conflicting pedestrian crossing phase** wherever this conflict exists. Signalized intersections will be reconfigured to add left-turn pockets where these do not exist.

On roads with more than two lanes, add **advanced yield lines** prior to all marked crosswalks where traffic control is lacking in the conflicting direction.

Add **stop bars** to all approaches at signalized intersections.

Add **overhead lighting to crosswalks** that cross the major street where no such lighting exists.

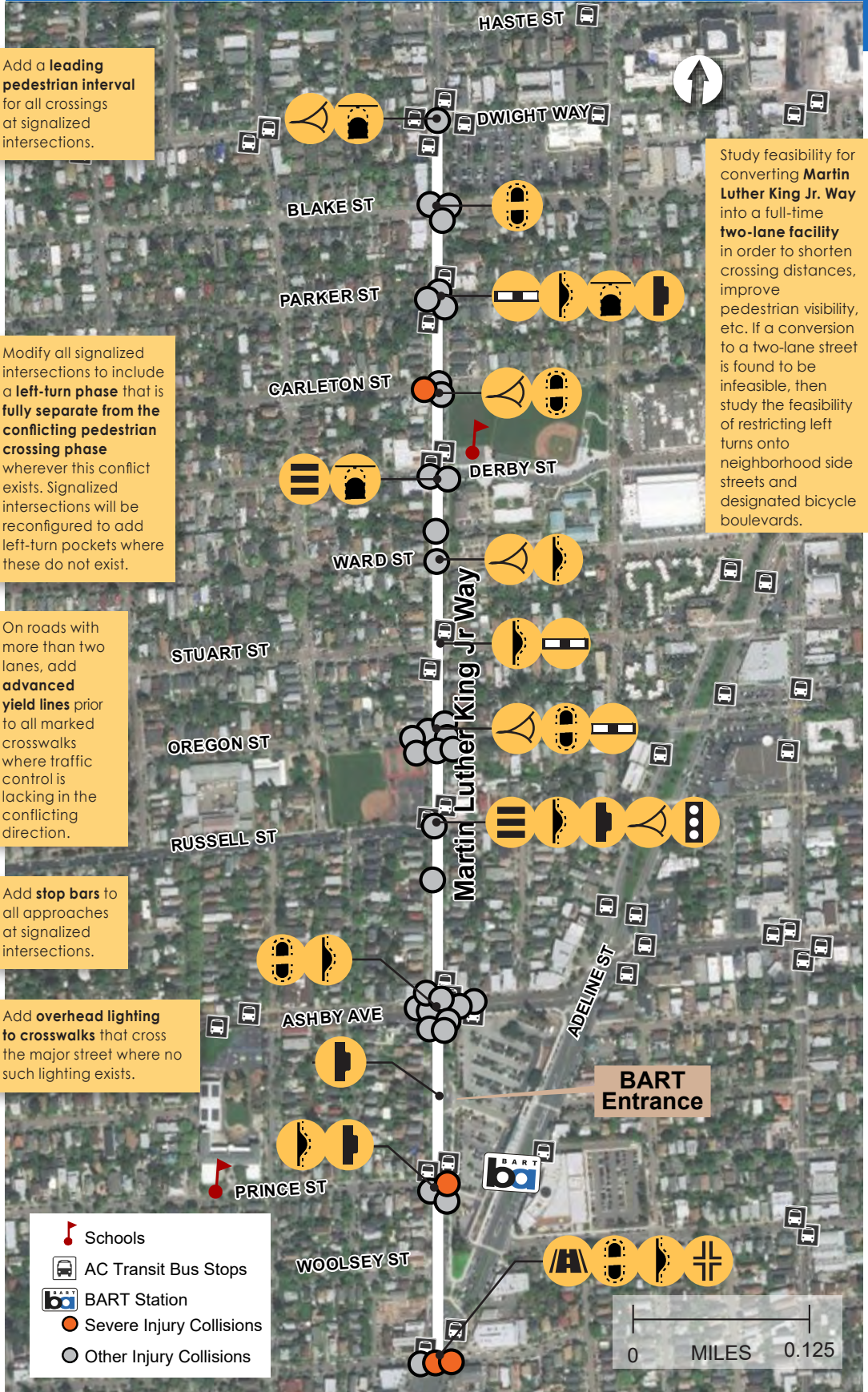
Study feasibility for converting **Martin Luther King Jr. Way** into a full-time **two-lane facility** in order to shorten crossing distances, improve pedestrian visibility, etc. If a conversion to a two-lane street is found to be infeasible, then study the feasibility of restricting left turns onto neighborhood side streets and designated bicycle boulevards.

### ADELINE CORRIDOR SPECIFIC PLAN

- All recommendations at the Shattuck Avenue/Adeline Street intersection are consistent with the Adeline Corridor Specific Plan.
- The 2019 Adeline Corridor Specific Plan includes a redesign of the Adeline/ Martin Luther King Jr Way/ Woolsey Street intersection, which would remove channelized turn lanes and provide curb extensions and a new marked crossing at Woolsey Street across Martin Luther King Jr Way.

**Low Estimate**  
**\$1,390,000**

**High Estimate**  
**\$6,350,000**



- 🚦 Schools
- 🚌 AC Transit Bus Stops
- 🚇 BART Station
- 🔴 Severe Injury Collisions
- ⊙ Other Injury Collisions

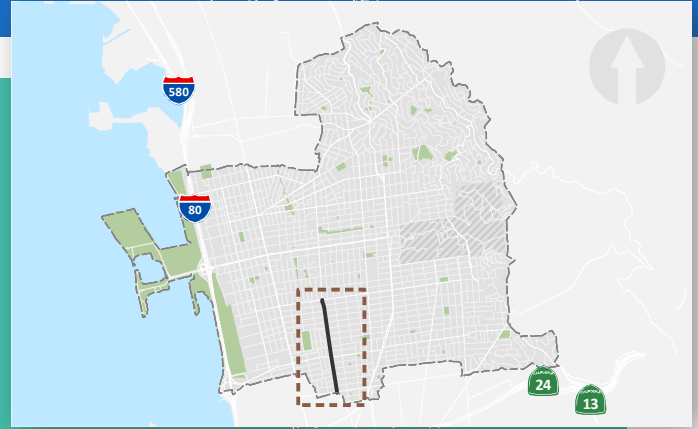


# Sacramento Street

Dwight Way to Southern City Limits

## SEGMENT CHARACTERISTICS

- The study segment, classified as a Major Street, has two travel lanes in each direction, divided by a landscape median with on-street parking throughout the corridor.
- The posted speed limit is 30 mph.
- The 1-mile segment includes 18 intersections (4 signalized, 14 unsignalized).
- This segment is in a historically underserved area.



## PEDESTRIAN COLLISIONS, 2008–2017

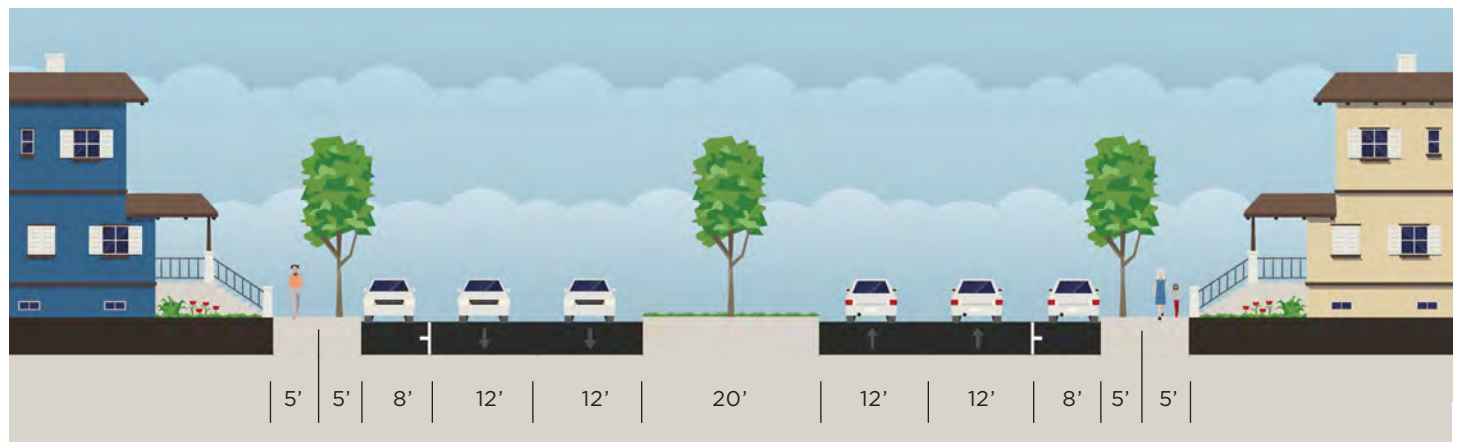
|                                           | Daylight |  | Dawn/Dusk/Night |  |
|-------------------------------------------|----------|--|-----------------|--|
| Crossing in Crosswalk at Intersection     | 11       |  | 11              |  |
| Crossing in Crosswalk not at intersection | 1        |  | 1               |  |
| Crossing not in Crosswalk                 | 3        |  | 0               |  |
| In Road, Including Shoulder               | 0        |  | 1               |  |
| Not In Road                               | 2        |  | 0               |  |
| Not Stated                                | 1        |  | 0               |  |

Severe Injury Collisions Other Injury Collisions



Sacramento Street at Fairview Street. There is no traffic control to help pedestrians cross the street.

## EXISTING CROSS-SECTION Sacramento Street, Dwight Way to Southern City Limits



# Sacramento Street Proposed Intersection Improvements

## OBSERVATIONS

- At several intersections, medians extend into the marked crosswalk and obstruct the full width of the crosswalk.
- At many intersections, a wide outside lane with a transit stop creates a de facto right-turn lane. Bus bulbs or curb extensions can shorten crossing distances and reduce possible conflicts with right-turning vehicle movements.
- AC Transit lines 88 and J run along portions of this segment. A stopped bus at a near-side stop can reduce visibility of crossing pedestrians.
- Major pedestrian destinations along this section of Sacramento Street include Longfellow Middle School, Lifelong Over 60 Health Center, numerous multi-family housing complexes.

Add a **leading pedestrian interval** for all crossings at signalized intersections.

Modify all signalized intersections to include a **left-turn phase** that is **fully separate from the conflicting pedestrian crossing phase** wherever this conflict exists. Signalized intersections will be reconfigured to add left-turn pockets where these do not exist.

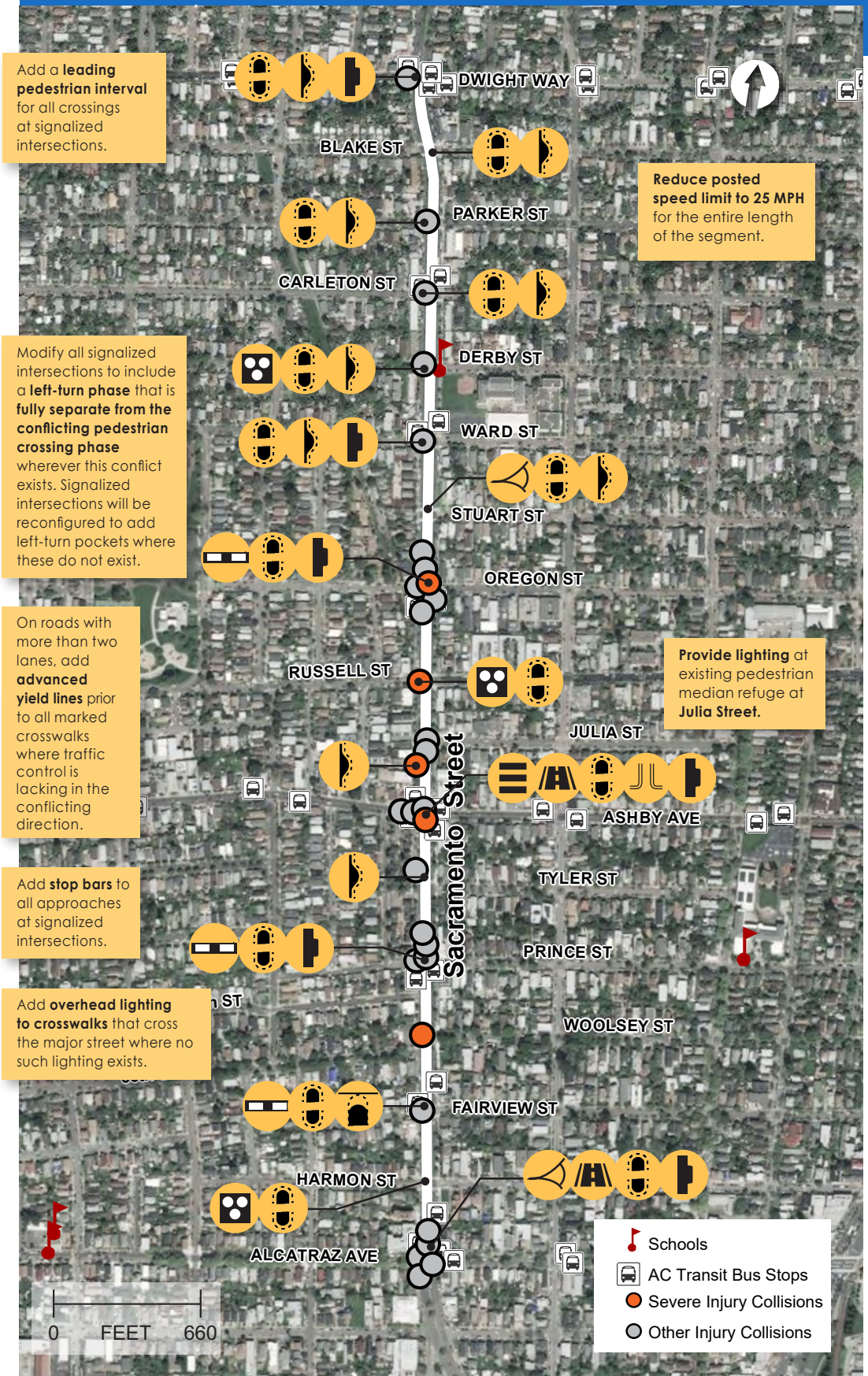
On roads with more than two lanes, add **advanced yield lines** prior to all marked crosswalks where traffic control is lacking in the conflicting direction.

Add **stop bars** to all approaches at signalized intersections.

Add **overhead lighting to crosswalks** that cross the major street where no such lighting exists.

Reduce posted **speed limit to 25 MPH** for the entire length of the segment.

Provide **lighting at existing pedestrian median refuge at Julia Street.**



**Low Estimate**  
\$2,855,000

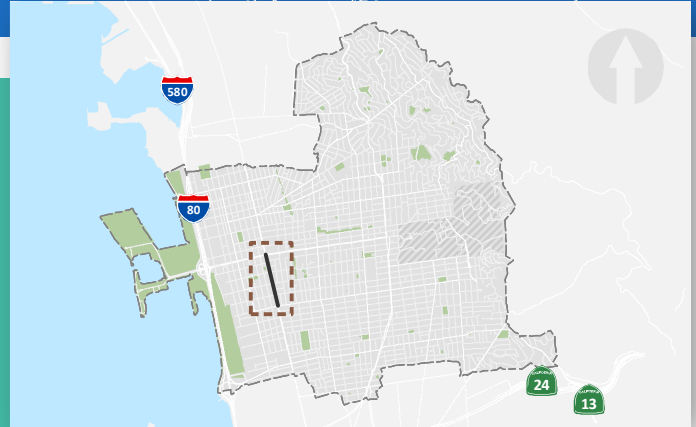
**High Estimate**  
\$9,100,000

# San Pablo Avenue

## University Avenue to Dwight Way

### SEGMENT CHARACTERISTICS

- The study segment, also known as State Route 123, is a four-lane roadway classified as a Major Street with 2 lanes in each direction divided by a landscaped median. Left-turn pockets are present at all signalized intersections, and the segment has a posted 30 mph speed limit.
- There are 8 intersections (3 signalized, 5 unsignalized) in 0.6 miles.
- This segment is in a historically underserved area.



### PEDESTRIAN COLLISIONS, 2008–2017

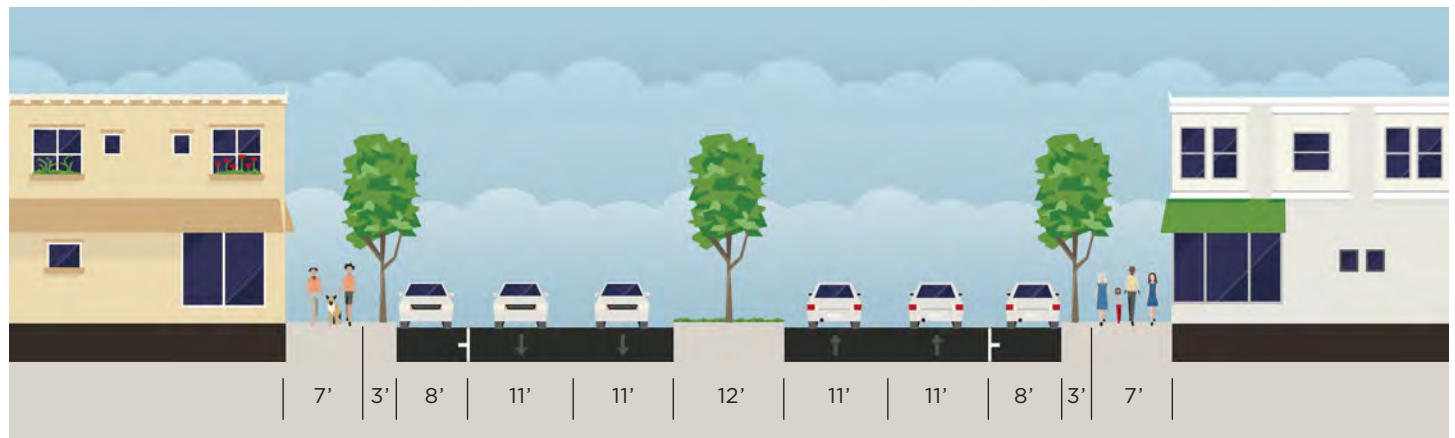
|                                           | Daylight | Dawn/Dusk/Night |
|-------------------------------------------|----------|-----------------|
| Crossing in Crosswalk at Intersection     | 11       | 6               |
| Crossing in Crosswalk not at intersection | 2        | 1               |
| Crossing not in Crosswalk                 | 2        | 1               |
| In Road, Including Shoulder               | 2        | 1               |
| Not In Road                               | 3        | 1               |

Severe Injury Collisions Other Injury Collisions



San Pablo Avenue at Bancroft Way. A future signal here will help pedestrians cross this five-lane street.

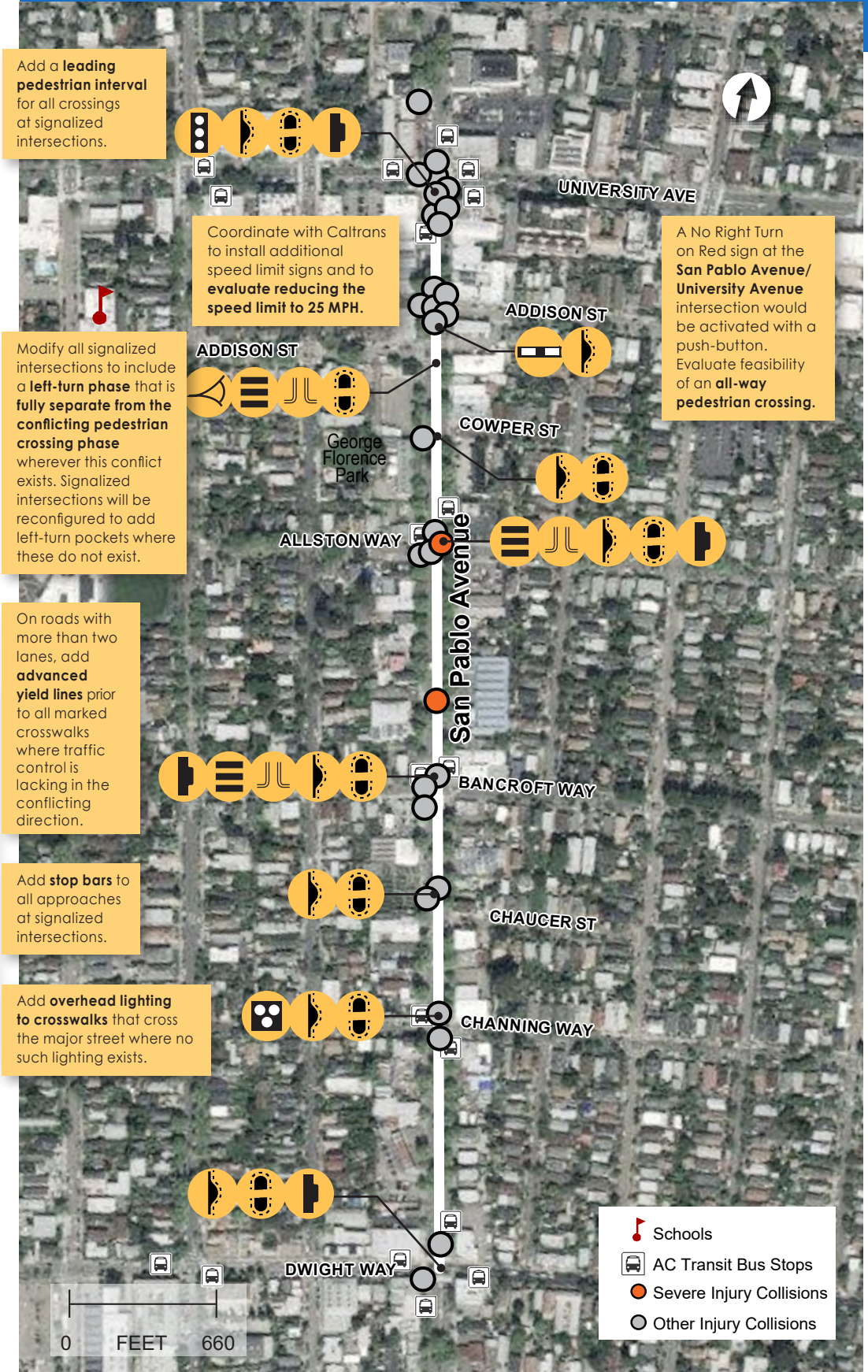
### EXISTING CROSS-SECTION San Pablo Avenue, University Avenue to Dwight Way



# San Pablo Avenue Proposed Intersection Improvements

## OBSERVATIONS

- The parking lane and presence of bus stops at University Avenue provide informal right-turn lanes with limited visibility.
- The T-intersections at Cowper Street and at Chaucer Street only provide one marked crossing across San Pablo Avenue.
- Unsignalized intersections along the segment feature marked crossings, advanced yield striping/signage, and warning signs but no accessible refuge. There is informal refuge space here that could be upgraded to accessible median refuges.
- Multilane unsignalized crossings would also benefit from pedestrian-scale lighting and crossing enhancement (an RRFB or PHB).
- The intersection at San Pablo Avenue and Bancroft Way has been identified for future signalization.



Add a **leading pedestrian interval** for all crossings at signalized intersections.

Coordinate with Caltrans to install additional speed limit signs and to **evaluate reducing the speed limit to 25 MPH.**

A No Right Turn on Red sign at the **San Pablo Avenue/University Avenue** intersection would be activated with a push-button. Evaluate feasibility of an **all-way pedestrian crossing.**

Modify all signalized intersections to include a **left-turn phase that is fully separate from the conflicting pedestrian crossing phase** wherever this conflict exists. Signalized intersections will be reconfigured to add left-turn pockets where these do not exist.

On roads with more than two lanes, add **advanced yield lines** prior to all marked crosswalks where traffic control is lacking in the conflicting direction.

Add **stop bars** to all approaches at signalized intersections.

Add **overhead lighting to crosswalks** that cross the major street where no such lighting exists.

### BERKELEY BICYCLE PLAN

The Berkeley Bicycle Plan calls for studying a potential cycle track along San Pablo Avenue. Alameda CTC is conducting a corridor study to evaluate adding bus rapid transit and/or cycle tracks. Curb extensions would conflict with any future cycle track, but pedestrian refuge islands in the buffer zone between vehicle traffic and a cycle track could be a solution.

**Low Estimate**  
\$1,375,000

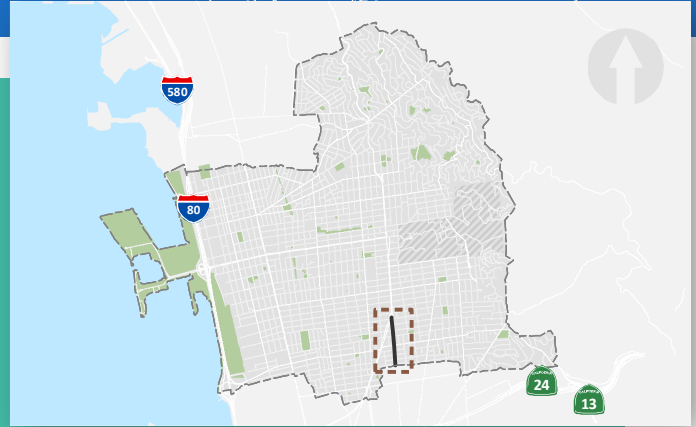
**High Estimate**  
\$4,085,000

# Shattuck Avenue

Adeline Street to Southern City Limits

## SEGMENT CHARACTERISTICS

- The study segment, classified as a Major Street, is generally a two-lane road, with a single lane in each direction with on-street parking on both sides of the street.
- The 0.5-mile segment includes 9 intersections (2 signalized, 7 unsignalized) and has a 25 mph speed limit throughout.
- This segment is in a historically underserved area.



## PEDESTRIAN COLLISIONS, 2008–2017

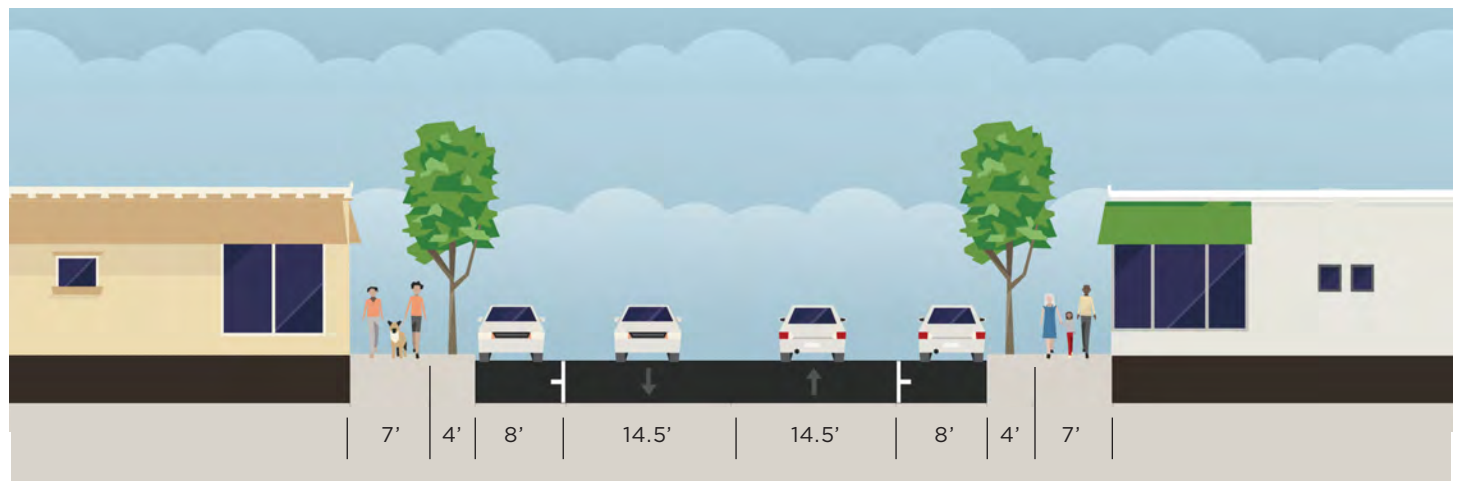
|                                       | Daylight | Dawn/Dusk/Night |
|---------------------------------------|----------|-----------------|
| Crossing in Crosswalk at Intersection | 9        | 12              |
| Crossing not in Crosswalk             | 2        | 0               |
| In Road, Including Shoulder           | 3        | 0               |
| Not In Road                           | 1        | 1               |

Severe Injury Collisions Other Injury Collisions



Shattuck Avenue at Ashby Avenue. A left-lane merge just beyond a crosswalk could cause conflict.

## EXISTING CROSS-SECTION Shattuck Avenue, Adeline Street to Southern City Limits



# Shattuck Avenue Proposed Intersection Improvements

## OBSERVATIONS

- The highest pedestrian volumes are located on the northern portion of the segment closest to Adeline Street and around Berkeley Bowl, as well as at the Shattuck Avenue/Ashby Avenue intersection.

## ADELINE CORRIDOR SPECIFIC PLAN

The Adeline Corridor Specific Plan is a long-range plan for the Adeline Corridor to promote transit-oriented development and safe access for users of all modes of transportation. The planning process began in 2015 and the community was involved heavily.

The Adeline Corridor Specific Plan's study area starts on Shattuck Avenue from Dwight Way to Adeline Street, continuing on Adeline Street from Shattuck Avenue until the southern City limits.

The recommendations for the Pedestrian Plan's priority segment of Adeline Street take into account the recommended design features identified in the Adeline Corridor Specific Plan, such as reducing the number of lanes. The Adeline Corridor Specific Plan notes that "detailed design of pedestrian and bicycle treatments at intersections will occur in later design phases." In the later design phases, recommendations from the Pedestrian Plan will be worked into the detailed design of the Adeline Corridor including the Adeline Street/Shattuck Avenue intersection.

Add a **leading pedestrian interval** for all crossings at signalized intersections.

Modify all signalized intersections to include a **left-turn phase** that is **fully separate from the conflicting pedestrian crossing phase** wherever this conflict exists. Signalized intersections will be reconfigured to add left-turn pockets where these do not exist.

Add **stop bars** to all approaches at signalized intersections.

Add **overhead lighting to crosswalks** that cross the major street where no such lighting exists.

At the **Shattuck Avenue/Russell Street** and **Shattuck Avenue/Woolsey Street** intersections, either a rectangular rapid flashing beacon or an all-way stop should be installed.



**Low Estimate**  
**\$1,675,000**

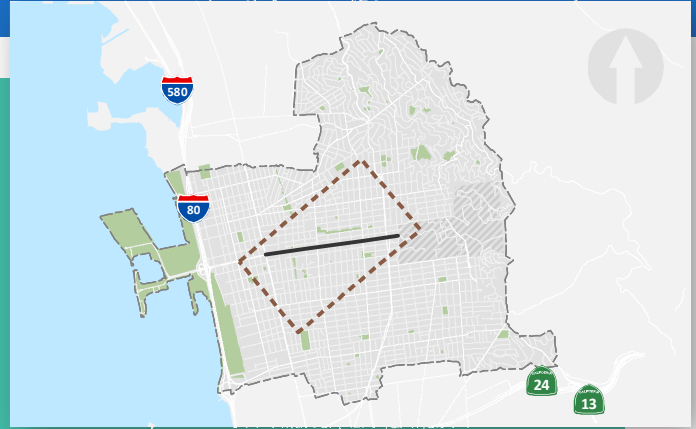
**High Estimate**  
**\$4,140,000**

# University Avenue

San Pablo Avenue to Oxford Street

## SEGMENT CHARACTERISTICS

- The study segment, classified as a Major Street, is a 4-lane roadway with a raised median. There are left- and right-turn pockets at several intersections and 25 mph speed limit signs posted.
- There are 18 intersections (11 signalized and 7 unsignalized intersections, with 1 midblock crossing) in 1.5 miles.
- The portion of this segment from San Pablo Avenue to Bonita Avenue is in a historically underserved area.



## PEDESTRIAN COLLISIONS, 2008–2017

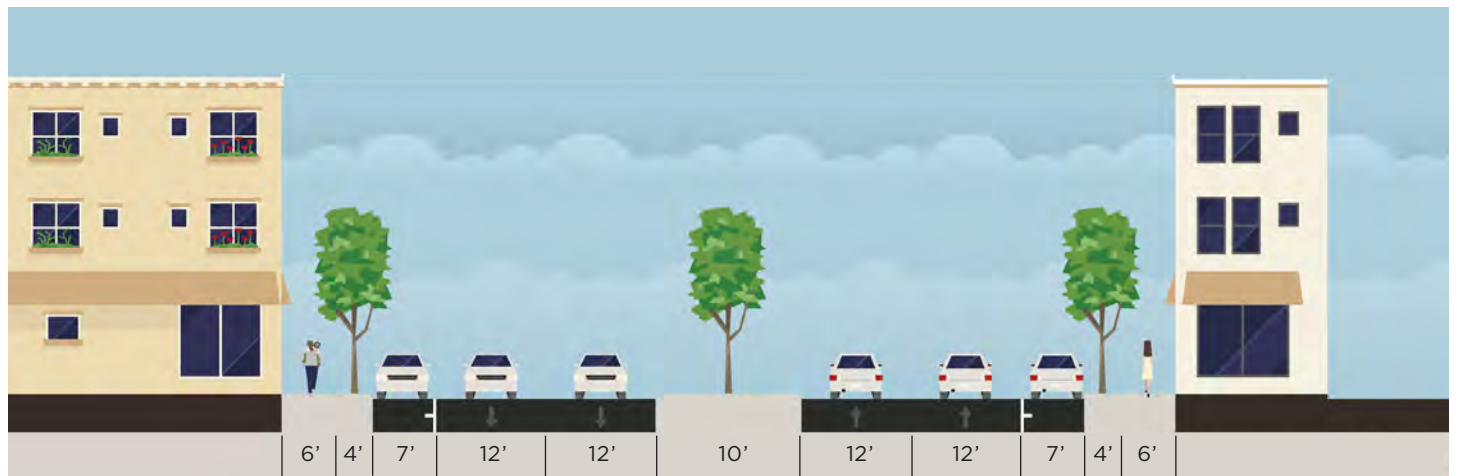
|                                           | Daylight | Dawn/Dusk/Night |
|-------------------------------------------|----------|-----------------|
| Crossing in Crosswalk at Intersection     | 34       | 17              |
| Crossing in Crosswalk not at intersection | 1        | 2               |
| Crossing not in Crosswalk                 | 3        | 2               |
| In Road, Including Shoulder               | 6        | 1               |
| Not In Road                               | 0        | 1               |
| Not Stated                                | 1        | 1               |

Severe Injury Collisions Other Injury Collisions Fatal Injury Collisions



University Avenue at Martin Luther King Jr. Way. Protected left-turn phasing would reduce conflicts with pedestrians.

## EXISTING CROSS-SECTION University Avenue – San Pablo Avenue to Oxford Street





# University Avenue Proposed Intersection Improvements

## OBSERVATIONS

- Several intersections lack pedestrian scale lighting. For example, the lighting at the West Street Trail crossing is behind the crosswalk
- There are high left-turn volumes at several locations, such as to/from Oxford Street, that pose potential conflicts with pedestrians in the crosswalk
- There are several locations where bus stops are at the near side of an intersection, such as at the Berkeley Unified School District building at Bonar Street. These locations limit pedestrian visibility when crossing the street. Where feasible, bus stops should be moved to the far side of an intersection.

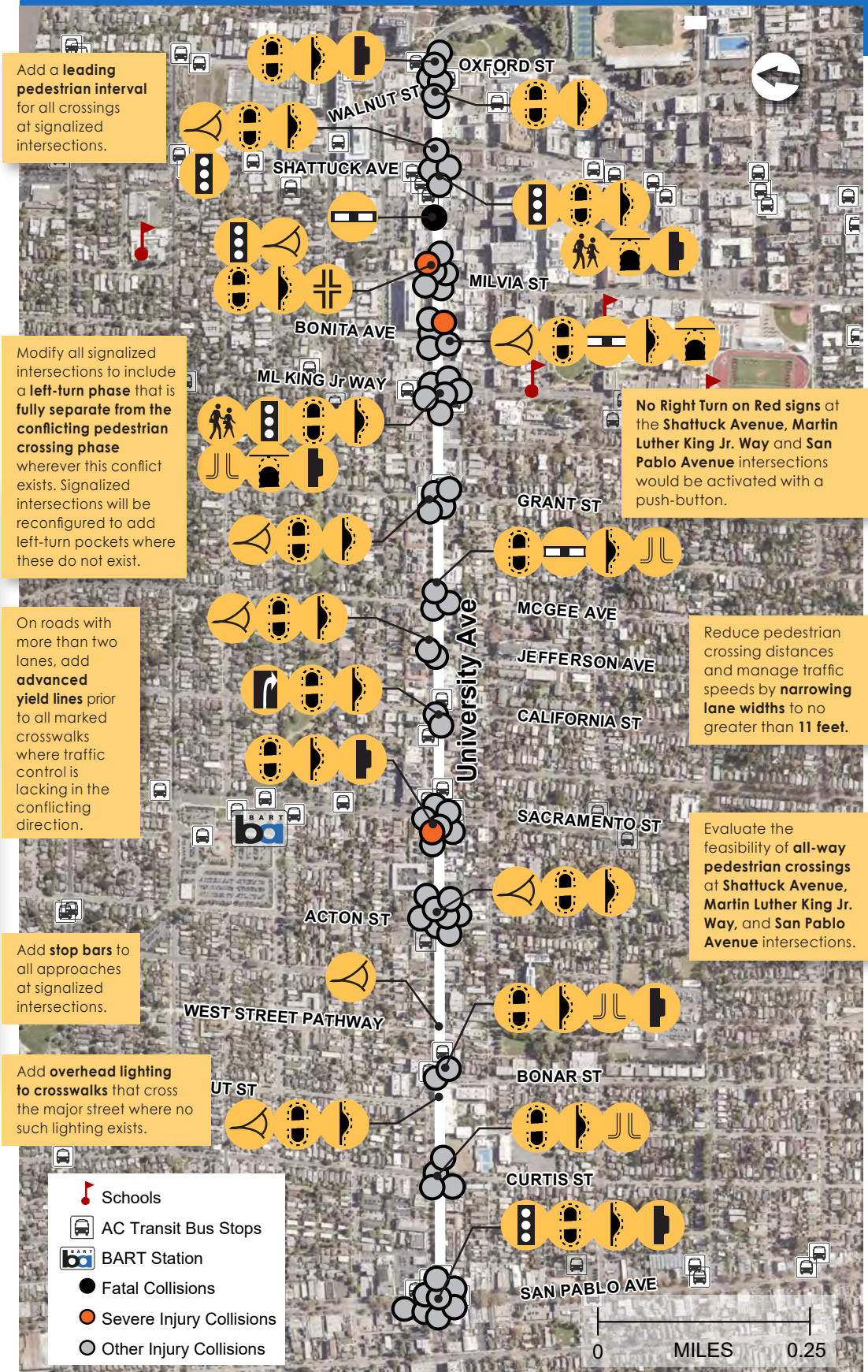
## BERKELEY BICYCLE PLAN

The Berkeley Bicycle Plan calls for studying a potential cycle track along University Avenue from Oxford Street to Fourth Street. The City will need to study the corridor to assess impacts to transit, including potential dedicated bus lanes. Curb extensions would conflict with any future cycle track, but pedestrian refuge islands in the buffer zone between vehicle traffic and a cycle track could be a solution.

The plan also calls for a protected intersection at University Avenue/Milvia Street, and the plan estimates that this will cost \$650,000 to construct.

**Low Estimate**  
**\$3,595,000**

**High Estimate**  
**\$12,630,000**



## Policies, Programs, and Practices

Achieving the goals of the Plan will require policies, programs, and practices that support it and other City efforts to improve walkability in Berkeley. The recommended policies, programs, and practices to achieve the Plan's goals are consistent with the City's approach to pedestrian planning and align with best practices to improve walking safety, connectivity, and enjoyment.

The Plan's recommended programs and policies are described in this section and fit within the following three themes:

- **Reducing conflicts between pedestrians and vehicles**
- **Making pedestrians more visible on the street**
- **Upgrading and adding enhanced crossings**

Within each theme are specific priority topics that together create a comprehensive approach to improving Berkeley's pedestrian network and an action plan of policies, programs, and practices. Some recommendations will be addressed through this Plan, while others inform and support the City's Vision Zero Action Plan and other ongoing efforts.



Using a mobility device to cross the Ashby Avenue and Shattuck Avenue intersection.

The priority program areas are presented below with a sub-set of specific priority programs. These are to be implemented throughout Berkeley. For example, improving lighting to make pedestrians more visible on the street will be implemented based on the lighting needs analysis in **Appendix F: Pedestrian Lighting Needs Inventory**.



## Reducing Conflicts Between Pedestrians and Vehicles

**Implement protected left turns:** Implement protected left turn phases to address multiple collision factors consistent with the City's of Berkeley's Vision Zero policy.



## Making Pedestrians More Visible on the Street

**Install pedestrian-scale lighting:** Install solar-powered LED lighting citywide at all crosswalks lacking such lighting on one or both sides.

**Removing visual obstructions at intersections:** Install red curb for approaches to pedestrian crossings in order to make pedestrians attempting to cross streets more visible.



## Upgrading and Adding Enhanced Crossings

**Apply crosswalk policy (re-timing, leading pedestrian interval):** Apply the crosswalk policy as a transparent and predictable process for crosswalk installation and design based on street characteristics and context which can be found in **Appendix B: Engineering & Design Guidance**.

The full list of program and policy recommendations is summarized below in **Table 8** and in **Appendix D: Recommendations and Cost Estimates**. The recommended improvements augment the four priority areas listed above by providing additional means and methods for improving experience of walking in Berkeley. Topic areas for these program and policy recommendations range from inter- and intra-agency coordination to street design and pedestrian crossings. Design guidance for implementing project and program recommendations is provided in **Appendix B: Engineering & Design Guidance**. Pedestrian lighting needs along the City's High Injury Street network is provided in **Appendix E: Pedestrian Lighting Needs Inventory**.

TABLE 8: SUMMARY OF ALL RECOMMENDATIONS FOR PEDESTRIAN-RELATED POLICIES, PROGRAMS, AND PRACTICES

| Topic Area                           | Recommendations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Infrastructure and Operations</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Street Design                        | <ul style="list-style-type: none"> <li>Utilize pedestrian design guidance and treatment selection policies shown in <b>Appendix B: Engineering &amp; Design Guidance</b>.</li> <li>Adopt the Caltrans Temporary Pedestrian Access Routes Handbook (2020) and utilize it for City construction projects in the public right of way. Train City inspectors on its use. Provide it to developers and utility service providers when construction impacts the public right of way.</li> <li>Integrate bus stop amenities, including bus bulbs, into pedestrian amenities when making street improvements, as funding allows.</li> <li>Continue the City’s Parklet Program and incorporate pedestrian amenities, including benches/seating and lighting, into grant applications when seeking funding, and into projects as opportunities arise.</li> <li>The addition of accessible parking (blue zone spaces) should be prioritized when making street improvements, particularly along streets near commercial destinations, to support convenient access for people with disabilities.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Pedestrian Crossings                 | <ul style="list-style-type: none"> <li>Utilize the pedestrian crosswalk policy and enhancement guidelines shown in the Engineering and Design Guidance Appendix to this Plan. Marked crosswalks should be provided on all legs of all four way intersections except where doing so would decrease safety.</li> <li>Install solar-powered LED lighting citywide at all crosswalks lacking such lighting on one or both sides.</li> <li>In order to make pedestrians attempting to cross streets more visible, install red curb for approaches to pedestrian crossings.</li> <li>Consistent with the Vision Zero Action Plan and the Engineering and Design Guidance in the Appendix to this Plan, utilize only protected left-turn signals at all new or modified signalized intersections and embark on a program to convert existing permissive left-turn operations to protected left turns as roadway geometry permits.</li> <li>Utilize automatic walk signals (recall to walk) of the pedestrian signal at all locations and times of day where and when the concurrent (parallel) traffic phase has a green light indication and this concurrent traffic phase has enough time allocated for a pedestrian crossing.</li> <li>Pedestrians should automatically receive a walk signal (recall to walk) without having to push the button at all intersections with high pedestrian demand.</li> <li>Provide Leading Pedestrian Intervals (LPIs) when new signals are installed and when signal timing is modified.</li> </ul> |

| Topic Area                                  | Recommendations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Speed Management and Traffic Calming</p> | <ul style="list-style-type: none"> <li>• Revise criteria for the neighborhood traffic calming program to allow neighborhood streets with prevailing speeds above 25 mph to qualify, with a maximum of 20 applications evaluated per year.</li> <li>• Advocate for State legislation to allow local jurisdictions to reduce speed limits on neighborhood streets to below 25 mph, similar to many other states, such that Berkeley could establish a 20 mph speed limit on two-lane neighborhood streets and a 15 mph speed limit at all times on two-lane residential streets adjacent to schools, parks, and senior centers.</li> <li>• Advocate for State legislation to allow local jurisdictions to set speed limits based on safety goals rather than the existing prevailing (85th percentile) traffic speed, which would allow for a 20 MPH speed limit on neighborhood streets, consistent with “20 Is Plenty” traffic safety campaigns.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <p>Accessibility</p>                        | <ul style="list-style-type: none"> <li>• Design curb ramps to align with the direction of the crosswalk where technically feasible.</li> <li>• Retain automatic walk signals after the installation of accessible pedestrian signals.</li> <li>• Prioritize bus stops for receiving accessibility improvements to facilitate boarding and alighting from buses.</li> <li>• Propose a property-tax or other assessment to Berkeley voters to raise funds for maintenance of public sidewalks and public pathways, and for staff resources to manage this maintenance program and potentially for adding sidewalk lighting and enforcing municipal codes requiring that sidewalks be kept clear of overgrowing vegetation and other obstructions.</li> <li>• Develop a strategy for prioritizing repaving crosswalks to eliminate tripping hazards in the near term, even if the street will be repaved farther in the future.</li> <li>• The addition of accessible parking (blue zone spaces) should be prioritized when making street improvements, particularly along streets near commercial destinations, to support access for people with disabilities (as stated in the “Street Design” section above).</li> <li>• Adopt the Caltrans Temporary Pedestrian Access Routes Handbook (2020) and utilize it for City construction projects in the public right of way. Train City inspectors on its use. Provide it to developers and utility service providers when construction impacts the public right of way (as stated in the “Street Design” section above).</li> <li>• Continue to include curb ramps and sidewalks compliant with Americans with Disabilities Act (ADA) standards in street rehabilitation and modification projects, and continue to require ADA compliant curb ramps and sidewalks on the frontage of private development projects.</li> </ul> |
| <p><b>Evaluation and Planning</b></p>       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <p>Pedestrian Volumes</p>                   | <ul style="list-style-type: none"> <li>• Require pedestrian and bicycle counts as part of the traffic impact analysis that is required of development projects.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <p>Pedestrian Safety</p>                    | <ul style="list-style-type: none"> <li>• Evaluate pedestrian safety outcomes after transportation capital projects are implemented.</li> <li>• Coordinate with the City’s Fatal Accident Investigation Team to develop rapid-response projects for fatal and severe injury collision locations.</li> <li>• Conduct Road Safety Audits (RSAs) and implement safety projects on all high-injury streets by 2028.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

| Topic Area                                 | Recommendations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Project Implementation</b>              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Intra- and Inter-Agency Coordination       | <ul style="list-style-type: none"> <li>• Continue to collaborate with transit agencies, Caltrans, and adjacent cities.</li> <li>• Explore opportunities for better aligning street design for reduced traffic speeds with emergency response equipment and service standards.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Funding                                    | <ul style="list-style-type: none"> <li>• Propose a property-tax or other assessment to Berkeley voters to raise funds for maintenance of public sidewalks and public pathways, and for staff resources to manage this maintenance program and potentially for adding sidewalk lighting and enforcing municipal codes requiring that sidewalks be kept clear of overgrowing vegetation (as stated in the “Accessibility” section above).</li> <li>• Fund projects to fill high-priority sidewalk gaps through the City Capital Improvement Plan (CIP).</li> <li>• Develop a line item in the CIP for implementation of the Pedestrian Plan.</li> <li>• Seek funding opportunities for all high-injury streets in the historically underserved area of Berkeley.</li> <li>• Ensure that pedestrian improvements continue to be included in street rehabilitation and modification projects, such as resurfacing, bridge replacement, or lane reconfiguration.</li> <li>• Explore the possibility of obtaining Highway Safety Improvement Program (HSIP) funds for pedestrian safety projects.</li> <li>• Through the Vision Zero Program, secure a funding source to be used for broader pedestrian safety education efforts, targeting speeding and failure to yield to pedestrians.</li> </ul> |
| <b>Education and Equitable Enforcement</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Safety Education                           | <ul style="list-style-type: none"> <li>• Continue to promote walking and bicycling to school through participation in the Alameda County Safe Routes to School program.</li> <li>• Develop and implement a targeted safety education campaign through the Vision Zero Program, focusing on equity and culturally appropriate messaging.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Enforcement                                | <ul style="list-style-type: none"> <li>• Utilize the equitable enforcement strategy to be developed through the Vision Zero Program.</li> <li>• Support state-wide traffic safety legislation allowing automated speed enforcement by local agencies. Utilize existing legislated automated enforcement strategies, such as red light cameras.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

# 4

## COST ESTIMATES

## & FUNDING



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Cost estimates and funding sources are both critical to implementation. Cost estimates help to determine how to fund the implementation of recommended projects and programs. In turn, identifying funding sources provides sustainable and responsible ways of implementing recommended projects and programs.

This chapter includes the following sections:

- **Cost estimates** for projects on the ten priority high-injury street segments and recommended program elements
- **Funding and revenue sources**, ranging from local and countywide sources to statewide and federal sources

## COST ESTIMATES

Cost estimates for each proposed improvement are presented in **Table 9**. Low and high cost estimates have been provided to show a range of possible costs and to account for a variety of circumstances at each installation location. Low and high cost estimates for each priority project are shown alphabetically in **Table 10**. The full cost estimate worksheets for each of the ten priority street segments can be found in **Appendix D: Recommendations and Cost Estimates**.



TABLE 9: COST ESTIMATES FOR PROPOSED IMPROVEMENTS

| CATEGORY               | ITEM                                                   | UNIT                           | ESTIMATED COST              |
|------------------------|--------------------------------------------------------|--------------------------------|-----------------------------|
| <b>Signals</b>         | Add All-way Pedestrian Phase (Pedestrian Scramble)     | Per Location                   | <b>\$90,000 - \$150,000</b> |
|                        | Restrict Right Turn on Red                             | Per Approach                   | <b>\$500 - \$15,000</b>     |
|                        | Convert Permissive Left-Turn Phase to Protected        | Per Location                   | <b>\$40,000 - \$300,000</b> |
|                        | Pedestrian Countdown Timers                            | Per Device                     | <b>\$1,000</b>              |
|                        | Leading Pedestrian Interval                            | Per Location                   | <b>\$500 - \$1,500</b>      |
| <b>Intersections</b>   | Red Curb                                               | Per Approach                   | <b>\$500</b>                |
|                        | Stripe Advance Yield Lines                             | Per Crossing                   | <b>\$500</b>                |
|                        | STOP Sign                                              | Per Sign                       | <b>\$600</b>                |
|                        | Pavement Markings                                      | Per Approach                   | <b>\$800</b>                |
|                        | High Visibility Crosswalk Pavement Markings            | Per Crossing                   | <b>\$2,500 - \$5,000</b>    |
|                        | Median as Pedestrian Refuge Island - paint and posts   | Per Island                     | <b>\$2,500 - \$4,000</b>    |
|                        | Raised Median as Pedestrian Refuge Island - concrete   | Per Island                     | <b>\$15,000 - \$25,000</b>  |
|                        | Curb Extension - paint and posts                       | Per Extension                  | <b>\$2,500 - \$4,000</b>    |
|                        | Curb Extension - concrete and landscaping              | Per Extension                  | <b>\$15,000 - \$45,000</b>  |
|                        | Closing Curb Cut (redoing curb and sidewalk)           | Per Location                   | <b>\$5,000 - \$10,000</b>   |
|                        | Pedestrian Lighting                                    | Per Light                      | <b>\$5,000 - \$7,500</b>    |
|                        | Rectangular Rapid Flashing Beacon                      | Per Installation               | <b>\$25,000 - \$40,000</b>  |
|                        | Pedestrian Hybrid Beacon                               | Per Installation               | <b>\$250,000</b>            |
|                        | Raised Intersection or Raised Pedestrian Crossing      | Per Crossing/<br>Intersection  | <b>\$10,000 - \$50,000</b>  |
|                        | Protected Intersection                                 | Per Location                   | <b>\$650,000</b>            |
| Realigned Intersection | Per Intersection                                       | <b>\$800,000 - \$1,250,000</b> |                             |
| <b>Segments</b>        | Centerline Hardening - paint and flexible posts        | Per Location                   | <b>\$2,000 - \$4,000</b>    |
|                        | Bus Bulb                                               | Per Location                   | <b>\$15,000 - \$70,000</b>  |
|                        | Lane Narrowing - striping shoulder or adding bike lane | Per Mile                       | <b>\$750 - \$1,000</b>      |
|                        | Lane Reduction / Road Diet                             | Per Mile                       | <b>\$25,000 - \$120,000</b> |

TABLE 10: COST ESTIMATES FOR PRIORITY STREET SEGMENT PROJECTS

| PRIORITY PROJECT                   | FROM              | TO                   | LOW ESTIMATE COST   | HIGH ESTIMATE COST  |
|------------------------------------|-------------------|----------------------|---------------------|---------------------|
| Adeline Street                     | Ashby Avenue      | Southern City Limits | \$2,540,000         | \$4,730,000         |
| Alcatraz Avenue                    | Sacramento Street | Adeline Street       | \$315,000           | \$1,055,000         |
| Ashby Avenue                       | San Pablo Avenue  | Shattuck Avenue      | \$2,155,000         | \$7,075,000         |
| Cedar Street                       | Sixth Street      | Stannage Avenue      | \$855,000           | \$3,310,000         |
| Martin Luther King Jr. Way (North) | Hearst Avenue     | Dwight Way           | \$1,665,000         | \$8,980,000         |
| Martin Luther King Jr. Way (South) | Dwight Way        | Adeline Street       | \$1,390,000         | \$6,350,000         |
| Sacramento Street                  | Dwight Way        | Southern City Limits | \$2,855,000         | \$9,100,000         |
| San Pablo Avenue                   | University Avenue | Dwight Way           | \$1,375,000         | \$4,085,000         |
| Shattuck Avenue                    | Adeline Street    | Southern City Limits | \$1,675,000         | \$4,140,000         |
| University Avenue                  | San Pablo Avenue  | Oxford Street        | \$3,595,000         | \$12,630,000        |
| <b>TOTAL</b>                       |                   |                      | <b>\$18,420,000</b> | <b>\$61,455,000</b> |

## FUNDING AND REVENUE SOURCES

Funding opportunities for implementing the Plan's recommendations are identified in this section. Pedestrian infrastructure can be funded from programs at federal, state, regional, countywide, and local levels. Pedestrian projects in Berkeley are funded through a combination of ballot measure monies (e.g., Alameda County Measure B and BB), the City General Fund, developer-funded projects, and State and federal grants. The City routinely uses local funds to provide matching funds required by grant programs.

Funding sources are summarized in **Table 11** below. Funding and revenue sources were identified with the purpose of matching potential projects to a range of sustainable funding sources.

The list of funding sources includes:

- **Local programs:** Berkeley Measure T1, General Fund
- **Countywide and Regional programs:** Measures B, BB, and F, Transportation Development Act Article 3
- **Statewide programs:** Active Transportation Program (ATP), Caltrans Sustainable Transportation Planning Program (Sustainable Communities Grants and Strategic Partnerships Grants), Affordable Housing & Sustainable Communities (AHSC) grants, State Highway Operation and Protection Program (SHOPP), State Transportation Improvement Program (STIP), Highway Safety Improvement Program (HSIP), Gas Tax Revenue
- **Federal funding:** One Bay Area Grant (OBAG), which utilizes the regional share of Federal Surface Transportation Program (STP) and Congestion Mitigation & Air Quality (CMAQ) funds



TABLE 11: FUNDING SOURCES APPLICABLE TO THE BERKELEY PEDESTRIAN PLAN

| FUND NAME                                               | ADMINISTERING AGENCY                     | PROJECT TYPES                                                                                                                                                                                                                                                                                                                                                | FUNDING LEVELS                           | LIMITATIONS                                                                                                                                                                                                                                                | FREQUENCY                                                                                  |
|---------------------------------------------------------|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| <b>Local</b>                                            |                                          |                                                                                                                                                                                                                                                                                                                                                              |                                          |                                                                                                                                                                                                                                                            |                                                                                            |
| Measure T1, Phase 2                                     | City of Berkeley                         | Paving, sidewalks, green infrastructure, facilities                                                                                                                                                                                                                                                                                                          | \$40 million for 2022-2025               | <ul style="list-style-type: none"> <li>Projects must have a 30-year useful life</li> <li>Complete Streets comprised 17 percent of Phase 1</li> </ul>                                                                                                       | Begins 2022                                                                                |
| General Fund & Capital Improvement Program <sup>1</sup> | City of Berkeley                         | Capital improvements without other funding sources regularly available                                                                                                                                                                                                                                                                                       | \$5 million annually <sup>2</sup>        | Streets, sidewalks, and transportation account for about \$2.6 million annually                                                                                                                                                                            | Updated with CIP                                                                           |
| <b>Countywide and Regional</b>                          |                                          |                                                                                                                                                                                                                                                                                                                                                              |                                          |                                                                                                                                                                                                                                                            |                                                                                            |
| Measure B <sup>3</sup>                                  | Alameda County Transportation Commission | <p><b>Bicycle and Pedestrian Program:</b><br/>Capital projects, programs, and plans that directly address bicycle and pedestrian access, convenience, safety, and usage</p> <p><b>Local Streets and Roads Program:</b><br/>Capital projects, programs, maintenance, or operations that directly improve local streets and roads and local transportation</p> | \$4.0 million in FY 2018-19 <sup>4</sup> | <p><b>Bicycle and Pedestrian Program:</b> Cannot be used for repaving of an entire roadway or programs that exclusively serve City staff.</p> <p><b>Local Streets and Roads Program:</b> Cannot be used for programs that exclusively serve City staff</p> | Monthly direct disbursements, also competitive discretionary funding awarded every 2 years |

1 <https://www.cityofberkeley.info/citybudget/>

2 <https://www.cityofberkeley.info/uploadedFiles/Manager/Budget/FY-2020-2021-CIP-budget.pdf>

3 <https://www.alamedactc.org/funding/fund-sources/measure-b/>

4 [https://www.alamedactc.org/wp-content/uploads/2018/12/FY18-19\\_2000MB\\_Sales\\_Tax\\_Projections\\_20180510.pdf](https://www.alamedactc.org/wp-content/uploads/2018/12/FY18-19_2000MB_Sales_Tax_Projections_20180510.pdf)

| FUND NAME              | ADMINISTERING AGENCY                     | PROJECT TYPES                                                                                                                                                                                                                                                                                                                                                | FUNDING LEVELS                           | LIMITATIONS                                                                                                                                                                                                                                               | FREQUENCY                                                                                   |
|------------------------|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| Measure B/BB           | Alameda County Transportation Commission | <p><b>Bicycle and Pedestrian Program:</b><br/>Capital projects, programs, and plans that directly address bicycle and pedestrian access, convenience, safety, and usage</p> <p><b>Local Streets and Roads Program:</b><br/>Capital projects, programs, maintenance, or operations that directly improve local streets and roads and local transportation</p> | \$3.7 million in FY 2018-19 <sup>5</sup> | <p><b>Bicycle and Pedestrian Program:</b> Cannot be used for repaving of an entire roadway or programs that exclusively serve City staff</p> <p><b>Local Streets and Roads Program:</b> Cannot be used for programs that exclusively serve City staff</p> | Monthly direct disbursements, also competitive discretionary grants awarded every two years |
| Measure F <sup>6</sup> | Alameda County Transportation Commission | <p><b>Bicycle and Pedestrian Program:</b><br/>Capital projects, programs, and plans that directly address bicycle and pedestrian access, convenience, safety, and usage</p> <p><b>Local Streets and Roads Program:</b><br/>Capital projects, programs, maintenance, or operations that directly improve local streets and roads and local transportation</p> | \$280,000 annually for Berkeley          | <p><b>Bicycle and Pedestrian Program:</b> Cannot be used for repaving of an entire roadway or programs that exclusively serve City staff</p> <p><b>Local Streets and Roads Program:</b> Cannot be used for programs that exclusively serve City staff</p> | Monthly direct disbursements, also competitive discretionary funding awarded every 2 years  |

<sup>5</sup> According to [https://www.alamedactc.org/wp-content/uploads/2018/12/FY18-19\\_2014MBB\\_Sales\\_Tax\\_Projections\\_20180510-2.pdf](https://www.alamedactc.org/wp-content/uploads/2018/12/FY18-19_2014MBB_Sales_Tax_Projections_20180510-2.pdf), Berkeley received \$3.1 million for Local Streets and Roads, \$320,000 from the Bicycle and Pedestrian Program, and \$320,000 for Paratransit

<sup>6</sup> <https://www.alamedactc.org/funding/fund-sources/vehicle-registration-fee/>

| FUND NAME                                                   | ADMINISTERING AGENCY                 | PROJECT TYPES                                                                                                                                                                                                                                       | FUNDING LEVELS                                                         | LIMITATIONS                                                                                                                                                                                                                                                                                                                                         | FREQUENCY                   |
|-------------------------------------------------------------|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| Transportation Development Act (TDA) Article 3 <sup>7</sup> | Alameda County                       | Pedestrian and bicycle plans; design and construction of walkways, bike paths, bike lanes, safety education programs                                                                                                                                | \$3 million regionwide annually                                        | <ul style="list-style-type: none"> <li>• Must be in adopted general plan or bicycle plan</li> <li>• All projects must be reviewed by the City or County Bicycle &amp; Pedestrian Advisory Committee</li> </ul>                                                                                                                                      | Every 2-3 years             |
| <b>Statewide</b>                                            |                                      |                                                                                                                                                                                                                                                     |                                                                        |                                                                                                                                                                                                                                                                                                                                                     |                             |
| Statewide Gas Tax Revenue                                   | California Transportation Commission | Construction, engineering, and maintenance                                                                                                                                                                                                          | \$945,000 annually for Berkeley                                        | Ineligible expenses include decorative lighting, transit facilities, park features, new utilities                                                                                                                                                                                                                                                   | Annual                      |
| Active Transportation Program <sup>8</sup> (ATP)            | California Transportation Commission | <ul style="list-style-type: none"> <li>• Infrastructure projects</li> <li>• Plans, including bicycle, pedestrian, active transportation, and Safe Routes to School Plans</li> <li>• Education, encouragement, and enforcement activities</li> </ul> | \$238 million in Cycle 4                                               | <ul style="list-style-type: none"> <li>• Very competitive program. Projects in disadvantaged communities score highly</li> <li>• Cannot be used for fully funded projects or for cost increases</li> <li>• Infrastructure projects must exceed \$250,000</li> <li>• The Quick-Build Project Pilot Program funds interim capital projects</li> </ul> | Approximately every 2 years |
| Sustainable Communities                                     | Caltrans                             | Multimodal transportation and land use planning projects that further the region's Sustainable Communities Strategy                                                                                                                                 | \$29.5 million, split between statewide and regional competitive funds | <ul style="list-style-type: none"> <li>• Requires 11.47 percent local match</li> <li>• Often federalized</li> </ul>                                                                                                                                                                                                                                 | Annual                      |

7 <https://mtc.ca.gov/our-work/fund-invest/investment-strategies-commitments/transit-21st-century/funding-sales-tax-and-O>

8 [http://www.catc.ca.gov/programs/atp/2019/docs/051618\\_2019\\_ATP\\_Guidelines\\_Final\\_Adopted.pdf](http://www.catc.ca.gov/programs/atp/2019/docs/051618_2019_ATP_Guidelines_Final_Adopted.pdf)

| FUND NAME                                                           | ADMINISTERING AGENCY                 | PROJECT TYPES                                                                                                                                                                                                                            | FUNDING LEVELS                                                                      | LIMITATIONS                                                                                                                                                                                  | FREQUENCY                                                                                                              |
|---------------------------------------------------------------------|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| Strategic Partnerships                                              | Caltrans                             | Planning efforts that identify and address statewide, interregional, and regional transportation deficiencies on the State Highway System in partnership with Caltrans                                                                   | \$4.5 million, \$3 million of which is dedicated to projects that relate to transit | <ul style="list-style-type: none"> <li>Requires 20 percent local match</li> <li>Federalized</li> <li>City of Berkeley would need to apply as sub-applicant to MTC</li> </ul>                 | Annual                                                                                                                 |
| State Highway Operation and Protection Program (SHOPP) <sup>9</sup> | Caltrans                             | <p>Repair and preservation, emergency repairs, safety improvements, and some highway operational improvements on the State Highway System</p> <p>Elements include pavement, bridges, culverts, and transportation management systems</p> | \$18 billion statewide for four years                                               | <p>Projects must be on the State Highway System:</p> <ul style="list-style-type: none"> <li>San Pablo Avenue (SR 123)</li> <li>Ashby Avenue (SR 13)</li> <li>Freeway interchanges</li> </ul> | Portfolio is updated every 2 years projects are selected and administered by Caltrans, but the City can influence them |
| State Transportation Improvement Program (STIP)                     | California Transportation Commission | <p>Any transportation project eligible for State Highway Account or Federal Funds.</p> <p>Example: Gilman Interchange improvements Projects</p>                                                                                          | \$62 million for Alameda County <sup>10</sup>                                       | Projects need to be nominated in Regional Transportation Improvement Program (TIP), but MTC may nominate fund categories                                                                     | STIP is updated every 2 years                                                                                          |
| Highway Safety Improvement Program (HSIP)                           | Caltrans                             | Focuses on infrastructure treatments with known collision reduction factors                                                                                                                                                              | \$418 million statewide                                                             | Countermeasures at locations with documented collision and safety issues                                                                                                                     | Every 1-2 years                                                                                                        |

9 [http://www.dot.ca.gov/hq/transprog/SHOPP/2018\\_shopp/2018-shopp-adopted-by-ctc.pdf](http://www.dot.ca.gov/hq/transprog/SHOPP/2018_shopp/2018-shopp-adopted-by-ctc.pdf)

10 [http://www.catc.ca.gov/programs/stip/2018-stip/2018\\_ORANGE\\_BOOK.pdf](http://www.catc.ca.gov/programs/stip/2018-stip/2018_ORANGE_BOOK.pdf)

| FUND NAME                                                           | ADMINISTERING AGENCY                                       | PROJECT TYPES                                                                                                                                                                                                                               | FUNDING LEVELS                                                                                                                                                                 | LIMITATIONS                                                                              | FREQUENCY     |
|---------------------------------------------------------------------|------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|---------------|
| Affordable Housing and Sustainable Communities Program (ASHC)       | California Department of Housing and Community Development | Transit oriented development projects that which achieve greenhouse gas reductions and increase accessibility of affordable housing                                                                                                         | Minimum award of \$1 million, maximum award of \$30 million                                                                                                                    | Developer must lead the application                                                      | Annual        |
| <b>Federal</b>                                                      |                                                            |                                                                                                                                                                                                                                             |                                                                                                                                                                                |                                                                                          |               |
| Better Utilizing Investments to Leverage Development (BUILD) grants | US DOT                                                     | Major infrastructure projects, especially with road, bridge, transit, or intermodal components<br><br>Example: BUILD awarded \$15 million to Better Market Street in San Francisco                                                          | \$500 million - \$1.5 billion nationally                                                                                                                                       | Minimum grant size of \$5 million but program of projects is possible                    | Annual        |
| One Bay Area Grant (OBAG)                                           | Metropolitan Transportation Commission                     | <ul style="list-style-type: none"> <li>Local street and road maintenance</li> <li>Streetscape enhancements</li> <li>Bicycle and pedestrian improvements</li> <li>Safe Routes to School projects</li> <li>Transportation planning</li> </ul> | \$916 million in OBAG 2 regionwide <sup>11</sup> <ul style="list-style-type: none"> <li>\$530 million in Regional Program</li> <li>\$386 million in County Programs</li> </ul> | Most projects must be in a Priority Development Area (PDA) or have a connection to a PDA | Every 5 years |
| Congestion Mitigation & Air Quality (CMAQ)                          | Federal Highway Administration. Funds distributed to MPOs  | Transportation projects or programs that contribute to attainment of national air quality standards                                                                                                                                         | \$70.5 million regionwide                                                                                                                                                      | Must reduce air pollution and be included in Regional Transportation Plan                | Annual        |

<sup>11</sup> <https://mtc.ca.gov/our-work/fund-invest/federal-funding/obag-2>



| FUND NAME                                 | ADMINISTERING AGENCY           | PROJECT TYPES                                                                                                                                    | FUNDING LEVELS                                                                        | LIMITATIONS                                                                                       | FREQUENCY |
|-------------------------------------------|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-----------|
| Surface Transportation Block Grant (STBG) | Federal Highway Administration | Improve conditions and performance on any federal-aid highway, bridge or tunnel projects on a public road, pedestrian and bicycle infrastructure | \$1 billion annually to California, divided into population-based and statewide funds | In general, funds aren't used on local roads, but there are many exceptions to this <sup>12</sup> | Annual    |



<sup>12</sup> <https://www.fhwa.dot.gov/fastact/factsheets/stbgfs.cfm>

**BERKELEY TRANSPORTATION COMMISSION ACTION ON THE  
DRAFT 2020 PEDESTRIAN PLAN**

The Transportation Commission took the following action at its September 17, 2020, meeting.

**Draft Berkeley Pedestrian Plan**

Action: It was M/S/C (Zander/Parolek) unanimously to recommend that City Council adopt the Pedestrian Plan with the following changes; that staff send a copy of the draft Pedestrian Plan to the Transportation Commission at least two weeks ahead of the deadline for submission of the report for the Council meeting on December 15th, 2020; and to designate Transportation Commissioner Sophia Zander as the primary representative to speak to Council, with Commissioner Anthony Bruzzone as a back-up.

- a. Add a policy supporting providing marked crosswalks across both sides of intersections.
- b. Remove recommendations related to traffic enforcement and instead refer to the Vision Zero Action Plan concerning traffic enforcement.

Ayes: Bruzzone, Ghosh, Greene, Hutheesing, Lathbury, Parolek, Taplin, Zander

Noes: None; Abstain: None; Absent: Garcia.

Motion carried.



Public Works Commission

ACTION CALENDAR

January 26, 2021

To: Honorable Mayor and Members of the City Council

From: Public Works Commission

Submitted by: Matthew Freiberg, Chair, Public Works Commission

Subject: Public Works Commission Recommendation for the Five-Year Paving Plan

RECOMMENDATION

Adopt a resolution that recommends approval of the first three years of the Five-Year Paving Plan, for FY2021 to FY2025, as proposed by Staff, with special advisories regarding prioritization of permeable paving on select streets.

SUMMARY

This Report to council is comprised of two sections:

1. A recommendation on the City's Proposed 5-Year Paving Plan
2. An update from the Public Works Commission (PWC) on the approach to address the on-going paving condition deficit through the creation and implementation of a Long-Term Paving Master Plan.

(1) The City of Berkeley's Street Rehabilitation and Repair Policy (Street Policy) requires that a 5-year paving plan be reviewed each year and adopted formally by the City Council, with advice from the PWC. The Rehabilitation Plan (commonly called the Paving Plan) for FY 2021 to FY2025 has been reviewed by the PWC and it is recommending adoption of the first three years of the plan. It is worth noting that streets that are prioritized as part of the Vision Zero high injury streets, Pedestrian Plan, and Bicycle Plan only include the paving of these streets, they do not include any of the associated roadway improvements that are recommended as part of this plan. It is recommended that City Council secure additional funding to ensure that these improvements are funded and incorporated into the redesign of these roads.

(2) Berkeley's streets are in an "at-risk" condition, far from the City's target of having our streets in "good" condition, and they continue to decline year on year. In January 2020, City Council directed the Public Works Department and the PWC to develop a long-term Paving Master Plan. Due to the suspension of commissions and the continued suspension of subcommittee activities, limited progress has been made developing this plan. Currently Staff and the PWC are collaborating on an update of the Paving Policy

that will provide guidance for the future of paving in the City and the development of the Paving Master Plan.

#### FISCAL IMPACTS OF RECOMMENDATION

This Paving Plan is based on the Adopted Biennial Budget for Fiscal Years 2021 & 2022, and on the following estimated available funding levels from all sources, including State Transportation (Gas) Tax, Measure B, Measure BB, Measure F, and the General Fund.

| <b>Five-Year Paving Program Funding Sources by Year, in \$</b> |                  |                  |                  |                  |                  |
|----------------------------------------------------------------|------------------|------------------|------------------|------------------|------------------|
| <b>Fund Description</b>                                        | <b>FY 2021</b>   | <b>FY 2022</b>   | <b>FY 2023</b>   | <b>FY 2024</b>   | <b>FY 2025</b>   |
| <b>State Transportation Tax</b>                                | 495,303          | 495,303          | 495,303          | 495,303          | 495,303          |
| <b>State Transportation Tax –SB1</b>                           | 1,230,000        | 1,310,000        | 2,000,000        | 2,000,000        | 2,000,000        |
| <b>Measure B - Local Streets &amp; Roads</b>                   | 660,000          | 330,000          | 0                | 0                | 0                |
| <b>Measure BB – Local Streets &amp; Roads</b>                  | 1,380,000        | 1,654,000        | 2,700,000        | 2,700,000        | 2,700,000        |
| <b>Measure F Vehicle -Registration Fee</b>                     | 155,000          | 155,000          | 155,000          | 155,000          | 155,000          |
| <b>Capital Improvement Fund</b>                                | 1,925,000        | 1,925,000        | 1,925,000        | 1,925,000        | 1,925,000        |
| <b>TOTAL</b>                                                   | <b>5,845,303</b> | <b>5,869,303</b> | <b>7,272,303</b> | <b>7,272,303</b> | <b>7,272,303</b> |

In addition to the City's program funding, additional grant and bond funding has been made available for paving in FY 2023, summarized below.

| <b>Other Funding for Paving by Year, in \$</b>                               |                |                |                  |                |                |
|------------------------------------------------------------------------------|----------------|----------------|------------------|----------------|----------------|
| <b>Funding Source</b>                                                        | <b>FY 2021</b> | <b>FY 2022</b> | <b>FY 2023</b>   | <b>FY 2024</b> | <b>FY 2025</b> |
| <b>Grants (South Side Complete Streets – Bancroft, Telegraph, and Dana)*</b> | 0              | 0              | 1,200,000        | 0              | 0              |
| <b>TOTAL</b>                                                                 | <b>0</b>       | <b>0</b>       | <b>1,200,000</b> | <b>0</b>       | <b>0</b>       |

\*The grant funded projects are not included in the five-year paving plan

#### CURRENT SITUATION AND ITS EFFECTS

The City's streets continue to be evaluated as "at risk," and do not meet the City's target to be in "good" condition. The latest pavement condition analysis conducted by PEI, identifies the city-wide average Pavement Condition Index (PCI) to be 57, ranging across council districts from 52.8% to 61.9%. The average PCI is down from 58 in 2019. The lack of resources available to the Paving Program are resulting in a continual decline in the condition of the City's streets.

| District   | Area (sqft) | Mileage | Percent of Total | PCI in 2020 |
|------------|-------------|---------|------------------|-------------|
| District 1 | 7,652,427   | 38.6    | 19.6%            | 55.3        |
| District 2 | 6,164,641   | 32.7    | 15.8%            | 52.8        |
| District 3 | 5,132,474   | 24.3    | 13.1%            | 58.8        |
| District 4 | 3,411,318   | 16.1    | 8.7%             | 53.7        |
| District 5 | 6,209,611   | 37.1    | 15.9%            | 61.9        |
| District 6 | 4,750,199   | 35.3    | 12.2%            | 56.5        |
| District 7 | 1,672,660   | 7.8     | 4.3%             | 55.9        |
| District 8 | 4,053,495   | 23.0    | 10.4%            | 58.1        |

This report addresses the following topics:

- Review of the new 5-year paving plan for fiscal years 2021 – 2025.
- An update on the progress towards updating the City's Paving Policy and for a master plan to improve the condition of Berkeley's streets.

#### Review of 5-year Paving Plan

Staff prepared a list of paving projects for the new 5-year planning period (FY2021 – 2025). This was prepared using, StreetSaver program analysis, knowledge of what has been accomplished in recent years, and available funding. The proposed plan is summarized as follows.

|                                                                 | FY2021         | FY2022         | FY2023         | FY2024         | FY2025         | Total            | % of Total    |
|-----------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|------------------|---------------|
| <b><u>Square Footage of Paving</u></b>                          |                |                |                |                |                |                  |               |
| Arterials, sqft                                                 | 0              | 0              | 7,200          | 0              | 54,910         | 62,110           | 2.3%          |
| Collectors, sqft                                                | 61,700         | 128,340        | 177,040        | 194,515        | 37,500         | 599,095          | 22.0%         |
| Residential, sqft                                               | 351,450        | 464,628        | 395,067        | 549,901        | 304,620        | 2,065,666        | 75.8%         |
| <b>Total Area</b>                                               | <b>413,150</b> | <b>592,968</b> | <b>579,307</b> | <b>744,416</b> | <b>397,030</b> | <b>2,726,871</b> | <b>100.0%</b> |
| <b><u>Miles</u></b>                                             |                |                |                |                |                |                  |               |
| Arterials, miles                                                | 0.00           | 0.00           | 0.04           | 0.00           | 0.21           | 0.31             | 2.1%          |
| Collectors, miles                                               | 0.10           | 0.68           | 0.95           | 0.94           | 0.21           | 2.88             | 19.2%         |
| Residential, miles                                              | 2.08           | 2.65           | 2.05           | 3.41           | 1.60           | 11.79            | 78.7%         |
| <b>Total miles</b>                                              | <b>2.18</b>    | <b>3.33</b>    | <b>3.04</b>    | <b>4.35</b>    | <b>2.04</b>    | <b>14.98</b>     | <b>100.0%</b> |
| <i>Total Bikeways</i>                                           | <i>0.76</i>    | <i>1.31</i>    | <i>1.34</i>    | <i>2.21</i>    | <i>1.38</i>    | <i>7.01</i>      | <i>53%</i>    |
| <i>Bicycle, Pedestrian, and Vision Zero High Injury Streets</i> | <i>0.58</i>    | <i>1.32</i>    | <i>2.29</i>    | <i>2.22</i>    | <i>1.38</i>    | <i>7.79</i>      | <i>52%</i>    |
| <b><u>Cost</u></b>                                              |                |                |                |                |                |                  |               |
| Arterials, \$millions                                           | \$0            | \$0            | \$0.102        | \$0.000        | \$0.683        | \$0.785          | 2.6%          |

|                                                                         |                                                                                                                                                                                       |                |                |                |                |                 |             |
|-------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------|----------------|----------------|-----------------|-------------|
| Collectors,<br>\$millions                                               | \$0.269                                                                                                                                                                               | \$1.519        | \$1.987        | \$2.685        | \$0.634        | \$7.095         | 23.6%       |
| Residential,<br>\$millions                                              | \$5.189                                                                                                                                                                               | \$3.654        | \$3.934        | \$4.005        | \$4.509        | \$22.212        | 73.8%       |
| Discretionary,<br>\$millions                                            | <i>Staff intends to use all of the Discretionary Fund to comply with the City Council referral to use 50% of funding on Bicycle, Pedestrian, and Vision Zero High Injury Streets.</i> |                |                |                |                |                 |             |
| Curb Ramps                                                              | \$0.150                                                                                                                                                                               | \$0.348        | \$0.240        | \$0.474        | \$0.126        | \$1.344         | 5%          |
| <b>Total cost,<br/>\$millions</b>                                       | <b>\$5.845</b>                                                                                                                                                                        | <b>\$5.869</b> | <b>\$7.275</b> | <b>\$7.275</b> | <b>\$7.275</b> | <b>\$30.092</b> | <b>100%</b> |
| <i>Total Bikeways</i>                                                   | <i>\$1.267</i>                                                                                                                                                                        | <i>\$2.922</i> | <i>\$3.340</i> | <i>\$4.373</i> | <i>\$4.509</i> | <i>\$16.412</i> | <i>55%</i>  |
| <i>Bicycle, Pedestrian,<br/>and Vision Zero<br/>High Injury Streets</i> | <i>\$1.181</i>                                                                                                                                                                        | <i>\$2.922</i> | <i>\$4.291</i> | <i>\$4.373</i> | <i>\$4.510</i> | <i>\$17.277</i> | <i>57%</i>  |

The above summary does not include \$1.2 million in grant funding in FY2023.

The PWC paving subcommittee discussed the plan with Public Works Department staff and we have the following comments.

1. Many of the City's streets with the lowest PCI are on residential streets. The proposed plan by staff shifts more focus of the paving plan to residential streets. While this prioritization of residential streets falls outside of the City's Paving Policy for allocation of paving funds by street type, this plan helps address the roads that are in the greatest need and will do the most to improve the citywide average PCI. The PWC agrees with this approach in the near term but recommends shifting focus back to the primary transportation network streets (arterials, collectors, bus routes, and the low stress bike network).

The following table provides a breakdown of the cost allocated to different street types in the current five-year paving plan compared to the Paving Policy:

|                     | <b>Cost Breakdown<br/>Per Paving Policy<sup>1</sup></b> | <b>Cost Breakdown<br/>Per 5-Year Paving Plan<br/>(FY2021-2025)</b> |
|---------------------|---------------------------------------------------------|--------------------------------------------------------------------|
| Arterial streets    | 10%                                                     | 2.6%                                                               |
| Collector streets   | 50%                                                     | 23.6%                                                              |
| Residential streets | 25%                                                     | 73.8%                                                              |
| Discretionary       | 15%                                                     | 0%                                                                 |

2. The plan reviewed against the council referral to Develop a Bicycle Lane and Pedestrian Street Improvements Policy, which recommends that at least 50 percent of the repaving budget be allocated to Vision Zero pedestrian high injury streets and

<sup>1</sup> This allocation is specific to Measure B Sales Tax and Gas Tax revenues, but as a matter of practice has been applied to all sources of revenues in recent years.

bikeways between 2022 to 2025. The 5-year paving plan was reviewed against the council referral figures in addition to the May 2017 Bike Plan, the March 2020 Vision Zero Action Plan, and the October 2020 Draft Pedestrian Plan.

Between 2022 - 2025, approximately 58 percent of the paving dollars (\$16.1 million) and 56 percent of the paved miles (7.2 miles) are allocated to the bikeway and vision zero high injury streets, so the requirement in the council referral is met. However, there are no funds allocated towards the “Prioritized High-Injury Streets” identified in the Draft Pedestrian Plan. The high priority bikeways (Tier 1 & 2 in the bike plan) make up slightly more than half of the bikeway miles & slightly less than half of the bikeway dollars allocated in the paving plan. The lower priority (Tier 3) bikeways account for the balance. Inclusion of some of the high priority projects in the pedestrian plan and shifting some of the Tier 3 bikeway projects to Tier 1 bikeway projects should be considered to better meet the intent of the council referral.

It is worth noting that the five year paving plan does not include any of the additional roadway improvements that are intended to improve bike and pedestrian safety that are recommended in the Bicycle Plan, Pedestrian Plan, and Vision Zero. It is recommended that City Council secure additional funding to ensure that these improvements are funded and incorporated into the redesign of these roads.

3. The PWC has reviewed the plan for contiguous streets and that the work is bundled for cost effective implementation. While there are multiple short sections of paving in the current five-year plan, staff has made every effort to bundle projects to the maximum extent practicable, with consideration of other extenuating factors such as subsurface utility maintenance and funding limitations. This is balanced with having the paving work be spread equitably across all Council Districts of the City. Over the 5-year Paving Plan, financial resources and miles of roads surfaced are allocated fairly equally across all council districts. This allocation is very much in line with the historic interpretation of equity that has been practiced by the City.

| District   | Mileage | Percent of Total | PCI in 2020 | FY 2021 – 25 Investment (\$) | FY 2021 – 25 Miles Surfaced | Projected PCI in 2025 |
|------------|---------|------------------|-------------|------------------------------|-----------------------------|-----------------------|
| District 1 | 38.6    | 19.6%            | 55.3        | \$4,046,266 (13%)            | 1.69 (11%)                  | 47                    |
| District 2 | 32.7    | 15.8%            | 52.8        | \$4,590,248 (15%)            | 1.73 (12%)                  | 46                    |
| District 3 | 24.3    | 13.1%            | 58.8        | \$4,620,579 (15%)            | 2.38 (16%)                  | 52                    |
| District 4 | 16.1    | 8.7%             | 53.7        | \$4,073,349 (14%)            | 1.36 (9%)                   | 50                    |
| District 5 | 37.1    | 15.9%            | 61.9        | \$3,911,654 (13%)            | 1.68 (11%)                  | 55                    |
| District 6 | 35.3    | 12.2%            | 56.5        | \$2,382,033 (8%)             | 2.06 (14%)                  | 49                    |
| District 7 | 7.8     | 4.3%             | 55.9        | \$3,576,655 (12%)            | 2.39 (16%)                  | 58                    |
| District 8 | 23.0    | 10.4%            | 58.1        | \$2,891,269 (10%)            | 1.7 (11%)                   | 53                    |

The Public Works Commission is currently evaluating an update to the definition of equity. The leading definition would move the Public Works Department towards a

results oriented performance evaluation, where investment of resources are allocated in a way that seeks to provide equivalent PCI outcomes across all planning areas, rather than focusing purely on the monetary inputs.

4. The PWC agrees that 15% of available funding should be reserved for discretionary and/or demonstration projects. The PWC is in the process of developing a recommendation for how to manage this reserve as well as criteria to help prioritize projects to be funded with the discretionary reserve. Over the next five years, Staff intends to use the entirety of this funding source to comply with the October 29, 2019 City Council Referral that requires 50 percent of funding to be allocated towards priority bicycle paths and high injury vision zero streets. As a result, there are not any permeable paving projects included in the five-year plan. The PWC encourages City Council and Staff to consider incorporating pervious roadway surfaces as part of the Southside Complete Streets Project.
5. The PWC would also like to make note that the current plan does not include the paving of Derby and Ward Streets between Shattuck Avenue and Telegraph Avenues. The Public Works Commission only became aware of this council resolution from September 2019 on November 2020. This note in our report is highlight that these streets will be brought up for consideration in next year's five-year plan for years three, four, or five of that plan.

#### Master Plan to Improve the Condition of Berkeley's Streets

The current citywide average PCI is 57 on a scale of 100, and is firmly in the "at risk," category. Streets in this category tend to degrade at a more accelerated rate than those in a "good" or "fair" condition. Under the proposed paving plan, the PCI is estimated to dip to 52 by 2023. This is far from the City's target of having our streets in "good" condition (PCI of 70 -79), and it is clear that action is needed to reverse this trend before our roads fall into "failing" condition where massive reconstructs will be needed for roads city-wide. Below is a summary of the current conditions of Berkeley's streets by road type that has been prepared by staff and PEI.

| Section/Area        | PCI in 2020 | PCI in 2019 | Total Center Lane Miles |
|---------------------|-------------|-------------|-------------------------|
| Overall system      | 57          | 58          | 214.2                   |
| Arterial streets    | 63          | 66          | 21.9                    |
| Collector streets   | 60          | 64          | 37.1                    |
| Residential streets | 55          | 55          | 155.3                   |
| Bus routes          | 62          | 66          | 39.2                    |
| Bike lanes          | 61          | 62          | 63.6                    |

In January 2020, Council provided direction for the Public Works Department and the PWC to develop a long-term Paving Master Plan to develop a road map and understand the funding and resources needed to improve Berkeley's streets to a "good" condition.



Due to the suspension of the City Commissions during COVID, little progress has been made today. However, with the PWC re-authorized to commence meetings, we are re-engaging in this process, addressing the following items starting with items 1 and 2.

1. Update the Street Policy – The policy was last updated in 2009. The policy should be reviewed and updated to incorporate current thinking about using life cycle cost analysis, Vision Zero, equity, sustainable multi-benefit technologies, and other factors. With these considerations in mind, the updated policy should include new performance metrics that capture the diversity objective the City holds for our road network.
2. Equity – Historically, it has been the practice of the City to evaluate equity in roadway investment in terms of equivalent allocation of financial resources and miles of roadway surfaced among the Council Districts. However, this does not result in equal outcomes across the City.  
The Public Works Commission is currently evaluating an update to the definition of equity. The leading definition would move the Public Works Department towards a results oriented performance evaluation, where investment of resources are allocated in a way that seeks to provide equivalent PCI outcomes across all planning areas, rather than focusing purely on the monetary inputs.
3. A long-term paving capital plan – The Master Plan should include a 40-year paving plan to help the City identify the most efficient path to move the current PCI from “at risk” to “good.” This approach spans two cycles of a typical asphalt road’s expected useful life, and allows for decisions on street paving to be optimized for the greatest bang for our buck over the full life of our assets, rather than the current short-term approach.
4. Financing Strategy -- Lack of funding for street paving plays a major role in the overall condition of the City’s streets. As part of the Master Plan, the work should include a long-term funding gap analysis, a financial plan to address the funding gap, a cost-of-service rate study to develop recommended rates needed to sustainably finance the Paving Program, and an impact fee analysis to allow the City to recoup the cost of accelerated wear on our roads imposed by heavy vehicles. We also recommend the master plan include an evaluation of grant funding opportunities.
5. Public Engagement -- Public feedback is critical to the successful development and implementation of any City Plan. The Master Plan should provide guidance for public engagement strategies that will allow the collection and synthesis of public feedback regarding the future of the City streets.

The recommendation to approve the 5-year paving plan and to forward it to Council was discussed by the Public Works Commission at its November 12, 2020 meeting.

Motion to approve made by Krpata and seconded by Hitchen. Ayes: Freiberg, Humbert, Schueler, Erbe, Constantine; Noes: Nesbitt; Abstain: none; Absent: Brennan,

ENVIRONMENTAL SUSTAINABILITY

Permeable pavers provide a way of reducing the volume of storm water entering the City storm drain system; improving the quality of urban runoff from the roadway that is conveyed to local creeks and the Bay; and reducing greenhouse gas emissions by installing a durable product that requires less maintenance than traditional asphalt concrete.

Full Depth Reclamation (FDR), a cost-effective alternative to traditional street reconstruction methods, is planned for use in several of the streets selected for rehabilitation. It recycles much of the existing pavement on site, and incorporates it into the pavement subgrade, thereby reducing truck trips to and from construction sites. In addition, the Paving Plan includes repair of the City's deteriorating storm drain infrastructure that minimizes degradation of water quality in local creeks and the Bay. These repairs are consistent with the City of Berkeley's 2011 Watershed Management Plan. Furthermore, the Paving Plan also proposes approximately 5.8 miles of improvements to bicycle routes, and improvements to sidewalk and curb ramps adopted from the Bicycle and Pedestrian Plans. These steps result in lower emissions of greenhouse gases into the environment, which is consistent with the goals of the 2009 Berkeley Climate Action Plan.

RATIONALE FOR RECOMMENDATION

It is the policy of the City of Berkeley that there shall be a Five-year Street Rehabilitation Plan for the entire City to be adopted by the City Council. Further, the proposed plan provides for much needed street infrastructure improvements that are consistent with the City's Street Policy.

ALTERNATIVE ACTIONS CONSIDERED

None.

CITY MANAGER

Staff recommends the City Council approve the first three years of the paving plan, per the Commission's recommendation. In addition, to respond to the recent recommendations of the City Audit, staff updated the street repair program website: [https://www.cityofberkeley.info/Public\\_Works/Sidewalks-Streets-Utility/Street\\_Repair\\_Program.aspx](https://www.cityofberkeley.info/Public_Works/Sidewalks-Streets-Utility/Street_Repair_Program.aspx) to identify the level of funding necessary to move our street conditions from at-risk to good, and to identify funding sources to achieve and maintain our streets in good condition.

CONTACT PERSON

Matthew Freiberg, Chair, Public Works Commission (831) 566-3628  
Liam Garland, Director of Public Works, (510) 981-6402  
Joe Enke, Acting Manager of Engineering (510) 981-6411

Attachments:

1. Resolution
2. Five-Year Street Rehabilitation Plan for FY 2021 to FY 2025
3. Map of proposed roadway surfacing projects

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

APPROVAL OF THE FIRST THREE YEARS OF THE FIVE-YEAR PAVING PLAN FOR  
FY 2021 TO FY2025

WHEREAS, the Street Rehabilitation Policy, Resolution No. 55,384-N.S. approved on May 22, 1990, requires there be a Five-Year Street Paving Plan for the entire City to be adopted by the City Council, and

WHEREAS, the City Council requests advice from the Public Works Commission on the Five-Year Paving Plan; and

WHEREAS, on November 12, 2020, the Public Works Commission voted to approve the first three years of the Five-Year Paving Plan, submitting the FY 2021 to FY2025 Five-year Paving Plan to City Council, attached as Exhibit A;

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the first three years of the FY 2021 to FY2025 Five-Year Paving Plan attached as Exhibit A hereof, is hereby adopted.

Exhibit A: Five-Year Paving Plan for FY2021 to FY2025

EXHIBIT A  
5-YEAR STREET REHABILITATION PLAN FOR FY 2021 TO FY 2025

Revised: 10/30/2020

| Fiscal Year | Street ID | Section ID | Street Name   | From               | To            | Class | Treatment (from StreetSaver) | Updated Total Cost            | District | P         | Mileage | Current PCI | Last M&R Date | Last Paved                  |
|-------------|-----------|------------|---------------|--------------------|---------------|-------|------------------------------|-------------------------------|----------|-----------|---------|-------------|---------------|-----------------------------|
| 2021        | 319006    | 45         | ADA ST        | SACRAMENTO ST      | ORDWAY ST     | R     | Reconstruct                  | \$ 780,000                    | 1, 5     | N         | 0.26    | 25          | 10/1/1992     | MILL AND OVERLAY W/FABRIC   |
| 2021        | 932042    | 30         | BANCROFT WAY  | 6TH ST             | 8TH ST        | R     | Heavy Mtce                   | \$ 70,800                     | 2        | 3A        | 0.13    | 55          | 11/1/1986     | MILL AND OVERLAY W/FABRIC   |
| 2021        | 932042    | 35         | BANCROFT WAY  | 8TH ST             | SAN PABLO AVE | R     | Heavy Mtce                   | \$ 86,000                     | 2        | 3A        | 0.19    | 59          | NA            |                             |
| 2021        | 829104    | 60         | CHANNING WAY  | MARTIN LUTHER KING | MILVIA ST     | R     | Reconstruct                  | \$ 462,920                    | 4        | 2A to 2B* | 0.13    | 15          | 5/1/1995      | THIN AC OVERLAY(1.5 INCHES) |
| 2021        | 729104    | 63         | CHANNING WAY  | MILVIA ST          | SHATTUCK AVE  | R     | Heavy Rehab                  | \$ 267,640                    | 4        | 2A to 2B* | 0.13    | 34          | 9/1/1991      | MILL AND OVERLAY W/FABRIC   |
| 2021        | 319129    | 38         | CURTIS ST     | HOPKINS ST         | CEDAR ST      | R     | Reconstruct                  | \$ 202,267                    | 1        | N         | 0.07    | 11          | 12/1/1992     | MILL AND OVERLAY W/FABRIC   |
| 2021        | 322129    | 40         | CURTIS ST     | CEDAR ST           | VIRGINIA ST   | R     | Reconstruct                  | \$ 360,800                    | 1        | N         | 0.13    | 16          | 10/1/1992     | MILL AND OVERLAY W/FABRIC   |
| 2021        | 729152    | 64         | DURANT AVE    | SHATTUCK AVE       | FULTON ST     | C     | Heavy Rehab                  | \$ 268,880                    | 4        | N         | 0.10    | 32          | 8/12/1997     | MILL AND OVERLAY W/FABRIC   |
| 2021        | 739186    | 60         | EMERSON ST    | ADELINE ST         | SHATTUCK AVE  | R     | Light Rehab                  | \$ 192,320                    | 3        | N         | 0.15    | 59          | 4/1/2001      | RECONSTRUCT STRUCTURE (AC)  |
| 2021        | 839191    | 60         | ESSEX ST      | ADELINE ST         | TREMONT ST    | R     | Heavy Mtce                   | \$ 88,160                     | 3        | N         | 0.06    | 68          | 4/1/2001      | RECONSTRUCT STRUCTURE (AC)  |
| 2021        | 739191    | 62         | ESSEX ST      | TREMONT ST         | SHATTUCK AVE  | R     | Light Rehab                  | \$ 141,920                    | 3        | N         | 0.11    | 64          | 4/1/2001      | RECONSTRUCT STRUCTURE (AC)  |
| 2021        | 418290    | 30         | HOLLY ST      | ROSE ST            | CEDAR ST      | R     | Reconstruct                  | \$ 596,960                    | 1        | N         | 0.17    | 7           | 10/1/1992     | MILL AND OVERLAY W/FABRIC   |
| 2021        | 115550    | 25         | SPRUCE ST     | ARCH ST            | EUNICE ST     | R     | Heavy Rehab                  | \$ 379,834                    | 5, 6     | 3C*       | 0.19    | 47          | 11/1/1990     | MILL AND THIN OVERLAY       |
| 2021        | 920528    | 50         | 2ND ST        | UNIVERSITY AVE     | ADDISON ST    | R     | Heavy Rehab                  | \$ 560,000                    | 2        | N         | 0.09    | 32          | 8/27/1997     | MILL AND OVERLAY W/FABRIC   |
| 2021        | 320686    | 10         | SPINNAKER WAY | BREAKWATER DR      | MARINA BLVD   | R     | Reconstruct                  | \$ 1,000,000                  | 1        | N         | 0.28    | 22          | 8/1/1991      | OVERLAY                     |
| 2021        |           |            | CONTINGENCY   |                    |               |       | \$ 386,802                   |                               |          |           |         |             |               |                             |
|             |           |            | TOTAL FUNDING |                    |               |       | \$ 5,845,303                 |                               |          |           | 2.18    |             |               |                             |
|             |           |            |               |                    |               |       | 22%                          | bike/ped                      |          |           |         |             |               |                             |
|             |           |            |               |                    |               |       | 23%                          | bike/ped not incl contingency |          |           |         |             |               |                             |

FISCAL YEAR 2021 TOTALS

Total Estimated Cost and Miles

\$5,845,303 2.18 miles

|              | Mileage | Estimated Cost | % Cost | % Mileage | District | Cost        | Miles |
|--------------|---------|----------------|--------|-----------|----------|-------------|-------|
| Arterials    | 0.00    | \$0            | 0%     | 0%        | 1        | \$2,550,027 | 0.78  |
| Collectors   | 0.10    | \$268,880      | 5%     | 5%        | 2        | \$716,800   | 0.40  |
| Residentials | 2.08    | \$5,189,621    | 95%    | 95%       | 3        | \$422,400   | 0.33  |
|              |         |                |        |           | 4        | \$999,440   | 0.36  |
| Bikeways     | 0.76    | \$1,267,194    | 23%    | 35%       | 5        | \$579,917   | 0.22  |
| Curb Ramps   |         | \$150,000      | 3%     |           | 6        | \$189,917   | 0.09  |
| Total        |         | \$1,417,194    | 26%    |           | 7        | \$0         | 0.00  |
|              |         |                |        |           | 8        | \$0         | 0.00  |
|              |         |                |        |           |          | \$5,458,501 | 2.18  |

Note: Column P denotes presence of bike facility type (1 paved path, 2A 2B bike lane, 3A sign-only, 3C Sharrows, 3E bike blvd, 4 cycle track); C for bus route; and N for none.

\*Proposed bike facilities from 2017 Bike Plan.

EXHIBIT A  
5-YEAR STREET REHABILITATION PLAN FOR FY 2021 TO FY 2025

Revised: 10/30/2020

| Fiscal Year | Street ID | Section ID | Street Name   | From             | To            | Class | Treatment (from StreetSaver) | Updated Total Cost | District                                     | P   | Mileage | Current PCI | Last M&R Date | Last Paved                   |
|-------------|-----------|------------|---------------|------------------|---------------|-------|------------------------------|--------------------|----------------------------------------------|-----|---------|-------------|---------------|------------------------------|
| 2022        | 931073    | 50         | BROWNING ST   | ADDISON ST       | DWIGHT WAY    | R     | Heavy Rehab                  | \$ 953,600         | 2                                            | N   | 0.50    | 35          | 10/1/1995     | MILL AND OVERLAY W/FABRIC    |
| 2022        | 213119    | 10         | COLUSA AVE    | NORTH CITY LIMIT | SOLANO AVE    | C     | Heavy Rehab                  | \$ 1,518,904       | 5                                            | 2B  | 0.68    | 44          | 11/1/1986     | MILL AND OVERLAY W/FABRIC    |
| 2022*       | 728180    | 50         | ELLSWORTH ST  | BANCROFT WAY     | DWIGHT WAY    | R     | Reconstruct                  | \$ 319,661         | 7                                            | N   | 0.25    | 22          | 11/1/1992     | MILL AND OVERLAY W/FABRIC    |
| 2022*       | 736180    | 60         | ELLSWORTH ST  | DWIGHT WAY       | WARD ST       | R     | Light Mtce                   | \$ 113,356         | 7                                            | N   | 0.38    | 92          | 5/11/2011     | RECONSTRUCT SURFACE (AC)     |
| 2022*       | 736180    | 65         | ELLSWORTH ST  | WARD ST          | STUART ST     | R     | Light Mtce                   | \$ 22,671          | 3                                            | N   | 0.05    | 92          | 5/11/2011     | RECONSTRUCT SURFACE (AC)     |
| 2022*       |           |            | ELLSWORTH ST  | STUART ST        | ASHBY AVE     | R     | Light Mtce                   | \$ 113,356         | 3                                            | N   | 0.24    | 92          | 5/11/2011     | RECONSTRUCT SURFACE (AC)     |
| 2022        | 736227    | 60         | FULTON ST     | DWIGHT WAY       | BLAKE ST      | R     | Heavy Mtce                   | \$ 82,628          | 3                                            | 3E* | 0.06    | 60          | 6/1/1993      | MEDIUM AC OVERLAY (2 INCHES) |
| 2022        | 736227    | 61         | FULTON ST     | BLAKE ST         | PARKER ST     | R     | Heavy Mtce                   | \$ 27,840          | 3                                            | 3E* | 0.07    | 69          | 6/1/1993      | MEDIUM AC OVERLAY (2 INCHES) |
| 2022        | 736227    | 63         | FULTON ST     | PARKER ST        | STUART ST     | R     | Heavy Mtce                   | \$ 382,092         | 3                                            | 3E* | 0.25    | 58          | 2/1/1992      | THIN AC OVERLAY(1.5 INCHES)  |
| 2022        | 920275    | 40         | HEINZ AVE     | 7TH ST           | SAN PABLO AVE | R     | Reconstruct                  | \$ 910,408         | 2                                            | 3E  | 0.26    | 22          | 11/1/1992     | MILL AND OVERLAY W/FABRIC    |
| 2022*       |           |            | STUART ST     | FULTON ST        | ELLSWORTH ST  | R     | Heavy Rehab                  | \$ 196,000         | 3                                            | N   | 0.12    | 39          | 11/13/1998    | RECONSTRUCT STRUCTURE (AC)   |
| 2022*       | 736561    | 70         | STUART ST     | ELLSWORTH        | HILLEGASS AVE | R     | Heavy Rehab                  | \$ 319,661         | 7                                            | N   | 0.35    | 39          | 11/13/1998    | RECONSTRUCT STRUCTURE (AC)   |
| 2022*       | 636561    | 78         | STUART ST     | HILLEGASS AVE    | BENVENUE AVE  | R     | Heavy Rehab                  | \$ 79,915          | 8                                            | N   | 0.07    | 33          | 11/13/1998    | RECONSTRUCT STRUCTURE (AC)   |
| 2022*       |           |            | STUART ST     | BENVENUE AVE     | COLLEGE AVE   | R     | Heavy Rehab                  | \$ 132,400         | 8                                            | N   | 0.07    | 33          | 11/13/1998    | RECONSTRUCT STRUCTURE (AC)   |
| 2022        |           |            | CONTINGENCY   |                  |               |       |                              | \$ 696,811         |                                              |     |         |             |               |                              |
|             |           |            | TOTAL FUNDING |                  |               |       |                              | \$ 5,869,303       |                                              |     | 3.32    |             |               |                              |
|             |           |            |               |                  |               |       |                              | 50%                | bike/ped                                     |     |         |             |               |                              |
|             |           |            |               |                  |               |       |                              | 56%                | bike/ped not incl contingency                |     |         |             |               |                              |
|             |           |            |               |                  |               |       |                              | 73%                | bike/ped not incl contingency or ebmud share |     |         |             |               |                              |

\* in Fiscal Year column denotes coordination and/or cost sharing with EBMUD project

FISCAL YEAR 2022 TOTALS

| Total Estimated Cost and Miles |         |                |        |           | \$5,869,303 | 3.32        | miles |
|--------------------------------|---------|----------------|--------|-----------|-------------|-------------|-------|
|                                | Mileage | Estimated Cost | % Cost | % Mileage | District    | Cost        | Miles |
| Arterials                      | 0.00    | \$0            | 0%     | 0%        | 1           | \$0         | 0.00  |
| Collectors                     | 0.68    | \$1,518,904    | 29%    | 20%       | 2           | \$1,864,008 | 0.76  |
| Residentials                   | 2.65    | \$3,653,588    | 71%    | 80%       | 3           | \$824,587   | 0.78  |
|                                |         |                |        |           | 4           | \$0         | 0.00  |
| Bikeways                       | 1.31    | \$2,921,872    | 56%    | 39%       | 5           | \$1,518,904 | 0.68  |
| Curb Ramps                     |         | \$348,000      | 7%     |           | 6           | \$0         | 0.00  |
| Total                          |         | \$3,269,872    | 63%    |           | 7           | \$752,678   | 0.97  |
|                                |         |                |        |           | 8           | \$212,315   | 0.14  |
|                                |         |                |        |           |             | \$5,172,492 | 3.32  |

Note: Column P denotes presence of bike facility type (1 paved path, 2A 2B bike lane, 3A sign-only, 3C Sharrows, 3E bike blvd, 4 cycle track); C for bus route; and N for none.

\*Proposed bike facilities from 2017 Bike Plan.

EXHIBIT A  
5-YEAR STREET REHABILITATION PLAN FOR FY 2021 TO FY 2025

Revised: 10/30/2020

| Fiscal Year | Street ID | Section ID | Street Name   | From          | To             | Class | Treatment (from StreetSaver) | Updated Total Cost | District                      | P         | Mileage | Current PCI | Last M&R Date | Last Paved                 |
|-------------|-----------|------------|---------------|---------------|----------------|-------|------------------------------|--------------------|-------------------------------|-----------|---------|-------------|---------------|----------------------------|
| 2023        | 729042    | 65         | BANCROFT WAY  | SHATTUCK AVE  | FULTON ST      | C     | Heavy Rehab                  | \$ 341,126         | 4                             | 4*        | 0.09    | 41          | 8/7/1997      | MILL AND OVERLAY W/FABRIC  |
| 2023        | 729042    | 60         | BANCROFT WAY  | MILVIA WAY    | SHATTUCK AVE   | C     | Heavy Rehab                  | \$ 418,348         | 4                             | 4*        | 0.13    | 34          | 12/1/1989     | MILL AND OVERLAY W/FABRIC  |
| 2023        | 728042    | 76         | BANCROFT WAY  | TELEGRAPH AVE | BOWDITCH ST    | C     | Heavy Mtce                   | \$ 133,325         | 7                             | 4*        | 0.13    | 63          | 12/1/1990     | MILL AND OVERLAY W/FABRIC  |
| 2023        | 628042    | 78         | BANCROFT WAY  | BOWDITCH ST   | COLLEGE AVE    | C     | Heavy Mtce                   | \$ 161,036         | 7                             | 3C*       | 0.13    | 56          | 12/1/1990     | MILL AND OVERLAY W/FABRIC  |
| 2023        | 627042    | 80         | BANCROFT WAY  | COLLEGE AVE   | PIEDMONT AVE   | C     | Heavy Rehab                  | \$ 254,076         | 7                             | 3C*       | 0.13    | 28          | 12/1/1990     | MILL AND OVERLAY W/FABRIC  |
| 2023        | 728140    | 50         | DANA ST       | BANCROFT WAY  | DWIGHT WAY     | R     | Heavy Rehab                  | \$ 458,900         | 7                             | 2A to 2B* | 0.25    | 45          | 12/1/1989     | MILL AND OVERLAY W/FABRIC  |
| 2023        | 736140    | 60         | DANA ST       | DWIGHT WAY    | BLAKE ST       | R     | Light Rehab                  | \$ 91,440          | 7                             | 3E        | 0.06    | 44          | 12/1/1989     | MILL AND OVERLAY W/FABRIC  |
| 2023        | 736140    | 65         | DANA ST       | BLAKE ST      | WARD ST        | R     | Light Rehab                  | \$ 466,580         | 7                             | 3E*       | 0.25    | 65          | 7/30/2008     | RECONSTRUCT STRUCTURE (AC) |
| 2023*       | 627155    | 85         | DWIGHT WAY    | HILLSIDE AVE  | DEAD END ABOVE | R     | Reconstruct                  | \$ 387,040         | 8                             | N         | 0.11    | 22          | 9/1/1993      | RECONSTRUCT SURFACE (AC)   |
| 2023*       | 627155    | 83         | DWIGHT WAY    | PIEDMONT AVE  | HILLSIDE AVE   | R     | Reconstruct                  | \$ 501,840         | 7, 8                          | N         | 0.14    | 12          | 9/1/1993      | MILL AND OVERLAY W/FABRIC  |
| 2023*       | 637217    | 80         | FOREST AVE    | COLLEGE AVE   | CLAREMONT BLVD | R     | Heavy Rehab                  | \$ 618,000         | 8                             | N         | 0.36    | 45          | 8/1/1996      | RECONSTRUCT STRUCTURE (AC) |
| 2023        | 835431    | 65         | OTIS ST       | RUSSELL ST    | ASHBY AVE      | R     | Heavy Rehab                  | \$ 224,000         | 3                             | N         | 0.13    | 49          | 4/1/2001      | RECONSTRUCT STRUCTURE (AC) |
| 2023        | 728584    | 50         | TELEGRAPH AVE | BANCROFT WAY  | DWIGHT WAY     | C     | Heavy Rehab                  | \$ 473,060         | 7                             | 3C*       | 0.25    | 39          | 7/1/1988      | MILL AND OVERLAY W/FABRIC  |
| 2023        | 319293    | 47         | HOPKINS ST    | GILMAN ST     | SACRAMENTO ST  | R     | Heavy Rehab                  | \$ 233,942         | 5                             | 3A, C     | 0.10    | 32          | 9/13/2002     | MILL AND OVERLAY W/FABRIC  |
| 2023        | 213293    | 50         | HOPKINS ST    | HOPKINS CT    | MONTEREY AVE   | C     | Light Rehab                  | \$ 87,193          | 5                             | 3A, C     | 0.05    | 59          | 9/13/2002     | MILL AND OVERLAY W/FABRIC  |
| 2023        | 213293    | 52         | HOPKINS ST    | MONTEREY AVE  | MC GEE AVE     | C     | Heavy Rehab                  | \$ 119,167         | 5                             | 2A, C     | 0.05    | 47          | 12/1/1989     | RECONSTRUCT STRUCTURE (AC) |
| 2023        | 319293    | 45         | HOPKINS ST    | NORTHSIDE AVE | PERALTA AVE    | R     | Light Mtce                   | \$ 239,587         | 1                             | N         | 0.10    | 78          | 9/13/2002     | MILL AND OVERLAY W/FABRIC  |
| 2023        | 319293    | 46         | HOPKINS ST    | PERALTA AVE   | GILMAN ST      | R     | Heavy Mtce                   | \$ 493,031         | 1, 5                          | N         | 0.27    | 58          | 9/13/2002     | MILL AND OVERLAY W/FABRIC  |
| 2023        | 319293    | 49         | HOPKINS ST    | SACRAMENTO ST | HOPKINS CT     | A     | Heavy Rehab                  | \$ 101,755         | 5                             | 3A, C     | 0.04    | 38          | 9/13/2002     | MILL AND OVERLAY W/FABRIC  |
| 2023        | 319293    | 40         | HOPKINS ST    | SAN PABLO AVE | STANNAGE AVE   | R     | Light Mtce                   | \$ 37,188          | 1                             | N         | 0.09    | 74          | 9/13/2002     | MILL AND OVERLAY W/FABRIC  |
| 2023        | 319293    | 42         | HOPKINS ST    | STANNAGE AVE  | NORTHSIDE AVE  | R     | Heavy Mtce                   | \$ 181,658         | 1                             | N         | 0.17    | 69          | 9/13/2002     | MILL AND OVERLAY W/FABRIC  |
| 2023        |           |            | CONTINGENCY   |               |                |       |                              | \$ 1,253,011       |                               |           |         |             |               |                            |
|             |           |            | TOTAL FUNDING |               |                |       |                              | \$ 7,275,303       |                               |           | 3.04    |             |               |                            |
|             |           |            |               |               |                |       |                              | 46%                | bike/ped                      |           |         |             |               |                            |
|             |           |            |               |               |                |       |                              | 55%                | bike/ped not incl contingency |           |         |             |               |                            |

\* in Fiscal Year column denotes coordination and/or cost sharing with EBMUD project

FISCAL YEAR 2023 TOTALS

| Total Estimated Cost and Miles |         |                |        |           |          |             | \$7,275,303 | 3.04 | miles |
|--------------------------------|---------|----------------|--------|-----------|----------|-------------|-------------|------|-------|
|                                | Mileage | Estimated Cost | % Cost | % Mileage | District | Cost        | Miles       |      |       |
| Arterials                      | 0.04    | \$101,755      | 2%     | 1%        | 1        | \$704,948   | 0.51        |      |       |
| Collectors                     | 0.95    | \$1,987,331    | 33%    | 31%       | 2        | \$0         | 0.00        |      |       |
| Residential                    | 2.05    | \$3,933,206    | 65%    | 67%       | 3        | \$224,000   | 0.13        |      |       |
|                                |         |                |        |           | 4        | \$759,474   | 0.23        |      |       |
| Bikeways                       | 1.34    | \$3,339,948    | 55%    | 44%       | 5        | \$788,573   | 0.37        |      |       |
| Curb Ramps                     |         | \$240,000      | 4%     |           | 6        | \$0         | 0.00        |      |       |
| Total                          |         | \$3,579,948    | 59%    |           | 7        | \$2,289,337 | 1.27        |      |       |
|                                |         |                |        |           | 8        | \$1,255,960 | 0.54        |      |       |
|                                |         |                |        |           |          | \$6,022,292 | 3.04        |      |       |

Note: Column P denotes presence of bike facility type (1 paved path, 2A 2B bike lane, 3A sign-only, 3C Sharrows, 3E bike blvd, 4 cycle track); C for bus route; and N for none.

\*Proposed bike facilities from 2017 Bike Plan.

EXHIBIT A  
5-YEAR STREET REHABILITATION PLAN FOR FY 2021 TO FY 2025

Revised: 10/30/2020

| Fiscal Year | Street ID | Section ID | Street Name       | From              | To                  | Class | Treatment (from StreetSaver) | Updated Total Cost | District | P                             | Mileage | Current PCI | Last M&R Date | Last Paved                 |
|-------------|-----------|------------|-------------------|-------------------|---------------------|-------|------------------------------|--------------------|----------|-------------------------------|---------|-------------|---------------|----------------------------|
| 2024        | 830104    | 57         | CHANNING WAY      | ROOSEVELT AVE     | MARTIN LUTHER KING  | R     | Reconstruct                  | \$ 695,500         | 4        | 3E                            | 0.19    | 1           | 9/1/1991      | MILL AND OVERLAY W/FABRIC  |
| 2024        | 830104    | 50         | CHANNING WAY      | SACRAMENTO ST     | ROOSEVELT AVE       | R     | Heavy Rehab                  | \$ 696,780         | 4        | 3E                            | 0.31    | 22          | 9/1/1991      | MILL AND OVERLAY W/FABRIC  |
| 2024        | 111127    | 10         | CRESTON RD        | GRIZZLY PEAK BLVD | SUNSET LANE         | R     | Heavy Mtce                   | \$ 93,378          | 6        | N                             | 0.36    | 63          | 6/1/1995      | RECONSTRUCT STRUCTURE (AC) |
| 2024        | 115127    | 20         | CRESTON RD        | SUNSET LANE       | GRIZZLY PEAK BLVD   | R     | Heavy Mtce                   | \$ 116,258         | 6        | N                             | 0.36    | 64          | 11/1/1988     | RECONSTRUCT SURFACE (AC)   |
| 2024        | 322142    | 48         | DELAWARE ST       | ACTON ST          | SACRAMENTO ST       | C     | Heavy Mtce                   | \$ 108,175         | 1        | 4*                            | 0.13    | 61          | 10/1/1992     | MILL AND OVERLAY W/FABRIC  |
| 2024        | 636146    | 78         | DERBY ST          | HILLEGASS AVE     | COLLEGE AVE         | R     | Reconstruct                  | \$ 577,560         | 8        | 3E*                           | 0.14    | 25          | 8/8/1997      | MILL AND OVERLAY W/FABRIC  |
| 2024        | 729152    | 60         | DURANT AVE        | MILVIA ST         | SHATTUCK AVE        | C     | Reconstruct                  | \$ 693,355         | 4        | N                             | 0.13    | 11          | 11/1/1992     | MILL AND OVERLAY W/FABRIC  |
| 2024        | 111249    | 17         | GRIZZLY PEAK BLVD | KEELER AVE        | MARIN AVE           | C     | Reconstruct                  | \$ 859,622         | 6        | 3C*                           | 0.27    | 19          | 10/1/1992     | MILL AND OVERLAY W/FABRIC  |
| 2024        | 739285    | 70         | HILLEGASS AVE     | ASHBY AVE         | CITY LIMIT (WOOLSEY | R     | Light Mtce                   | \$ 98,900          | 8        | 3E                            | 0.16    | 76          | 7/28/2003     | RECONSTRUCT STRUCTURE (AC) |
| 2024        | 736285    | 60         | HILLEGASS AVE     | DWIGHT WAY        | ASHBY AVE           | R     | Light Mtce                   | \$ 312,000         | 8        | 3E                            | 0.61    | 78          | 5/31/2000     | RECONSTRUCT STRUCTURE (AC) |
| 2024        | 213293    | 53         | HOPKINS ST        | MC GEE AVE        | CARLOTTA AVE        | C     | Heavy Rehab                  | \$ 149,680         | 5        | 2A, C                         | 0.06    | 45          | 12/1/1989     | RECONSTRUCT STRUCTURE (AC) |
| 2024        | 213293    | 55         | HOPKINS ST        | CARLOTTA AVE      | JOSEPHINE ST        | C     | Heavy Rehab                  | \$ 874,580         | 5        | 2A, C                         | 0.35    | 50          | 12/1/1989     | MILL AND OVERLAY           |
| 2024        | 115344    | 80         | LATHAM LANE       | MILLER AVE        | GRIZZLY PEAK        | R     | Heavy Mtce                   | \$ 38,500          | 6        | N                             | 0.10    | 59          | 6/1/1994      | RECONSTRUCT STRUCTURE (AC) |
| 2024        | 834371    | 65         | MC GEE AVE        | DERBY ST          | RUSSELL ST          | R     | Light Rehab                  | \$ 551,992         | 3        | N                             | 0.25    | 59          | 12/10/1998    | RECONSTRUCT STRUCTURE (AC) |
| 2024        | 834371    | 60         | MC GEE AVE        | DWIGHT WAY        | DERBY ST            | R     | Light Rehab                  | \$ 374,400         | 3        | N                             | 0.26    | 51          | 7/1/1988      | THIN OVERLAY w/FABRIC      |
| 2024        | 115380    | 70         | MILLER AVE        | HILLDALE AVE      | SHASTA RD           | R     | Light Rehab                  | \$ 449,880         | 6        | N                             | 0.66    | 53          | 6/1/1994      | RECONSTRUCT STRUCTURE (AC) |
| 2024        |           |            | CONTINGENCY       |                   |                     |       |                              | \$ 584,743         |          |                               |         |             |               |                            |
|             |           |            | TOTAL FUNDING     |                   |                     |       |                              | \$ 7,275,303       |          |                               | 4.35    |             |               |                            |
|             |           |            |                   |                   |                     |       |                              | 60%                |          | bike/ped                      |         |             |               |                            |
|             |           |            |                   |                   |                     |       |                              | 65%                |          | bike/ped not incl contingency |         |             |               |                            |

FISCAL YEAR 2024 TOTALS

Total Estimated Cost and Miles

\$7,275,303 4.35 miles

|              | Mileage | Estimated Cost | % Cost | % Mileage | District | Cost        | Miles |
|--------------|---------|----------------|--------|-----------|----------|-------------|-------|
| Arterials    | 0.00    | \$0            | 0%     | 0%        | 1        | \$108,175   | 0.13  |
| Collectors   | 0.94    | \$2,685,412    | 40%    | 22%       | 2        | \$0         | 0.00  |
| Residentials | 3.41    | \$4,005,148    | 60%    | 78%       | 3        | \$926,392   | 0.51  |
|              |         |                |        |           | 4        | \$2,085,635 | 0.63  |
| Bikeways     | 2.21    | \$4,372,797    | 65%    | 51%       | 5        | \$1,024,260 | 0.41  |
| Curb Ramps   |         | \$474,000      | 7%     |           | 6        | \$1,557,638 | 1.76  |
| Total        |         | \$4,846,797    | 72%    |           | 7        | \$0         | 0.00  |
|              |         |                |        |           | 8        | \$988,460   | 0.91  |
|              |         |                |        |           |          | \$6,690,560 | 4.35  |

Note: Column P denotes presence of bike facility type (1 paved path, 2A 2B bike lane, 3A sign-only, 3C Sharrows, 3E bike blvd, 4 cycle track); C for bus route; and N for none.

\*Proposed bike facilities from 2017 Bike Plan.



EXHIBIT A  
5-YEAR STREET REHABILITATION PLAN FOR FY 2021 TO FY 2025

Revised: 10/30/2020

| Fiscal Year | Street ID | Section ID | Street Name       | From           | To                 | Class | Treatment (from StreetSaver) | Updated Total Cost | District | P                             | Mileage | Current PCI | Last M&R Date | Last Paved                |
|-------------|-----------|------------|-------------------|----------------|--------------------|-------|------------------------------|--------------------|----------|-------------------------------|---------|-------------|---------------|---------------------------|
| 2025        | 729014    | 63         | ALLSTON WAY       | MILVIA ST      | SHATTUCK AVE       | R     | Heavy Rehab                  | \$ 228,800         | 4        | N                             | 0.14    | 37          | 11/1/1990     | MILL AND THIN OVERLAY     |
| 2025        | 931129    | 50         | CURTIS ST         | UNIVERSITY AVE | DWIGHT WAY         | R     | Reconstruct                  | \$ 2,009,440       | 2        | N                             | 0.57    | 9           | 8/18/1997     | MILL AND THICK OVERLAY    |
| 2025        | 834146    | 50         | DERBY ST          | SACRAMENTO ST  | MARTIN LUTHER KING | R     | Reconstruct                  | \$ 1,688,560       | 3        | 3E                            | 0.48    | 18          | 10/1/1992     | MILL AND OVERLAY W/FABRIC |
| 2025        | 736146    | 70         | DERBY ST          | FULTON ST      | TELEGRAPH AVE      | R     | Reconstruct                  | \$ 1,069,280       | 3, 7     | 3E                            | 0.31    | 13          | 10/1/1992     | MILL AND OVERLAY W/FABRIC |
| 2025        | 319241    | 40         | GILMAN ST         | SAN PABLO AVE  | SANTA FE AVE       | A     | Heavy Rehab                  | \$ 683,116         | 1        | 4*                            | 0.27    | 48          | 10/2007       | MILL AND OVERLAY          |
| 2025        | 111249    | 15         | GRIZZLY PEAK BLVD | EUCLID AVE     | KEELER AVE         | C     | Reconstruct                  | \$ 634,478         | 6        | 3E                            | 0.21    | 13          | 11/1/1990     | MILL AND THICK OVERLAY    |
| 2025        | 639671    | 78         | WOOLSEY ST        | HILLEGASS AVE  | COLLEGE AVE        | R     | Reconstruct                  | \$ 434,534         | 8        | 3A                            | 0.11    | 13          | NA            |                           |
|             |           |            | CONTINGENCY       |                |                    |       |                              | \$ 527,095         |          |                               |         |             |               |                           |
|             |           |            | TOTAL FUNDING     |                |                    |       |                              | \$ 7,275,303       |          |                               | 2.08    |             |               |                           |
|             |           |            |                   |                |                    |       |                              | 62%                |          | bike/ped                      |         |             |               |                           |
|             |           |            |                   |                |                    |       |                              | 67%                |          | bike/ped not incl contingency |         |             |               |                           |

FISCAL YEAR 2025 TOTALS

|                                       |         |                |        |           |          |             |             |  |      |       |
|---------------------------------------|---------|----------------|--------|-----------|----------|-------------|-------------|--|------|-------|
| <b>Total Estimated Cost and Miles</b> |         |                |        |           |          |             | \$7,275,303 |  | 2.08 | miles |
|                                       | Mileage | Estimated Cost | % Cost | % Mileage | District | Cost        | Miles       |  |      |       |
| Arterials                             | 0.27    | \$683,116      | 10%    | 13%       | 1        | \$683,116   | 0.27        |  |      |       |
| Collectors                            | 0.21    | \$634,478      | 9%     | 10%       | 2        | \$2,009,440 | 0.57        |  |      |       |
| Residential                           | 1.60    | \$5,430,614    | 80%    | 77%       | 3        | \$2,223,200 | 0.63        |  |      |       |
|                                       |         |                |        |           | 4        | \$228,800   | 0.14        |  |      |       |
| Bikeways                              | 1.38    | \$4,509,968    | 67%    | 66%       | 5        | \$0         | 0.00        |  |      |       |
| Curb Ramps                            |         | \$126,000      | 2%     |           | 6        | \$634,478   | 0.21        |  |      |       |
| Total                                 |         | \$4,635,968    | 69%    |           | 7        | \$534,640   | 0.15        |  |      |       |
|                                       |         |                |        |           | 8        | \$434,534   | 0.11        |  |      |       |
|                                       |         |                |        |           |          | \$6,748,208 | 2.08        |  |      |       |







FISCAL YEAR 2021-2025 TOTALS

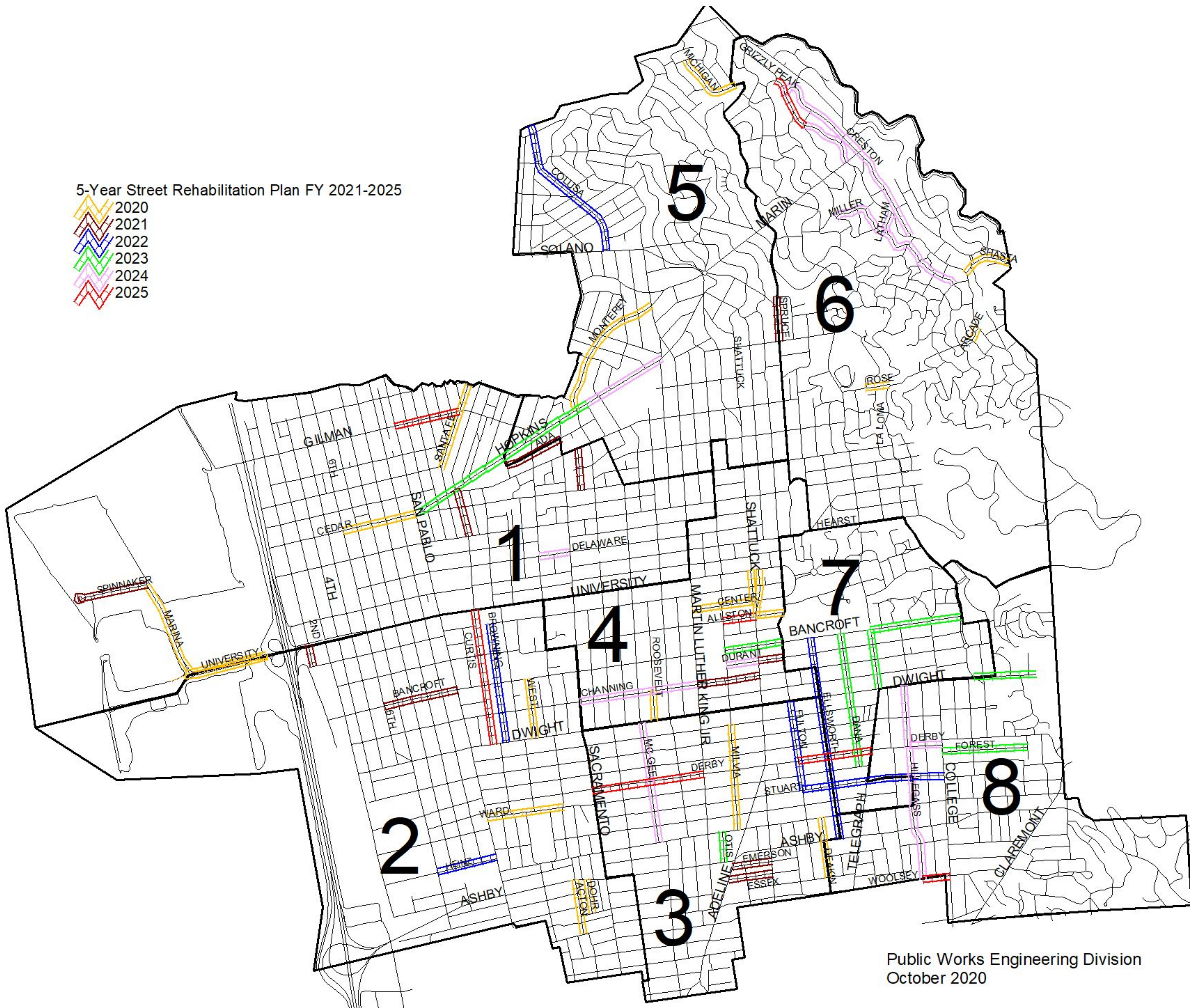
|                                       |         |                |        |           |          |               |              |  |       |       |
|---------------------------------------|---------|----------------|--------|-----------|----------|---------------|--------------|--|-------|-------|
| <b>Total Estimated Cost and Miles</b> |         |                |        |           |          |               | \$33,540,515 |  | 14.98 | miles |
|                                       | Mileage | Estimated Cost | % Cost | % Mileage | District | Cost          | Miles        |  |       |       |
| Arterials                             | 0.31    | \$784,871      | 3%     | 2%        | 1        | \$4,046,266   | 1.69         |  |       |       |
| Collectors                            | 2.88    | \$7,095,005    | 24%    | 19%       | 2        | \$4,590,248   | 1.73         |  |       |       |
| Residential                           | 11.79   | \$22,212,176   | 74%    | 79%       | 3        | \$4,620,579   | 2.38         |  |       |       |
|                                       |         |                |        |           | 4        | \$4,073,349   | 1.36         |  |       |       |
| Bikeways                              | 7.01    | \$16,411,779   | 55%    | 47%       | 5        | \$3,911,654   | 1.68         |  |       |       |
| Curb Ramps                            |         | \$1,338,000    | 4%     |           | 6        | \$2,382,033   | 2.06         |  |       |       |
| Total                                 |         | \$17,749,779   | 59%    |           | 7        | \$3,576,655   | 2.39         |  |       |       |
|                                       |         |                |        |           | 8        | \$2,891,269   | 1.70         |  |       |       |
|                                       |         |                |        |           |          | \$30,092,053  | 14.98        |  |       |       |
|                                       |         |                |        |           |          | Total Funding | \$33,540,515 |  |       |       |

Note: Column P denotes presence of bike facility type (1 paved path, 2A 2B bike lane, 3A sign-only, 3C Sharrows, 3E bike blvd, 4 cycle track); C for bus route; and N for none.

\*Proposed bike facilities from 2017 Bike Plan.

5-Year Street Rehabilitation Plan FY 2021-2025

-  2020
-  2021
-  2022
-  2023
-  2024
-  2025



Public Works Engineering Division  
October 2020



Office of the City Manager

PUBLIC HEARING

January 26, 2021

To: Honorable Mayor and Members of the City Council

From: Dee Williams-Ridley, City Manager

Submitted by: Liam Garland, Director, Public Works

Subject: Amend BMC Chapter 14.52 Authorizing goBerkeley Parking Program at All Parking Meters

RECOMMENDATION

Conduct a public hearing, and upon conclusion adopt first reading of an Ordinance amending Berkeley Municipal Code (BMC) Chapter 14.52 to add all parking meter areas to the goBerkeley parking program, thereby authorizing the use of demand-responsive parking management citywide under the existing goBerkeley fee structure and program guidelines.

FISCAL IMPACTS OF RECOMMENDATION

There are no immediate fiscal impacts of allowing all existing parking meters to be managed under the goBerkeley program. The attached Ordinance makes all meters in the City eligible for demand-responsive rate adjustments under existing goBerkeley program guidelines.

CURRENT SITUATION AND ITS EFFECTS

Prior to March 2020, the City of Berkeley's parking meters were managed in two ways:

- In goBerkeley program areas, prices were set based on observed parking demand, increasing or decreasing rates to achieve 65-85% optimal parking occupancy.<sup>1</sup> goBerkeley areas specified in BMC Chapter 14.52.010 include the Downtown Berkeley, Southside/Telegraph, Elmwood, Euclid/Hearst, and North Shattuck commercial districts.
- In all other metered commercial areas, the price was set at a flat rate of \$1.50/hour.

In response to the ongoing pandemic and its resulting effects on the local economy, the City's parking meters have been managed under emergency guidelines, allowing maximum flexibility in the face of unpredictable circumstances. After several weeks of providing parking at no charge, prices resumed at \$0.50/hour at all meters citywide on

<sup>1</sup> Periodic program adjustments were made in compliance with the July 12, 2016 Resolution No. 67,613-N.S. that specifies how demand-responsive on-street and off-street parking is implemented within goBerkeley parking program areas. Resolution available at <https://bit.ly/3kJoevl>.

June 1, 2020. Since then, rates have been periodically adjusted based on observed parking occupancy levels as the economy gradually reopens. Prices have ranged from \$0.50/hour in areas of lower demand to \$3.00/hour in Downtown Berkeley, where demand grew the most last fall. In December, the City lowered parking rates in Downtown Berkeley to reflect changing demand due to reimposed restrictions. Current prices are provided on the City's website and are updated prior to adjustments going into effect.<sup>2</sup> All prices are displayed on parking meter screens and the ParkMobile contactless payment app.

Staff have managed pricing since June 2020 in keeping with existing goBerkeley program guidelines, adjusting rates in discrete commercial districts by increments of no more than \$0.50 when parking is too full. Under emergency conditions, demand-responsive pricing is proving successful in managing demand both in existing goBerkeley areas and in metered areas previously set at a flat rate.

After the most recent price adjustment on November 2, 2020, nearly half of all metered spaces in the City were cheaper than the standard \$1.50 rate defined in BMC 14.52.120, with one-third of parking meters set at the lowest rate of \$0.50/hour. While these prices are subject to change as the economy recovers and localized parking demand returns, it is likely that the \$1.50/hour rate may have been too high for some commercial areas prior to the pandemic, particularly the University Avenue and San Pablo Avenue corridors.

The standard \$1.50/hour rate is also proving too low in other areas to properly manage strengthening parking demand, most notably on Fourth Street. After incremental rate adjustments, the \$1.50/hour maximum rate was reached on August 31, 2020. Recent observations indicate that on-street parking demand in this area is strong and parking remains full, despite the availability of free private off-street lots (totaling 282 spaces). This suggests that \$1.50/hour is too low a price to achieve optimum parking availability in this area.

The attached Ordinance would extend goBerkeley management to all meters in the City. This would formally authorize the current "right size" of \$0.50/hour and \$1.00/hour parking in areas of lower demand and allow staff to incrementally increase prices beyond the standard \$1.50/hour rate in districts that are too full.

Authorizing goBerkeley demand-responsive parking management citywide is a Strategic Plan Priority Project, advancing our goals to:

- provide state-of-the-art, well-maintained infrastructure, amenities, and facilities;
- foster a dynamic, sustainable, and locally-based economy; and
- be a global leader in addressing climate change, advancing environmental justice, and protecting the environment.

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<sup>2</sup> "COVID-19 Parking Information," accessed 11/17/20 via <https://bit.ly/2IBG0Es>

## BACKGROUND

The City uses parking meters to manage parking demand, particularly in commercial areas where parking availability and turnover are critical for visitor access and convenience. The goBerkeley program consists of a suite of strategies and initiatives designed to improve economic vitality and reduce greenhouse gas emissions. The program features improved parking availability that improves pedestrian and bicyclist safety by reducing the likelihood of incidents of distracted driving as drivers search for parking. Clearer signage and longer on-street parking time limits also provide better customer service.

## ENVIRONMENTAL SUSTAINABILITY

Allowing flexible parking pricing under established goBerkeley parking program guidelines improves the City's ability to manage its public parking resources, reducing traffic congestion and vehicle emissions as drivers are anticipated to spend less time searching for available parking spaces. Demand-responsive parking pricing is a proven tool that will help the City meet its established Climate Action Plan goals, including reducing transportation emissions 80% below 2000 levels by 2050.<sup>3</sup>

## RATIONALE FOR RECOMMENDATION

Under goBerkeley, staff utilize evidence-based pricing and longer time limits to achieve a host of transportation and climate benefits. As the City confronts an unpredictable set of circumstances affecting the local economy, emergency demand-responsive pricing is already proving effective in "right sizing" parking pricing in commercial districts citywide. Given ongoing health and safety concerns as the pandemic subsides, private vehicle use may temporarily increase amid declining transit ridership, underscoring the need to manage parking resources well. Formally including all parking meter areas in the goBerkeley program would provide much-needed flexibility to actively manage on-street parking as local businesses gradually reopen.

## ALTERNATIVE ACTIONS CONSIDERED

Council could choose an incremental approach, expanding to distinct commercial districts as the need arises. This strategy fared well prior to the pandemic, but emergency management is already showing the benefit of lower prices in some areas and the need for higher prices in others.

## CONTACT PERSON

Farid Javandel, Transportation Manager, Public Works (510) 981-7061  
Danette Perry, Parking Services Manager, Public Works (510) 981-7057  
Gordon Hansen, Senior Planner, Public Works (510) 981-7064

Attachments:

1: Ordinance

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<sup>3</sup> November 3, 2015 Council Worksession: <http://bit.ly/111IYVV>

2: Public Hearing Notice

ORDINANCE NO. -N.S.

AMENDING BERKELEY MUNICIPAL CODE CHAPTER 14.52 TO ALLOW  
GOBERKELEY PROGRAM IN ALL PARKING METER AREAS

BE IT ORDAINED by the Council of the City of Berkeley as follows:

Section 1. That Berkeley Municipal Code Section 14.52.010 is repealed and reenacted to read as follows:

**14.52.010 Parking meter zones.**

goBerkeley Program parking meter zones are those streets or portions of streets in the City located within the goBerkeley Areas hereinafter described as zones within which the parking of motor vehicles shall be controlled, regulated and inspected with the aid of parking meters, pay-and-display stations, and/or a City-approved software application that processes pay-by-phone payments from a mobile phone at fees set in 14.52.120:

Acton Street, both sides, from 150 feet north of University Avenue to University Avenue.

Addison Street, both sides, from Oxford Street to Martin Luther King Jr. Way.

Addison Street, north side, from Martin Luther King Jr. Way to 170 feet west of Martin Luther King Jr. Way.

Adeline Street, east side, from Ward Street to Essex Street.

Adeline Street, west side, from Russell Street to Ashby Avenue.

Alcatraz Avenue, south side, from 75 feet east of College Avenue to College Avenue.

Allston Way, both sides, from Oxford Street to Martin Luther King Jr. Way.

Ashby Avenue, both sides, from Domingo Avenue to Claremont Avenue.

Ashby Avenue, north side, from College Avenue to Benvenue Avenue.

Ashby Avenue, south side, from Benvenue Avenue to Elmwood Avenue.

Ashby Place, east side, from Ashby Avenue to a point 80 feet north of Ashby Avenue.

Bancroft Way, both sides, from Piedmont Avenue to Milvia Street.

Benvenue Avenue, west side, from Ashby Avenue to 100 feet south of Ashby Avenue.

Berkeley Square, both sides, from Addison Street to Center Street.

Berkeley Way, north side, from Oxford Street to Shattuck Avenue.

Berkeley Way, south side, from Oxford Street to 385 feet west of Shattuck Avenue.

Blake Street, both sides, from Telegraph Avenue to 125 feet west of Telegraph Avenue.

Blake Street, south side, from Shattuck Avenue to 80 feet west of Shattuck Avenue.

Bonar Street, east side, from University Avenue to 150 feet south of University Avenue.

Bonar Street, west side, from University Avenue to Addison Street.

Bonita Avenue, east side, from University Avenue to Berkeley Way.

Bowditch Street, east side, from Bancroft Way to Dwight Way.

California Street, both sides, from 100 feet north of University Avenue to 100 feet south of University Avenue.

Camelia Street, north side, from Tenth Street to Ninth Street.

Camelia Street, north side, from San Pablo Avenue to 100 feet west of San Pablo Avenue.

Center Street, both sides, from Oxford Street to Martin Luther King Jr. Way.

Channing Way, north side, from Shattuck Avenue to 250 feet west of Shattuck Avenue.

Channing Way, north side, from College Avenue to Dana Street.

Claremont Avenue, east side, from Russell Street to Ashby Avenue.

Claremont Avenue, west side, from Russell Street to Claremont Boulevard.

Colby Street, west side, from Webster Street to South Hospital Drive.

College Avenue, east side, from Bancroft Way to 200 feet south of Dwight Way.

College Avenue, west side, from Bancroft Way to Dwight Way.

College Avenue, east side, from 75 feet south of Webster Street to 175 feet north of Russell Street.

College Avenue, west side, from 140 feet north of Russell Street to Webster Street.

College Avenue, east side, from 150 feet north of Alcatraz Avenue to Berkeley-Oakland city limits south of Alcatraz Avenue.

College Avenue, west side, from Alcatraz Avenue to Berkeley-Oakland city limit, south of Alcatraz Avenue.

Colusa Avenue, east side, from Catalina Avenue to 225 feet south of Solano Avenue

Colusa Avenue, west side, from Catalina Avenue to 180 feet south of Solano Avenue.

Curtis Street, both sides, from 100 feet north of University Avenue to University Avenue.

Dana Street, both sides, from Bancroft Way to Channing Way.

Dana Street, west side, from Haste Street to 150 feet south of Haste Street.

Delaware Street, south side, from 60 feet east of Shattuck Avenue to Shattuck Avenue.

Derby Street, north side, from 150 feet east of Telegraph Avenue to 50 feet west of Telegraph Avenue.

Derby Street, south side, from 150 feet east of Telegraph Avenue to Telegraph Avenue.

Derby Street, south side, from 300 feet east of Milvia Street to Milvia Street.

Domingo Avenue, both sides, from Berkeley-Oakland city limit to Ashby Avenue.

Durant Avenue, both sides, from Fulton Street to Milvia Street.

Durant Avenue, both sides, from College Avenue to Ellsworth Street.

Dwight Way, both sides, from Fulton Street to Milvia Street.

Dwight Way, north side, from 300 feet east of Telegraph Avenue to 300 feet east of Dana Street.

Dwight Way, north side, from College Avenue to Bowditch Street.

Dwight Way, south side, from 125 feet east of Regent Street to 325 feet west of Telegraph Avenue.

Dwight Way, south side, from Benvenue Avenue to Hillegass Avenue.

Dwight Way, north side, from 40 feet east of San Pablo Avenue to San Pablo Avenue.

Eighth Street, west side, from 100 feet north of University Avenue to 200 feet south of University Avenue.

Ensenada Avenue, east side, from 66 feet north of Solano Avenue to 90 feet south of Solano Avenue.

Euclid Avenue, east side, from 135 feet north of Ridge Road to Hearst Avenue.

Euclid Avenue, west side, from 130 feet north of Ridge Road to Hearst Avenue.



Fifth Street, west side, from Virginia Street to Hearst Avenue.  
Fifth Street, both sides, from Hearst Avenue to Addison Street.  
Fourth Street, east side, from Virginia Street to Addison Street.  
Fourth Street, west side, from Cedar Street to Addison Street.  
Francisco Street, both sides, from Shattuck Avenue to 100 feet west of Shattuck Avenue.  
Fresno Avenue, east side, from Solano Avenue to 69 feet south of Solano Avenue.  
Fulton Street, both sides, from Kittredge Street to Bancroft Way.  
Fulton Street, east side, from Bancroft Way to Durant Avenue.  
Fulton Street, west side, beginning at Durant Avenue and extending south for 80 feet.  
Grant Street, both sides, from 100 feet north of University Avenue to 100 feet south of University Avenue.  
Grayson Street, south side, from San Pablo Avenue to 60 feet west of San Pablo Avenue.  
Harold Way, both sides, from Allston Way to Kittredge Street.  
Haste Street, both sides, from 250 feet east of Shattuck Avenue to Milvia Street.  
Haste Street, north side, from College Avenue to Dana Street.  
Haste Street, south side, from 300 feet east of Telegraph Avenue to 350 feet west of Telegraph Avenue.  
Haste Street, south side, from College Avenue to Bowditch Street.  
Hearst Avenue, north side, from LaLoma Avenue to Scenic Avenue.  
Hearst Avenue, south side, from Euclid Avenue to Gayley Road.  
Hearst Avenue, south side, from Oxford Street to Arch Street.  
Hearst Avenue, both sides, from Oxford Street to Shattuck Avenue.  
Hearst Avenue, north side, from Fifth Street to Third Street.  
Hearst Avenue, south side, from Sixth Street to Third Street.  
Kittredge Street, both sides, from Oxford Street to Milvia Street.  
LaLoma Avenue, both sides, from Ridge Road to Hearst Avenue.  
LeRoy Avenue, both sides, from Ridge Road to Hearst Avenue.  
Lincoln Street, south side, from Shattuck Avenue to 150 feet west of Shattuck Avenue.  
Martin Luther King Jr. Way, both sides, from Addison Street to Allston Way.  
Milvia Street, both sides, from Berkeley Way to Center Street.  
Milvia Street, east side, from Center Street to Bancroft Way.  
Milvia Street, east side from Derby Street to Ward Street.  
Modoc Street, east side, from Solano Avenue to 90 feet south of Solano Avenue.  
Modoc Street, west side, from Solano Avenue to 66 feet south of Solano Avenue.  
Ninth Street, east side, from 300 feet north of Gilman Street to Gilman Street.  
Ninth Street, west side, from 75 feet north of University Avenue to 150 feet south of University Avenue.  
Oregon Street, north side, from 75 feet east of Telegraph Avenue to 50 feet west of Telegraph Avenue.  
Oregon Street, south side, from 175 feet east of Telegraph Avenue to Telegraph Avenue.  
Oregon Street, both sides, from Shattuck Avenue to Adeline Street.

Oxford Street, both sides, from Hearst Avenue to Kittredge Street.  
Page Street, north side, from San Pablo Avenue to Tenth Street.  
Pardee Street, south side, from San Pablo Avenue extending 60 feet west of San Pablo Avenue.  
Parker Street, both sides, from 200 feet west of Regent Street to 100 feet west of Telegraph Avenue.  
Parker Street, both sides, from Shattuck Avenue to 100 feet west of Shattuck Avenue.  
Parker Street, north side, from 100 feet east of Shattuck Avenue to Shattuck Avenue.  
Regent Street, east side, from Ashby Avenue to 125 feet south of Webster Street.  
Regent Street, west side, from Ashby Avenue to South Hospital Drive.  
Ridge Road, north side, from 100 feet east of Euclid Avenue to 250 feet west of Euclid Avenue.  
Ridge Road, south side, from LeRoy Avenue to 250 feet west of Euclid Avenue.  
Rose Street, north side, from 100 feet east of Shattuck Avenue to 100 feet west of Henry Street.  
Rose Street, south side, from Walnut Street to Shattuck Place.  
Russell Street, north side, from 85 feet east of College Avenue to 175 feet west of College Avenue.  
Russell Street, south side, from 120 feet east of College Avenue to 200 feet west of College Avenue.  
Russell Street, south side, from 75 feet east of Telegraph Avenue to 100 feet west of Telegraph Avenue.  
San Pablo Avenue, both sides, from Harrison Street to Carrison Street.  
Scenic Avenue, east side, from Hearst Avenue to Ridge Road.  
Seventh Street, east side, from University Avenue to 150 feet south of University Avenue.  
Shattuck Avenue, both sides, from 100 feet north of Rose Street to University Avenue.  
Shattuck Avenue, both sides, of the east roadway, from University Avenue to Addison Street (Shattuck Square).  
Shattuck Avenue, both sides, of the west roadway, from University Avenue to Addison Street (Shattuck Square).  
Shattuck Avenue, both sides, of the east roadway, from Addison Street to Center Street (Berkeley Square).  
Shattuck Avenue, both sides, of the west roadway, from Addison Street to Center Street (Berkeley Square).  
Shattuck Avenue, both sides, from Center Street to Ashby Avenue.  
Shattuck Place, both sides, from Rose Street to Shattuck Avenue.  
Sixth Street, east side, University Avenue to Addison Street.  
Solano Avenue, both sides, from Tulare Avenue to The Alameda.  
Solano Avenue, north side, from 140 feet to 184 feet east of The Alameda.  
South Hospital Drive, south side, from Colby Street to 75 feet west of Colby Street.  
Stuart Street, north side, from 70 feet east of Shattuck Avenue to Adeline Street.  
Stuart Street, south side, from 50 feet east of Telegraph Avenue to Telegraph Avenue.  
Tacoma Avenue, both sides, from 66 feet north of Solano Avenue to Solano Avenue.

Telegraph Avenue, both sides, from Bancroft Way to Dwight Way.  
Telegraph Avenue, east side, from Dwight Way to Woolsey Street.  
Telegraph Avenue, west side, from Dwight Way to Prince Street.  
Tenth Street, west side, from 300 feet north of Gilman Street to Gilman Street.  
Tenth Street, both sides, from Gilman Street to Camelia Street.  
Tenth Street, east side, from 100 feet north of University Avenue to 100 feet south of University Avenue.  
The Alameda, east side, from Solano Avenue to Los Angeles Avenue.  
The Alameda, west side, from 90 feet north of Solano Avenue to 220 feet north of Los Angeles Avenue.  
Tulare Avenue, east side, from Solano Avenue to 90 feet south of Solano Avenue.  
University Avenue, both sides, from Oxford Street to Third Street.  
Vine Street, north side, from 75 feet east of Walnut Street to 100 feet east of Henry Street.  
Vine Street, south side, from 150 feet east of Walnut Street to 100 feet east of Henry Street.  
Virginia Street, north side, from 150 feet east of Shattuck Avenue to 150 feet west of Shattuck Avenue.  
Virginia Street, south side, from Shattuck Avenue to 125 feet west of Shattuck Avenue.  
Walnut Street, east side, from 75 feet north of Vine Street to 125 feet south of Vine Street.  
Walnut Street, west side, from Rose Street to 200 feet south of Vine Street.  
Walnut Street, both sides, from Berkeley Way to University Avenue.  
Ward Street, north side, from 300 feet east of Milvia Street to Milvia Street.  
Webster Street, both sides, from 125 feet east of College Avenue to 100 feet west of College Avenue.  
Webster Street, north side, from Colby Street to 150 feet west of Telegraph Avenue.  
Webster Street, south side, from Colby Street to 100 feet west of Telegraph Avenue.

The City Traffic Engineer shall cause parking meters and pay-and-display stations to be installed and maintained in all parking meter zones.

Section 2. That Berkeley Municipal Code Section 14.52.120 is amended to read as follows:

**14.52.120 Parking meter and Pay-and-Display Station fees.**

~~Single-space Parking~~-meter and Pay-and-Display Station fees for the [goBerkeley Program](#) parking meter zones hereinabove set forth ~~in 14.52.010~~ shall be as follows:

A. For [goBerkeley Program](#) parking meter zones set forth in [14.52.010\(A\)](#) and [14.52.010\(B\)](#):

1. Pay-and-Display Stations and credit card enabled single-space meters shall accept nickels, dimes, quarters, one dollar coins and credit/debit cards.

~~2. Single-space parking meters that accept coins only shall accept nickels, dimes and quarters.~~

~~23.~~ The minimum transaction amount for cash payment shall be five cents (\$0.05) and shall purchase a segment of time proportional to the prevailing hourly rate, rounded up to the nearest whole minute. ~~The prevailing hourly rate for meter zones specified in 14.52.010(A) shall be \$1.50 per hour.~~ The prevailing hourly rate for meter zones specified in 14.52.010(B) shall be set by section 14.52.120(B).

~~34.~~ The 12-minute minimum transaction amount for credit/debit card payment shall purchase a segment of time proportional to the prevailing hourly rate, rounded up to the nearest whole minute. ~~The prevailing hourly rate for meter zones specified in 14.52.010(A) shall be \$1.50 per hour.~~ The prevailing hourly rate for meter zones specified in 14.52.010(B) shall be set by section 14.52.120(B).

B. ~~For parking meter zones set forth in Section 14.52.010(B) (goBerkeley Program Areas):~~

At single-space meters and Pay-and-Display Stations within the goBerkeley Program parking meter zones:

1. The hourly rate may vary between \$0.50 and \$5.00 per hour effective FY 2017, between \$0.50 and \$6.00 per hour effective FY 2018, between \$0.50 and \$7.00 effective FY 2019, and between \$0.50 and \$8.00 effective FY 2020, as set by the City Manager.

2. The parking fee may be either flat rates (same rate for a specified time period e.g. 1 hour, 4 hours, all day), or may be variable rates based on time of day, length of stay, or a combination of those pricing structures, as set by the City Manager.

3. The City Manager may adjust the parking fee by increments no larger than 50 cents (\$0.50) per hour.

4. The City Manager may implement special event pricing at designated times and at designated pay-and-display stations and parking meters,

5. Adjustments to the parking fee must be supported by published data on parking usage statistics with the goal of achieving 65-85% parking occupancy of spaces as calculated in the goBerkeley Program Guidelines.

6. Adjustments to the parking fee at pay-and-display stations and parking meters must be posted to the City's website no later than 30 calendar days prior to the adjustment.

7. Parking rates may be adjusted no more frequently than once per 60 calendar days.

Section 3. Copies of this Ordinance shall be posted for two days prior to adoption in the display case located near the walkway in front of Council Chambers, 2134 Martin Luther King Jr. Way. Within 15 days of adoption, copies of this Ordinance shall be filed at each branch of the Berkeley Public Library and the title shall be published in a newspaper of general circulation.

## NOTICE OF PUBLIC HEARING BERKELEY CITY COUNCIL

### AMEND BMC CHAPTER 14.52 AUTHORIZING GOBERKELEY PARKING MANAGEMENT PROGRAM CITYWIDE

The Department of Public Works is recommending to expand the goBerkeley Parking Management Program to all parking meters in the City. Prior to the pandemic, goBerkeley included the Downtown Berkeley, Southside/Telegraph, Elmwood, Euclid/Hearst, and North Shattuck commercial areas. All other parking meters were set at a flat rate of \$1.50/hour.

Under goBerkeley, meter prices are adjusted based on how difficult or easy it is to find parking. The goBerkeley program has a goal of 65-85% parking occupancy at on-street metered areas and in off-street facilities. This is equivalent to between one and two parking spaces being available at peak hours, such as noon on weekdays.

goBerkeley pricing principles are currently guiding parking management under emergency guidelines as the City faces unprecedented and unpredictable economic conditions due to the novel coronavirus pandemic. In some areas, emergency rates are currently lower than the standard \$1.50/hour rate. This action would formalize the ability to set parking prices throughout the City based on observed parking demand as the pandemic subsides.

Commercial corridors currently zoned for metered parking that would be affected by this proposal include:

- Adeline Street from Shattuck Avenue to Essex Street
- Claremont shopping area, including the intersection of College and Alcatraz Avenues
- Fourth Street commercial district
- Telegraph Avenue from Dwight Way to Woolsey Street and side streets, including the Alta Bates Hospital area
- San Pablo Avenue from Harrison Street to Carrison Street
- Shattuck Avenue from Dwight Way to Ashby Avenue
- Solano Avenue and side streets
- University Avenue from Martin Luther King Jr. Way to 4<sup>th</sup> Street and side streets

The table below describes the current range of parking rates at meters within the goBerkeley program, per Ordinance 7498 (July 19, 2016). The table also shows the limitations on the size of rate adjustments and frequency of rate changes. Per existing program guidelines, parking rates may be adjusted by no more than \$0.50 per hour, not more often than once per 60 calendar days.

|                             |
|-----------------------------|
| <b>Non goBerkeley Areas</b> |
|-----------------------------|

|                                                  | Current     | goBerkeley Hourly Rate Range | Increment               | Frequency                                     |
|--------------------------------------------------|-------------|------------------------------|-------------------------|-----------------------------------------------|
| On-street parking meters in non goBerkeley areas | \$1.50/hour | \$0.50/hr – \$8.00/hr        | Not more than \$0.50/hr | Not more often than once per 60 calendar days |

The hearing will be held on, [date of hearing] at [6:00 p.m.] The hearing will be held via videoconference pursuant to Governor’s Executive Order N-29-20.

A copy of the agenda material for this hearing will be available on the City’s website at [www.CityofBerkeley.info](http://www.CityofBerkeley.info) as of [date of agenda posting]. **Once posted, the agenda for this meeting will include a link for public participation using Zoom video technology.**

For further information, please contact Farid Javandel at (510) 981-7061.

Written comments should be mailed directly to the City Clerk, 2180 Milvia Street, Berkeley, CA 94704, or emailed to [council@cityofberkeley.info](mailto:council@cityofberkeley.info) in order to ensure delivery to all Councilmembers and inclusion in the agenda packet.

Communications to the Berkeley City Council are public record and will become part of the City’s electronic records, which are accessible through the City’s website. **Please note: e-mail addresses, names, addresses, and other contact information are not required, but if included in any communication to the City Council, will become part of the public record.** If you do not want your e-mail address or any other contact information to be made public, you may deliver communications via U.S. Postal Service. If you do not want your contact information included in the public record, please do not include that information in your communication. Please contact the City Clerk at 981-6900 or [clerk@cityofberkeley.info](mailto:clerk@cityofberkeley.info) for further information.

**Published:** January 15 and January 22, 2021 – The Berkeley Voice  
Pursuant to Government Code 6062a

~~~~~  
I hereby certify that the Notice for this Public Hearing of the Berkeley City Council was posted at the display case located near the walkway in front of the Maudelle Shirek Building, 2134 Martin Luther King Jr. Way, as well as on the City’s website, on January 14, 2021.

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Mark Numainville, City Clerk







Cheryl Davila  
Councilmember  
District 2

ACTION CALENDAR

January 26, 2021

*(Continued from November 10, 2020)*

To: Honorable Mayor and Members of the City Council

From: Councilmember Cheryl Davila

Subject: Support Community Refrigerators

RECOMMENDATION

1. Adopt a Resolution to create an allocation of the homeless budget towards the purchasing of community refrigerators to be distributed in Council districts to provide access to food for those who have no refrigeration or may be food insecure.
2. Allocate \$8,000 of the budget for the purchasing of the refrigerators.

RATIONALE FOR RECOMMENDATION

The City of Berkeley spent \$6.5 million of the general fund to combat homelessness in 2019. The COVID-19 pandemic, the raging fires and smoke in the state of California, the unhoused community is being hit even harder. The economic challenges of businesses closing, financial strains and health concerns increasing leads to increased disparities. It is necessary to support our communities who cannot buy basic necessities for survival such as food. A district fridge would bring together our communities to aid the homeless. Moreover, this is a part of a larger goal to bridge financial inequities in the City of Berkeley.

BACKGROUND

The City of Berkeley spent close to \$20 million on providing homeless services. About \$6.5 million came from its general fund, about \$9.5 million came from regional, state, and federal funds and \$3.9 million were one-time funds from the state's Homeless Emergency Aid Program.

COVID-19 has strained access to money and resources such as food for our homeless communities. The fires and dangerous air quality have also created a need for cooled water. Health disparities increase in times of distress and hit our at-risk communities the hardest.

Implementing an accessible refrigerator program, run by each district and its neighborhoods is a step in the right direction. Several cities across the country such as Los Angeles, Oakland, and New York have already created community fridges. Businesses, organizations, and individuals work together to keep the fridges stocked with prepackaged meals, leftovers, fresh fruits and vegetables, water, and other drinks. Anyone who feels the need to can take anything they need, at any time of day.

This is essential now. Food insecurity is an issue that ravages homeless communities. Yet, in some cities, we dump more than one million tons of food into landfills . Many community fridges are located in areas with high levels of food insecurity, either in “food deserts” (neighborhoods that lack access to fresh, affordable food) or “food swamps” (neighborhoods where there is an overabundance of fast food).

In the City of Oakland, the community group “Town Fridge” has set up refrigerators in publicly accessible locations throughout Oakland. The purpose is to create a mutual aid to address food insecurities in the community. These community refrigerators have donation guidelines posted at their locations, where they accept produce, pantry staples, bottled water, prepared meals but forbid raw meat. They also require: label and dates of all perishables on food containers; placing non-perishables on the shelving outside the fridge; If a fridge is full, they ask donors to not leave the food outside the fridge, but donate the food to a nearby encampment. Many locations have outside shelving for placement of non perishable items.

Residents can also apply to be a “fridge host”, hosting a community refrigerator on their block. Since this program has been established, it is a model for other cities to implement.

Community fridges will allow 24/7 access to fresh foods to the public, while empowering people of our community.

#### FINANCIAL IMPLICATIONS

The estimated price of a low-cost fridge is approximately \$800. Purchasing one for each district of Berkeley amounts to approximately \$8,000 allocated from the budget.

This program can be at no cost to the City as residents replace their refrigerators with newer technology refrigerators, and can donate their old refrigerators to be used as Community Refrigerators.

#### ENVIRONMENTAL SUSTAINABILITY

Protecting our communities during this climate and health crisis is an act of environmental sustainability.

#### CONTACT PERSONS

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Councilmember District 2  
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[cdavila@cityofberkeley.info](mailto:cdavila@cityofberkeley.info)

Sanjita Pamidimukkala  
Eshal Sandhu  
District 2 Intern

#### ATTACHMENTS:

1. Resolution
2. Four Pictures from Deputy City Manager Paul Buddenhagen of Community Fridge at 59th and Marshall

#### REFERENCES:

1. Oakland Town Fridge <https://linktr.ee/townfridge>



# TOWN FRIDGE

Current Locations:

**NORTH OAKLAND**  
+59th Street,  
in between Marshall  
and Fremont

**WEST OAKLAND**  
+Linden Street, Past 30th  
+16th Street and West  
+14th Street and Peralta

**DOWNTOWN**  
+Broadway and 15th  
Street, in the plaza

**OPEN 24/7**

**WE KEEP US FED**

**FREE FOOD**

**THIS ISN'T CHARITY  
THIS IS MUTUAL AID**

**COMIDA GRATIS**

TAKE WHAT YOU NEED - LEAVE WHAT YOU DON'T

---

## TOWN FRIDGE DONATION GUIDELINES

**OPEN 24/7**

We Accept:  
Produce  
Pantry Staples  
Bottled Water  
Prepared Meals  
**NO RAW MEAT**

**WE KEEP US FED**

**THIS ISN'T CHARITY THIS IS MUTUAL AID**

Label and date all perishables on the container.  
Put non-perishables on the shelving outside the fridge.  
If a fridge is full, do not leave your donation! Check another fridge location, see if there is a nearby encampment or people who would want the food. If they say no, or you cannot find anyone, please take it home and do not leave it outside the fridge.  
Spread the love! If you have a big donation of the same items, spread it across several fridges.  
Tag @townfridge on Instagram when you make a donation, so we can keep track of donations and give live updates.  
Take what you need, leave what you can.





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

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF BERKELEY, CALIFORNIA,  
PROVIDING OUR HOUSELESSNESS COMMUNITY WITH DISTRICT REFRIGERATORS

WHEREAS, The City of Berkeley spent close to \$20 million on providing homeless services. About \$6.5 million came from its general fund, about \$9.5 million came from regional, state, and federal funds and \$3.9 million were one-time funds from the state's Homeless Emergency Aid Program; and

WHEREAS, COVID-19 has strained access to money and resources such as food for our homeless communities. The fires and dangerous air quality have also created a need for cooled water. Health disparities increase in times of distress and hit our at-risk communities the hardest; and

WHEREAS, Implementing an accessible refrigerator program, run by each district and its neighborhoods is a step in the right direction. Several cities across the country such as Los Angeles, Oakland, and New York have already created community fridges. Businesses, organizations, and individuals work together to keep the fridges stocked with prepackaged meals, leftovers, fresh fruits and vegetables, water, and other drinks. Anyone who feels the need to can take anything they need, at any time of day; and

WHEREAS, This is essential now. Food insecurity is an issue that ravages homeless communities. Yet, in some cities, we dump more than one million tons of food into landfills . Many community fridges are located in areas with high levels of food insecurity, either in "food deserts" (neighborhoods that lack access to fresh, affordable food) or "food swamps" (neighborhoods where there is an overabundance of fast food); and

WHEREAS, In the City of Oakland, the community group "Town Fridge" has set up refrigerators in publicly accessible locations throughout Oakland. The purpose is to create a mutual aid to address food insecurities in the community. These community refrigerators have donation guidelines posted at their locations, where they accept produce, pantry staples, bottled water, prepared meals but forbid raw meat. They also require: label and dates of all perishables on food containers; placing non-perishables on the shelving outside the fridge; If a fridge is full, they ask donors to not leave the food outside the fridge, but donate the food to a nearby encampment. Many locations have outside shelving for placement of non perishable items. Residents can also apply to be a "fridge host", hosting a community refrigerator on their block. Since this program has been established, it is a model for other cities to implement; and

WHEREAS, Community fridges will allow 24/7 access to fresh foods to the public, while empowering people of our community; and

NOW THEREFORE BE IT RESOLVED that the City Council of the City of Berkeley, California supports not only the implementation of district fridges to reduce the amount of food insecurity in the homeless community, but also the reduction of financial inequities in our city. Specifically, the Council of the City of Berkeley calls for:

1. Create an allocation of the homeless budget towards the purchasing of community refrigerators to be distributed in Council districts to provide access to food for those who have no refrigeration or may be food insecure.
2. Allocate \$8,000 of the budget for the purchasing of the refrigerators.





Cheryl Davila  
Councilmember  
District 2

ACTION CALENDAR  
January 26, 2021

To: Honorable Mayor and Members of the City Council  
From: Councilmembers Cheryl Davila (Author)  
Subject: Declare Juneteenth as a City Holiday for the City of Berkeley

RECOMMENDATION

1. Adopt a resolution declaring Juneteenth as a City Holiday for the City of Berkeley
2. Send copies of this resolution to State Assemblywoman Buffy Wicks, State Senator Nancy Skinner, and United States Congresswoman Barbara Lee.

POLICY COMMITTEE RECOMMENDATION

This item expired on December 14, 2020, and is returning to Council with no action taken by the Budget and Finance Policy Committee.

BACKGROUND

Juneteenth, slaves received the news of their liberation more than two years after President Abraham Lincoln's Emancipation Proclamation went into effect on January 1, 1863; African Americans across the state were made aware of their right to freedom on June 19, 1865, when Major General Gordon Granger arrived in Galveston with federal troops to read General Order No. 3 announcing the end of the Civil War and that all enslaved people.

Governor Andrew M. Cuomo recently issued an [Executive Order](#) recognizing Juneteenth as a holiday for state employees, in recognition of the official emancipation of African Americans throughout the United States. The Governor will also advance legislation to make Juneteenth an official state holiday next year. The City of Berkeley should follow Governor Cuomo's lead and ask Governor Newsome to do the same. California has a tradition of acknowledging significant milestones in advancing the cause of freedom, and some of whom descend directly from those brave men and women that gained freedom on that day, join in celebrating the 155th anniversary of Juneteenth, an observance that commemorates the official announcement made in the State of Texas regarding the abolition of slavery and the freeing of some quarter-million African Americans.

The observance of Juneteenth honors the history, perseverance, and achievements of African Americans, and celebrates America's progress and continuing commitment to realizing the principles of liberty and equality upon which our nation was founded.

This observance is a reminder of the hardships and losses suffered by African Americans in

their struggle to attain freedom, and we pay tribute to the memory of those who made the ultimate sacrifice in this quest; through their experiences and those of others who were successful in achieving victory, we find among the most poignant and valuable lessons of humankind that continue to resonate with people of all backgrounds.

The official emancipation of African Americans throughout the United States literally and figuratively opened doors of opportunity that enabled following generations to contribute immeasurably to our nation's richness, equality of citizens, and global leadership, and today communities across our state – from Brooklyn to Buffalo – mark the anniversary of Juneteenth with appropriate commemoration.

Juneteenth is not just a Black liberation day, but a day of American liberation in a deep sense possibly further than the Fourth of July. It is fitting that all join to commemorate such an important day in our nation's history, as we take this opportunity to reflect upon and rejoice in the freedom and civil rights that we all share as Americans.

The City of Berkeley for decades has celebrated Juneteenth on the streets on Adeline and Martin Luther King Jr. Way. Berkeley has recognized Malcolm X Birthday Day as a City Holiday, and it is time Juneteenth is added to be recognized as a City Holiday.

#### FISCAL IMPACTS OF RECOMMENDATION

None.

#### ENVIRONMENTAL SUSTAINABILITY

Protecting our communities during this climate and health crisis is an act of environmental sustainability.

#### CONTACT PERSON

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#### ATTACHMENTS

1. Resolution

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

A RESOLUTION OF THE CITY COUNCIL FOR THE CITY OF BERKELEY DECLARING JUNETEENTH AS A CITY HOLIDAY.

WHEREAS, Juneteenth, slaves received the news of their liberation more than two years after President Abraham Lincoln's Emancipation Proclamation went into effect on January 1, 1863; African Americans across the state were made aware of their right to freedom on June 19, 1865, when Major General Gordon Granger arrived in Galveston with federal troops to read General Order No. 3 announcing the end of the Civil War and that all enslaved people; and

WHEREAS, Governor Andrew M. Cuomo recently issued an [Executive Order](#) recognizing Juneteenth as a holiday for state employees, in recognition of the official emancipation of African Americans throughout the United States. The Governor will also advance legislation to make Juneteenth an official state holiday next year. The City of Berkeley should follow Governor Cuomo's lead and ask Governor Newsome to do the same. California has a tradition of acknowledging significant milestones in advancing the cause of freedom, and some of whom descend directly from those brave men and women that gained freedom on that day, join in celebrating the 155th anniversary of Juneteenth, an observance that commemorates the official announcement made in the State of Texas regarding the abolition of slavery and the freeing of some quarter-million African Americans; and

WHEREAS, The observance of Juneteenth honors the history, perseverance, and achievements of African Americans, and celebrates America's progress and continuing commitment to realizing the principles of liberty and equality upon which our nation was founded; and

WHEREAS, This observance is a reminder of the hardships and losses suffered by African Americans in their struggle to attain freedom, and we pay tribute to the memory of those who made the ultimate sacrifice in this quest; through their experiences and those of others who were successful in achieving victory, we find among the most poignant and valuable lessons of humankind that continue to resonate with people of all backgrounds; and

WHEREAS, This observance is a reminder of the hardships and losses suffered by African Americans in their struggle to attain freedom, and we pay tribute to the memory of those who made the ultimate sacrifice in this quest; through their experiences and those of others who were successful in achieving victory, we find among the most poignant and valuable lessons of humankind that continue to resonate with people of all backgrounds; and

WHEREAS, The official emancipation of African Americans throughout the United States literally and figuratively opened doors of opportunity that enabled following generations to contribute immeasurably to our nation's richness, equality of citizens, and global leadership, and today communities across our state – from Brooklyn to Buffalo – mark the anniversary of Juneteenth with appropriate commemoration; and

WHEREAS, Juneteenth is not just a Black liberation day, but a day of American liberation in a

deep sense possibly further than the Fourth of July. It is fitting that all join to commemorate such an important day in our nation's history, as we take this opportunity to reflect upon and rejoice in the freedom and civil rights that we all share as Americans; and

WHEREAS, The City of Berkeley for decades has celebrated Juneteenth on the streets on Adeline and Martin Luther King Jr. Way. Berkeley has recognized Malcolm X Birthday Day as a City Holiday, and it is time Juneteenth is added to be recognized as a City Holiday; and

NOW, THEREFORE, BE IT RESOLVED that the City Council for the City of Berkeley recognize June 19 of every year as Juneteenth, which shall be a holiday for city employees, who if not required to work, shall be entitled to leave at full pay without charge to existing accruals and for those employees who are required to work, they shall receive one day of compensatory time.

BE IT FURTHER RESOLVED that copies of this resolution are sent to State Assemblywoman Buffy Wicks, State Senator Nancy Skinner, and United States Congresswoman Barbara Lee.



Public Works Commission  
 Disaster & Fire Safety Commission  
 Transportation Commission

INFORMATION CALENDAR  
 January 26, 2021

To: Honorable Mayor and Members of the City Council

From: Public Works Commission, Disaster & Fire Safety Commission,  
 Transportation Commission

Submitted by: Shane Krpata, Chairperson, Utility Undergrounding Subcommittee  
 Matthew Freiberg, Chairperson, Public Works Commission  
 Gradiva Couzin, Chairperson, Disaster & Fire Safety Commission  
 Barnali Ghosh, Chairperson, Transportation Commission

Subject: Report for Phase 3 Study to Underground Utility Wires in Berkeley

INTRODUCTION

Climate changes continue to threaten Berkeley with risks of wildland urban interface fires. Undergrounding overhead utility wires is an important tool to reduce the risks.

CURRENT SITUATION AND ITS EFFECTS

The attached document is the Phase 3 Study of the City Council referral. This work was completed at the end of 2019, and the report was approved by the Public Works Commission on November 7, 2019, Transportation Commission on January 16, 2020, and Disaster and Fire Safety Commission on February 26, 2020. It was scheduled to be presented to Council in March 2020 and has been delayed because of the Covid-19 pandemic emergency. The Commissions are providing it now as an informational item and are making the following recommendations.

1. The participating commissions encourage the continuation of studying undergrounding as an option to save lives. Our climate is in a crisis and the devastation caused by wildfires is increasing each year.
2. Further studying of undergrounding shall be conducted within the work scope of the Vision 2050 initiative. The initiative was approved by Council in September 2020 and is being implemented.
3. This transmittal closes out the Council referral from December 2014.

**Public Works Commission** discussed the recommendations at its November 7<sup>th</sup>, 2019 meeting and a motion was made to approve the report pending the inclusion of the items in the meeting minutes of this conversation.

**Action:** It was Moved/Seconded (Erbe/Constantine) to “Approve the Utilities Undergrounding Subcommittee Report pending the inclusion of the items in the meeting minutes of this conversation.”

**Vote:** Aye - 9; Nay - 0; Abstain - 0; Absent - 0

**Outcome:** Unanimous Agreement

**Transportation Commission** discussed the recommendations at its January 16<sup>th</sup>, 2020 meeting and a motion was made to approve forwarding the Utilities Undergrounding Subcommittee Report to City Council.

**Action:** It was Moved/Seconded (Parolek/Zander) to “Approve forwarding the Utilities Undergrounding Subcommittee Report to City Council.”

**Vote:** Aye - 7; Nay - 0; Abstain - 0; Absent - 2

**Outcome:** Unanimous Agreement

**Disaster & Fire Safety Commission** discussed the recommendations at its February 26<sup>th</sup>, 2020 meeting and a motion was made to approve forwarding the Report for Phase 3 Study to Underground Utility Wires in Berkeley to the City Council.

**Action:** It was Moved/Seconded (Degenkolb/Grimes) to “Approve forwarding the Report for Phase 3 Study to Underground Utility Wires in Berkeley to the City Council.”

**Vote:** Aye - 9; Nay - 0; Abstain - 0; Absent - 0

**Outcome:** Unanimous Agreement

The Public Works Commission, Transportation Commission, and Disaster & Fire Safety Commission each voted and unanimously agreed to forward the Phase 3 Study to Council.

## BACKGROUND

The City Council, at its meeting December 16, 2014, referred to the Public Works, Disaster and Fire Safety and Transportation Commissions to develop a comprehensive plan for the funding of the undergrounding of utility wires on all major and collector streets in Berkeley. The arterial and collector streets were identified as a priority for the movement of emergency vehicles and the evacuation of residents in the event of a major disaster. The commissions organized a four-phase work plan consisting of: 1) baseline study to summarize Berkeley’s status on undergrounding, 2) conceptual study to determine the feasibility of undergrounding, 3) financial and implementation plan to underground the recommended streets, and 4) implementation of an approved program.

The commissions presented the Phase 2 report to Council on February 27, 2018. It was well received and Council authorized proceeding with the Phase 3 study.

ENVIRONMENTAL SUSTAINABILITY

Undergrounding utility wires is environmentally sustainable by providing space for large trees and green infrastructure while improving public safety and energy reliability by substantially reducing the likelihood of downed wires and network disruptions along emergency evacuation corridors.

POSSIBLE FUTURE ACTION

It is important to recognize that undergrounding utility wires on evacuation routes must be only one component of a suite of actions to ensure that our community can safely escape advancing fire and first responders can access areas to fight fires. Undergrounding should be considered in combination with other actions, including but not be limited to educating the public of the risks, reducing vegetation that fuels fires, parking restrictions to provide more roadway clearance, improved road markings and signage, and more.

FISCAL IMPACTS OF POSSIBLE FUTURE ACTION

The estimated cost of the undergrounding program recommended in the Phase 3 Study is \$90M in 2019 dollars. The Subcommittee has identified multiple funding strategies, described in the Section 2 Chapter C “Funding Strategies” (p.12) of the Phase 3 Study.

CONTACT PERSON

Andrew Brozyna, Deputy Director of Public Works, 510-981-6496  
Joe Enke, Commission Secretary, Supervising Civil Engineer, 510-981-6411

Attachment:

1: Study to Underground Utility Wires in Berkeley Phase 3 Report

# STUDY TO UNDERGROUND UTILITY WIRES IN BERKELEY

## PHASE 3 REPORT

---

**PREPARED BY MEMBERS OF BERKELEY'S**

PUBLIC WORKS COMMISSION

DISASTER AND FIRE SAFETY COMMISSION

TRANSPORTATION COMMISSION

PUBLIC WORKS DEPARTMENT



Downed power poles and lines in 2017 Tubbs Fire  
Photo by LA Times

February 2020



# ACKNOWLEDGEMENTS

## Participating Commissions

The following Commissioners participated in the preparation of this report:

Public Works Commission

Shane Krpata, Sachu Constantine and former commissioners Nic Dominguez, Larry Henry and Ray Yep

Disaster and Fire Safety Commission

Paul Degenkolb, Bob Flasher and former commissioner Victoria Legg

Transportation Commission

Tony Bruzzone

## City of Berkeley

Phil Harrington, Public Works Director

Andrew Brozyna, Deputy Public Works Director

Keith May, Berkeley Fire Department

Hamid Mostowfi, Transportation Department

Ray Yep, Public Works Department program specialist

## Other Participants

Charles Scawthorn, Earthquake and Fire Risk mitigation specialist

Marvin Snow, Berkeley Citizens for Utility Undergrounding

Gordon Wozniak, Former City Councilmember

Bellecci & Associates

# TABLE OF CONTENTS

## Executive Summary

|   |           |
|---|-----------|
| <b>1. Introduction and Background</b>                         |           |
| A. City Council Referral .....                                | 8         |
| B. Phase 3 Study Work Scope .....                             | 8         |
| <b>2. Phase 3 Study Findings</b>                              |           |
| A. Undergrounding Along Key Evacuation Routes .....           | 10        |
| B. Estimated Cost of Undergrounding .....                     | 14        |
| C. Funding Strategies .....                                   | 15        |
| <b>3. Framework for Berkeley's Infrastructure Development</b> |           |
| A. Resilience Strategy .....                                  | 24        |
| B. Vision 2050 .....  | 25        |
| C. A Time of Transition .....                                 | 26        |
| D. What is the Broader Context for Undergrounding? .....      | 27        |
| <b>4. Recommended Undergrounding Program</b>                  |           |
| A. A Long-term Vision for Undergrounding in Berkeley .....    | 30        |
| B. Program to Underground the Key Evacuation Routes .....     | 30        |
| <b>5. Recommended Next Steps .....</b>                        | <b>34</b> |

## Appendices

|  |  |
|--|--|
| A. Baseline Study for the Development of a Utility Undergrounding Program, Harris & Associates, July 2016                              |  |
| B. Fire Risks and Mitigation Measures  |  |
| C. Declaring Wildfire Prevention and Safety a Top Priority in the City of Berkeley, October 2019                                       |  |
| D. Map of Utilities Undergrounded in Berkeley  |  |
| E. Projected Costs of Undergrounding Utilities Along City of Berkeley's Evacuation Routes, by Bellecci & Associates, January 2020      |  |
| F. A Natural History of the Wooden Utility Pole, California Public Utilities Commission, July 2017                                     |  |
| G. Energy Division's Staff Proposal for Rule 20 Program Reform and Enhancements, California Public Utilities Commission, February 2020 |  |

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## EXECUTIVE SUMMARY

In 2014, Berkeley's City Council issued a referral to "develop a comprehensive plan for the funding of the undergrounding of utility wires on all major arterial and collector streets in Berkeley" to the Public Works, Transportation and Disaster and Fire Safety Commissions. Results of the Phase 1 and 2 studies were presented to Council in February 2018.

The history of undergrounding in Berkeley dates back to the 1970's. Currently, 49% of arterial streets, 31% of collector streets and 7% of residential streets are undergrounded. The major streets undergrounded include San Pablo Avenue, University Avenue, MLK Way (part), Shattuck Avenue, Solano Avenue and Telegraph Avenue.

This report represents the results of our Phase 3 study. It is important to note that throughout this effort, the group was guided by the goals of **safety, equity, resilience and future technologies**.

### Phase 3 Study Findings

The Phase 3 study identified the arterial and collector streets for undergrounding, updated the estimated costs and further studied the funding options. The basis for our understanding of the hazards facing the City and the mitigation strategies are stated in the 2019 Local Hazard Mitigation Plan.

The major arterial and collector streets to underground utilities were identified through discussions with Berkeley's Fire Department and a review of Berkeley's evacuation plan. The main purpose of undergrounding is to support public safety through ingress of first responders and egress of community members in the event of a major disaster. The routes selected for this study are mostly east/west plus two north/south routes. These routes are:

- Alcatraz/Claremont Avenues
- Ashby/Tunnel Road
- Cedar Street
- Gilman/Hopkins Streets
- Marin Avenue
- Grizzly Peak Blvd.
- Spruce/Oxford/Rose Streets

Bellecci & Associates was retained to update the cost estimate for the selected streets for undergrounding. The estimated cost is \$90 million for the 15.1 miles of undergrounding. The cost is in 2019 dollars and the average cost is \$6.0 million per mile. The cost estimate is inclusive of trenching, conduits, wiring, service conversions, street lighting and engineering.

### Framework for Berkeley's Future Infrastructure Development

Understanding the big picture of Berkeley's current infrastructure condition and the framework for its future development is important and useful. As the Subcommittee has worked over the past five years in carrying out the Council referral, many initiatives are in development:

- Resilience Strategy
- Vision 2050
- We are in a time of transition in electric power delivery

- CPUC re-evaluation of Rule 20

The recent publication of the CPUC’s report “Staff Proposal for Rule 20 Program Reform and Enhancements” in February 2020 include the following recommendations:

- Refine and expand the Rule 20 public interest criteria
- Modify Rule 20B to incorporate tiered ratepayer contributions commensurate with public benefit
- Sunset the Rule 20A and 20D programs as currently designed
- Incentivize municipal utility surcharge undergrounding programs
- Eliminate work credit trading with limited exceptions
- Modify the Rule 20A annual completion and allocation reports
- Adopt an updated Rule 20 guidebook
- Improve communications with the communities and publish relevant Rule 20 program information, documents and reports online
- Implement incentives to reduce project completion timelines and costs

What does this broader context mean to this study on undergrounding? The Resilience Strategy and Vision 2050 initiative is leading us to “*move beyond business-as-usual and accelerate the building of climate-smart, technologically-advanced, integrated, and efficient infrastructure in Berkeley*”. The use of wooden poles dates back to the 1840’s when the telegraph system was developed. New cities and developments have their utilities underground. Continuing the use of an overhead system is continuing to use old technology. Converting to undergrounded systems supports Berkeley to do the following:

- Meet our climate action goals with reliable electrical distribution
- Add to our quality of life, including public safety
- Support broadband expansion and other integrated needs in our public right of way
- Use new technology

### Recommended Undergrounding Program

We propose the following long-term vision for undergrounding in Berkeley.

| Undergrounding Development Phase | Timeframe, year   | Description   |
|----------------------------------|-------------------|---|
| Previous work                    | 1970’s – present  | 49% of arterial streets and 31% of collector streets are already undergrounded.   |
| Near term                        | 2020 - 2040       | Underground key evacuation routes as described in this report. The work will be done in about 15 years.   |
| Near term                        | 2020 – continuing | Create and implement a Rule 20B program that includes a revolving fund to provide for upfront costs of proposed projects. Once a 20B project is approved by a vote of the parcel owners, the advanced upfront funds will be returned to the revolving fund. |
| Long term                        | 2040 - 2070       | Underground Berkeley citywide.  |

The Subcommittee proposes a 15-year program to underground the key evacuation routes, as follows.

| Year | Street                        | Section  | Council districts |
|------|-------------------------------|--|-------------------|
| 1    | Dwight Way                    | Fernwald Rd. to Shattuck Ave.                            | 3, 4, 7, 8        |
| 2    | Dwight Way                    | Shattuck Ave. to San Pablo Ave.                          | 2, 3, 4           |
| 3    | Marin Avenue                  | Tulare Ave. to Grizzly Peak Blvd.                        | 5, 6              |
| 4    | Grizzly Peak Blvd.            | Spruce St. to Marin Ave.                                 | 6                 |
| 5    | Grizzly Peak Blvd.            | Marin Ave. to Arcade Ave.                                | 6                 |
| 6    | Ashby Ave., Tunnel Road       | Vicente Rd to Telegraph Ave.                             | 7, 8              |
| 7    | Ashby Ave.                    | Telegraph Ave. to San Pablo Ave.                         | 2, 3, 7           |
| 8    | Cedar Street                  | La Loma Ave. to MLK Way                                  | 4, 5 6            |
| 9    | Cedar Street                  | MLK Way to San Pablo Ave.                                | 1, 5              |
| 10   | Hopkins Street                | Sutter St. to Gilman St.                                 | 5                 |
| 11   | Gilman Street                 | Gilman St. to San Pablo Ave.                             | 1, 5              |
| 12   | Spruce Street                 | Grizzly Peak Blvd. to Rose St.                           | 5, 6              |
| 13   | Rose Street, Oxford Street    | Rose from Spruce to Oxford and Oxford from Rose to Cedar | 5                 |
| 14   | Claremont Ave., Alcatraz Ave. | Ashby Ave. to Telegraph Ave.                             | 8                 |
| 15   | Alcatraz Avenue               | Telegraph Ave. to San Pablo Ave.                         | 2, 3              |

This preliminary list has the following assumptions:

- The Fire Department has stated that Dwight Way is a high priority due to the risks in the Panoramic Hills area.
- Undergrounding is planned east of San Pablo Avenue because the areas west of San Pablo Avenue are subject to high groundwater levels and have ground liquefaction concerns.
- The percentage of streets in the hills is 37% and in the flat lands is 63%.

If we assume that the program will start in 2023, the estimated cost will be \$105 million in FY2023 dollars. The project team recommends the following ranking of the four financing options studied.

1. Place a parcel tax with an inflator, similar to the Library and Parks taxes, on the ballot to fund undergrounding. A parcel tax of ~10 cents/ft<sup>2</sup> will generate ~\$7.0 - 12 million/yr. over the life of the project.
2. Create an Assessment District for Utility Undergrounding, similar to the City’s recent Prop 218 Street Lighting & Storm Sewer. Although the approval threshold is lower for a Prop. 2018 fee, there are legal questions on the required nexus with the service provided.
3. Place a General Obligation bond on the ballot to authorize \$140 million to fund the total project cost over 15 years.
4. Increase the Utility User Tax from 7.5% to 12.0% (increase of 4.5%). This will produce additional revenue of ~\$9 million per year to fund the total project cost of \$140 million.

## Recommended Next Steps

The Subcommittee recommends the following next steps for Council consideration.

1. Review this report and provide direction on whether to proceed with the 15-year undergrounding program of the key evacuation routes.
2. Work with the Council's Facilities, Infrastructure, Transportation, Environment, and Sustainability Policy Committee on further development of the undergrounding program.
3. Work with the Finance Department, the Council's Budget committee, and consultant support, to refine costs and select the final funding option.
4. Implement a public engagement process in 2020.
5. Staff to prepare a Program Plan for the recommended undergrounding program.
6. Close out the original Council referral to the participating commissions. We recommend forming an Undergrounding Task Force to ensure public input in the future planning of utility undergrounding.

## Section 1

# INTRODUCTION AND BACKGROUND

## City Council Referral

The Berkeley City Council (Council) referred a request to “develop a comprehensive plan for the funding of the undergrounding of utility wires on all major arterial and collector streets in Berkeley” to the Public Works Commission, Disaster and Fire Safety Commission and the Transportation Commission on December 16, 2014.

The three commissions organized an Undergrounding Subcommittee to respond to the referral. The Subcommittee structured the study into four phases, as follows.

- Phase 1:** Conduct a baseline study to summarize Berkeley’s current status of undergrounding utilities, cost to complete the undergrounding of arterial and collector streets, and examples of where undergrounding programs have been implemented.
- Phase 2:** Conduct a conceptual study to determine the feasibility of utility undergrounding. The work included literature review, supporting studies by two Goldman School Masters candidates’ thesis projects, meetings with utility and communications service providers, and meetings with municipalities having robust undergrounding programs.
- Phase 3:** Prepare a financial and implementation plan for the recommended streets to be undergrounded.
- Phase 4:** Implement the financing, design and construction of the approved program.

The Subcommittee presented progress reports to the Council on September 29, 2015 and March 28, 2017. The 2017 report included an updated work plan, the Harris & Associates baseline study, a proposal for studies by U.C. Berkeley’s Goldman School of Public Policy graduate students, and notes from meetings held with utility and communications service providers. The Harris & Associates baseline study provides useful background information and included in Appendix A. The Council authorized the Subcommittee to complete the work through Phase 2 and to report back to them.

The Subcommittee presented the Phase 2 report to the Council on February 27, 2018. The comprehensive report was well received and Council authorized the Subcommittee to proceed with the Phase 3 study.

## Phase 3 Study Work Scope

A recommended work scope for the Phase 3 study was included in the Phase 2 report. This work was planned as a shared responsibility between the participating commissions and Public Works Department (PWD) staff. PWD did not have staff available for the work and a funding request was made to hire temporary staff. That request was approved by Council in November 2018. The PWD made attempts to retain a temporary staff person, but it was not successful due to a shortage of



qualified technical candidates. Consequently, staff procured support services from one of the City of Berkeley’s (City) on-call design firms in lieu of a temporary hire.

The Phase 3 study began at the beginning of 2019 with staffing from the PWD, Fire Department, participating commissions, and with technical expertise from Bellecci & Associates, the City’s on-call consultant. The following is a summary of the work tasks and the progress.

| Phase 3 Work Tasks   | Work Progress   |
|--|---|
| <p><b>Task 1 – Define the Phase 3 projects</b></p> <p>A. <u>Major and Collector Streets</u> – The original work scope was to identify the major east/west routes to be undergrounded that would facilitate the travel of first responders and evacuation of residents.</p> <p>B. <u>Coordinate with Microgrid Development</u> – The original work scope was to evaluate microgrids as a way to increase power reliability after a major disaster</p> <p>C. <u>Review code standards</u> – The original work scope was to evaluate codes that would limit the loads carried by utility poles.</p> | <p>This work was done with input from Berkeley’s fire department and transportation department Also, we conducted a review of other fire mitigation measures underway in the Berkeley area.</p> <p>This work will be changed to a separate study by the PWD.</p> <p>This work will be changed to a separate study by the PWD.</p> |
| <p><b>Task 2 – Develop the financing plan</b></p> <p>A. <u>Refine cost estimate for undergrounding</u>. The original work scope was to refine the cost estimates previously prepared by Harris &amp; Associates.</p> <p>B. <u>Participate in CPUC Rule 20 review</u> – The original work scope was to monitor activities with the CPUC regarding Rule 20 modifications.</p> <p>C. <u>Evaluate funding options</u>. The original work scope was to evaluate funding options for Phase 3 projects in Berkeley.</p>   | <p>This work has been done with a consultant from the City’s pre-approved consultant list and from other references.</p> <p>This work will be done by the PWD and the recommended task force.</p> <p>This work has been done.</p>   |
| <p><b>Task 3 – Conduct community input</b><br/>The original work scope was to conduct community outreach and workshops.</p>  | <p>This work will be done following Council input on this report.</p>   |
| <p><b>Task 4 – Coordinate with utilities</b><br/>The original work scope was to meet with PG&amp;E and telecom companies regarding the phase 3 projects.</p>   | <p>This work will be done at the appropriate time.</p>  |
| <p><b>Task 5 – Prepare an implementation plan</b><br/>The original work scope was to prepare an implementation plan.</p>   | <p>This work will be done following Council approval to proceed to implementation.</p>  |

## Section 2

# PHASE 3 STUDY FINDINGS

The Phase 3 study is guided by the goals of safety, equity, resilience and future technologies. This study focused on identifying the streets for undergrounding, updating the estimated costs and further studying the funding options. The findings are described in this section.

### Undergrounding Along Key Evacuation Routes

Berkeley's understanding of the hazards facing the city and the mitigation strategies to minimize the impacts to our buildings, infrastructure, community and the environment are stated in the **2019 Local Hazard Mitigation Plan, December 2019 (LHMP)**. The hazards of greatest concern include the following:

#### **Earthquake**

*We do not know when the next major earthquake will strike Berkeley. The United States Geological Survey states that there is a 72% probability of one or more M 6.7 or greater earthquakes from 2014 to 2043 in the San Francisco Bay Region.<sup>4</sup> There is a 33% chance that a 6.7 or greater will occur on the Hayward fault system between 2014 and 2043. This means that many Berkeley residents are likely to experience a severe earthquake in their lifetime.*

*In a 6.9 magnitude earthquake on the Hayward Fault, the City estimates that over 600 buildings in Berkeley will be completely destroyed and over 20,000 more will be damaged. One thousand to 4,000 families may need temporary shelter. Depending on the disaster scenario, one hundred people could be killed in Berkeley alone, and many more would be injured. Commercial buildings, utilities, and public roads will be disabled or destroyed. This plan estimates that building damage in Berkeley alone could exceed \$2 billion, out of a multi-billion dollar regional loss, with losses to business activities and infrastructure adding to this figure.*

#### **Wildland-Urban Interface Fire**

*Berkeley is vulnerable to a wind-driven fire starting along the city's eastern border. The fire risk facing the people and properties in the eastern hills is compounded by the area's mountainous topography, limited water supply, minimal access and egress routes, and location, overlaid upon the Hayward Fault. Berkeley's flatlands are also exposed to a fire that spreads west from the hills. The flatlands are densely-covered with old wooden buildings housing low-income and vulnerable populations, including isolated seniors, people with disabilities, and students.*

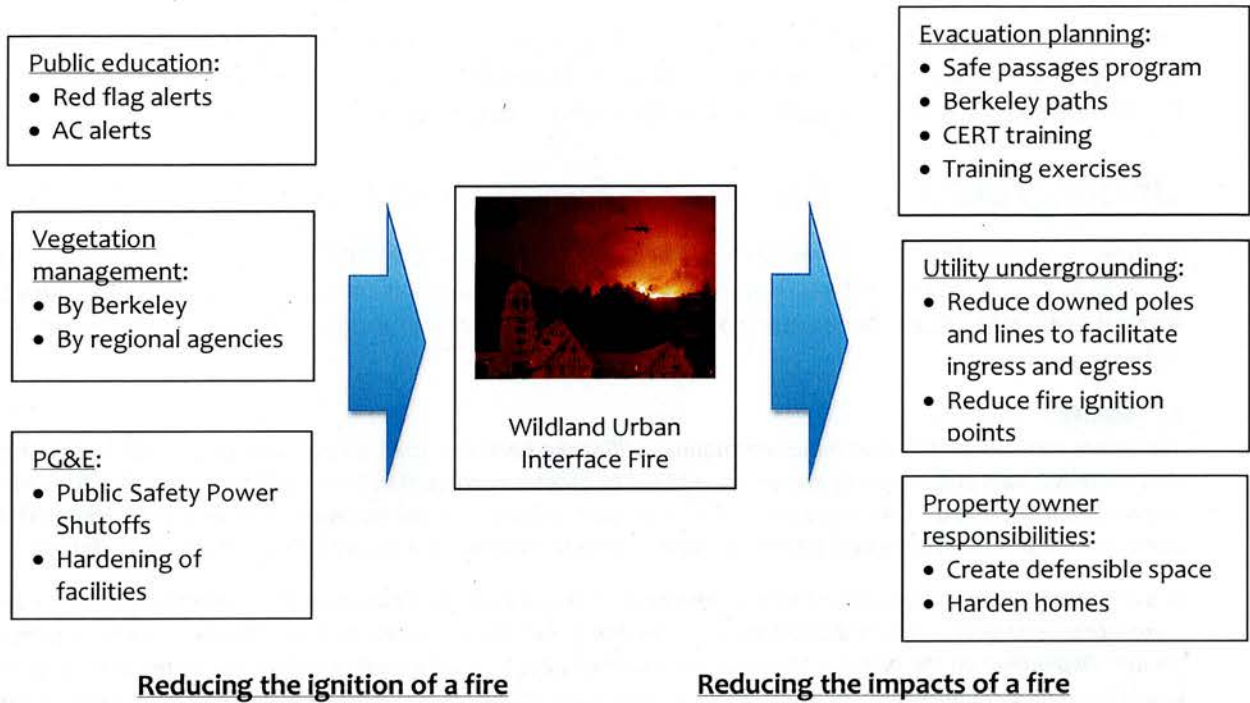
*The high risk of wildland-urban interface (WUI) fire in Berkeley was clearly demonstrated in the 1991 Tunnel Fire, which destroyed 62 homes in Berkeley and more than 3,000 in Oakland. Accounts of major wildfires in Berkeley date back to at least 1905 when a fire burned through Strawberry Canyon and threatened the University campus and the small Panoramic Hill subdivision. Other major fires occurred in the 1970s and 1980s.*

*In 1923, an even more devastating fire burned through Berkeley. It began in the open lands of Wildcat Canyon to the northeast and, swept by a hot September wind, penetrated residential north Berkeley and destroyed nearly 600 structures, including homes, apartments, fraternities and sororities, a church, a fire station.*

*If a fire occurred today that burned the same area, the loss to structures would be in the billions of dollars. Destruction of contents in all of the homes and businesses burned would add hundreds of millions of dollars to fire losses. Efforts to stabilize hillsides after the fire to prevent massive landslides would also add costs. Depending on the speed of the fire spread, lives of Berkeley residents could also be lost. Many established small businesses, homes, and multifamily apartment buildings, particularly student housing, would be completely destroyed, changing the character of Berkeley forever.*

Mitigation measures are described in the LHMP and are further describe in Appendix B of this report. The LHMP also describes Berkeley’s three tiers of hazardous fire zones.

The pathways for reducing the hazard of a wildland urban interface fire are shown below.



There are multiple cases of downed powerlines blocking critical escape routes. Images of persons trapped because of downed power lines in the 1991 Tunnel Fire are etched in our memory. One common cause of tragic death by wildfire is the inability to outrun fire because of downed power lines and poles blocking roadways. Supporting an undergrounding program for emergency routes is one tool we have to reduce loss of life in wildfires by creating safer egress for community members and ingress for first responders to protect our community.

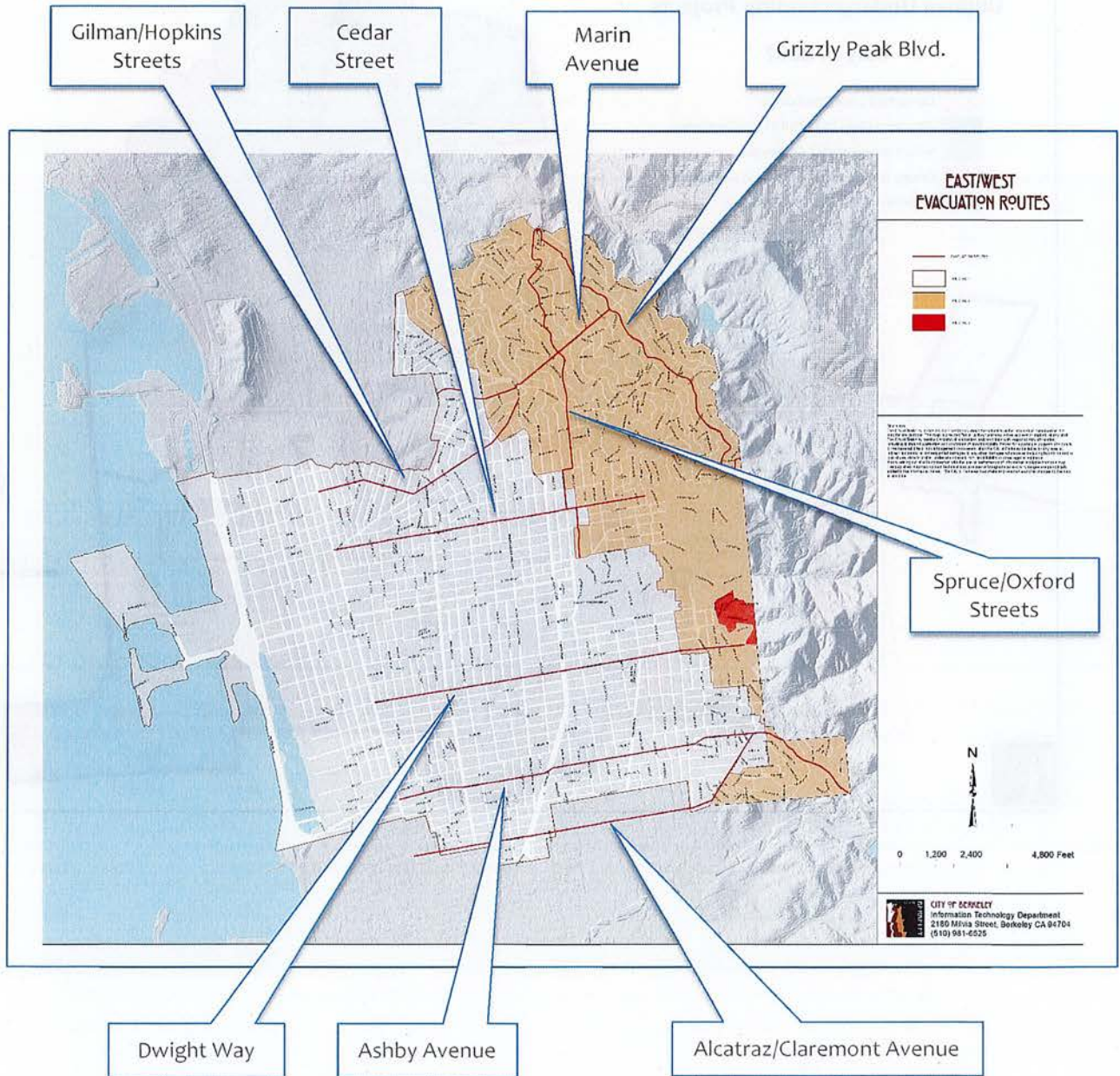
Representatives from Berkeley’s Fire Department, Public Works Transportation Department and participating commissions met to review the critical evacuation routes in the City (see Figure 3). The evaluation included the following factors:

- Realize that a major wildland fire can affect all of Berkeley, just as the Tubbs Fire did in Santa Rosa.
- Consider the criticality of the routes for ingress and egress, including movement of people north/south and east/west.
- Review any barriers to the use of these routes, including width of street, capacity or blockages.
- Review the presence of overhead utility wires and the potential to underground them.

The routes selected for this study are shown on Figure 1. Other arterial and collector streets in Berkeley, such as University Avenue, Telegraph Avenue, Shattuck Avenue, Martin Luther King Jr Way

(part) and San Pablo Avenue are already undergrounded. The history of undergrounding in Berkeley goes back at least to the 1970's. Of the 25.6 miles of arterial streets, 12.5 miles have been undergrounded (49%). Of the 36.1 miles of collector streets, 11.3 miles have been undergrounded (31%). A map showing the undergrounding completed or scheduled to be completed in Berkeley is on Figure 2 and is in Appendix D.

Figure 1 – Undergrounding Along Major Evacuation Routes



The development of these undergrounding routes assumed that those avoiding a major fire are leaving by vehicle to get to I-80. This assumption depends on the severity and spread of the fire.

Other factors include people walking to get to shelter areas, vehicles driving to shelter areas instead of I-80 and leaving the area by travelling north or south.

Figure 2 – Undergrounded Streets in Berkeley

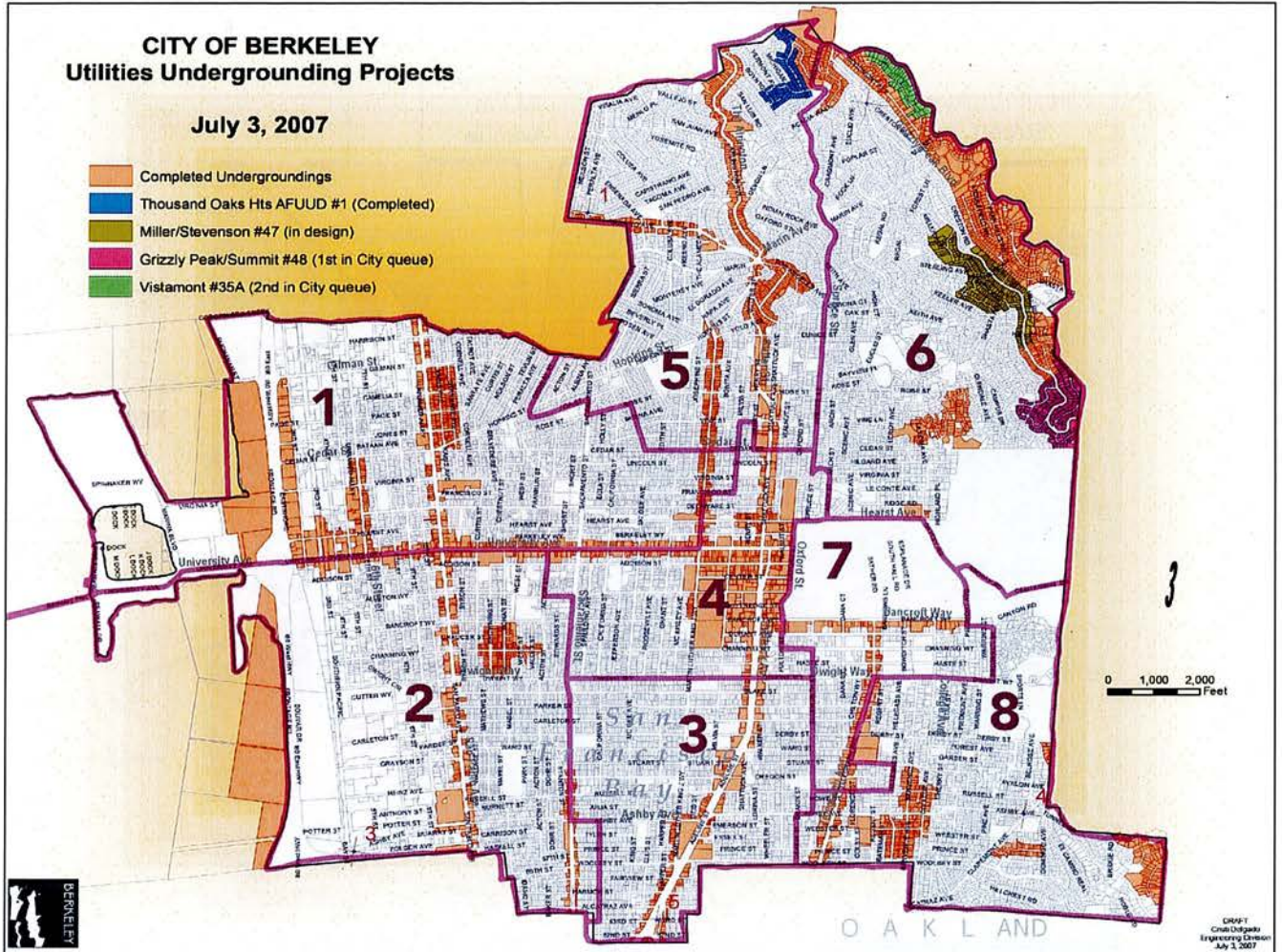
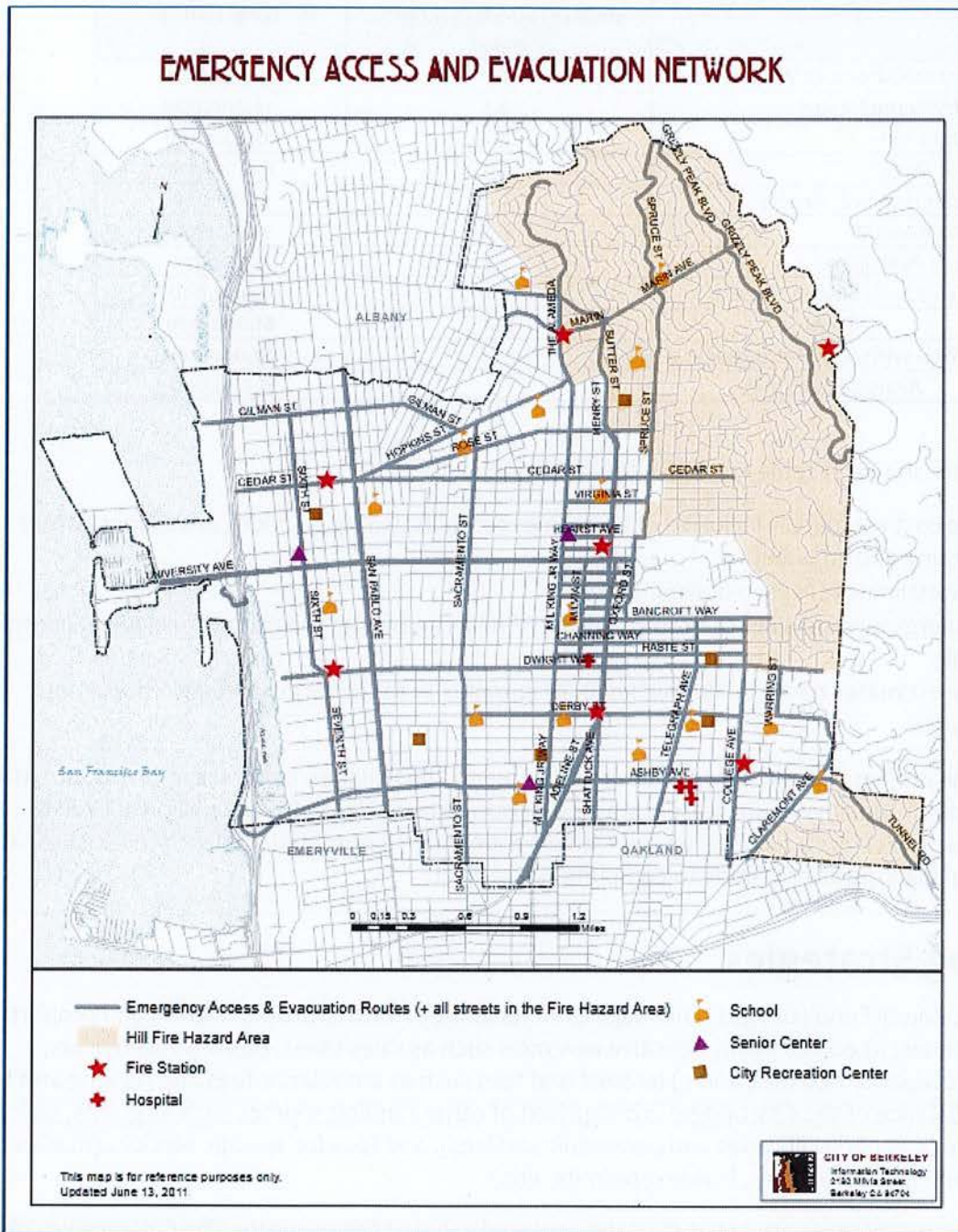


Figure 3 – Berkeley’s emergency access and evacuation network



## Estimated Cost of Undergrounding

The project team researched the cost of undergrounding from many sources. During Phase 1 of this study, an estimate was prepared by Harris and Associates. This was supplemented with the actual costs from Palo Alto, San Diego and published sources. The work scope of the Phase 3 study was to refine the cost estimates and the engineering firm Bellecci & Associates was retained to do the work. Their analysis is summarized on Table 1 and their report is included in Appendix E.

Table 1 – Estimated cost to underground overhead wires, in 2019 dollars

| Street                            | Undergrounding length, miles | Total cost, \$    |
|-----------------------------------|------------------------------|-------------------|
| Alcatraz/Claremont Avenues        | 2.3                          | 9,400,000         |
| Ashby/Tunnel Road                 | 2.2                          | 14,200,000        |
| Dwight Way                        | 2.7                          | 16,400,000        |
| Cedar Street                      | 1.9                          | 10,200,000        |
| Gilman/Hopkins Streets            | 1.4                          | 7,700,000         |
| Marin Avenue                      | 1.2                          | 7,600,000         |
| Grizzly Peak Blvd.                | 1.3                          | 6,400,000         |
| Spruce/Oxford/Rose Streets        | 2.1                          | 9,900,000         |
| <b>Total</b>                      | <b>15.1</b>                  | <b>81,800,000</b> |
| <b>Total with 10% contingency</b> |                              | <b>90,000,000</b> |
| <b>Average cost/mile</b>          |                              | <b>6,000,000</b>  |

The estimate shown in Table 1 includes the following factors:

- The cost estimate is inclusive of trenching, conduits, wiring, service conversions, street lighting and engineering.
- The estimate is in 2019 dollars.
- Undergrounding all of the routes will be done as an overall program to achieve economies of scale.
- The estimates have considered levels of complexity for undergrounding in the various streets.

Because the project will take place over 15 years, due to construction cost escalation (4%/yr.), the cost of undergrounding will increase from \$6.0 million/mile in FY2019 to ~\$12 million in FY2038. Thus, it is important to select a funding source with revenue growth potential similar to the cost escalation to avoid having insufficient funds to complete the project.

## Funding Strategies

The City's General Fund (GF) gets the majority of its money from: a) property taxes and property-based revenues; b) economically sensitive revenues such as sales taxes, business license tax, transient occupancy tax, etc.; and c) interest and fees such as ambulance fees and parking and traffic fines. The balance of the City budget is comprised of other funding sources such as grants, special tax revenue (e.g. parks, libraries and paramedic services), and fees for specific services (marina berth fees, garbage and sewer fees, building permits, etc.).

California property taxes are set at 1% of the assessed value of the property. The City receives about a third of every property tax dollar collected in Berkeley and schools get 43% of every property tax dollar. Sales tax is 9.25 cents of every dollar and the City gets 1.00 cent. Other potential sources of revenue are General Obligation (GO) Bonds and Revenue bonds. In June of 2019, Moody's Rating Agency upgraded the City's GO bonds from Aa2 to Aa1, which is the 2<sup>nd</sup> highest for long-term debt. In its credit analysis report, Moody's stated that "The City of Berkeley, CA (AA1) has a robust tax base and economy benefiting from its central Bay Area location. The city's assessed valuation (AV) is large and growing, supported by strong resident wealth indicators. The city has a very strong fiscal position, with growing revenues, high available fund balances and strong financial management policies and practices."

*The city's debt level is moderately low, but the unfunded pension liability is high, which the city is proactively addressing through establishing and funding an irrevocable pension trust."*

In summary, Berkeley has an exceptionally strong tax base and its economy benefits from its central Bay Area location. The City has a very strong financial profile, and in the last six years has significantly improved its reserve levels and liquidity.

## Financing Options for Undergrounding

### Rule 20 Funding

The California Public Utilities Commission (CPUC)'s Tariff Rule 20 is the vehicle for the implementation of underground programs. Rule 20 provides three levels, A, B, and C, of progressively diminishing ratepayer funding for the projects. There is also rule 20D adopted in 2014, which currently applies only to San Diego for undergrounding and other fire hardening techniques in their designated Very High Hazard Fire Zone. Under Rule 20, the CPUC requires the utility to allocate a certain amount of money each year for conversion projects. Upon completion of an undergrounding project, the utility records its cost in its electric plant account for inclusion in its rate base. Then the CPUC authorizes the utility to recover the cost from ratepayers until the project is fully depreciated. Rule 20 requires the utility to reallocate funds to communities having active undergrounding programs in amounts initially allocated to other municipalities but not spent. Cities may also commit to future 20A allocations for five years. The following table is a summary of the Rule 20 categories.

Table 2 -- Summary of Rule 20 Categories and Ratepayer Contribution

| Rule 20 categories | California Ratepayer Contribution | Applicability                           |
|--------------------|-----------------------------------|---|
| 20 A               | About 100%                        | Primarily ratepayer financed            |
| 20B                | 20%                               | Shared ratepayer and homeowner financed |
| 20C                | Minimal                           | Primarily homeowner financed            |
| 20D                | About 80%                         | Used by San Diego Gas & Electric        |

Two existing Rule 20A funded undergrounding districts, formed in the early 1990s, are scheduled for completion in 2020 and 2025 respectively.

- Berkeley Grizzly Peak Summit, UUD #48 – in the engineering phase
- Berkeley Vistamont, UUD#35A - in the planning phase

Both undergrounding districts have paid their share for connection from the street to service boxes and for street light replacement.

Rule 20A is the preferred option for cities because the utility pays almost all of the cost for undergrounding. Unfortunately, the funds available are very small compared to the costs of undergrounding. Berkeley's current Rule 20A allotment is ~\$0.53 million/year. The account balance as of June 30, 2019 was \$9,009,455. Most of this, if not all of it, will be used on the UUD #48 project. A 5-year borrow amounts to about \$2.6 million.

For most cities, the annual 20A allotment is inadequate to sustain an ongoing undergrounding program. Because cities and counties are able to trade or sell unallocated Rule 20A credits, some



cities selling their unused credits at a substantial discount. A recent proposal by CPUC staff is recommending discontinuation of selling or trading of unused credits. See Appendix G for this and other reforms and enhancements proposed by the CPUC staff. This was in response to a CPUC Order Instituting Rule Making issued by the CPUC in May 2017 as well as the recent audit of PG&E's Rule 20 performance.

The City rolled out 20B project guidelines in 2000 for neighborhoods interested in forming Rule 20B districts. Although many neighborhoods have expressed interest and continue to do so, one neighborhood, Thousand Oaks Heights, formed and completed an undergrounding district. In recent years, there has been a significant increase in neighborhood interest in both 20A and 20B utility undergrounding projects. A good source of information on recent neighborhood efforts can be obtained from Berkeley Citizens for Utility Undergrounding. Their website is:

[www.berkeleyundergrounding.com](http://www.berkeleyundergrounding.com)

Eleven Cities in California are leading the appeal to the CPUC to redefine eligibility for 20A funds to include and increase 20A fund allocations to communities in California's Very High Hazard Severity Fire Zones for the express purpose of fire safety. A supporting resolution was presented by the League of California Cities at their annual conference in October 2019. The League took no action on the resolution and sent it back to the Committee on Environment for further review. Despite this action, the League continues to lobby the CPUC. At its January 24, 2020 meeting, the Environmental Quality Policy Committee of the League of California Cities endorsed a proposal to revise Rule 20, specifically for hazardous fire areas.

#### **Utility User Tax, Sales Tax or Parcel Tax Funding**

Another strategy for funding undergrounding projects would be the adoption of a local sales tax, an increase in the Utility User's Tax (UUT) or a Parcel Tax that would be dedicated to funding utility undergrounding projects. All three would be a "special tax" as defined by Proposition 218 and Proposition 26 and require a 2/3 voter approval for adoption.

##### **1. Utility Users Tax**

The UUT is the 4<sup>th</sup> largest source of GF revenue for the City of Berkeley. The annual revenue has been stable between \$12 and \$15 million over the last two decades. See Figure 4. The UUT is charged at a rate of 7.5% to all users of a given utility (electricity, gas, telephone, cable, and cellular), other than the corporation providing the utility. The tax is not applicable to State, County, or City agencies, or to insurance companies and banks. About 60% of the UUT revenues are generated from gas and electric services and about 40% from telecommunications.

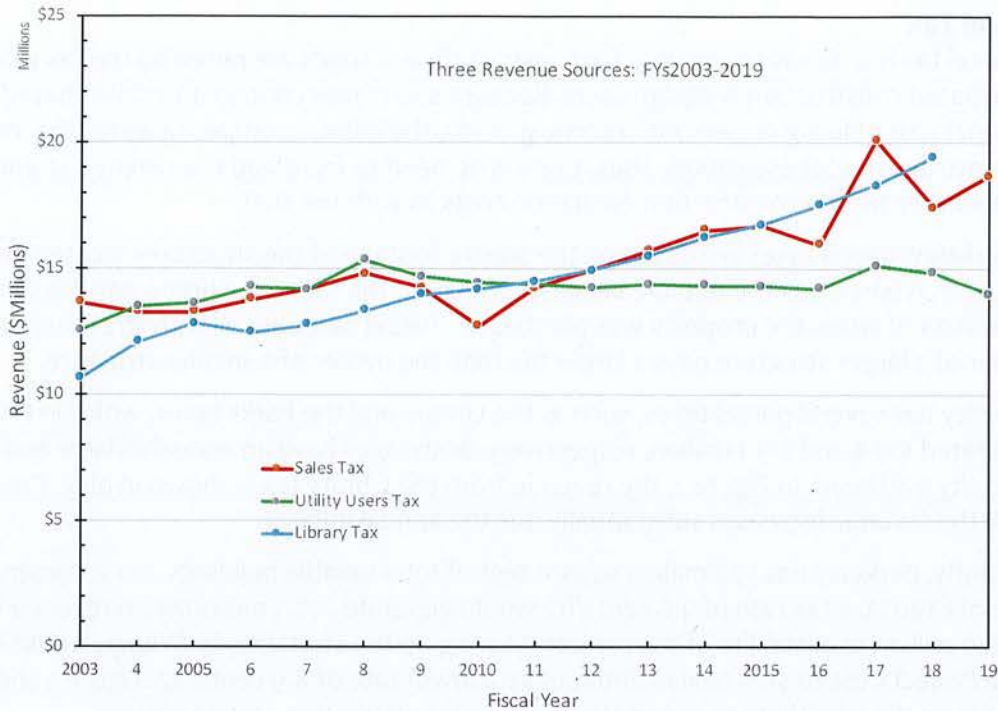


Figure 4 – Revenue from the UUT, Sales Tax, and the Library Tax for FY2003 - 2019

Because the UUT is a tax on utilities, it has an obvious nexus with undergrounding. While the 7.5% tax rate has not increased in two decades, it has little potential for future growth and has recently decreased by ~\$1 million. Thus, the UUT would have to be increased by ~4.5% percentage points to cover the substantial construction cost escalation (4%/yr.) over the lifetime of the undergrounding. A 4.5% increase would generate additional revenue of ~\$9.0-million/yr., which is required to cover the total project cost of \$139 million. See Table 3.

Table 3 – Existing and Potential New Revenue from UUT

| UUT                             | 7.5% | 12.0% |
|---------------------------------|------|-------|
| Revenue (\$millions)            | \$15 | \$24  |
| Additional Revenue (\$millions) | 0    | \$9   |

2. **Sales Tax**

The total sales tax rate for Alameda County is currently 9.25% and Berkeley receives 1.00%. Over the last twenty years, the sales tax revenue has increased from about \$14 million in 2000 to ~\$18 million in 2019. If Berkeley were to increase its sales tax rate from 1.0 to 1.5%, additional revenue of ~\$8.5 million/year could be generated that is sufficient to finance the undergrounding of utilities along emergency exit routes. Furthermore, its 3% annual growth over the last decade, if continued, would compensate expected construction cost escalation. After some discussion with the Subcommittee, this option was not pursued due to concerns that a sales tax is regressive.

### 3. Parcel Tax

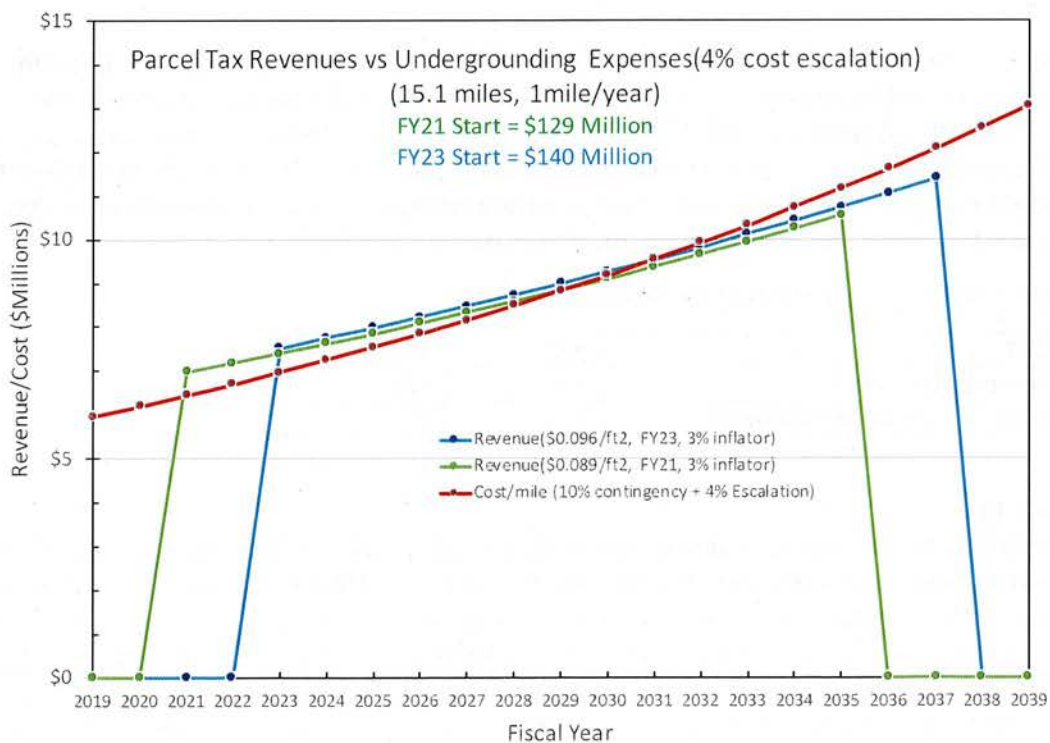
A parcel tax is a pay-as-you go tax. Each year, sufficient funds are raised by the tax to cover the anticipated construction & design costs. Because such taxes contain an inflator based on the regional cost of living or personal income growth, the inflator compensates for the increases due to construction cost escalation. Thus, there is no need to frontload the revenue stream to compensate for the construction escalation costs as with the UUT.

In Berkeley, parcel taxes are based on the square footage of the structures located on the property. A parcel tax is equitable because owners of the same size home pay the same amount regardless of when the property was purchased. Parcel taxes are also progressive, since the owner of a larger structure pays a larger tax than the owner of a smaller structure.

Berkeley has several parcel taxes, such as the Library and the Parks taxes, which in FY2018 generated \$19.4 and \$13.1 million, respectively. Both taxes have an annual inflator and are exempt from city overhead. In Figure 2, the revenue from the Library tax is shown in blue. From 2003 to 2018, the revenue increases substantially due the annual inflator.

Currently, Berkeley has ~78 million square feet of total taxable buildings. For a construction start date of FY2023, a tax rate of 9.6 cents/ft<sup>2</sup> would generate ~\$7.5 million/yr. in revenue for a total of \$140 million over the life of the project. Moving up the start date to FY2021, would decrease Total Project Cost to \$129 million and require a lower rate of 8.9 cents/ft<sup>2</sup>. Figure 5 shows how 3% inflator on the parcel tax compensates for the 4% construction cost escalation.

Figure 5 – Parcel tax revenue vs. undergrounding expenses



### **Franchise Fee Funding**

Cable and electric & gas companies pay the City a franchise fee to use the public right-of-way. In 2018 franchise fees totaled ~\$2.0 million and are projected to increase slightly to \$2.1 million by 2021. The rate of the franchise fees is fixed by state law and cannot be changed by the City.

Currently, franchise fees accrue to the General Fund. However, as stated in the Moody's Rating Agency Report, the City's ratio of General Fund operating revenues to expenses is a strong 1.08 times. The City ended fiscal 2019 with general fund available balance of \$93 million or a very strong 46% of general fund revenue. This followed a \$9 million surplus for the year, resulting from strong revenue growth and strong expenditure management.

Since franchise fees are generated by private utilities that utilize the public right-of-way, it would be appropriate to consider assigning these funds to a public right-of-way account to finance revenue bonds for undergrounding utilities.

Unlike the City of Berkeley, Santa Barbara imposed a 1% franchise fee on its electric provider, after Proposition 13 had passed and before Propositions' 26 and 218 were passed. In 1999, Santa Barbara increased that fee to 2%. In 2001, the City of San Diego increased its franchise fee and imposed a franchise surcharge to pay for undergrounding its residential streets. These costs were then passed on to the utility users by the utility providers.

Santa Barbara was sued by a local businessman who argued that the imposition of this additional fee was an illegal tax because, contrary to Proposition 218, it was imposed without voter approval. A similar lawsuit was filed against San Diego whose surcharge fee was specifically earmarked for undergrounding residential streets, had an end date of 2065 and a provision that what was not spent in any given year would be deposited in the city's General Fund.

The trial court accepted the City of Santa Barbara's argument that the franchise fee increase was not a tax as defined by Propositions 26 and 218. This decision was later overturned by an Appeals Court but a California Supreme Court decision in June 2017 ruled in favor of Santa Barbara. The decision was based on Proposition 13 law which preceded Propositions 26 and 218. The decision is briefly summarized as follows:

- Fees for use of government property are not taxes requiring voter approval as the fee payor gets something of value in return
- Such fees generate discretionary (General Fund) revenues to be used for any lawful purpose of the agency
- Standing to challenge a revenue measure is limited to those having a legal duty to pay it
- Fees must not exceed any reasonable value of the franchise but be reasonably relating to the value of the franchise
- The 2% franchise fee imposed by the municipality on Southern California Edison must recover cost of fee only from customers in the city imposing the fee and shown as a separate line item on the utility billing statement

The lawsuit filed against the City of San Diego alleging that the surcharge was an illegal tax imposed by the City without voter approval was dismissed by a Superior Court judge in August 2018, who agreed with the City that the surcharge is a fee paid to the City in exchange for the right to use the City's electric infrastructure.

### General Obligation Bond Funding

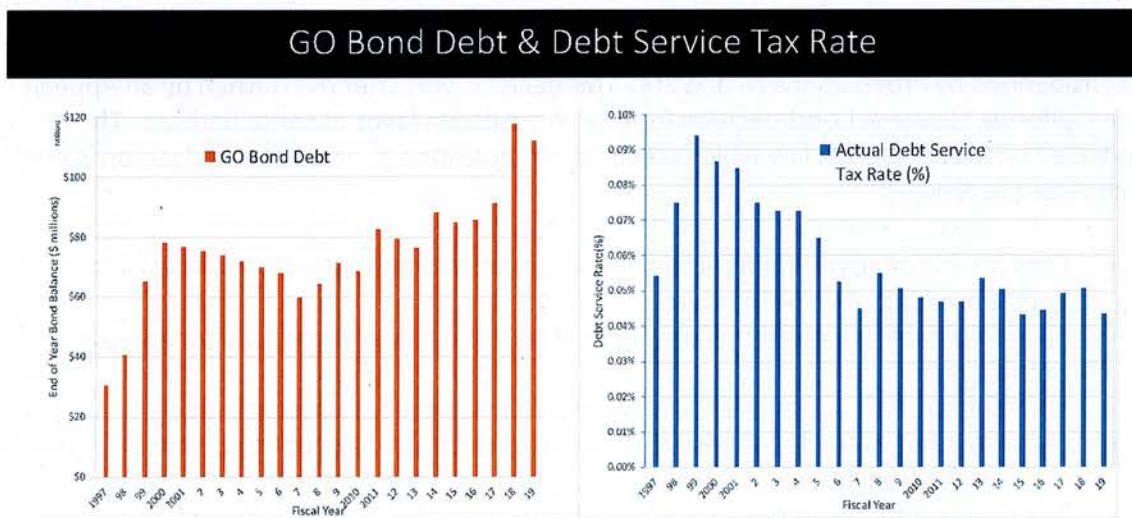
From 1997 to 2000, the City increased its General Obligation (GO) bond debt from \$30 million to \$80 million. However, due to a strong increase in total property assessed values (AVs), the debt-service rate only doubled from 0.05% to 0.09%. Moreover, during the next six years, the debt-service rate decreased back to ~0.05%, as Berkeley’s AVs continued to increase and bond principal was paid down.

After the Financial Crisis of 2008, interest rates fell dramatically. The City took advantage of the lower rates to refinance old debt and to issue new debt: Measures FF, M & T1. From 2007 to 2019, the City doubled its bond debt, while keeping its debt service rate constant due to lower interest rates and the strong appreciation in property AVs.

Because of Berkeley’s robust tax base and strong economy, which benefits from its central Bay Area location, it should be able to issue additional GO bonds during the coming decade, while keeping the debt-service rates within the historic range.

Although Berkeley has additional bonding capacity, GO Bonds have several disadvantages for funding long-term-construction projects, where construction cost escalation is increasing by 4%/year. First, 85% GO bond funds must be spent within three years, requiring multiple tranches of bond funding, which makes the funding more sensitive to potential interest rate increases. Second, GO bond authorization must be approved by the voters for the total 15-year Project Cost of \$140 million. Third the City will have to continue to pay substantial interest payments for ~25 years after the completion of the project.

Figure 6 -- GO Bond Debt & Debt Service Tax Rate for FYs1997-2019



### Assessment District

Property assessments districts can be formed to provide certain services to property owners for a fee which is collected on the annual property tax bill. An example is Berkeley’s Clean Storm Water fee, which was adopted in 1991, but never increased in the subsequent quarter century. Recently, a Prop 2018 process was used to increase the fee in 2018 to provide sufficient funding to ensure that clean, safe water is entering our creeks and the bay, and to prevent flooding. Assessment district fees can include an inflator to compensate for inflation and require a majority approval from the

voting property owners. Further development of this option requires support from a specialized consultant.

### Recommended Financing Options for Berkeley

The project team has evaluated a wide range of funding options. We have considered the level of required funding, the number of years to carry out the undergrounding program, advantages and disadvantages of each option and equity issues. Due to the high probability that the City will experience either a major wildland fire and/or and major earthquake in the next two decades, we believe that it is important to complete the undergrounding of the emergency evacuation routes expeditiously. The Public Works Dept. believes that it has the capacity to design and construct about 1.0 miles of undergrounding per year. Thus, our goal is to provide sufficient financing to underground about 1.0 miles per year so that the evacuation routes can be completed in 15 years.

Table 4 – Summary of Funding Options

| Funding Option                | Approval Requirement | Who Pays                | Fairness          | Inflator | Funding Stability   |
|-------------------------------|----------------------|-------------------------|-------------------|----------|---------------------|
| Parcel Tax                    | High <sup>1</sup>    | Property owners         | High <sup>3</sup> | Yes      | High <sup>5</sup>   |
| Assessment District City wide | Medium <sup>2</sup>  | Property owners         | Medium            | Yes      | High                |
| GO Bond                       | High                 | Property owners         | Low <sup>4</sup>  | No       | Medium <sup>6</sup> |
| Utility Users Tax             | High                 | All Utility bill payers | Medium            | No       | Medium <sup>7</sup> |

<sup>1</sup>Requires a 2/3 approval in a general election

<sup>2</sup>Requires a 50% approval of the property owners in a Prop 2018 process

<sup>3</sup>Owners of the same size structure pay the same amount

<sup>4</sup>A GO bond is an ad valorem tax, where two homeowners with the same size house may pay substantially different amounts, depending on how long they have owned the property

<sup>5</sup>Parcel tax are collected annually via the property tax bill

<sup>6</sup>Since the GO bonds will be issued in several tranches over the 15-year project lifetime, interest rates may rise increasing the cost

<sup>7</sup>Since the UUT revenue has shown little growth, with a recent \$1 million decline, it may not be able to cover the cost of construction escalation

The project team recommends the following ranking of the four financing options.

1. Place a parcel tax with an inflator, similar to the Library and Parks taxes, on the ballot to fund undergrounding. A parcel tax of 9.6 cents/ft<sup>2</sup> will generate ~\$7.5 million/yr. Although the approval threshold is high (2/3 of voters), a parcel tax is the most fair, since owners of the same size home pay the same tax amount. Includes an inflator and the funding is stable.
2. Create an Assessment District for Utility Undergrounding, similar to the City’s recent Prop 218 Street Lighting & Storm Sewer. Although the approval threshold is lower for a Prop. 2018 fee, there are unanswered legal questions on the required nexus with the service provided.

3. Place a GO bond on the ballot to authorize \$140 million to fund the emergency evacuation routes. The approval threshold is high and Ad Valorem taxes are less fair due to Prop 13 restrictions. In addition, since different tranches of bonds would have to be issued over the lifetime of the project, interest rate could increase above the current low rates.
4. Increase the Utility User Tax from 7.5% to 12.0% (increase of 4.5%). This will produce additional revenue of ~\$9 million per year to fund the emergency evacuation routes. Since there is no inflator, a higher initial cost/yr. is require to compensate for construction cost inflation. Although the revenue from this tax has been stable over the last decade, it has recently decreased and could decrease further over the lifetime of the project.

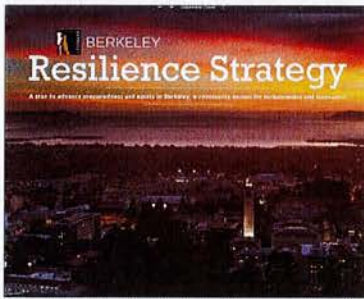
## Section 3

# FRAMEWORK FOR BERKELEY'S INFRASTRUCTURE DEVELOPMENT

Understanding the big picture of Berkeley's current infrastructure condition and the framework for its future development is important and useful. As the Subcommittee has worked over the past five years in carrying out the Council referral, many initiatives are in development:

- Resilience Strategy
- Vision 2050
- We are in a time of transition in electric power delivery
- CPUC re-evaluation of Rule 20

## Resilience Strategy



In 2014 the City of Berkeley, along with our neighboring cities of Oakland and San Francisco, was one of the first 32 cities selected to participate in 100 Resilient Cities (100RC)—Pioneered by The Rockefeller Foundation. 100RC helps cities around the world build resilience to the social, economic, and physical challenges of the 21st century. A city's resilience is defined by the ability of the individuals, institutions, businesses, and systems within the community to survive, adapt, and grow no matter what chronic stress or acute shock it experiences. A resilient city lives well in good times and bounces back quickly and strongly from hard times.

Building on existing efforts and with guidance from the Mayor, the City Council, and the community, the Berkeley Resilience Strategy identified six long-term goals and recommended specific short-term actions to help address some of Berkeley's most pressing challenges. Berkeley's interconnected resilience challenges are:

- Earthquakes
- Wildfires
- Climate change impacts – drought and flooding

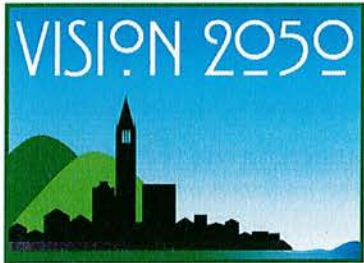
The six goals are:

- Goal 1: Build a connected and prepared community
- Goal 2: Accelerate access to reliable and clean energy
- Goal 3: Adapt to the changing climate
- Goal 4: Advance racial equity
- Goal 5: Excel at working together within City government to better serve the community
- Goal 6: Build regional resilience



The Resilience Strategy report was completed in 2016.

## Vision 2050



**CITY OF BERKELEY**

Mayor Arreguin launched the Vision 2050 initiative in 2018 – a long-term infrastructure plan to create a City that is resilient and sustainable for future generations. Berkeley, along with many older U.S. cities, is built on infrastructure that was designed and constructed before most of our residents were born. Much of the City’s electrical system, streets, storm drains, sewers, and water lines date to the early decades of the 20<sup>th</sup> century.

Agging infrastructure is not only costly to maintain but it doesn’t meet current or future requirements. This leaves the community vulnerable to unplanned failure and service interruptions. For residents, workers and businesses trying to go about their daily lives, this can translate to unsafe conditions, unexpected costs, and inequity between neighborhoods.

Vision 2050 looks forward, over the next 30 years, to encourage long-term planning to begin to meet the serious challenges to our infrastructure - including climate change, inequality, population increases and obsolescence. It is meant to move beyond business-as-usual and accelerate the building of climate-smart, technologically-advanced, integrated, and efficient infrastructure in Berkeley.

The concepts coming out of the Vision 2050 process include:

- **Plan for environmental impacts** – Our City has declared a Climate Emergency. According to the 4<sup>th</sup> California Climate Assessment, new climate conditions will lead to more frequent major fires and intense precipitation events, reduce our air quality and regional biodiversity, and gradually flood the coastal highways, parks and neighborhoods along the shoreline.
- **Incorporate technology advances** – Technological change is affecting the way we use the City’s infrastructure and is challenging the ability of existing infrastructure to meet future needs. The City should plan for new trends in technology and actively seek to incorporate new technologies that are sustainable and resilient.
- **Provide quality of life benefits** – All decisions made in infrastructure planning must include how they will impact the community’s quality of life, today and in the future. This includes public safety, clean air, open spaces, serving diverse populations and other factors.
- **Ensure integrated and balanced planning** – Planning for infrastructure should not be done in isolation and should be integrated across City functions. It also needs to be adaptive to changes that will most certainly occur.
- **Manage infrastructure from cradle to grave** – Managing our infrastructure should start with a structured Master Planning process for all infrastructure systems. It should continue with an Asset Management system that forecasts the needs for maintenance and replacement. The goal is the have infrastructure provide effective and efficient service throughout its service life.

## A Time of Transition

We are in a time of change and uncertainty in planning for our future infrastructure. The issues that are relevant to planning for electrical distribution systems include the following.

- **Climate emergency** – Berkeley has declared a climate emergency. The two main approaches to address the emergency are to: a) reduce our use of gas-powered vehicles and to increase the use of public transit, biking and walking, and b) to electrify our homes and business and to use clean electrical energy. This trend places a higher need for reliable electric distribution.
- **Interest in micro-grids** – With PG&E’s Public Safety Shutoff Program, there is increasing interest in the use of micro-grids to increase our resiliency. These systems also use solar power and will reduce our dependence on the “grid”.
- **Broadband development** – We are living in a connected world of high-speed information transfer. Many of the telecom companies are placing more wires on existing old poles. There is a need to have these systems be reliable and resilient in a major disaster.
- **Uncertainty of PG&E’s future** – PG&E is in bankruptcy and there are uncertainties of how the company will be structured in the future.
- **CPUC Energy Division’s staff proposal for Rule 20 program reform and enhancements** – The California Public Utilities Commission (CPUC) hired a consulting company to audit the PG&E Rule 20A undergrounding program. The firm, AzP Consulting, LLC, issued a final report in October 2019. The CPUC’s Energy Division staff issued a report “Staff Proposal for Rule 20 Program Reform and Enhancements” in February 2020. The report is included in Appendix G. A summary of staff’s recommendations are as follows:

• **Refine and Expand the Rule 20 Public Interest Criteria:** *This will consist of refinements to the existing criteria for Rule 20A and the addition of new criteria based on safety and reliability concerns, such as if the street serves as an egress, ingress, or is designated as an evacuation route, and if the overhead facilities cross through Tier 2 or Tier 3 areas of the State’s High Fire Threat District (HFTD). These criteria would be applicable towards a Rule 20A sunset phase and a modified Rule 20B program should either come into fruition.*

• **Modify Rule 20B to Incorporate Tiered Ratepayer Contributions Commensurate with Public Benefits:** *The CPUC should utilize a three-tiered Rule 20B program with higher portions of ratepayer contribution commensurate with greater public benefits and public policy objectives. The three tiers are: - Tier 1 – 20% Ratepayer contribution – Meets existing Rule 20B criteria. - Tier 2 – 30 % Ratepayer contribution – Meets Tier 1 criteria and one or more of the expanded public interest criteria of this staff proposal, including wildfire safety mitigation. - Tier 3 – 50% Ratepayer contribution – Meets Tier 2 criteria and one or more equity criteria.*

• **Sunset the Rule 20A and 20D Programs as Currently Designed:** *The existing allocation-based Rule 20A and Rule 20D programs should be sunsetted over a 10-year period and either be replaced with the modified Rule 20 B program, other new programs or be terminated.*

• **Incentivize Municipal Utility Surcharge Undergrounding Programs:** *The CPUC encourages governmental bodies to pursue self-taxation programs in collaboration with their local utilities and Staff proposes for the utilities to provide municipalities matching funds of up to \$5 million per year per participating community. An example of such a program is the City of San Diego’s utility surcharge program (see page 10) which has accelerated undergrounding in San Diego. The CPUC does not oversee this type of program but can authorize the utility to collect the franchise fee through rates that goes directly to funding the undergrounding.*

• **Eliminate Work Credit Trading with Limited Exceptions:** The CPUC should prohibit the trading of work credits and review all utility requests to apply additional Rule 20A work credits to a project that has insufficient funds. The limited exceptions are to allow intra-county non-monetary transfers from a county government to cities and towns within the county and to allow credit pooling amongst R.17-05-010 ALJ/EW2/nd3 11 / 103 Undergrounding Proceeding (R.17-05-010) Staff Proposal 9 two or more adjoining municipalities for a project with community benefit.

• **Modify the Rule 20A Annual Completion and Allocation Reports:** The utilities should provide more details to the CPUC, communities and the public regarding the projects that are underway, cost breakdowns for projects, project cost trends, performance metrics, and modify the summary statistics. Additionally, the utilities' allocation reports should include how the utilities derive the allocations from the general rate case and the allocation formula in the Rule 20A Tariff.

• **Adopt an Updated Rule 20 Guidebook:** The utilities should meet and confer with the League of California Cities, the California State Association of Counties, AT&T and the CPUC Staff to draft an updated version of the Rule 20 Guidebook that would be subject to CPUC review prior to its formal adoption and circulation among the cities and counties.

• **Improve Communications with the Communities and Publish Relevant Rule 20 Program Information, Documents and Reports Online:** New utility program communication strategies should include annual meetings with interested cities and counties to discuss their ten-year plans for undergrounding. The utilities should coordinate more closely with the communities and the broader public to enhance transparency and allow them public to have a greater voice in the planning process for projects. Staff also recommends publishing the relevant Rule 20A program information and reports online on dedicated utility and CPUC undergrounding webpages to enhance the public's access to information about the Rule 20 program.

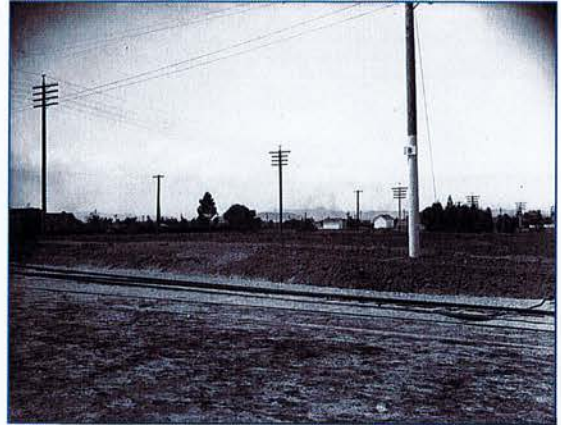
• **Implement Incentives to Reduce Project Completion Timelines and Costs:** These new incentives would include requiring the communities to serve as the default project lead, establishing threshold timeframes for project milestones, and delineating all Task and Cost Responsibilities in updated guidance documents.

There are also other changes to those mentioned above.

## What is the Broader Context for Undergrounding?

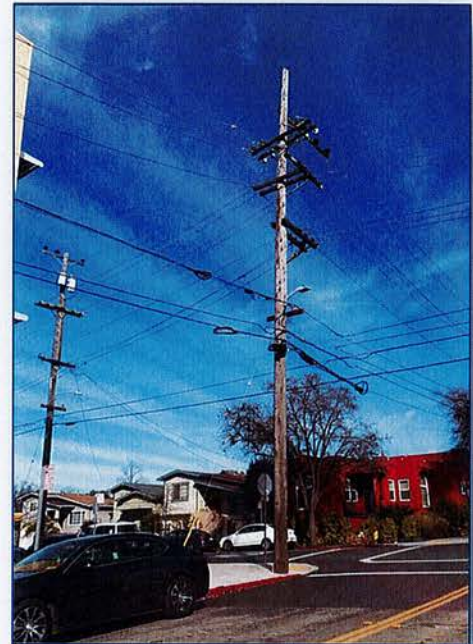
What does this broader context mean to this study on undergrounding? The Resilience Strategy and Vision 2050 initiative is leading us to “move beyond business-as-usual and accelerate the building of climate-smart, technologically-advanced, integrated, and efficient infrastructure in Berkeley”. This is planning for the future.

The use of wooden poles dates back to the 1840's when the telegraph system was developed. The adjacent pictures shows wooden poles on Addison Street in Berkeley in 1885 and in 2020. A history of the wooden utility pole, prepared by the CPUC, is included in Appendix F.



The context is that Berkeley needs reliable, resilient infrastructure systems for the future and to not rely on old infrastructure concepts. The amount of wires on poles have increased dramatically. Converting to undergrounded systems supports Berkeley to do the following:

- Meet our climate action goals with reliable electrical distribution.
- Add to our quality of life, including public safety.
- Support broadband expansion and other integrated needs in our public right of way.
- Use new technology.





## Section 4

# PROGRAM RECOMMENDATIONS

This section presents the Subcommittee’s recommended undergrounding program. After five years of research and study and considering the bigger picture of infrastructure development in Berkeley, we are presenting a long-term vision for utility undergrounding.

### A Long-term Vision for Undergrounding in Berkeley

The use of wooden poles and overhead electrical wires is a technology used for over 150 years. New cities and developments have their utilities underground. This is the same with advanced countries, such as in much of Europe. The future direction stated in the Resilience Strategy and Vision 2050 calls for infrastructure that is climate-smart, technologically-advanced, integrated, and efficient. With that context, we propose the following long-term vision for undergrounding in Berkeley.

| Undergrounding Development Phase | Timeframe, year   | Description   |
|----------------------------------|-------------------|---|
| Previous work                    | 1970’s – present  | 49% of arterial streets and 31% of collector streets are already undergrounded.   |
| Near term                        | 2020 - 2040       | Underground key evacuation routes as described in this report. The work will be done is about 15 years.   |
| Near term                        | 2020 – continuing | Create and implement a Rule 20B program that includes a revolving fund to provide for upfront costs of proposed projects. Once a 20B project is approved by a vote of the parcel owners, the advanced upfront funds will be returned to the revolving fund. |
| Long term                        | 2040 - 2070       | Underground Berkeley citywide.  |

### Program to Underground the Key Evacuation Routes

In response to the Council referral, Phase 4 is the implementation of a program to underground overhead utilities along key evacuation streets in Berkeley. We recommend the following program for Council consideration.

#### Recommend a 15-year Undergrounding Program

Considering the urgency to improve safety and the complex infrastructure conditions in Berkeley, we are recommending a 15-year program to underground the utilities along the key evacuation routes. To determine the priority of the streets to underground, we recommend preparing a set of criteria that will include the following:

- Coordination with Berkeley’s Fire Department on their evacuation planning and safe passages analysis
- The time needed for coordination with Caltrans, PG&E, and telecom companies
- Dividing each street into manageable project lengths (approximately 1 mile each)
- Consider undergrounding the more complex and costly streets early in the program
- Coordinate with street paving and other utility work in the public right of way
- Undergrounding to benefit all Council districts
- Other criteria

The project team prepared the following preliminary priority list to illustrate a 15-year program.

| Year | Street                        | Section  | Council districts |
|------|-------------------------------|--|-------------------|
| 1    | Dwight Way                    | Fernwald Rd. to Shattuck Ave.                            | 3, 4, 7, 8        |
| 2    | Dwight Way                    | Shattuck Ave. to San Pablo Ave.                          | 2, 3, 4           |
| 3    | Marin Avenue                  | Tulare Ave. to Grizzly Peak Blvd.                        | 5, 6              |
| 4    | Grizzly Peak Blvd.            | Spruce St. to Marin Ave.                                 | 6                 |
| 5    | Grizzly Peak Blvd.            | Marin Ave. to Arcade Ave.                                | 6                 |
| 6    | Ashby Ave., Tunnel Road       | Vicente Rd to Telegraph Ave.                             | 7, 8              |
| 7    | Ashby Ave.                    | Telegraph Ave. to San Pablo Ave.                         | 2, 3, 7           |
| 8    | Cedar Street                  | La Loma Ave. to MLK Way                                  | 4, 5, 6           |
| 9    | Cedar Street                  | MLK Way to San Pablo Ave.                                | 1, 5              |
| 10   | Hopkins Street                | Sutter St. to Gilman St.                                 | 5                 |
| 11   | Gilman Street                 | Gilman St. to San Pablo Ave.                             | 1, 5              |
| 12   | Spruce Street                 | Grizzly Peak Blvd. to Rose St.                           | 5, 6              |
| 13   | Rose Street, Oxford Street    | Rose from Spruce to Oxford and Oxford from Rose to Cedar | 5                 |
| 14   | Claremont Ave., Alcatraz Ave. | Ashby Ave. to Telegraph Ave.                             | 8                 |
| 15   | Alcatraz Avenue               | Telegraph Ave. to San Pablo Ave.                         | 2, 3              |

This preliminary list has the following assumptions:

- The Fire Department has stated that Dwight Way is a high priority due to the risks in the Panoramic Hills area.
- Ashby Avenue will take significant time to coordinate the work with Caltrans.
- The work on Alcatraz Avenue is uncertain due to coordination with the City of Oakland.
- The street sections for specific projects are planned to be approximately 1 mile in length each.
- Undergrounding is planned only east of San Pablo Avenue. The cost estimates prepared by Bellecci & Associates includes undergrounding between San Pablo Avenue and I-80. We now consider those areas too far from the fire areas and those areas are subject to high groundwater levels. The total centerline length of streets to be undergrounded is now 15.1 miles and the total cost is about \$90 million (in 2019 dollars).
- If we underground to San Pablo Avenue, the percentage of streets in the hills is 37% and in the flat lands is 63%.

### Use a Program Approach

Research by the project team and information from Bellecci & Associates shows that it is important to develop an overall program approach to undergrounding. This is to promote cost effectiveness

and to achieve completion in a reasonable schedule. Upon authorization to proceed from Council, we recommend that a Program Plan be prepared that includes the following:

- Outcome objectives
- Project priorities, work scopes, budgets and schedules
- Program organization, staffing, consultants and resources needed
- Design criteria
- Coordination with utilities and telecom companies
- Change management process
- Reporting and oversight
- Other

### **Use “Dig Once” Approach**

The undergrounding work should be coordinated with street paving, water lines, sewer lines and other utility work in the public right of way.

Opportunity exists to prepare streets for future undergrounding during regular routine paving or maintenance work. For example, clear routes for future underground cables can be drawn into present day plans, to avoid creating expensive future rerouting.

Significant opportunity exists to install empty City-owned conduit pipe, installed to published utility standards, in any full depth street reconstruction along a priority underground route. Such City owned empty conduit pipe would be left sealed at construction time, and later sold or traded for Rule 20A credits at the time of the undergrounding project. Extra conduit space would be available for sale to broadband providers or for use on City projects.

### **Community Engagement**

Upon authorization from Council to proceed, a robust community engagement process shall be implemented. This shall include community workshops, methods for the public to submit questions, regular updates and other actions. Public input will be valuable in determining the priority and extent of undergrounding.





## *Section 5*

# RECOMMENDED NEXT STEPS

The Subcommittee recommends the following next steps for Council consideration.

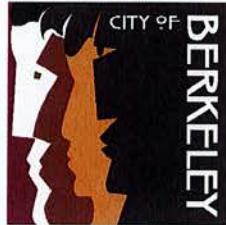
1. Review this report and provide direction on whether to proceed with the Phase 4 program.
2. Work with the Council's Facilities, Infrastructure, Transportation, Environment, and Sustainability Policy Committee on further development of the undergrounding program.
3. Work with the Finance Department, the Council's Budget committee, and consultant support, to select the funding option.
4. Implement a public engagement process in 2020.
5. Staff to prepare a Program Plan for the Phase 4 undergrounding program.
6. Close out the original Council referral to the participating commissions. We recommend forming an Undergrounding Task Force to ensure public input in the future planning of utility undergrounding.



**Appendix A**  
**Baseline Study for the Development of a Utility Undergrounding Program by**  
**Harris & Associates**



# CITY OF BERKELEY



## Baseline Study for the Development of a Utility Undergrounding Program

July 22, 2016

Prepared by:





Mr. Kenneth Emeziem  
Senior Civil Engineer  
City of Berkeley  
1947 Center Street, 4th Floor  
Berkeley, CA

Re: Baseline Study for the Development of a Utility Undergrounding Program – Final Submittal

Dear Mr. Emeziem:

The attached “Baseline Study for the Development of a Utility Undergrounding Program” incorporates the comments received from the commission and City staff. As the baseline, it occupies the starting point for the future studies and developing an undergrounding program with the goal of undergrounding all of the overhead utilities in the City of Berkeley.

From the study we identified that there are approximately 13.1 miles of Arterial and 24.8 miles of Collector streets remaining to be undergrounded. The estimated cost of undergrounding the total 37.9 miles is \$134,800,000.

We are pleased to have provided this study and be a part of the City’s goal to underground the City.

If you have any questions, please contact me at (925) 348-1098.

Sincerely,

Harris & Associates

Rocco Colicchia

Project Manager

**Baseline Study for the Development of a Utility Undergrounding Program**

**Table of Contents**

|  |    |
|--|----|
| Introduction   | 1  |
| Chapter I – Project Objectives   | 3  |
| Chapter II - Arterial and Collector Street and Zoning Map  | 3  |
| Chapter III – Planning Level Estimate of the Construction Costs of Utility Undergrounding          | 4  |
| Chapter IV – Funding Utility Undergrounding Projects   | 6  |
| Chapter V – Funding Options Used by Other Communities  | 10 |
| Chapter VI – Status of Rule 20A, 20B, and 20C Funding in the City of Berkeley                      | 11 |
| Chapter VII – Creating a District to Fund Neighborhood Undergrounding Projects                     | 13 |
| Chapter VIII – Emerging Technologies   | 14 |
| Chapter IX – Summary of Advantages and Disadvantages of Undergrounding Arterials<br>and Collectors | 15 |
| Chapter X – Conclusion   | 16 |
| Chapter XI – History of Undergrounding Overhead Utilities  | 16 |
| Chapter XII – Comments from the Commissioner   | 17 |
| Appendix 1   |    |
| Appendix 2   |    |
| Appendix 3   |    |



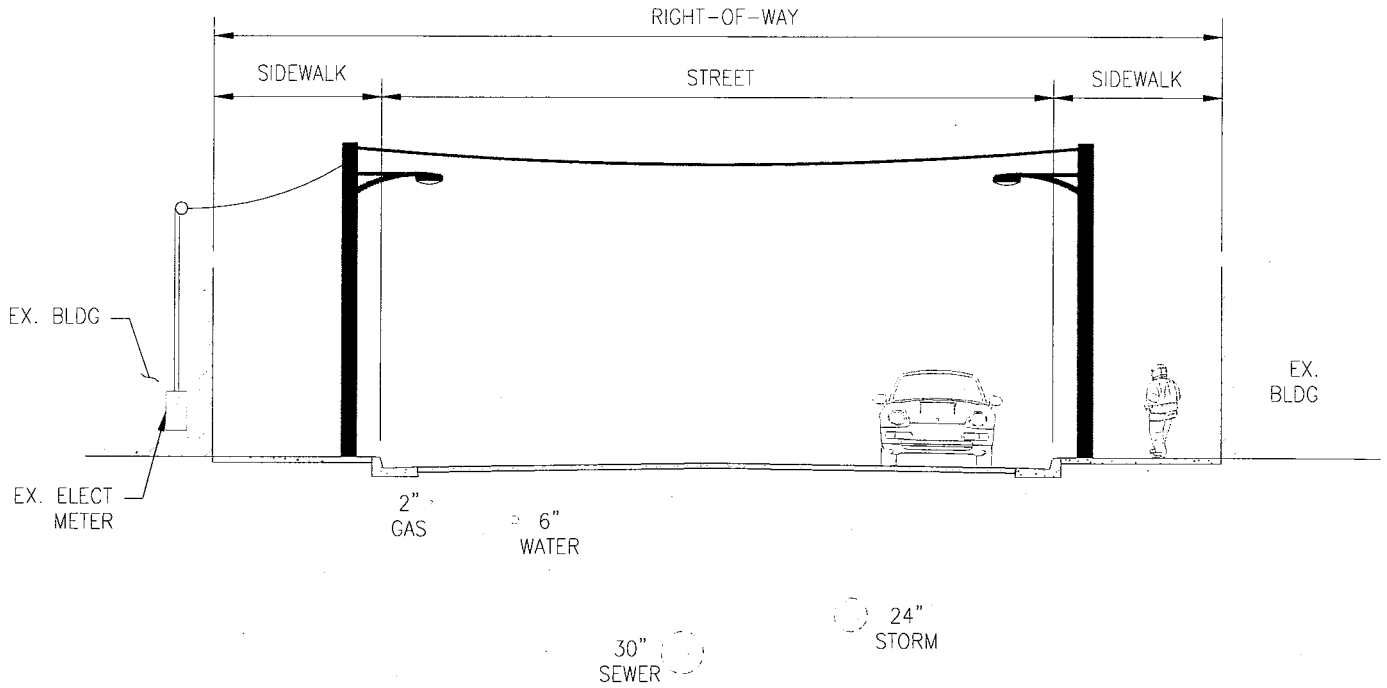
## INTRODUCTION

Harris & Associates has been retained by the City of Berkeley to prepare this “Baseline Study for the Development of a Utility Undergrounding Program”. This document will provide a starting point, as the City develops a plan to underground all of the overhead facilities in the City of Berkeley. This study includes identification of the streets to be undergrounded, high level costs and high level timing. Both costs and timing will be further developed in subsequent studies.

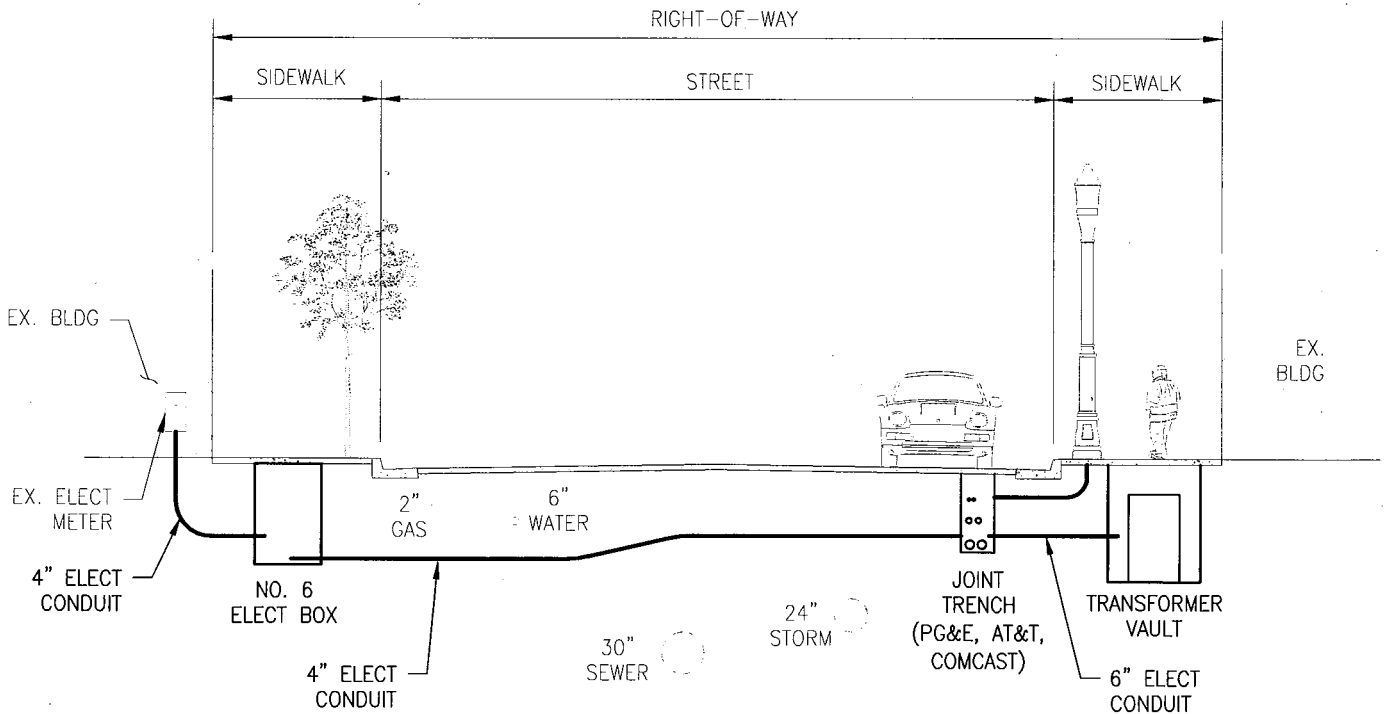
The City of Berkeley has been involved in utility undergrounding for many years. Most of the undergrounding projects within the City have relied on the provisions of electric Rule 20A and telephone Rule 32.1, to fund the undergrounding in various areas of the City. In addition, the City has also seen interest from property owners within specific neighborhoods who have worked together to fund the undergrounding of the existing overhead utilities within their neighborhood after submitting a petition to the City and agreeing to fund a majority of the costs of the undergrounding through the formation of an assessment district.

This study includes information we have developed and collected based upon our scope of work, and is intended to provide the baseline information and data needed as the City begins the development of a comprehensive citywide strategy for undergrounding the City’s overhead utilities. The following items are included as part of this baseline study and help to describe the starting point for the undergrounding program:

1. A map showing the arterial and collector streets in Berkeley and current zoning. This information was taken from the city website. In addition, the map also shows those streets where the utilities have already been undergrounded. This map will become the basis for the underground plan.
2. A planning level estimate of the construction costs for utility undergrounding. These costs do not include the cost of undergrounding service on private property or the cost of the electric service panel conversion.
3. A description of Rule 20A, 20B, and 20C, and how those programs could be used to fund future utility undergrounding projects in the City.
4. An overview of other funding options that could be used, including a discussion of how other communities have funded their utility undergrounding programs, and the pros/cons of those approaches.
5. The current status of the City’s Rule 20A funding and anticipated future contributions
6. The process of creating an underground district.
7. A review of emerging technologies and their impact on the cost of utility undergrounding programs.
8. A discussion of the pros and cons of undergrounding arterial and collector streets in non-residential areas.
9. The City’s undergrounding history.
10. A “Diagram of a Typical Street Section”



**BEFORE: STREET SECTION WITH OVERHEAD UTILITIES**



**AFTER: STREET SECTION WITH UNDERGROUND UTILITIES**

**NOTES:**

1. LOCATIONS ASSUME ADEQUATE CLEARANCES
2. SHADED FACILITIES ARE EXISTING

**FIGURE - 1**  
**DIAGRAMS OF TYPICAL STREET SECTION SHOWING OVERHEAD**  
**AND UNDERGROUND FACILITIES IN COMMERCIAL AREA**

SCALE: NTS

## I. PROJECT OBJECTIVES

The City of Berkeley's City Council has requested that three commissions (Public Works, Disaster and Fire Safety, and Transportation) collaborate to develop a comprehensive funding plan to underground utilities along arterials and collector streets in Berkeley. The commissions shall work with Public Works staff and specialty consultants to draft a plan for the Council's consideration.

The goal of the City of Berkeley is improve public safety by undergrounding utility lines. Undergrounding minimizes the impacts of fallen electric lines and poles. Downed power lines can spark a serious fire, negatively affect power delivery to households for an extended period of time, impact the ability of persons to leave their homes and/or first responders to reach persons in need. Undergrounding increases the safety of residents while strengthening the infrastructure of the region's delivery of these utility services increasing reliability, all of which positively contributes to the capability of our community. Undergrounding increases pedestrian access and beautifies the streetscape.

**The overall project objective is to develop a comprehensive plan to underground the overhead facilities in a manner that will provide the greatest benefit to all of Berkeley. This study is the first step in that effort.** The following are some guiding principles for the project:

- The primary driver is to provide reliability of utility service and safety to Berkeley's residents in an emergency.
- The scope of the study shall be all of the City of Berkeley.
- Implementation of the plan shall be prioritized to the streets that will have the greatest benefit to all of Berkeley. These will be the arterial and collector streets.
- Learn from other cities that have studied and implemented programs to underground utilities.
- Incorporate new concepts (such as utility corridors) and work with various utility pole users (such as cable TV, power, telephone) to find cost effective solutions.
- Conduct the study in two phases to allow for effective decision making and use of resources.

## II. ARTERIAL AND COLLECTOR STREET AND ZONING MAP

The first task in creating this study was to assemble the available information and create a map showing the streets that have already been undergrounded. The attached Arterial and Collector Street and Zoning Map (See Attachment 1 in Appendix 1) shows the streets that have been undergrounded and consolidates the information requested by the City.

The map shows all of the arterial and collector streets based on the City's Circulation Element, current zoning, and the streets that have already been undergrounded within Berkeley city boundaries. In order to identify the streets that have already been undergrounded, Harris utilized the history document provided by the City, reviewed streets on Google, and we obtained undergrounding information from PG&E. This information was then field verified for the arterial and collector streets in the areas zoned non-residential. The multi-colored hatched areas represent the street segments that have been utility

undergrounded. The residential streets located outside the arterial and collector street network that have been undergrounded were mapped and tabulated based on the available resources. The varying colors denote where or how the data was obtained. We have also shown the 2 upcoming underground utility districts (Grizzly Peak and Vistamont) in the residential areas that will be completed in the future.

The arterial and collector streets have been separated by residential and non-residential to aid in a future prioritization model.

### III. PLANNING LEVEL ESTIMATE OF THE CONSTRUCTION COSTS OF UTILITY UNDERGROUNDING.

**Table 1** below summarizes the costs tabulated in Attachment 2 (see Appendix 1) and shows the estimated lengths and percentages of the arterial and collector streets in the City of Berkeley that have been undergrounded and needs to be undergrounded. A list of residential streets that have been undergrounded based on data provided by the City has been added to Attachment 2. Residential streets shown in the residential zones (R and MUR) that have not been undergrounded were not included in Attachment 2, however, we estimated in the table below the percentage of residential streets to be undergrounded. Attachment 2 also includes "impact ratings", which were considered when determining the unit cost for undergrounding. The costs to install the private property trench and conduits, and the service panel conversions have not been included as well as costs for financing and engineering and construction management.

The impact ratings were based on a scale of 1 to 5 with 1= Low Impact to 5= High Impact. This rating represents a level of difficulty associated with utility undergrounding based on the existing conditions of the street layout and facilities. In the field, we looked at the impacts to sidewalk clearances, traffic volume, and utility density on the existing joint poles and assessed the 1 to 5 rating scale. Sidewalk impact rating was based on space availability for locating the proposed underground utility vaults, existing obstructions in the sidewalk and pedestrian traffic. Traffic volume impact rating was based on the number of vehicles using the street and estimate of traffic control that may be required during the utility trench construction. Utility density impact rating was based on the estimate of number of utilities that needed to be undergrounded and the quantity and quality (thickness and existing connectivity at poles) of the overhead wires.

The unit costs were based on current unit prices from utility underground projects that we have designed. We used typical bid items including trench excavation, pavement resurfacing, basic utility conduits for PG&E, AT&T, and Comcast, street lighting, traffic control and mobilization to calculate a base unit cost per foot for construction. The base unit cost was used as our baseline for medium level of difficulty streets. We then added and subtracted 30% to the baseline to establish the high and low level unit cost.

Our estimate produced a baseline of joint trench construction costs based on current bid unit costs. We assumed number of vaults and length of conduits needed for each utility, without actual designs from utility agencies, and added a 25% contingency. Field measurements were not taken at peak driving times, therefore, traffic volumes were estimated.

The estimate does not include trenching on private property, service conduits, service panel conversions, cost of financing, engineering, construction management, and street lighting.

**Disclaimer:** The impact ratings and costs were developed and gathered for the purpose of this report in order to produce a baseline of unit costs. The costs may change in future years due to inflation and also the fluctuation of oil prices that affect the cost of PVC conduit and asphalt material.

| <b>TABLE 1: Summary of Undergrounding Lengths and Costs</b> |                      |                       |                       |                      |
|---|----------------------|-----------------------|-----------------------|----------------------|
| <b>Arterial Streets</b>                                     | <b>Length (Feet)</b> | <b>Length (Miles)</b> | <b>Estimated Cost</b> | <b>% Underground</b> |
| Total arterial streets                                      | 135,095              | 25.6                  | N/A                   | N/A                  |
| Total arterial streets undergrounded                        | 66,015               | 12.5                  | N/A                   | 49%                  |
| Non-residential arterial streets to be undergrounded*       | 14,830               | 2.8                   | \$11,380,000          | 11%                  |
| Residential arterial streets to be undergrounded**          | 54,250               | 10.3                  | \$31,550,000          | 40%                  |
| Total arterial streets to be undergrounded                  | 69,080               | 13.1                  | \$42,930,000          | 51%                  |
| <b>Collector Streets</b>                                    |                      |                       |                       |                      |
| Total collector streets                                     | 190,460              | 36.1                  | N/A                   | N/A                  |
| Total collector streets undergrounded                       | 59,660               | 11.3                  | N/A                   | 31%                  |
| Non-residential collector streets to be undergrounded*      | 23,275               | 4.4                   | \$15,100,000          | 12%                  |
| Residential collector streets to be undergrounded**         | 107,525              | 20.4                  | \$76,770,000          | 57%                  |
| Total collector streets to be undergrounded                 | 130,800              | 24.8                  | \$91,870,000          | 69%                  |
| <b>Residential Streets</b>                                  |                      |                       |                       |                      |
| Total residential streets***                                | 832,666              | 157.7                 | N/A                   | N/A                  |
| Total residential streets undergrounded                     | 57,267               | 10.8                  | N/A                   | 7%                   |
| Total residential streets to be undergrounded               | 775,399              | 149.9                 | N/A                   | 93%                  |

\* Non-residential includes Zones M, C-DMU, C, and SP

\*\* Residential includes Zones MUR and R

\*\*\* Residential Streets include all non-arterial and non-collector streets falling in multiple zones

#### IV. FUNDING UTILITY UNDERGROUNDING PROJECTS

This section looks at the options available to the City and property owners for funding utility undergrounding projects. Some of the funding options may be limited in terms of the types of projects that can be funded, or require the approval of property owners or registered voters.

##### A.1 Rule 20A Funds

The California Public Utilities Commission (CPUC) and utility companies established a program to underground utilities across the State in 1967, commonly known as Rule 20. Rule 20 consists of three parts, A, B and C (for San Diego Gas & Electric ((SDG&E) there is also a D). Under Rule 20A, each utility company regulated by the Public Utilities Commission (PUC) allocates funds annually to each entity within its service boundaries to be used to convert existing overhead electrical facilities to underground electrical facilities within the community. Based upon the funds available each agency is able to prioritize undergrounding projects within their respective jurisdictions. Because of the high costs of most undergrounding projects, agencies must accumulate Rule 20A funds until they have accumulated the funds needed. Since a portion of the rates collected from all rate payers are used to fund the Rule 20A program, to qualify a project for Rule 20A funds, the City is required to:

- determine that the undergrounding of the existing overhead utilities will be in the public's interest,
- receive concurrence from utility that they have set aside or accumulated sufficient Rule 20A funds for the proposed undergrounding,
- create an Underground Utility District by City Ordinance which will require all property owners within the undergrounding district to convert their service connections to the undergrounded utilities at their expense, and
- meet at least one of the 4 criteria in the rate tariff to qualify for Rule 20A funds which include:
  1. the undergrounding will eliminate a heavy concentration of overhead facilities,
  2. the street to be undergrounded must be at least one block or 600 feet,
  3. the street is heavily travelled by pedestrian or vehicular traffic,
  4. the street adjoins a civic area, a recreation area or an area of unusual scenic interest, and/or
  5. The street is an arterial or collector in the General Plan.

The annual allocation of Rule 20A funds to agencies is based upon a formula, in the Rule, that compares the above ground facilities to underground facilities and the total number of overhead utility meters within the City in relationship to the total number of overhead utility meters within the utility's service area. The City of Berkeley is currently allocated approximately \$533,000 per year for undergrounding of electrical services that are eligible for funding under Rule 20A. The City currently has a balance in its Rule 20A account of \$6.4 million that could be used for undergrounding. In addition, the City can also "mortgage" up to 5 years of future Rule 20A allocations. Additionally, the City can "borrow" allocation from the County. The allocation can also be used to fund the installation of the service conduit up to 100 feet and the conversion of the electric service panel up to \$1,500. Rule 20A allocations continue to be made by PG&E for projects that meet the criteria established in the Rule.

### **A.2 Other Financing Options under Rules 20B and 20C**

Since the use of Rule 20A funds are limited to utility undergrounding projects typically along major roadways or other locations which provide a public benefit, Tariff Rule 20 includes two other options in addition to Tariff Rule 20A for financing utility undergrounding projects: Rules 20B and 20C.

Under Rule 20B, the utility is responsible for approximately 20 percent of undergrounding project costs (using rate payer revenues), and property owners and/or the local jurisdiction is responsible for 80 percent of costs. Under Rule 20C, projects are paid for entirely by property owners, with no utility (ratepayer) funds used, though the electric utility is still involved in the installation of the underground wiring. Undergrounding projects approved under these two options are still subject to CPUC regulations and project criteria.

Since a majority or all of the project costs are the responsibility of property owners under Rule 20B or 20C, most agencies work with property owners to create special tax or benefit assessment districts which allow bonds to be sold to fund the undergrounding projects and allow property owners to pay for the projects over a 20-30-year period. State law, either as part of the Government Code or the Streets & Highways Code, governs the rules for the formation of a special tax or benefit assessment district. The following provides a general description of the steps required for the formation of a benefit assessment or special tax district to fund utility undergrounding projects.

### **B. Funding sources to Supplement Rule 20A, B and C**

Due to the high costs for undergrounding existing overhead utilities, most agencies work with property owners to establish a funding mechanism that will allow bonds to be sold and allow property owners to repay their financial obligation over a 20-25-year period. If a property is sold, the remaining financial obligation is the responsibility of the new property owner. The most commonly used funding mechanism by City's is the Municipal Improvement Act of 1913 or the Mello-Roos Act of 1982 as described below.

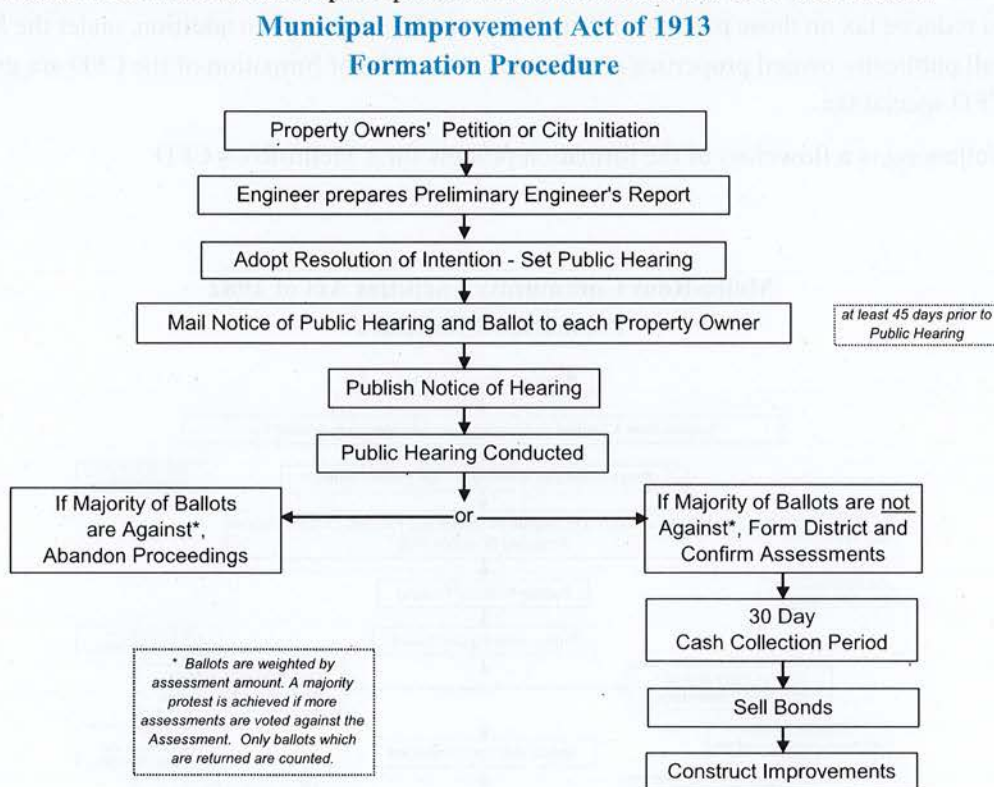
#### **B.1 Municipal Improvement Act of 1913 (the "1913 Act")**

The 1913 Act has been used by many cities throughout the state working with property owners within the area to be undergrounded to create an assessment district to fund the non-utility portion of the costs for utility undergrounding. Under the 1913 Act, the City can fund the utility undergrounding project including the costs of design and other related project costs. The Act also authorizes the sale of bonds under the Improvement Bond Act of 1915 to allow repayment by property owners over an extended period (typically 20-25 years).

Formation of the assessment district is based upon the requirements of Proposition 218, and as such requires an analysis of special / general benefit (general benefits may not be assessed), and the approval of 50% of the property owners based upon the ballots returned weighted by assessment amount. Below are some pros and cons of this approach:

| Pros:   | Cons:   |
|---|---|
| <ol style="list-style-type: none"> <li>1. authorizes the sale of bonds under the 1915 Improvement Bond Act</li> <li>2. requires 50% approval, by assessment amount, of the property owners returning their ballots</li> <li>3. once bonds are issued, assessment to pay back bond debt is protected by Federal Law</li> </ol> | <ol style="list-style-type: none"> <li>1. requires the identification of “special benefit” and development of a benefit methodology to allocate costs to each parcel</li> <li>2. must include public property and identify a funding source to pay for any general benefit since it may not be assessed.</li> <li>3. Additional limitations imposed by recent case law</li> </ol> |

The flowchart below shows the steps required for the formation of a 1913 Act District.



Note: Majority of property owners must sign petition to initiate the formation of the assessment district based upon the requirements of the Municipal Improvement Act of 1911, or the City must contribute 50% of the project costs if the City initiates the formation of the assessment district.

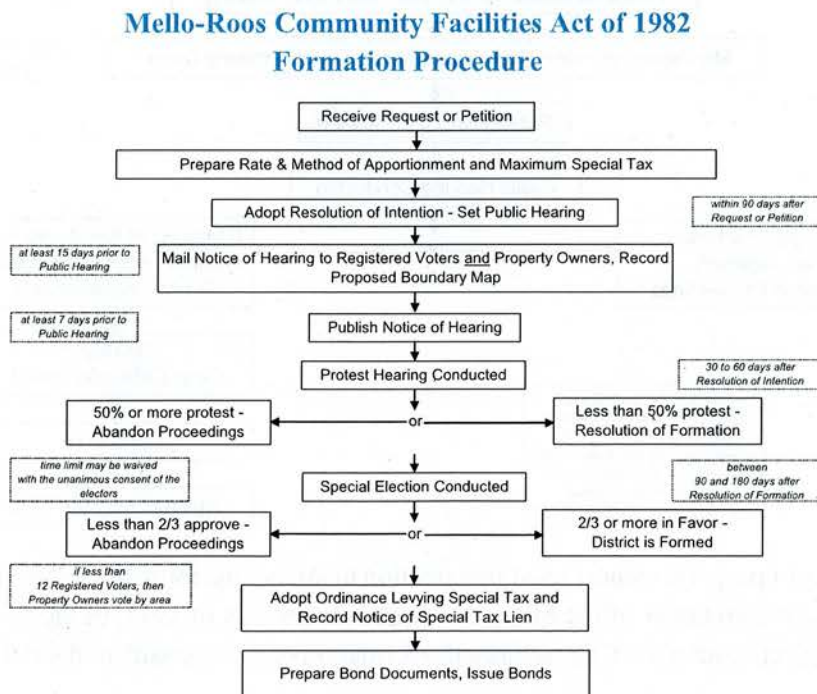
**B.2 Mello-Roos Community Facilities District**

The Mello-Roos Community Facilities Act of 1982 allows an agency to create a Community Facilities District (CFD) to finance the costs of utility undergrounding by the adoption of a special tax on parcels within the utility undergrounding district. Since a CFD imposes a special tax on parcels and not an assessment, it does not require the allocation of costs based upon special benefits as required by Prop. 218 for benefit assessment.



Since a CFD creates subject parcels to a special tax, it requires a two-thirds majority approval of the registered voters within the boundary of the CFD. It can be approved at a general election or special election. The special tax to be levied upon parcels is based upon the special tax formula that is established at the time the district is created. Although, there is no requirement that the special tax formula be based upon benefit, it must be reasonable. This allows the Agency a great deal of flexibility to create a special tax formula that will be acceptable to both the Agency and the registered voters. In the case of a utility undergrounding district, the special tax formula could levy a uniform tax on each parcel within the undergrounding district, which might not be possible in an assessment district, since some parcels may receive a greater benefit than others may. It also allows the tax to change over time, although it can never exceed the maximum special tax approved by the voters when the district is created. This flexibility can allow the tax to change based upon changes to a parcel. For example, if there are underdeveloped parcels within the undergrounding district, the special tax formula might levy a reduced tax on those parcels until such time as they develop. In addition, under the Mello-Roos Act, all publically owned properties in existence at the date of formation of the CFD are exempt from the CFD special tax.

The following is a flowchart of the formation process for a Mello-Roos CFD:



Harris has assisted many neighborhood groups and also cities such as Tiburon, Belvedere, Oakland, Newport Beach, Manhattan Beach, Laguna Beach, and others to utilize assessment district funding to underground overhead utilities.

## V. FUNDING OPTIONS USED BY OTHER COMMUNITIES

### A. Inter-Municipal Trading of Tariff Rule 20A Credits

Cities and counties are able to trade or sell unallocated Rule 20A credits if they will not be used to fund local undergrounding projects. There have been several cases where one agency has sold their unused credits, often for less than the full dollar value of the credits themselves to another agency. For example, in July of 2013, the City of Newport Beach entered into a memorandum of understanding (MOU) with the City of Mission Viejo to purchase unallocated Rule 20A credits at a cost of \$0.55 on the dollar. Mission Viejo also granted Newport Beach the first right of refusal to purchase future Rule 20A allocations between July 1, 2013 and July 1, 2015 at the same rate of \$0.55 on the dollar. In June of 2014, the City of Mission Viejo agreed to sell the City of Newport Beach a balance of \$99,143 in Rule 20A funds. Newport Beach will pay Mission Viejo a total of \$54,528 for the allocation. Mission Viejo agreed to sell its credits because it did not have undergrounding projects planned for the near future.

Similarly, the City of Foster City recently negotiated the transfer of \$1.7 million of its Rule 20A credits to the City of Belmont. According to a representative from PG&E, cities and counties in the service area can create agreements between themselves to transfer Rule 20A credits under varying conditions as long as they provide PG&E documentation of the agreements.

### B. Establishment of Local Surcharge for Undergrounding

Given the limited availability of Rule 20A funds for undergrounding, the City of San Diego working with SDG&E and the CPUC adopted a local surcharge as part of the utility rate structure to fund undergrounding projects. Until 2002, the undergrounding program in San Diego (as in the rest of California) proceeded under CPUC Rule 20-A. However, the amount of funding generated for Rule 20-A projects and the expenditure of those funds had significant limitations, including:

- the funds could only be used for undergrounding streets that would effect a “general public benefit” (such as arterial rights of way) and generally excludes residential streets;
- the funds could not be used to cover the cities’ costs related to the replacement of traffic signals and street lights, or street trees as part of a utility undergrounding project, and
- the funds could not be used to cover the property owners costs of converting their service to connect to the street trench wiring.

In 2002, the City of San Diego and SDG&E entered into an agreement (which required the approval of the CPUC) to adopt a small surcharge on the electric bills of all residential power users to provide a stream of revenue that would be sufficient to cover the costs of a phased program to underground all the utility wires on all of the City’s residential streets. This was adopted without a ballot measure. The surcharge funds non-Rule 20A projects. While in place for many years, the surcharge is being challenged in court. The case will be heard in 2017. Other agencies have adopted similar surcharges to fund utility undergrounding projects.

### C. Adoption of Local Sales Tax or Utility Tax for Undergrounding

Another strategy for funding local undergrounding projects would be the adoption of a local sales tax or Utility User's Tax that would be dedicated to funding utility undergrounding projects. Both of these would be a "special tax" as defined by Proposition 218 and Proposition 26 and require 2/3's voter approval for adoption. Bonds could be issued secured by the sales tax or utility user's tax to fund the costs of the undergrounding projects. One benefit of this approach is that it could be done on a citywide basis and it may spread the tax burden across a broader base of taxpayers beyond just property owners. One agency, which is using this strategy, is the City of Anaheim, which has implemented a 4% surcharge on all electric bills and is used to underground the arterials and collector streets including services. Phone and cable pay to underground their facilities. The approach has been very successful and well received by the public.

### D. Rule 20D (SDG&E only)

Rule 20D ([http://regarchive.sdge.com/tm2/pdf/ELEC\\_ELEC-RULES\\_ERULE20.pdf](http://regarchive.sdge.com/tm2/pdf/ELEC_ELEC-RULES_ERULE20.pdf)) applies to circumstances other than those covered by Rule 20A or 20B where the utility will at its expense replace overhead with underground where after consultation with the utility and the local fire agency and after holding public hearings that the undergrounding is in the general public interest. The undergrounding will "(1) Occur in the SDG&E Fire Threat Zone as developed in accordance with the California Public Utilities commission (D.) 09-08-029; and (2) Occur in an area where the utility has determined that undergrounding is a preferred method to reduce fire risk and enhance the reliability of the facilities to be undergrounded."

While currently included only in SDG&E's Rule 20, the option may be a consideration for Berkeley to explore.

## VI. STATUS OF RULE 20A, 20B, AND 20C FUNDING IN THE CITY OF BERKELEY.

PG&E continues to provide an allocation to the City of Berkeley under Rule 20A. The following table describes the allocation balance for 2016:

| City of Berkeley 2016 Estimate of Current Rule 20A Account Balance |               |                        |
|--|---------------|------------------------|
|  | Allocations   | Estimated Expenditures |
| (a) Account Balance as of 05/13/14                                 | \$6,365,851   |                        |
| (b) 2015 Allocation  | +\$528,394    |                        |
| (c) 2016 Allocation  | +\$523,888    |                        |
| (d) 5 year borrow  | +\$2,619,440  |                        |
| (e) Total Available Allocations                                    | =\$10,037,573 |                        |
| (f) Grizzly Peak Blvd - Current FAC                                |               | -\$4,682,736           |
| (g) Vistamont Ave - Preliminary Ballpark Figure                    |               | -\$6,085,703           |
| (h) Adjusted Account Balance as of 5/17/16                         | =\$730,866    |                        |

The factors making up the table are:

- (a) Account Balance as of 5/13/14. This is the balance as of 5/13/14 of the annual Rule 20A allocation. The balance is then added to the allocations to determine the amount available to fund Rule 20A projects.
- (b) 2015 Allocation. This is the amount of Rule 20A allocation received by the City of Berkeley in 2015. It is added to the Account Balance as of 2014.
- (c) 2016 Allocation. This is the amount of Rule 20A allocation received by the City of Berkeley in 2016. It is added to the Account Balance as of 2014.
- (d) 5 year borrow. Under the provisions of Rule 20A the City can borrow forward 5 years of allocation. The \$2,619,440 is 5 times the 2016 allocation. Please note that if the City uses the 5-year borrowing provision, the negative balance must be repaid from future allocations before another project can be done.
- (e) Total Available Allocations. The Total Available Allocations is the sum of the Account Balance as of 5/13/14, the 2015 Allocation, the 2016 Allocation and the 5 year borrow.
- (f) Grizzly Peak Blvd. The estimated value of the Grizzly Peak Blvd. Rule 20A is subtracted from the Total Available Allocations.
- (g) Vistamont Ave. The estimated value of Vistamont Ave. is subtracted from the Total Available Allocations.
- (h) Adjusted Account Balance as of 5/17/16. The Adjusted balance is the Total Available Allocations minus the next project where resolutions have been passed. The balance can still change depending on the actual construction cost of the Grizzly Peak project.

It is anticipated that PG&E will continue to provide an annual allocation for the near future to fund Rule 20A projects. However, in recent years PG&E has changed the allocation methodology. Under Rule 20A, the City can borrow forward up to 5 years of allocation to fund a qualified project. The allocation can also be used to fund the service lateral, up to 100 feet and the service panel conversion, up to \$1,500. The City of Berkeley has undergrounded many miles utilizing Rule 20A funds. The City utilizes a streetlight assessment to fund the installation of the streetlights in a Rule 20A district. Rule 20A continues to be an available funding mechanism to underground the arterial and collector streets within the City of Berkeley. If the street is not an arterial or collector, but is heavily conducted, heavily travelled or is scenic, it may also qualify for funding under Rule 20A

Under Rule 20B, the source of funding is typically an assessment or special tax district to fund the property owner's share of the costs. Prior to the dissolution of the RDA's they were also used to fund the local share of undergrounding projects. The City of Berkeley has done one undergrounding project under Rule 20B using an assessment district. Neighborhoods such as Bay View, Terrace View and La Loma have shown interest in pursuing undergrounding using Rule 20B. These are in areas of the City that are predominately residential and where it appears that funding with Rule 20A will not be available for many years. Rule 20B seems to be gaining interest with certain neighborhoods that would not qualify under Rule 20A, but still have a desire to enjoy the benefits associated with underground utilities.

It should also be noted that other than the arterials and collectors the remaining residential streets would not qualify for Rule 20A funding.

Under Rule 20C, the costs with the exception of a small salvage credit are all borne by the property owners. These projects are less popular than Rule 20A and Rule 20B projects and are usually done where small groups of property owners are interested in undergrounding a small area. While available, no projects have been identified as Rule 20C, and has not been utilized in the City. Generally having a project that is large, enough for a Rule 20B is more advantageous.

Rule 20D is specific to projects within SDG&E's service boundaries.

## **VII. CREATING A DISTRICT TO FUND NEIGHBORHOOD UNDERGROUNDING PROJECTS**

The steps required to create a special district to fund utility undergrounding projects typically consists of five stages, including Public Hearing/Outreach, District Formation, Design, Notification, and Construction. Each element is described in greater detail below.

### **Step 1. Establish Utility Undergrounding District**

In accordance with the City's Municipal Code, the City Council holds public hearings in order to create an Underground Utility District (UUD) which provides the legal mechanism to require property owners to convert their existing overhead utility services to underground service. All residents and property owners with the proposed UUD are mailed a Public Hearing Notice and a map of the proposed UUD location. The Public Hearing Notice informs property owners that they are within an area being considered for undergrounding by the City Council. The notice explains the potential impacts of the project. Any member of the public may attend or speak at a public hearing. Prior to the start of design work, the City Council must create an underground utility district.

### **Step 2. Identify Funding Mechanism.**

As discussed there are several ways that the undergrounding of utilities can be funded. If the costs will not be fully funded under Rule 20A or other City funds, the City will typically work with property owners to form an assessment or special tax district. The first step in the creation of an assessment district is to develop a preliminary costs estimates and a map showing the parcels that would be included in the assessment district that will be used during the petition process. The petition must be signed by property owners representing at least of 50% of the land area within the proposed boundary of the district. The specific steps for the formation of the financing district (either special tax or benefit assessment) is governed by either the Government Code or the Streets & Highways Code, depending upon the type of district. In both cases the City, typically create a financing team, that includes a special tax consultant/assessment engineer, bond counsel and legal counsel. District formation typically takes 3-6 months. Once established, the financing district establishes the financial obligation of each property owner and the manner in which each property owner will pay their portion of the project's costs. Typically, bonds would be sold and property owners would repay their share of the project costs over a 20-25-year period. The annual obligation is collected as part of the annual property tax bill. If a property is sold, the remaining obligation is the responsibility of the new property owner.

**Step 3. Design Process.**

Once an Underground Utility District and financing district has been created, the design process starts. Design typically takes 1-2 years after SCE has approved the project and involves field surveying, utility research, and coordination among impacted utilities.

**Step 4. Notification.**

Prior to the start of undergrounding, residents and property owners will receive additional outreach materials regarding planned construction activities. If trenching on private property is required, utility companies will coordinate right-of-entry permits from property owners. In addition, immediately prior to construction, utility companies will distribute additional construction notices making the public aware of construction dates and times.

**Step 5. Construction.**

Depending on the size of an undergrounding project, construction can range in duration from a few months to over a year. The initial step in construction involves installation of the underground plastic conduit below the surface of the roadway. Trenching may also occur up to individual properties to allow for conversion to underground services. Next, contractors install new utility lines within the conduit and new transformers/pedestals adjacent to trench areas. These boxes are necessary for the underground system and are placed above ground. Once utility lines are installed, each property's electrical panel is modified to allow for underground service and then transitioned from overhead to underground services. Finally, once all properties are converted to underground services, poles are removed in the project area.

**VIII. EMERGING TECHNOLOGIES**

Harris was also asked to look at emerging technologies and the effect they may have on undergrounding. The following technologies were investigated:

- Photovoltaics and energy storage,
- Distributed generation and micro grids,
- Trenchless construction using horizontal directional drilling.

**Photovoltaics and energy storage.** While solar (photovoltaics) is gaining in popularity and energy storage is more and more efficient, the effect of solar on electric distribution systems is still unclear. The issue continues to be the lack of an efficient method of storing the power generated by photovoltaic system. The Village of Minster in Ohio, has constructed a utility scale storage project combined with a solar array. The battery storage is owned by the utility and works to offset power purchased on the open market. (Solar Meets Energy Storage, T&D World Magazine, April 25, 2016). In a separate article, the author compares the growth of solar to that of mobile phones and speculates that people will cut utilities ties in much the same way as they have with telephone wires. (Why living off the grid will be easier in 25 years, Cadie Thompson). However, energy storage continues to be a significant factor in the success of solar, distributed generation or micro grids. While still very expensive, there is progress in technologies such as Lithium-ion battery storage, Vehicle-to-Grid, and Fuel Cell energy storage. (Mayor's Undergrounding Task Force, October 2013)

**Distributed generation and micro grids** refers to small size electric generation (typically from a renewable fuel) located close to electric load centers. This would eliminate the need for large transmission towers to deliver electric energy from a large generation facility to a city. However, there is still a need for a local distribution network. The issue with this technology is properly sizing the generation, or having a consistent fuel source, so that a back-up source is not needed. (Mayor's Undergrounding Task Force, October 2013) Similar to solar, the ability to store energy during times of low demand so that is available during peak load periods is a significant factor with this technology as well.

**Horizontal directional drilling (HDD)** is a steerable trenchless method of installing underground pipe, conduit, or cable in a shallow arc along a prescribed bore path by using a surface-launched drilling rig, with minimal impact on the surrounding area. It is a relatively common method for installation of power and communication conduits. It is generally used where there is a desire not to "open cut" a trench and where the presence of existing underground facilities is well defined.

A brief description of the process starts with a pilot hole drilled from the surface to the required depth on the designed alignment. Lengths of 300' are relatively common. The pilot drill pushes its way through the soil and is tracked and guided by electronic signals emanating from the drill head. The pilot drill head surfaces at the termination point and a back reamer is attached to the pilot drill rod. At this point, the drilling is reversed and the back reamer is pulled back toward the drilling rig enlarging the hole to the desired diameter for the plastic conduit carrier pipe. The conduit, which has been fuse welded together in one continuous pipe string, is then pulled back in the hole created by the reamer to the starting point. Costs can be as much as half of what open-cut construction would be and can range from \$60 to \$150 per foot depending on the conduit size and specific site constraints.

HDD is a viable option for use in Berkeley in streets that are not congested with existing underground utilities and for locations where landscaping and hardscape cannot be disturbed. However, to avoid damaging existing underground facilities it is imperative to know their exact locations.

## **IX. SUMMARY OF THE ADVANTAGES AND DISADVANTAGES OF UNDERGROUNDING ARTERIALS AND COLLECTORS**

The structure of Rule 20 favors undergrounding in areas used frequently by the public. Roads that are heavily conductored (many overhead wires) and heavily travelled benefit the public by being undergrounded. Public buildings since the public also frequents them also benefits. Expanding the qualifications of Rule 20A by including arterials and collectors provide more confirmation that utility funded undergrounding should benefit the public.

### **ADVANTAGES**

1. Enhanced public safety (during fire and earthquake events).
2. Enhanced reliability (less frequent outages)
3. Improved aesthetics.
4. Improved pedestrian access.
5. A reduction in car pole accidents.

6. Eliminate tree limb contacts with overhead wires
7. Improved public perception.
8. Reduced tree trimming cost.

## DISADVANTAGES

1. High construction costs.
2. Construction noise.
3. Impacts to traffic.
4. Higher utility rates.
5. Finding space for conduits and substructures in already crowded streets.
6. Complaints from the public during construction.

### Comment on undergrounding the arterials and collectors within residential areas

Undergrounding the arterials and collectors in the residential areas will share similar pros and cons as the non-residential areas. Property owners and the public alike benefit from a safety and reliability standpoint. Views are enhanced by removing the overhead conductors and poles.

However, there is much more effort in public education and information required in working with homeowners in residential areas. One of the biggest challenges in this regard is identifying homeowner participation in costs and estimating an early, accurate construction cost estimate.

## X. CONCLUSION

As this study is intended to provide a base case for future studies on undergrounding the City of Berkeley conclusions may be pre-mature. It appears there are compelling reasons to underground all or a portion of the remaining streets in Berkeley. The utility funded program (Rule 20A) can continue to be used to fund the undergrounding on the arterials and collector streets. The remaining streets may need to be funded by neighborhood groups, or some type of City –wide assessment.

There are several potential next steps to this process, they include:

- Refining the costs,
- Developing a prioritization model,
- Developing the funding model,
- Exploring the impact of technology.

## XI. HISTORY OF UNDERGROUNDING OF OVERHEAD UTILITIES

For reference, attached in Appendix 2 is the City’s “Undergrounding of Utility Wires – A Brief History, December 2015” document.

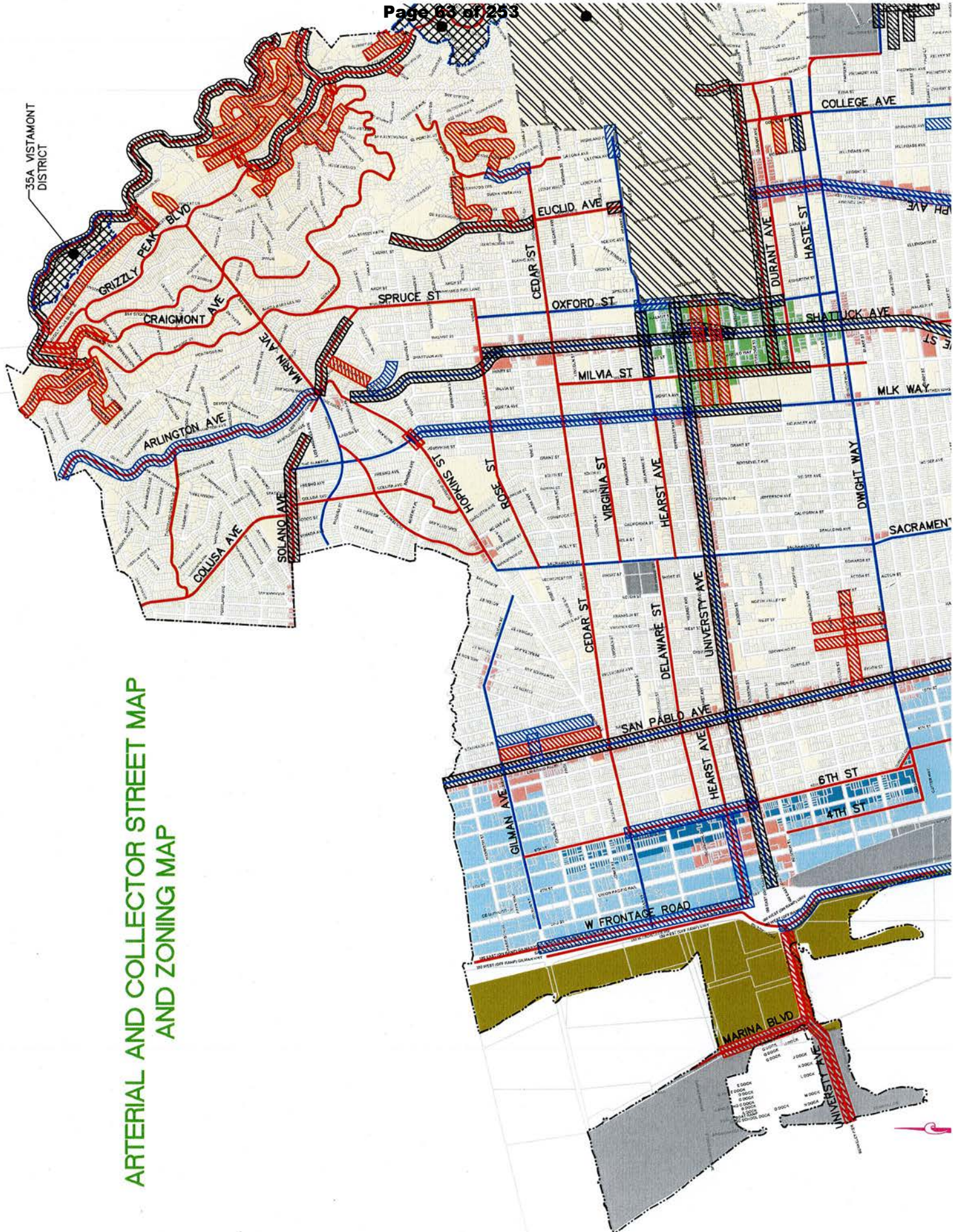


**XII. COMMENTS FROM COMMISSIONERS**

For reference, attached in Appendix 3 are the comments and questions from Commissioners and the Harris response.

**APPENDIX 1**

35A VISTAMONT DISTRICT



ARTERIAL AND COLLECTOR STREET MAP  
AND ZONING MAP

ATTACHMENT 2

CITY OF BERKELEY ARTERIAL AND COLLECTOR ROAD NETWORK UTILITY UNDERGROUNDING PLANNING LE 07/22/16

ARTERIAL ROAD NETWORK

| STREET NAMES AND LIMITS |                 |               |              | SECTIONS UNDERGROUND |               |               | OVERHEAD SECTIONS PER ZONE (NOTE: ZONES BASED ON CITY) |                |               |             |               |                 |
|-------------------------|-----------------|---------------|--------------|----------------------|---------------|---------------|--|----------------|---------------|-------------|---------------|-----------------|
| NO                      | STREET          | FROM          | TO           | TOTAL LENGTH (FT)    | FROM          | TO            | LENGTH (FT)  | FROM           | TO            | M ZONE (FT) | MUR ZONE (FT) | C-DMU ZONE (FT) |
| 1                       | ADELINE ST      | WARD ST       | CITY LIMIT   | 5280                 | WARD ST       | CITY LIMIT    | 5280   |                |               |             |               |                 |
| 2                       | ALAMEDA/MLK WAY | SOLANO AVE    | CITY LIMIT   | 15380                | HOPKINS       | BANCROFT WAY  | 6780   | SOLANO AVE     | HOPKINS ST    |             |               |                 |
|                         |                 |               |              |                      |               |               |  | BANCROFT WAY   | DWIGHT WAY    |             |               |                 |
|                         |                 |               |              |                      |               |               |  | DWIGHT WAY     | DWIGHT WAY    |             |               |                 |
|                         |                 |               |              |                      |               |               |  | DWIGHT WAY     | ASHBY AVE     |             |               |                 |
|                         |                 |               |              |                      | ASHBY AVE     | ADELINE ST    | 1450   |                |               |             |               |                 |
|                         |                 |               |              |                      | ADELINE ST    | CITY LIMIT    | 320  |                |               |             |               |                 |
| 3                       | ASHBY AVE       | BAY ST        | DOMINGO AVE  | 15465                |               |               |  | EAST OF BAY ST | SAN PABLO AVE |             |               |                 |
|                         |                 |               |              |                      |               |               |  | SAN PABLO AVE  | SACRAMENTO ST |             |               |                 |
|                         |                 |               |              |                      |               |               |  | SACRAMENTO ST  | SACRAMENTO ST |             |               |                 |
|                         |                 |               |              |                      |               |               |  | SACRAMENTO ST  | MLK WAY       |             |               |                 |
|                         |                 |               |              |                      | MLK WAY       | ADELINE ST    | 1160   |                | LORENA ST     |             |               |                 |
|                         |                 |               |              |                      |               |               |  |                | TELEGRAPH AVE |             |               |                 |
|                         |                 |               |              |                      | TELEGRAPH AVE | TELEGRAPH AVE | 450  |                | LORENA ST     |             |               |                 |
|                         |                 |               |              |                      |               |               |  |                | TELEGRAPH AVE |             |               |                 |
|                         |                 |               |              |                      | BENEVENUE AVE | PIEDMONT AVE  | 1215   |                | BENEVENUE AVE |             |               |                 |
|                         |                 |               |              |                      |               |               |  | PIEDMONT AVE   | CLAREMONT AVE |             |               |                 |
|                         |                 |               |              |                      |               |               |  | CLAREMONT AVE  | DOMINGO AVE   |             |               |                 |
| 4                       | CEDAR ST        | EASTSHORE HWY | 6TH ST       | 1765                 |               |               |  | EASTSHORE HWY  | 4TH ST        | 1120        |               |                 |
|                         |                 |               |              |                      |               |               |  | 4TH ST         | 6TH ST        | 645         |               |                 |
| 5                       | COLLEGE AVE     | DWIGHT WAY    | ALCATRAZ AVE | 5300                 |               |               |  | DWIGHT WAY     | RUSSELL ST    |             |               |                 |
|                         |                 |               |              |                      |               |               |  |                | ALCATRAZ AVE  |             |               |                 |
|                         |                 |               |              |                      |               |               |  | DWIGHT WAY     | WEBSTER ST    | 1125        |               |                 |
|                         |                 |               |              |                      |               |               |  |                | ALCATRAZ AVE  |             |               |                 |
|                         |                 |               |              |                      |               |               |  |                | ALCATRAZ AVE  |             |               |                 |
| 6                       | DERBY ST        | WARRING ST    | BELROSE AVE  | 1195                 |               |               |  | WARRING ST     | MID DERBEY ST |             |               |                 |
|                         |                 |               |              |                      |               |               |  |                | BELROSE AVE   | 715         |               |                 |
| 7                       | DWIGHT WAY      | 7TH ST        | PIEDMONT AVE | 12445                |               |               |  |                |               |             |               |                 |
|                         |                 |               |              |                      |               |               |  |                | 9TH ST        |             |               |                 |
|                         |                 |               |              |                      |               |               |  |                | SAN PABLO AVE | 675         |               |                 |
|                         |                 |               |              |                      |               |               |  |                | SACRAMENTO ST |             |               |                 |
|                         |                 |               |              |                      |               |               |  |                | SACRAMENTO ST |             |               |                 |
|                         |                 |               |              |                      |               |               |  |                | MLK WAY       |             |               |                 |

ATTACHMENT 2

CITY OF BERKELEY ARTERIAL AND COLLECTOR ROAD NETWORK UTILITY UNDERGROUNDING PLANNING LE

07/22/16

| STREET NAMES AND LIMITS |               |              |              | SECTIONS UNDERGROUNDED |      |    |             | OVERHEAD SECTIONS PER ZONE (NOTE: ZONES BASED ON CIT |    |             |               |                 |
|-------------------------|---------------|--------------|--------------|------------------------|------|----|-------------|--|----|-------------|---------------|-----------------|
| NO                      | STREET        | FROM         | TO           | TOTAL LENGTH (FT)      | FROM | TO | LENGTH (FT) | FROM   | TO | M ZONE (FT) | MUR ZONE (FT) | C-DMU ZONE (FT) |
| 9                       | HASTE AVE     | MLK WAY      | PEIDMONT AVE | 5980                   |      |    |             |  |    |             |               |                 |
| 10                      | HEARST AVE    | MLK AVE      | HIGHLAND PL  | 5160                   |      |    |             |  |    |             |               |                 |
| 11                      | HENRY ST      | EUNICE ST    | ROSE ST      | 1360                   |      |    |             |  |    |             |               |                 |
| 12                      | MARIN AVE     | TULARE AVE   | THE CIRCLE   | 2920                   |      |    |             |  |    |             |               |                 |
| 13                      | OXFORD ST     | ROSE ST      | DWIGHT WAY   | 6620                   |      |    |             |  |    |             |               |                 |
| 14                      | SACRAMENTO ST | HOPKINS ST   | ALCATRAZ AVE | 12375                  |      |    |             |  |    |             |               |                 |
| 15                      | SAN PABLO AVE | N CITY LIMIT | S CITY LIMIT | 12405                  |      |    |             |  |    |             |               |                 |
| 16                      | SHATTUCK AVE  | ROSE ST      | WARD ST      | 8250                   |      |    |             |  |    |             |               |                 |
| 17                      | SHATTUCK PL   | ROSE ST      | SHATTUCK AVE | 400                    |      |    |             |  |    |             |               |                 |
| 18                      | SUTTER ST     | HOPKINS ST   | EUNICE ST    | 1200                   |      |    |             |  |    |             |               |                 |

ARTERIAL ROAD NETWORK

# ATTACHMENT 2

## CITY OF BERKELEY ARTERIAL AND COLLECTOR ROAD NETWORK UTILITY UNDERGROUNDING PLANNING LE

07/22/16

SUMMARY OF STREETS TO BE UNDERGROUNDED SHOWING TOTAL LENGTH PER ZONE AND TOTAL COSTS

| CLASS                      | M ZONE (FT)   | C-DMU ZONE (FT) | C ZONE (FT) | SP ZONE (FT) | TOTAL LENGTH (FT) | Total Cost (\$) |
|----------------------------|---------------|-----------------|-------------|--------------|-------------------|-----------------|
| Arterial (Non-residential) | 4115          | 535             | 10180       | 0            | 14830             | \$11,380,000    |
| CLASS                      | MUR ZONE (FT) | R ZONE (FT)     |             |              |                   | Total Cost (\$) |
| Arterial (Residential)     | 645           | 53605           |             |              |                   | \$31,550,000    |

**LEGEND:**



SECTION OF STREETS TO BE UNDERGROUNDED  
SECTION OF STREETS ALREADY UNDERGROUNDED

**NOTE:**

1. IMPACT RATING IS THE LEVEL OF DIFFICULTY ASSOCIATED WITH UTILITY UNDERGROUNDING. IT IS ASSESSED IN THREE AREAS AS SHOWN BELOW PER FIELD REVIEW.  
IMPACT RATING IS TABULATED IN A SCALE FROM 1 (LOW IMPACT) TO 5 (HIGH IMPACT). REFER TO THE BASELINE STUDY IN SECTION III FOR MORE INFORMATION ON IMPACT RATING.

**ABBREVIATIONS:**

- M Zone = Manufacturing (Districts M, MM, MUU)
- MUR Zone = Mixed Use-Residential (District MUR)
- C-DMU Zone = Commercial Downtown Mixed Use (District C-DMU)
- C Zone = Commercial (Districts C-1, C-E, C-N, C-NS, C-SA, C-SO, C-T)
- SP Zone = Specific Plan (District SP)
- R Zone = Residential (Districts R-1, R-1A, R-2A, R-3, R-4, R-5, ES-R, R)

ATTACHMENT 2

CITY OF BERKELEY ARTERIAL AND COLLECTOR ROAD NETWORK UTILITY UNDERGROUNDING PLANNING LE

07/22/16

COLLECTOR ROAD NETWORK

| STREET NAMES AND LIMITS |               |               |                 | SECTIONS UNDERGROUNDED |      |    | OVERHEAD SECTIONS PER ZONE (ZONES BASED ON MUR ZONE) |                    |                    |             |                |
|-------------------------|---------------|---------------|-----------------|------------------------|------|----|--|--------------------|--------------------|-------------|----------------|
| NO                      | STREET        | FROM          | TO              | TOTAL LENGTH (FT)      | FROM | TO | LENGTH (FT)  | FROM               | TO                 | M ZONE (FT) | MUR ZONE(FT) Z |
| 1                       | 4TH ST        | ADDISON ST    | DWIGHT WAY      | 2535                   |      |    |  | ADDISON ST         | DWIGHT WAY         | 2535        |                |
| 2                       | 6TH ST        | GILMAN ST     | DWIGHT WAY      | 7290                   |      |    |  | GILMAN ST          | CAMELIA ST         | 670         |                |
|                         |               |               |                 |                        |      |    |  | CAMELIA ST         | CEDAR ST           |             | 1325           |
|                         |               |               |                 |                        |      |    | 2295   | UNIVERSITY AVE     | DWIGHT WAY         |             | 3000           |
| 3                       | 7TH ST        | DWIGHT WAY    | FOLGER AVE      | 3810                   |      |    |  | DWIGHT WAY         | CARLETON ST        | 1210        |                |
|                         |               |               |                 |                        |      |    |  | CARLETON ST        | HEINZ AVE          | 1300        |                |
|                         |               |               |                 |                        |      |    |  | HEINZ AVE          | ANTHONY ST         | 480         |                |
|                         |               |               |                 |                        |      |    |  | ANTHONY ST         | ASHBY AVE          |             |                |
|                         |               |               |                 |                        |      |    |  | ASHBY AVE          | FOLGER AVE         | 370         |                |
| 4                       | ALCATRAZ AVE  | COLLEGE AVE   | CLAREMONT AVE   | 850                    |      |    |  | COLLEGE AVE        | COLLEGE AVE        |             |                |
|                         |               |               |                 |                        |      |    |  | COLLEGE AVE        | CLAREMONT AVE      |             |                |
| 5                       | ALCATRAZ AVE  | W OF IDAHO ST | E OF ADELINE ST | 3970                   |      |    |  | W OF IDAHO ST      | SACRAMENTO ST      |             |                |
|                         |               |               |                 |                        |      |    |  | SACRAMENTO ST      | E OF CALIFORNIA ST |             |                |
|                         |               |               |                 |                        |      |    |  | E OF CALIFORNIA ST | ADELINE ST         |             |                |
|                         |               |               |                 |                        |      |    |  | ADELINE ST         | E OF ADELINE ST    |             |                |
| 6                       | ARLINGTON AVE | BOYNTON AVE   | MARIN AVE       | 5515                   |      |    |  | BOYNTON AVE        | MARIN AVE          | 5515        |                |
| 7                       | BANCROFT WAY  | MILVIA ST     | PIEDMONT AVE    | 5270                   |      |    |  | MILVIA ST          | PIEDMONT AVE       | 5270        |                |
| 8                       | BELROSE       | DERBY ST      | CLAREMONT AVE   | 1550                   |      |    |  | DERBY ST           | CLAREMONT AVE      | 1550        |                |
| 9                       | CEDAR ST      | 6TH ST        | LALOMA AVE      | 12290                  |      |    |  | 6TH ST             | SAN PABLO AVE      |             |                |
|                         |               |               |                 |                        |      |    |  | SAN PABLO AVE      | ACTON ST           |             |                |
|                         |               |               |                 |                        |      |    |  | ACTON ST           | SACRAMENTO ST      |             |                |
|                         |               |               |                 |                        |      |    |  | SACRAMENTO ST      | MILK AVE           |             |                |
|                         |               |               |                 |                        |      |    |  | MILK AVE           | SHATTUCK AVE       |             |                |
|                         |               |               |                 |                        |      |    |  | SHATTUCK AVE       | EUCUID AVE         |             |                |
|                         |               |               |                 |                        |      |    |  | EUCUID AVE         | LA LOMA AVE        |             |                |
| 10                      | CLAREMONT AVE | ALCATRAZ AVE  | TANGLEWOOD RD   | 4015                   |      |    |  | ALCATRAZ AVE       | PARKSIDE DR        |             |                |

COLLECTOR ROAD NETWORK

| STREET NAMES AND LIMITS |                   |                   |                | SECTIONS UNDERGROUNDED |            |            | OVERHEAD SECTIONS PER ZONE (ZONES BASED ON MUR ZONE) |   |  |             |                |
|-------------------------|-------------------|-------------------|----------------|------------------------|------------|------------|--|---|--|-------------|----------------|
| NO                      | STREET            | FROM              | TO             | TOTAL LENGTH (FT)      | FROM       | TO         | LENGTH (FT)  | FROM  | TO   | M ZONE (FT) | MUR ZONE(FT) Z |
| 14                      | COLUSA AVE        | SOLANO AVE        | VISALIA AVE    | 3430                   |            |            |  | SOLANO AVE  | VISALIA AVE  |             |                |
| 15                      | DELAWARE ST       | 6TH ST            | SACRAMENTO ST  | 4750                   |            |            |  | 6TH ST<br>SAN PABLO AVE   | SAN PABLO AVE<br>SACRAMENTO ST   |             |                |
| 16                      | DURANT AVE        | MILVIA ST         | PEIDMONT AVE   | 5280                   |            |            |  | MILVIA ST<br>SHATTUCK AVE<br>FULTON ST<br>TELEGRAPH AVE<br>BOWDITCH ST<br>COLLEGE AVE | SHATTUCK AVE<br>FULTON ST<br>TELEGRAPH AVE<br>BOWDITCH ST<br>COLLEGE AVE<br>PEIDMONT AVE |             |                |
| 17                      | DWIGHT WAY        | 4TH ST            | 7TH ST         | 960                    |            |            |  | 4TH ST<br>6TH ST  | 6TH ST<br>7TH ST   | 650<br>310  |                |
| 18                      | DWIGHT CR         | 6TH ST            | DWIGHT WAY     | 420                    |            |            |  | 6TH ST  | DWIGHT WAY   | 420         |                |
| 19                      | EAST SHORE HWY    | HEARST AVE        | N CITY LIMIT   | 5100                   | HEARST AVE | GILMAN ST  | 3770   | GILMAN ST   | N CITY LIMIT   | 1330        |                |
| 20                      | EUCLID AVE        | CEDAR ST          | HEARST AVE     | 1615                   | RIDGE RD   | HEARST AVE | 375  | CEDAR ST  | RIDGE RD   |             |                |
| 21                      | EUCLID AVE        | GRIZZLY PEAK BLVD | CRAIGMONT AVE  | 5185                   |            |            |  | GRIZZLY PEAK BLVD   | CRAIGMONT AVE  |             |                |
| 22                      | EUCLID ST         | EUNICE ST         | CEDAR ST       | 2780                   | EUNICE ST  | CEDAR ST   | 2780   |   |  |             |                |
| 23                      | FOLGER AVE        | HOLLIS ST         | EAST OF 7TH ST | 880                    |            |            |  | HOLLIS ST   | EAST OF 7TH ST   | 880         |                |
| 24                      | GRIZZLY PEAK BLVD | CRAIGMONT AVE     | EUCLID AVE     | 930                    |            |            |  | CRAIGMONT AVE   | EUCLID AVE   |             |                |
| 25                      | GRIZZLY PEAK BLVD | EUCLID AVE        | GOLF COURSE DR | 10885                  |            |            |  | EUCLID AVE  | MARIN AVE  |             |                |



ATTACHMENT 2

CITY OF BERKELEY ARTERIAL AND COLLECTOR ROAD NETWORK UTILITY UNDERGROUNDING PLANNING LE

07/22/16

COLLECTOR ROAD NETWORK

| STREET NAMES AND LIMITS |                 |                |                   | TOTAL LENGTH (FT) | SECTIONS UNDERGROUND |                   |             | OVERHEAD SECTIONS PER ZONE (ZONES BASED ON) |                   |             |              |
|-------------------------|-----------------|----------------|-------------------|-------------------|----------------------|-------------------|-------------|---|-------------------|-------------|--------------|
| NO                      | STREET          | FROM           | TO                |                   | FROM                 | TO                | LENGTH (FT) | FROM  | TO                | M ZONE (FT) | MUR ZONE(FT) |
| 29                      | KEITH AVE       | SPRUCE ST      | GRIZZLY PEAK BLVD | 8080              | MILLER RD            | GRIZZLY PEAK BLVD | 280         | SPRUCE ST                                   | MILLER RD         |             |              |
| 30                      | LA LOMA AVE     | GLENDALE AVE   | VIRGINIA ST       | 3705              | BUENA VISTA WAY      | CEDAR ST          | 790         | GLENDALE AVE                                | BUENA VISTA WAY   |             |              |
| 31                      | LOS ANGELES AVE | THE CIRCLE     | SPRUCE ST         | 1795              | THE CIRCLE           | OXFORD ST         | 1495        | OXFORD ST                                   | SPRUCE ST         |             |              |
| 32                      | MARIN AVE       | MARIN CR       | GRIZZLY PEAK BLVD | 3985              |                      |                   |             | MARIN CR                                    | GRIZZLY PEAK BLVD |             |              |
| 33                      | MARINA BLVD     | UNIVERSITY AVE | SPINNAKER WAY     | 2300              | UNIVERSITY AVE       | VIRGINIA ST EXT   | 1665        | VIRGINIA ST EXT                             | SPINNAKER WAY     |             |              |
| 34                      | MENDOCINO AVE   | MARIN CR       | MID-BLOCK         | 330               |                      |                   |             | MARIN CR                                    | MID-BLOCK         |             |              |
| 35                      | MILVIA ST       | CEDAR ST       | BLAKE ST          | 5640              | CEDAR ST             | VIRGINIA AVE      |             | CEDAR ST                                    | VIRGINIA AVE      |             |              |
|                         |                 |                |                   |                   |                      |                   |             | VIRGINIA AVE                                | FRANCISCO ST      |             |              |
|                         |                 |                |                   |                   |                      |                   |             | UNIVERSITY AVE                              | UNIVERSITY AVE    |             |              |
|                         |                 |                |                   |                   |                      |                   |             | UNIVERSITY AVE                              | CHANNING WAY      | 2300        |              |
|                         |                 |                |                   |                   |                      |                   |             | CHANNING WAY                                | HASTE AVE         |             |              |
|                         |                 |                |                   |                   |                      |                   |             | HASTE AVE                                   | BLAKE ST          |             |              |
| 36                      | MONTEREY AVE    | HOPKINS ST     | MARIN AVE         | 3550              |                      |                   |             | HOPKINS ST                                  | MARIN AVE         |             |              |
| 37                      | PIEDMONT AVE    | HASTE ST       | OPTOMETRY LN      | 1750              | BANCROFT AVE         | OPTOMETRY LN      | 725         | HASTE ST                                    | BANCROFT AVE      |             |              |
| 38                      | ROSE ST         | SACRAMENTO ST  | SPRUCE ST         | 5090              | MILK WAY             | MILK WAY          | 225         | ROSE ST                                     | MILK WAY          |             |              |
|                         |                 |                |                   |                   |                      |                   |             | MILK WAY                                    | HENRY ST          |             |              |
|                         |                 |                |                   |                   |                      |                   |             | HENRY ST                                    | SHATTUCK PL       | 550         |              |

ATTACHMENT 2

CITY OF BERKELEY ARTERIAL AND COLLECTOR ROAD NETWORK UTILITY UNDERGROUNDING PLANNING LE 07/22/16

COLLECTOR ROAD NETWORK

| STREET NAMES AND LIMITS |                    |                   |               | SECTIONS UNDERGROUNDED    |                   |                           | OVERHEAD SECTIONS PER ZONE (ZONES BASED ON STREET CLASS) |                 |                           |             |               |             |
|-------------------------|--------------------|-------------------|---------------|---------------------------|-------------------|---------------------------|--|-----------------|---------------------------|-------------|---------------|-------------|
| NO                      | STREET             | FROM              | TO            | TOTAL LENGTH (FT)         | FROM              | TO                        | LENGTH (FT)  | FROM            | TO                        | M ZONE (FT) | MUR ZONE (FT) |             |
| 43                      | TELEGRAPH AVE      | BANCROFT WAY      | DWIGHT WAY    | 1310                      | BANCROFT WAY      | DWIGHT WAY                | 1310   |                 |                           |             |               |             |
| 44                      | THOUSAND OAKS BLVD | COLUSA AVE        | ARLINGTON AVE | 2840                      |                   |                           |  | COLUSA AVE      | SANTA CLARA AVE           |             |               |             |
|                         |                    |                   |               |                           |                   |                           |  | SANTA CLARA AVE | ARLINGTON AVE             |             |               |             |
| 45                      | UNIVERSITY AVE     | SEAWALL DR        | FRONTAGE RD   | 3825                      |                   |                           |  |                 |                           |             |               |             |
|                         |                    |                   |               |                           | SEAWALL DR        | FRONTAGE RD               | 3825   |                 |                           |             |               |             |
| 46                      | VIRGINIA ST        | SACRAMENTO ST     | MILK WAY      | 2640                      |                   |                           |  |                 |                           |             |               |             |
|                         |                    |                   |               |                           |                   |                           |  | SACRAMENTO ST   | MILK WAY                  |             |               |             |
| 47                      | W FRONTAGE RD      | ACROSS DWIGHT WAY | GILMAN ST     | 7500                      | ACROSS DWIGHT WAY | UNIVERSITY AVE            | 3000   |                 |                           |             |               |             |
|                         |                    |                   |               |                           |                   |                           |  | UNIVERSITY AVE  | GILMAN ST                 | 4500        |               |             |
| 48                      | WARRING ST         | DWIGHT WAY        | DERBY ST      | 1580                      |                   |                           |  |                 |                           |             |               |             |
|                         |                    |                   |               |                           |                   |                           |  | DWIGHT WAY      | DERBY ST                  |             |               |             |
| 49                      | WILDCAT CANYON RD  | WOODMONT AVE      | CITY LIMIT    | 9750                      | WOODMONT AVE      | CITY LIMIT                | 9750   |                 |                           |             |               |             |
|                         |                    |                   |               |                           |                   |                           |  |                 |                           |             |               |             |
|                         |                    |                   |               | <b>TOTAL LENGTH (FT)=</b> | <b>190460</b>     | <b>TOTAL LENGTH (FT)=</b> |  | <b>59660</b>    | <b>TOTAL LENGTH (FT)=</b> |             | <b>13275</b>  | <b>5705</b> |

SUMMARY OF STREETS TO BE UNDERGROUNDED SHOWING TOTAL LENGTH PER ZONE AND TOTAL COSTS

| CLASS                       | M ZONE (FT) | C-DMU ZONE (FT) | C ZONE (FT) | SP ZONE (FT) | TOTAL LENGTH (FT) | Total Cost (\$) |
|-----------------------------|-------------|-----------------|-------------|--------------|-------------------|-----------------|
| Collector (Non-Residential) | 13275       | 1260            | 8105        | 635          | 23275             | \$15,100,000    |
| Collector (Residential)     | 5705        | 101820          |             |              | 107525            | \$76,770,000    |

LEGEND:

|  |  |
|--|--|
|  | SECTION OF STREETS TO BE UNDERGROUNDED   |
|  | SECTION OF STREETS ALREADY UNDERGROUNDED |

ABBREVIATIONS:

- M Zone = Manufacturing (Districts M, MM, MUU)
- MUR Zone = Mixed Use-Residential (District MUR)
- C-DMU Zone = Commercial Downtown Mixed Use (District C-DMU)
- C Zone = Commercial (Districts C-1, C-E, C-N, C-NS, C-SA, C-SO, C-T, C-V)
- SP Zone = Specific Plan (District SP)
- R Zone = Residential (Districts R-1, R-1A, R-2A, R-3, R-4, R-5, ES-R, R-5, F)

NOTE: 1. IMPACT RATING IS THE LEVEL OF DIFFICULTY ASSOCIATED WITH UTILITY UNDERGROUNDING. IT IS ASSESSED IN THREE AREAS AS SHOWN BELOW PER FIELD REVIEW. IMPACT RATING IS TABULATED IN A SCALE FROM 1 (LOW IMPACT) TO 5 (HIGH IMPACT). REFER TO THE BASELINE STUDY IN SECTION III FOR MORE INFORMATION ON IMPACT RATING.

| RESIDENTIAL ROADS ALREADY UNDERGROUNDED |                   |                    |                   |                   |
|---|-------------------|--------------------|-------------------|-------------------|
| STREET NAMES AND LIMITS                 |                   |                    |                   |                   |
| NO                                      | STREET            | FROM               | TO                | TOTAL LENGTH (FT) |
| 1                                       | ADDISON ST        | MLK WAY            | OXFORD ST         | 2040              |
| 2                                       | ALTA RD           | SPRUCE ST          | CRAIGMONT AVE     | 390               |
| 3                                       | ALVARADO RD       | CITY LIMIT         | WILLOW WALK       | 1890              |
| 4                                       | AMADOR AVE        | SUTTER ST          | SHATTUCK AVE      | 920               |
| 5                                       | ARCADE AVE        | GRIZZLY PEAK BLVD  | FAIRLAWN DR       | 310               |
| 6                                       | ATLAS PL          | HILL RD            | SUMMIT RD         | 200               |
| 7                                       | AVALON AVE        | OAK KNOLL TERRACE  | CLAREMONT AVE     | 800               |
| 8                                       | BENVENUE AVE      | ASHBY AVE          | WOOLSEY ST        | 1165              |
| 9                                       | BONAR ST          | BANCROFT WAY       | DWIGHT WAY        | 1320              |
| 10                                      | BOYNTON AVE       | COLORADO AVE       | FLORIDA AVE       | 280               |
| 11                                      | BROWNING ST       | BANCROFT WAY       | DWIGHT WAY        | 1320              |
| 12                                      | BUENA VISTA WAY   | EUCLID AVE         | LEROY AVE         | 380               |
| 13                                      | BUENA VISTA WAY   | LA LOMA AVE        | DEAD END          | 3340              |
| 14                                      | CAMELIA ST        | SAN PABLO AVE      | STANNAGE AVE      | 520               |
| 15                                      | CENTER ST         | MLK WAY            | OXFORD ST         | 2020              |
| 16                                      | CHANNING WAY      | SAN PABLO AVE      | VALLEY ST         | 1750              |
| 17                                      | CHANNING WAY      | BOWDITCH ST        | COLLEGE AVE       | 670               |
| 18                                      | COLBY ST          | ASHBY AVE          | WEBSTER ST        | 299               |
| 19                                      | COLORADO AVE      | BOYNTON AVE        | MICHIGAN AVE      | 510               |
| 20                                      | CLAREMONT BLVD    | DERBY ST           | BELROSE ABE       | 1400              |
| 21                                      | FOREST AVE        | MID POINT          | CLAREMONT BLVD    | 600               |
| 22                                      | GARBER ST         | OAK KNOLL TERRACE  | DEAD END          | 550               |
| 23                                      | THE CRESCENT      | PARK HILLS RD      | PARK HILLS RD     | 1020              |
| 24                                      | HAWTHORNE TERR    | EUCLID AVE         | LEROY AVE         | 365               |
| 25                                      | HILL RD           | GRIZZLY PEAK BLVD  | DEAD END          | 950               |
| 26                                      | HILLGRASS AVE     | WESBTER ST         | CITY LIMIT        | 840               |
| 27                                      | HILLVIEW RD       | WOODSIDE RD        | PARK HILLS RD     | 1265              |
| 28                                      | KAINS AVE         | GILMAN ST          | HOPKINS ST        | 1900              |
| 29                                      | KENTUCKY AVE      | VASSAR AVE         | MICHIGAN AVE      | 1315              |
| 30                                      | LATHAM LN         | MILLER AVE         | GRIZZLY PEAK BLVD | 550               |
| 31                                      | LATHAM LN         | CRESTON RD         | OVERLOOK RD       | 275               |
| 32                                      | LEROY AVE         | ROSE ST            | HAWTHORNE TERR    | 735               |
| 33                                      | MARIN AVE         | CRESTON RD         | DEAD END          | 450               |
| 34                                      | MARIPOSA AVE      | AMADOR AVE         | LOS ANGELES AVE   | 1070              |
| 35                                      | MIDDLEFIELD RD    | PARK HILLS RD      | LIMIT             | 1185              |
| 36                                      | MILLER AVE        | NORTH OF LATHAM LN | SHASTA RD         | 2180              |
| 37                                      | MUIR WAY          | GRIZZLY PEAK BLVD  | PARK HILLS RD     | 385               |
| 38                                      | OAK KNOLL TERRACE | GARBER ST          | AVALON AVE        | 475               |
| 39                                      | OAKVALE AVE       | CLAREMONT AVE      | DOMINGO AVE       | 1190              |
| 40                                      | OVERLOOK RD       | PARK HILLS RD      | DEAD END          | 1715              |
| 41                                      | PARK HILLS RD     | MUIR WAY           | SHASTA RD         | 1575              |
| 42                                      | PARK HILLS RD     | MUIR WAY           | WILDCAT CANYON RD | 1500              |
| 43                                      | ROSE ST           | LA LOMA AVE        | LEROY AVE         | 750               |
| 44                                      | STANNAGE AVE      | GILMAN ST          | HOPKINS ST        | 1685              |
| 45                                      | STERLING AVE      | WHITAKER AVE       | SHASTA RD         | 710               |
| 46                                      | STEVENSON AVE     | GRIZZLY PEAK BLVD  | MILLER AVE        | 520               |
| 47                                      | SUNSET LN         | CRESTON RD         | WILDCAT CANYON RD | 468               |
| 48                                      | VASSAR AVE        | NORTH CITY LIMIT   | SPRUCE ST         | 1535              |
| 49                                      | VINCENTE RD       | ALVARADO RD        | EAST CITY LIMIT   | 550               |
| 50                                      | VINCENTE RD       | TUNNEL RD          | CITY LIMIT        | 1310              |
| 51                                      | WEBSTER ST        | COLLEGE AVE        | REGENT ST         | 1070              |
| 52                                      | WHITAKER AVE      | STERLING AVE       | MILLER AVE        | 550               |
| 53                                      | WOODMONT AVE      | WILDCAT CANYON RD  | SUNSET LN         | 3055              |
| 54                                      | WOODSIDE RD       | CRESCENT RD        | PARK HILLS RD     | 1450              |
| <b>TOTAL LENGTH (FT)=</b>               |                   |                    |                   | <b>57267</b>      |

Final Committee on Oversight and Reform Report - December 2019

Section 2: Public Works Program - December 2019

Section 2: Public Works Program - December 2019

Section 2: Public Works Program - December 2019

## APPENDIX 2

Background

The public works program was established in 1977 to provide employment opportunities for disadvantaged individuals. The program was authorized by the Public Works Act of 1977, which was amended in 1982 and 1988. The program was authorized to provide employment opportunities for disadvantaged individuals for a period of 10 years, which was extended in 1988 and 1992. The program was authorized to provide employment opportunities for disadvantaged individuals for a period of 10 years, which was extended in 1988 and 1992.

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## Undergrounding of Overhead Utility Wires – A Brief History

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### Berkeley, CA Public Works Commission – December 2015

Pursuant to a referral from the Berkeley City Council in December 2014 and approval by the Council on September 28, 2015 –

- 1) “Approve a work plan, as attached hereto, to develop a comprehensive plan (the “Undergrounding Plan”) for the funding of the undergrounding of utility wires for all streets in Berkeley. The Undergrounding Plan would be developed in coordination with the City’s existing related plans and activities, including the City’s Resiliency Program.
- 2) Establish a Utility Undergrounding Special Commission consisting of the Public Works Commission, Transportation Commission, the Disaster and Fire Safety Commission representatives, and subject matter experts as needed to oversee the preparation of the Undergrounding Plan. The Special Commission shall be a manageable size and composed similar to the commission that developed the downtown Street and Open Space Improvement Plan”.

### Background:

The history of undergrounding utilities in the United States is over 125 years old, it was after the Great Blizzard of 1888<sup>1</sup> that Manhattan decided to put all its infrastructure from power to water, to gas lines, steam and subways, all went underground, and at great cost at that time. A second notable example was the Galveston, Texas in 1900. As the largest city in Texas at the time, Galveston, was the Wall Street of the South; but was destroyed by a great storm on Sept. 8, 1900. The 8,000+ people killed by that storm, 20 percent of the island’s total population, is still the largest single loss-of-life event from a natural disaster in U.S. history. Galveston built a 17-foot-high seawall that has protected the city from subsequent 44 hurricanes. But they also put all other vital infrastructure underground (natural gas, water, sewage and electricity telecom).

The California State Legislature in 1911 enacted laws to regulate erection and maintenance of poles and lines for overhead construction. Additionally, the “Municipal Improvement Act” of 1913 allowed for the financing of or acquisition of public improvements. This California State act is the enabling statute that municipalities use to construct and finance public works projects.

The history of undergrounding of overhead utility wires for older cities in the US is varied in its funding approach but mostly characterized by the incompleteness of efforts to fully experience the attributes and benefits of utility wire undergrounding. Currently utility customers in California pay about a dollar a month for a program that is supposed to bury all wires. (The amount that is in PG&E’s energy bill is to fund undergrounding that has already been completed.)

This ratepayer charge is based upon the California Public Utilities Commission action on September 19, 1967, as a result of their Case No. 8209. The California Public Utilities Commission (CPUC) adopted a rule requiring electric and telephone companies to initiate and participate in an active program to underground utilities in areas of general public benefit.

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<sup>1</sup> <http://www.history.com/this-day-in-history/great-blizzard-of-88-hits-east-coast>

European countries have much more of their power and telecommunications utilities undergrounded, as part of the post-WWII rebuilding and much like in the US where overhead wires are buried for new construction in the suburbs or special circumstances like the Oakland/Berkeley hill fires of 1991. Additionally, for example, there is an incentive for the State owned monopolies, like the French Post and Telegraph (now French Telecom) to see the long term view of the cost/ benefit of undergrounding utility wires. The “incident of repair” for buried utility wires during normal conditions is 47% lower. There are increased costs for construction to underground utility wires, which most current analysis sees as prohibitively expensive at \$2-\$4 (Should be \$3-\$5 million)a mile in urban areas, and repairs of utility outages do take longer in an undergrounded system<sup>2</sup>. However, these long term cost/benefits studies do not include the economic externalities, like business and individual loss of life and lost productivity, resulting from fire caused by the lack of tree trimming, snow/ice storms, earthquakes and other climate costs related to extreme weather phenomenon. Nor do these studies clearly address the time horizon for the payback period for their ‘prohibitively expensive’ judgments – 10, 20, 30, 50 or 100 years.

#### **Understanding the consequences of undergrounding of utilities:**

There have been a number of studies on the consequence of utility undergrounding by both private and public sources. They almost start out from the perspective that power outages over extended periods present major health and safety concerns and economic losses. According to a report by the Edison Electric Institute, “almost 70 percent of the nation’s distribution system has been built with overhead power lines. “Over the past 15 years or so, however, “approximately half the capital expenditures by U.S. investor -owned utilities for new transmission and distribution wires have been for underground wires.” Making such a conversion is rarely justified solely on the basis of costs. For utility companies, undergrounding provides potential benefits through reduced operations and maintenance (O&M) costs, reduced tree trimming costs, less storm damage, reduced loss of day -to-day electricity sales, and reduced losses of electricity sales when customers lose power after storms<sup>3</sup>.

#### **Potential Benefits of Underground Electric Facilities**

An advocacy group called Underground 2020 summarizes the potential benefits of undergrounding as the following;

Advantages of underground lines include aesthetics, higher public acceptance, perceived benefits of protection against electromagnetic field radiation (which is still present in underground lines), fewer interruptions, and lower maintenance costs. Failure rates of overhead lines and underground cables vary widely, but typically underground cable outage rates are about half of their equivalent overhead line types.

Potentially far fewer momentary interruptions occur from lightning, animals and tree branches falling on wires which de-energize a circuit and then re-energize it a moment later.

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<sup>2</sup> <http://www.ncuc.net/reports/undergroundreport.pdf>

<sup>3</sup> <http://www.underground2020.org/documents/Advantages%20of%20Undergrounding%20Utilities%20White%20Paper%2005-09.pdf>

Primary benefits most often cited can be divided into four areas:

**Potentially-Reduced Maintenance and Operating Costs**

- Lower storm restoration cost
- Lower tree-trimming cost

**Improved Reliability**

- Increased reliability during severe weather (wind-related storm damage will be greatly reduced for an underground system, and areas not subjected to flooding and storm surges experience minimal damage and interruption of electric service.
- Less damage during severe weather
- Far fewer momentary interruptions
- Improved utility relations regarding tree trimming

**Improved Public Safety**

- Fewer motor vehicle accidents
- Reduced live-wire contact injuries
- Fewer Fires (Lake County, Ca just a current example)

**Improved Property Values**

- Improved aesthetics (removal of unsightly poles and wires, enhanced tree canopies)
- Fewer structures impacting sidewalks

**Tangible Savings**

The following chart, which summarizes the total benefits that the Virginia State Corporation Commission calculated Virginia utilities might realize if the state’s entire electric distribution system were placed underground, shows tangible metrics for projecting savings to utilities. It shows an annual projected savings of approximately \$104 million.

| <b>Cost Saving Item:</b>   | <b>\$/Year</b>        |
|--|-----------------------|
| Operations & Maintenance   | no savings            |
| Tree Trimming  | \$ 50,000,000         |
| "Hundred-Year" Post Storm Rebuild                                | \$ 40,000,000         |
| Reduction in Day-to-Day Lost Electricity Sales                   | \$ 12,000,000         |
| Elimination of Lost Electricity Sales From "Hundred-Year" Storms | \$ 2,000,000          |
| <b>Total</b>   | <b>\$ 104,000,000</b> |

Source: Virginia State Corporation Commission, January 2005, “Placement of Utility Distribution Lines Underground” Societal Benefits

The following summarizes some of the societal benefits, including enhanced electric reliability to the economy, reduced economic losses to customers due to fewer power outages after major storms, and reduced injuries and deaths from automobiles striking utility poles.

| Cost Saving Item:                          | \$/Year          |
|--|------------------|
| Avoided Impact of Day-to-Day Outages       | \$ 3,440,000,000 |
| Avoided Impact of "100-Year" Storm Outages | \$ 230,000,000   |
| Avoided Impact of Motor Vehicle Accidents  | \$ 150,000,000   |
| Total                                      | \$ 3,820,000,000 |

The State of Virginia study, while not directly applicable, it does give us a template to use. We can substitute the "100-year storm" with know earthquake science that sees that every 35 years approximately the Bay Area experiences a greater than 6.0 quake. The risk is knowable the exact timing is uncertain.<sup>4</sup> Using a yearly per capita savings, based on the summary savings above, Berkeley can benefit from undergrounding of utilities by nearly \$60 million annually.

**The PG&E Program:**

PG&E places underground each year approximately 30 miles of overhead electric facilities, within its service area. This work is done under provisions of the company's Rule 20A, an electric tariff filed with the California Public Utilities Commission.

Projects performed under Rule 20A are nominated by a city, county or municipal agency and discussed with Pacific Gas and Electric Company, as well as other utilities. The costs for undergrounding under Rule 20A are recovered through electric rates after the project is completed. Rule 20 also includes sections B and C. Sections A, B and C are determined by the type of area to be undergrounded and by who pays for the work.

**Rule 20A**

Rule 20A projects are typically in areas of a community that are used most by the general public. These projects are also paid for by customers through future electric rates. To qualify, the governing body of a city or county must, among other things, determine, after consultation with Pacific Gas and Electric Company, and after holding public hearings on the subject, that undergrounding is in the general public interest for one or more of the following reasons:

- Undergrounding will avoid or eliminate an unusually heavy concentration of overhead electric facilities.
- The street or road or right-of-way is extensively used by the general public and carries a heavy volume of pedestrian or vehicular traffic.
- The street, road or right-of-way adjoins or passes through a civic area or public recreation area or an area of unusual scenic interest to the general public.
- The street or road or right-of-way is considered an arterial street or major collector as defined in the Governor's Office of Planning and Research General Plan Guidelines.

<sup>4</sup> "The Signal and the Noise; Why So Many Predictions Fail -but Some Don't", Nate Silver, 2012



## Rule 20B

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Rule 20B projects are usually done with larger developments. The majority of the costs are paid for by the developer or applicant.

Undergrounding under Rule 20B is available for circumstances where the area to be undergrounded does not fit the Rule 20A criteria, but still involves both sides of the street for at least 600 feet.

Under Rule 20B, the applicant is responsible for the installation of the conduit, substructures and boxes. The applicant then pays for the cost to complete installation of the underground electric system, less a credit for an equivalent overhead system, plus the ITCC (tax), if applicable. Berkeley has one 20B District - Thousand Oaks Heights

## Rule 20C

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Rule 20C projects are usually smaller projects involving a few property owners and the costs are almost entirely borne by the applicants.

Undergrounding under the provisions of Rule 20C is available where neither Rule 20A nor Rule 20B applies. Under Rule 20C, the applicant pays for the entire cost of the electric undergrounding, less a credit for salvage.

## Rule 20 Process Flow

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A cross-functional team that includes representatives from Pacific Gas and Electric Company, the phone and cable companies, local governments and the community at-large oversees Rule 20A projects. Projects are accomplished by:

- Identifying and reviewing potential projects
- Developing preliminary costs for the projects
- Refining associated boundaries and costs
- Coordinating the schedules of other public works projects
- Developing final project plans
- Passing a municipal underground resolution
- Developing an underground design
- Converting service panels for underground use
- Starting construction
- Installing underground services
- Completing all street work
- Removing existing poles from the project area

## City of Berkeley's Undergrounding Efforts

Berkeley has a total of 237 miles of utility wires, with 86 miles or 36% of the total miles currently undergrounded and 151 miles or 64% remain aboveground. Arterials and Emergency access routes comprise 29% of the total 237 miles. Of the nearly 86 miles currently undergrounded 51% are Arterials and Emergency access routes – thus barely ½ of the Arterials and Emergency Access routes have been undergrounded out of the total that experienced undergrounding using statewide PG&E ratepayer 20A funds. Nearly 50% of the 20A undergrounding funds from PG&E funds have been allocated to

residential streets or nearly \$26(??) million of the total \$65(??) million PG&E rate payer 20A funds that Berkeley received.

### Undergrounding Districts Completed

| 1970s                                    | 1980s  | 1990s   | 2000s  |
|--|--|---|--|
| Hearst (Freeway to 6 <sup>th</sup> )     | Oxford St (Hearst to University)             | Ashby/Benvenue                                | Los Angeles/Mariposa                                 |
| Sixth St (University to Cedar)           | Sacramento St (Oregon to South City Limit)   | Hearst Ave (LaLoma to Cyclotron)              | Park Hills   |
| Sutter/Henry St                          | Ajax PL/Hill Rd.                             | Grizzly Peak/Cragmont                         | Miller Stevenson                                     |
| San Pablo Avenue                         | Kains/Cedar/Hopkins/Jones/Page               | Vicente/Alvarado                              | Grizzly Peak/Summit (estimated completion date 2020) |
| Eastshore Highway (Hearst to Gilman)     | Oakvale Ave (Claremont to Domingo)           | MLK Jr Way                                    | Vistamont/Woodmont (estimated completion date 2025)  |
| Stannage Ave (Gilman to Hopkins)         | LaLoma (Buena Vista to Cedar)                | Woodmont Ave                                  |  |
| Buena Vista Way                          | Channing/Bonar                               | Hill Rd                                       |  |
| Camelia St. (Stannage to San Pablo)      | West Frontage Rd (South to North City Limit) | Spruce Vassar                                 |  |
| Colby ( Ashby to Webster)                | MLK Jr Way (University to Hopkins)           | Leroy/Euclid                                  |  |
| So. Hospital Drive ( Ashby to Webster)   | Amador Ave ( Shattuck to Sutter)             | Benvenue (Woolsey to Stuart)                  |  |
| Telegraph (Bancroft to South City Limit) | Woodmont Ave Area                            | College /Hillegas                             |  |
|  | Hill Rd/ Atlas Pl                            | Cragmont                                      |  |
|  | Spruce St/Vassar                             | Arlington Avenue (Marin Circle to City Limit) |  |
|  | Benvenue Ave (Ashby to Stuart)               |   |  |
| <b>1970s</b>                             | <b>1980s</b>                                 | <b>1990s</b>                                  | <b>2000s</b>   |

|  |                   |  |  |
|--|-------------------|--|--|
|  | University Avenue |  |  |
|  | Solana Avenue     |  |  |

**Districts Completed with Additional Funds other than PG&E Ratepayer 20 A funds**

|                        |                   |
|------------------------|-------------------|
| Shattuck/Adeline       | BART              |
| University Avenue      | Caltrans, Private |
| 6 <sup>th</sup> Street | Redevelopment     |
| Kains, etc.            | CDGB              |
| Bancroft Ave           | UC                |
| San Pablo              | Caltrans          |

**Districts formed since 1990:**

- Number of Districts formed: 9
- Criteria for Selection: First come/first served based upon organization and initiative of citizens in local area/district
- Annual obligations committed to these Undergrounding districts can borrow up to 5 years in advance on PG&E ratepayer 20A funds

**Rule 20A Districts in Berkeley as written by PWC in 2004**

“Berkeley and Oakland were two cities who aggressively went after Rule 20A funds and formed a long queue of assessment districts in their areas. They convinced PG&E to bend the guidelines and use Rule 20A monies in residential neighborhoods where residents were more willing to pay for private connection costs (\$2000+ per parcel).

When PG&E started to face their own problems (rapid demand caused by internet server farms & bankruptcy hearings) they began to refuse to deviate from the original criteria established by the CPUC under Rule 20. The first instance was PG&E’s outright rejection of a proposed Rule 20A district in Oakland’s Piedmont Pines neighborhood.

At that point, Berkeley still had a number residential districts approved by PG&E in queue and their Rule 20A monies committed years into the future. As a result, the City Council issued a moratorium on Rule 20A districts until a new policy for future Rule 20A monies could be developed.

Today there are still three residential districts which have paid their connection and street light costs, but are still waiting for PG&E to schedule construction.

- 1) Miller/Stevenson/Grizzly      Estimated construction 2007-2008
- 2) Grizzly Peak/Summit      To be scheduled
- 3) Vistamont (Woodmont)      To be scheduled

**Rule 20B -Most Residential Neighborhoods**

- In December 2000, the City rolled out guidelines for neighborhoods interested in forming Rule 20B districts. Although many neighborhoods have expressed interest and continue to do so, only one neighborhood (Thousand Oaks Heights) actually formed a district which is now complete.
- Although cost estimates are being updated based on the experience of Thousand Oaks Heights, the estimates from August 2005 give you some indication. At that time the range was \$25-\$30k per household, not including the conversion costs on each parcel or \$2.5k-\$5K. In broad terms this translated into approximately \$2000 annual costs added to county property tax bills. Of course, these costs would probably be a little higher today.”

**Moratorium established in 2000 on forming new districts until new criteria for forming districts:**

Criteria developed passed unanimously by both the Public Works Commission and Transportation Commission in January of 2009

- It recommends that the Council reaffirm its December 19, 2000, to prioritize major arterial routes which were additionally emergency and evacuation routes, by adopting priority routes that meet the convergence of three criteria
- a major arterial route as designated by the General Plan
- major emergency/first responder/evacuation route as designated by the General Plan
- highest traffic volumes as determined by the Public Works/Transportation division

This recommendation to Council was never agenzized or acted upon by Council.

**Current Situation - 2015:** These Districts were established between FY 1991 and FY 1992

- Berkeley Alameda Grizzly Peak Blvd “Engineering Phase”
- Berkeley Alameda Vistamont Ave “Planning Phase”

These two remaining Undergrounding Districts will not be completed until 2020 and 2025 respectively. Additionally, PG& E current allocation of 20 A funds for those districts being completed means that new 20A funds will not be available until 2025

**Funding Decisions**

Few alternatives exist for utilities themselves when it comes to financing the undergrounding of power lines; primarily through either rate increases or special charges to monthly utility bills. Conversely, jurisdictions have much greater flexibility and alternatives to consider in paying for undergrounding, for example:

- Charging a flat fee to all property owners within the jurisdiction;
- Create special districts within communities which could be added to monthly utility bills or tax bills;
- Community-financing through their operating budgets and General Obligation Bonds;
- Pooling monies from residents to pay for their own lines, or at least the portion that runs from the pole to their home meters;
- Implementing a small local tax on rooms, meals, liquor, and/ or retail sales;
- Using economic development, housing and community development, and other creative grant funding from resources such as the State Highway Administration, FEMA, and the State General Assemblies;

- Coordinate the timing and location with State and local infrastructure projects such as road, water, or gas line replacement to save on overall costs.<sup>5</sup>  
All the above.

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<sup>5</sup> Prepared by: Navigant Consulting, Inc., A Review of Electric Utility Undergrounding Policies and Practices March 8, 2005

## APPENDIX 3

Comments and Questions from Commissioners

1. Inclusion of a street cross section diagram showing placement of trench, transformers, etc. compared to the public right of way and potential private land. This would not even have to have measurements just a crude diagram to help a laymen understand what the actual underground looks like.
  - a. We have attached Figure 1 "Diagram of Typical Street Section Showing Underground Facilities in Commercial Area"
2. Please mention if Harris has come across in your research any cities that have had private organizations fund any portion of the undergrounding such as a telecom company funding it in coordination with replacement of their own infrastructure. If yes, expand a bit on how that worked out.
  - a. There have been projects where PG&E has offered a credit to underground in lieu of an overhead relocation for a road widening, but not for maintenance. In this case, PG&E credited the City with the avoided cost of the overhead relocation. This does involve a great deal of coordination, so that the undergrounding does not interfere with the road widening project.
3. Include a table showing the time it takes per mile to underground on various street or topography types.
  - a. We have attached typical schedules for 1 mile of undergrounding under Rule 20A and Rule 20B.
4. If possible, put some numbers to the potential cost savings in maintenance and power outage avoidance in the pro and con discussion.
  - a. Harris does not have this information.
5. Summary totals for all areas where data is presented.
  - a. Done.
6. Summary of new information about Rule 20 that is not available on the City's and PG&E's websites and put Rule 20 discussion in appendix.
  - a. In reviewing the rule, there is a new provision acknowledging "that wheelchair access is in the public interest and will be considered as a basis for defining the boundaries of projects that otherwise qualify for Rule 20A".
7. Expanded discussion of the time frame to realistically complete undergrounding given various funding mechanisms (bonding, surcharge, combination, etc.)
  - a. See schedules.
8. Totals miles and % of total residential of non-Arterial and Collector residential streets that already have been undergrounded and remaining total of residential streets to be undergrounded.

| TABLE 1: Summary of Undergrounding Lengths and Costs   |               |                |                |               |
|--|---------------|----------------|----------------|---------------|
| Arterial Streets                                       | Length (Feet) | Length (Miles) | Estimated Cost | % Underground |
| Total arterial streets                                 | 135,095       | 25.6           | N/A            | N/A           |
| Total arterial streets undergrounded                   | 66,015        | 12.5           | N/A            | 49%           |
| Non-residential arterial streets to be undergrounded*  | 14,830        | 2.8            | \$11,380,000   | 11%           |
| Residential arterial streets to be undergrounded**     | 54,250        | 10.3           | \$31,550,000   | 40%           |
| Total arterial streets to be undergrounded             | 69,080        | 13.1           | \$42,930,000   | 51%           |
| Collector Streets                                      |               |                |                |               |
| Total collector streets                                | 190,460       | 36.1           | N/A            | N/A           |
| Total collector streets undergrounded                  | 59,660        | 11.3           | N/A            | 31%           |
| Non-residential collector streets to be undergrounded* | 23,275        | 4.4            | \$15,100,000   | 12%           |
| Residential collector streets to be undergrounded**    | 107,525       | 20.4           | \$76,770,000   | 57%           |
| Total collector streets to be undergrounded            | 130,800       | 24.8           | \$91,870,000   | 69%           |
| Residential Streets                                    |               |                |                |               |
| Total residential streets***                           | 832, 666      | 157.7          | N/A            | N/A           |
| Total residential streets undergrounded                | 57,267        | 10.8           | N/A            | 7%            |
| Total residential streets to be undergrounded          | 775,399       | 149.9          | N/A            | 93%           |

\* Non-residential includes Zones M, C-DMU, C, and SP

\*\* Residential includes Zones MUR and R

\*\*\* Residential Streets include all non-arterial and non-collector streets falling in multiple zones

9. Expand the discussion of PROS AND CONS OF UNDERGROUNDING (e.g., if it is high cost CON - what about safety and emergency situations and associated risk assessment costs). Does Harris have any expertise in this area?
  - a. Harris does not have this expertise.
10. Create discussion on savings that can be accrued to the City when the City's Transportation Engineering and Paving Engineering are combined with Undergrounding Construction.



- a. While we do not have actual cost savings, combining paving projects with undergrounding would have several savings. Paving the street after an undergrounding project, would help to complete the cleaner aesthetics of the projects. The pole and wires would be underground and the newly paved street would help the street look new. The public's perception of the project would be improved, especially if the paving is performed directly after the undergrounding, instead of several years later. Related to the timing, if the paving were done after the undergrounding, the public would be inconvenienced less.
11. Can we figure out the percentage of street underground from the figures we already have? The Harris report specifies how many feet are already undergrounded and how many feet remain to accomplish, right?
  - a. See summary Table 1.
12. Overall, I think the report is pretty good. It would be nice to have the map in a scalable digital format (AutoCAD or ARC-GIS type format preferably, but at least a vector based map rather than a low resolution raster format), but I assume that is not part of the contract.
  - a. Thank you. Harris will provide 6 full size color copies and the CAD file.
13. On the map, and in the list of Arterials and collectors, Ashby Ave is not listed, and San Pablo is not listed. Even if this has to be dealt with through the State, these streets should be shown as Arterials.
  - a. The map now includes Ashby Ave. and San Pablo as arterials.
14. The unfilled outlines designated for the proposed areas are shown in the map legend, but are not marked on the map.
  - a. The map now shows the proposed areas as cross hatched.
15. Doing a Google inspection of MLK Jr. Way, the section at the south end of Berkeley to the Boarder with Oakland (actually, all the way to the bay) appear to already be undergrounded. Also the section of MLK north from Adeline to Ashby.
  - a. This has been updated.
16. In the Undergrounding Planning Level Estimate charts, where are the zones (M, MR, CB, C, SP and R) defined? It would be nice to have this definition as part of the chart legend for those not intimately familiar with the City zoning maps.

- a. The planning zones have been defined on the map and the estimate.
17. To be clear, the cost per foot (or mile) of undergrounding should include the cost to extend the conduits to the property line of each property. If this is not included, this should be clearly stated, and some estimate or formula should be provided, as this will ultimately be included in the cost to the city.
- a. The estimate does include the cost of the conduits from the main trench or splice box to the property line.
18. I am not sure where to fit this, but a discussion of the cost of connecting a house from the property line extension to the house itself should be discussed. Depending on current codes, this could include the cost of a pull box or the cost of a new service panel, the cost of the conduit, the cost of trenching, etc. Utility imposed rules not normally covered by code (for instance two-foot radius bends in two-inch conduit) should be noted. I would expect this cost (and the control of some of the specific details) would be the responsibility of the property owner.
- a. Since there are many variables in the cost of the service, we have included Table 2 below with the range of costs for commercial and residential services.

| <b>TABLE 2: SERVICE CONVERSION COSTS FOR:</b> |  |                       |
|---|--|-----------------------|
|   | <b>RESIDENTIAL (SINGLE FAMILY)</b>                 | <b>Range of Costs</b> |
| A   | Trench from property line to meter                 | \$50-\$100/foot       |
| B   | Conduits for electric, cable and phone             | \$6-\$15/foot         |
| C   | Service Panel Conversion                           | \$1500-\$3000/each    |
| D   | Driveway restoration                               | \$25-\$50/foot        |
| E   | Landscape restoration                              | \$10-\$25/square foot |
| F   | Trenching in steep slopes > 10%                    | \$100-\$200/foot      |
| G   | Drain box where meter is lower than sidewalk grade | \$200-\$400/each      |
|   | <b>COMMERCIAL</b>                                  | <b>Range of Costs</b> |
|   | Trench from property line to meter                 | \$50-\$100/foot       |
|   | Conduits for electric, cable and phone             | \$6-\$15/foot         |
|   | Service Panel Conversion (Up to 400 amps)          | \$3000-\$10000/each   |
|   | Driveway restoration                               | \$25-\$50/foot        |
|   | Landscape restoration                              | \$10-\$25/square-foot |
|   | Trenching in steep slopes > 10%                    | \$100-\$200/foot      |

For example, the approximate cost to provide the trench, conduit and service panel conversion where the slope is greater than 10% for a residence would be:  $(B+D+E+F) \times \text{Footage} + C = +/- \$\$\$$

19. Please provide a link to the details of San Diego's use of 20D funding and the San Diego utility lawsuit re: rate setting for 20D funds.

a. Here's the link to Rule 20D

[http://regarchive.sdge.com/tm2/pdf/ELEC\\_ELEC-RULES\\_ERULE20.pdf](http://regarchive.sdge.com/tm2/pdf/ELEC_ELEC-RULES_ERULE20.pdf)

and an article about the Rule 20 lawsuit. We didn't see anything specific to a Rule 20 lawsuit.

<http://www.sandiegoreader.com/news/2016/may/13/ticker-sdge-undergrounding-case-court/>

Comments from Commissioner Bruzzone

1. Pages 3 and 4. I think I'd have a summary here that there are 35 miles of street to underground for 100%. Of that 35 miles, about 11 miles is on arterials and the remaining on collector streets.

*A summary has been included on this version.*

If I am doing the math right, the cost is \$40 million for the 11 miles of arterial streets (about \$3.6 million per mile) and about \$90 million for the 24 miles of collector streets (about the same cost per mile).

I think if the costs per mile are unit costs, we should note that and note if there is a cost difference between arterial and collectors. *The unit costs have been noted.*

2. I'd like some discussion of any efficiencies we gain if we package all street rights-of-way improvements at once (i.e., sewer, water, gas, electric, telecom) along with repaving. This can be a range or a percentage.

*We have included a limited discussion.*

3. I'd like some discussion on what, in the future, needs to be directly connected to the building (house/office/etc.). I'm hearing that the telecom companies want to beam wireless into the residential units, eliminating that hard-wire link. Let's have a discussion on this (doesn't have to be a conclusion).

*This is outside the scope of this study. It could be provided on a future phase.*

4. If we don't need to have hard connections for telecom, how much does that save?

*We can address this in a future submittal.*

5. Thinking of which, the stated cost per mile (I believe) does not include the hard wire connection to the utility user. We should state that explicitly, and then give a range of what that cost would be (a range is fine, as I understand and appreciate Rocco's observation on the vastly different costs to provide access to the individual utility users).

*We have provided items that would make up estimated costs per foot of the trench, conduit and service panel conversion.*

6. Street lighting should be included in all estimates of undergrounding. Many streets (especially those around the University) are much too dark -- this is a public safety issue.

*This is outside the scope of this study however, we could provide a unit cost to replace the street lights in a future submittal.*

7. After listening to Rocco's comments, and the comments of the Subcommittee, I think we have a real opportunity to rethink the architecture of our utilities. On the energy side, with solar, we can work with PG&E and design the system to actually work for renewables -- i.e., storing power, islanding microgrids for both storage and for emergencies when the rest of the

gird goes down, etc. -- as well as recognizing that the telecoms may be changing their technology for access into the homes. If the study could include this as a sidebar someplace, I think that will be valuable.

*This is interesting, but outside the scope of this study.*

8. Some discussion of reliability increases that come with undergrounding -- including during an earthquake and the impacts of falling poles -- will also be valuable.

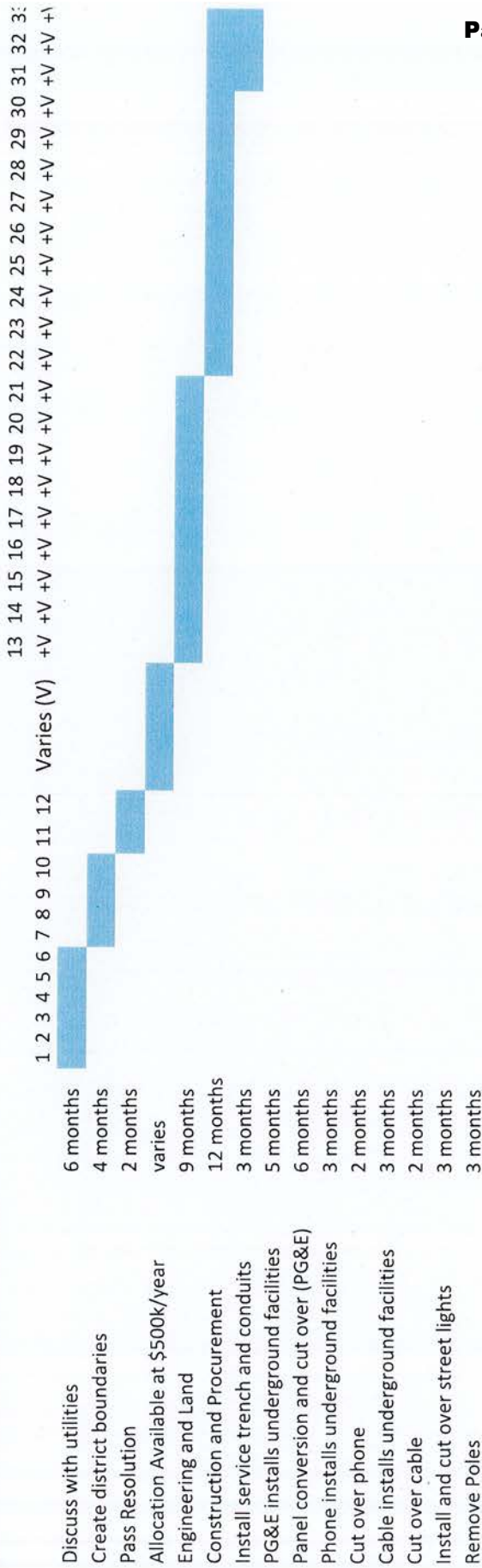
*This is outside the scope of this study.*

9. Finally, from my point of view, this work cannot be funded under the CPUC ratepayer program for a very long time, and, as is said, in the long-run we're all dead. We need to look at a citywide GO Bond -- or a series of bonds -- to get this done within at least some of our lifetimes. I think a broad discussion of developing an undergrounding program that coordinates with other utility and street infrastructure over a 20-year period, at a reasonable number of distances annually, will be our most effective way forward. We'll need to prioritize any program based on these coordinations and also based on important places to clear the wires from first (like fire stations!).

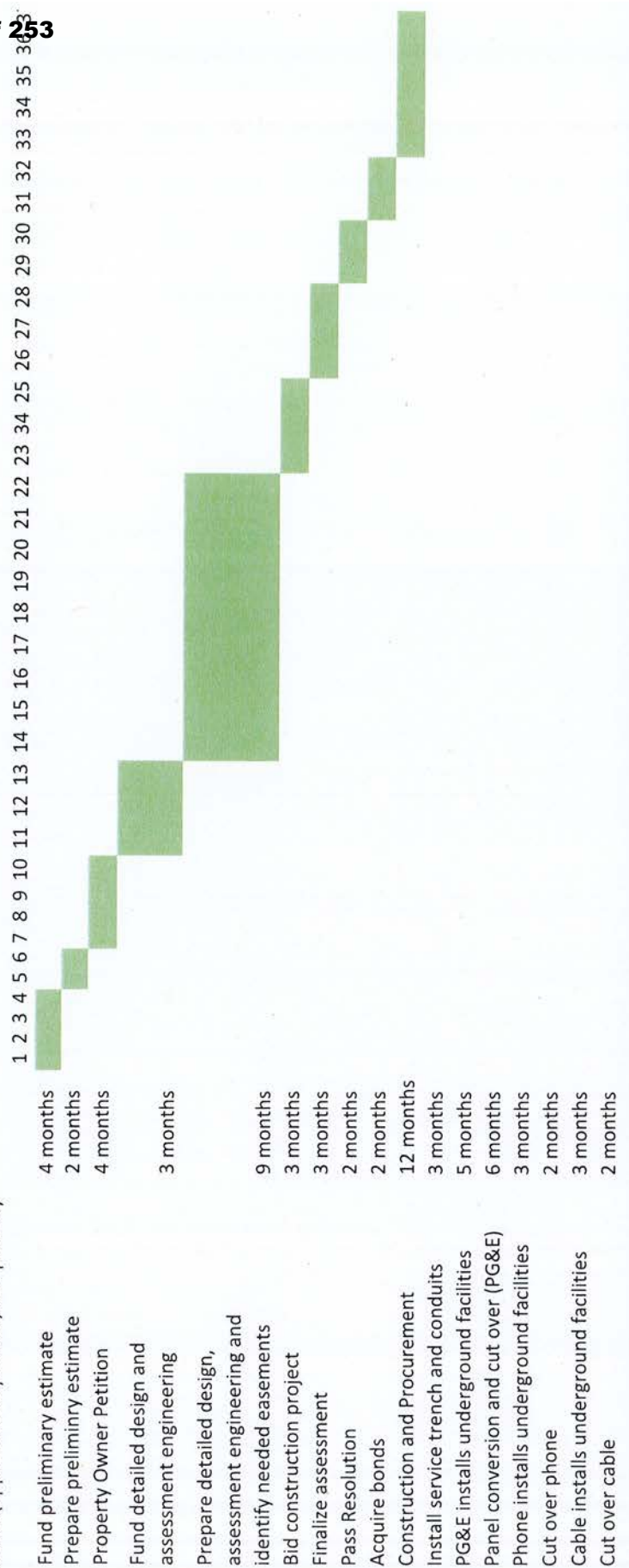
*This is outside the scope of this study however, we could provide some discussion in a future phase.*

CHAPTER IX  
TYPICAL SCHEDULE  
7/20/2016

Typical Rule 20A (approximately 1 mile, 100 parcels)



Typical Rule 20B (approximately 1 mile, 100 parcels)





## Appendix B

### Fire Risks and Mitigation Measures

## Fire History and Environmental Risk Factors

### Fire Risk in California

2017 was the hottest year on record in California, following 5 years of drought that killed 129 million trees in California. Seven of the ten deadliest and most destructive fires in California's history took place during the last 10 years, each one worse than ever experienced before. The most destructive fires in California, in order were:

- **CAMP FIRE - (Butte County), November 2018**  
Structures destroyed: 18,804  
Acres burned: 153,336  
Deaths: 86
- **TUBBS FIRE - (Napa County, Sonoma County), October 2017**  
Structures destroyed: 5,636  
Acres burned: 36,807  
Deaths: 22
- **TUNNEL FIRE - Oakland Hills (Alameda County), October 1991**  
Structures destroyed: 2,900  
Acres burned: 1,600  
Deaths: 25
- **CEDAR FIRE (San Diego County), October 2003**  
Structures destroyed: 2,820  
Acres burned: 273,246  
Deaths: 15
- **VALLEY FIRE (Lake, Napa & Sonoma County), September 2015**  
Structures destroyed: 1,955  
Acres burned: 76,067  
Deaths: 4
- **WITCH FIRE (San Diego County), October 2007**  
Structures destroyed: 1,650  
Acres burned: 197,990  
Deaths: 2
- **WOOLSEY FIRE (Ventura County), Nov. 2018**  
Structures destroyed: 1,643  
Acres burned: 96,949  
Deaths: 3
- **CARR FIRE (Shasta County, Trinity County), July 2018**  
Structures destroyed: 1,614  
Acres burned: 229,651



Deaths: 8

- **NUNS FIRE (Sonoma County), October 2017**  
Structures destroyed: 1,355  
Acres burned: 54,382  
Deaths: 3
- **THOMAS FIRE (Ventura County, Santa Barbara), December 2017**  
Structures destroyed: 1,063  
Acres burned: 281,893  
Deaths: 2

2017 was a devastating fire year highlighted by the Tubbs Fire, 2018 was highlighted by the Camp Fire, and 2019 is another severe fire year in northern and southern California. The Tubbs Fire in Santa Rosa made it clear that the flatlands are not immune from catastrophic fires. Fire raced down from the hills and flying embers started multiple smaller fires that burned down the Coffey Park neighborhood.

The following is an excerpt from the State of California's Fourth Climate Change Assessment, 2018, regarding projections on wildfires:

*Impact: Climate change will make forests more susceptible to extreme wildfires. By 2100, if greenhouse gas emissions continue to rise, one study found that the frequency of extreme wildfires burning over approximately 25,000 acres would increase by nearly 50 percent, and that average area burned statewide would increase by 77 percent by the end of the century. In the areas that have the highest fire risk, wildfire insurance is estimated to see costs rise by 18 percent by 2055 and the fraction of property insured would decrease.*

### **Fire Risk to Berkeley**

The Berkeley and Oakland area has had a long history of wildland fires. The following is excerpted from the Hills Wildfire Working Group, Wildfire Problem Statement, as posted on the East Bay Regional Park District website:

*Fire records for the East Bay Hills are sketchy, yet newspaper clips and old fire planning studies document an active and dangerous fire history. During the 75-year period between 1923 and 1998, eleven Diablo wind fires alone burned 9,840 acres, destroyed 3,542 homes, and took 26 lives, with over 2 billion dollars in financial loss. During the same period, three large west wind fires burned 1,230 acres of grass, brush, trees, and 4 homes.*

News reports document the major fires that have threatened the East Bay Hills:

- **1923 Berkeley-** A Diablo wind fire that started east of the Main ridge at 12 noon on a Monday in September destroyed 584 homes North of the U.C. Campus. No conflagration was ever more out of control. None ever demonstrated more vividly its power to defy all defensive resources once it gained headway. It was extinguished only by an act of providence.



Figure B-1 – 1923 Fire in Berkeley  
Photo by Cal Alumni Assoc.

- **1931 Leona**- 5 homes were lost and 1,800 acres burned by a Diablo wind fire that started at 7 a.m. on a Monday morning in November. "Splitting of the fire into two huge infernos left the hundreds of fire fighters almost helpless to combat the double conflagration."
- **1933 Redwood/Joaquin Miller**- 1 life and 5 homes were lost with 1,000 acres burned by a Diablo wind fire that started on the ridge at 7 a.m. on a Monday morning in November. "The fire traveled along the tops of the thick groves of trees for great distances, never reaching the ground until after the main blaze had passed."
- **1937 Broadway Terrace**- 4 homes were lost and 1,000 acres burned by a West wind fire that started at 3 p.m. on a hot Saturday afternoon in September. "Lack of water caused by exhaustion of reservoirs in the hills hampered fire fighters. The fire at times crept slowly through the brush and at other times leaped from treetop to treetop."
- **1946 Buckingham/Norfolk**- 1,000 acres were burned by a rekindled ridge top Diablo wind fire at 5:00 am on a Monday morning in September. "Sheer-walled canyons were quickly raging infernos. Flames raced so fast in the stiff wind they formed a fiery canopy over stands of pine and eucalyptus." In the ten years following this fire, at least 2 other large fires occurred in Claremont Canyon (Claremont above water tank to Stonewall) and Panoramic Hill (South of Panoramic to fire road) that did not involve structures because few existed at the time.
- **1960 Leona**- 2 homes were lost and 1200 acres were burned by a Diablo wind fire that started at 11 a.m. on Saturday morning in October. "The 84-degree temperature and low humidity aided the flames which roared with express train speed up steep slopes. Flames roared 50 ft. into the air."
- **1970 Buckingham/Norfolk**- 37 homes lost, 36 damaged, and 204 acres burned in a Diablo wind fire that started near the ridge at 10 a.m. on a Tuesday morning in September. The wind was swirling in every direction. The heat was so great that some houses were exploding before the fire actually reached them.
- **1980 Berkeley/Wildcat**- 5 ridge top homes were lost in a Diablo wind fire that started at 2 p.m. on a Saturday afternoon in December. The blaze, fed by thick underbrush and tree (eucalyptus) debris, was so hot and fast that homes literally exploded.

- **1991 Oakland/Berkeley-** The fire was rekindled at 10:45 a.m. below Buckingham/Norfolk roads, on a Sunday morning in October by a ridge top Diablo wind. The firestorm burned over 3 square miles, killed 25 people, gutted 2,900 homes and caused \$1.68 billion in damage. It was the most destructive wildfire in California history until 2017.

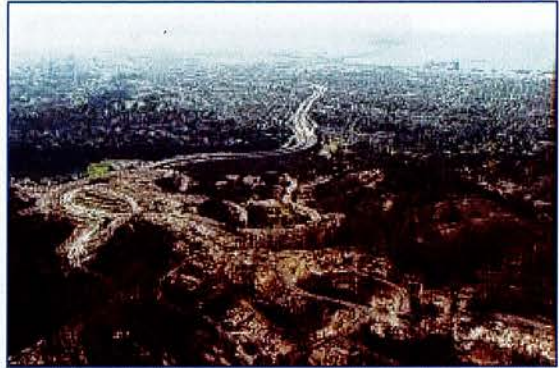


Figure B-2 – 1991 Oakland Hills fire  
Photo by SF Chronicle

- **1994 Castro Valley-** 3 homes were lost in a windy October afternoon near Lake Chabot Road when fireworks ignited a grass fire in a horse pasture below homes that provided no defensible space behind their residences.

If a fire occurs in Berkeley or the East Bay hills, how rapidly will it spread, and to where? While fires can occur under a wide variety of conditions, fires are most likely to rapidly spread and grow when high winds typically from the northeast direction coincide with hot dry conditions. This condition, winds descending the western slopes of the Coast range and known locally as a Mono or Diablo wind, is similar to the Santa Ana winds in southern California.

Given specified wind speed, fuel moisture and other data, fire spread can be computed using methods such as embodied in FlamMap (<https://www.firelab.org/project/flammap>). Such calculations are beyond the scope of this study. However, an estimate of how rapidly a fire might spread under Red Flag conditions can be gleaned by studying fire spread for events similar to those of concern. Such events include:

- The 1991 Oakland Hills fire began about 11 am during a Diablo wind – within 15 minutes it had run 2km (6,600 ft.) downhill – six hours later it had run 4.5 km (15,000 ft.). From Wildcat Canyon Road at Berkeley’s border with Tilden Park, to the Marin Avenue intersection at the Marin Circle, is 2.2 km. In other words, the East Bay Hills fire would have spread from Tilden Park to Marin Circle in about 20 minutes.
- The 2017 Tubbs fire spread at a rate of about 2 miles per hour, meaning it would have spread from Tilden Park to Marin Circle in about 37 minutes.

The North Berkeley Hills are a Wildland Urban Intermix area with about 26,000 residents and 7,453 assessor parcels. The likelihood of a major fire in this area similar to the Oakland Hills fire is about 0.002 per year, with Tilden Park itself having much higher likelihood (as much as 0.01 per year). Climate change may be increasing this likelihood, although how much is difficult to say. Diablo winds (“Red Flag” conditions) occur on average about 2.5 times each year, with about half those occurrences being in October to November when wildland fuels are very dry. Major WUI fires often burn the same areas that have burned in previous years. This is another reason why Berkeley is at risk.

CalFire has expanded its designation of high and extreme hazard fire zones as a result, with the subsequent loss of home insurance by many who live in these hilly and windy areas of Berkeley.

Cities that expect to rebuild after fires must develop a resilience strategy ahead of time to ensure that they don't lose citizens and businesses.

## Reducing the Risk of a Fire

With the increasing risks of wildland fires from extreme climatic conditions, there are actions that the City of Berkeley, our residents, and local agencies can take to reduce the risk of a fire. The following summarizes the actions we can take through educating the public of the risks, reducing vegetation that fuels fires, and PG&E's plans to shut off power during high risk climatic conditions.

### Public Education

The National Weather Service issues Red Flag Warnings & Fire Weather Watches to alert fire departments of the onset, or possible onset, of critical weather and dry conditions that could lead to rapid or dramatic increases in wildfire activity. A Red Flag Warning is issued for weather events which may result in extreme fire behavior that will occur within 24 hours. During these times extreme caution is urged by all residents, because a simple spark can cause a major wildfire. The type of weather patterns that can cause a warning include low relative humidity, strong winds, dry fuels, the possibility of dry lightning strikes, or any combination of the above.



Figure B-3 – AC Alert with Red Flag Warning

### East Bay Regional Parks District

The East Bay Regional Parks District issues the following restrictions to the danger of fires on Red Flag days:

- No open fires, campfires, wood burning or charcoal barbecues are permitted.
- Campground visitors must clear all flammable material for ten feet from their camp stove.
- Smoking is prohibited in all East Bay Regional Parks.
- No use of gasoline powered equipment (generators).
- Increased monitoring, patrol and strict enforcement of these restrictions.

### City of Berkeley

The public is notified of Red Flag conditions through AC Alert, City of Berkeley notifications, Mayor and Councilmember newsletters and local news broadcasts. Berkeley Councilmembers Susan Wengraf, Lori Droste, and Sophie Hahn hold an annual Fire Safety Town Hall every May. Representatives from the Berkeley Fire Department, the East Bay Regional Parks, the Orinda Fire Department, CalFire and UC Berkeley give presentations about what their jurisdictions are doing to mitigate and prevent wildfires. Topics covered included:

- Safe Passages pilot program (vehicle access and egress)
- Evacuation routes

- Vegetation management
- Notification and warning systems
- East Bay Regional Parks fire mitigations
- New technologies
- State legislation
- What neighboring jurisdictions are doing

## **Vegetation Management**

Wildland fire behavior is controlled by three factors: fuels, weather and topography. Because it is impractical to control the weather and topography around us, the only practical way to modify fire is by managing its fuel source. Fire fuel refers to anything that has the ability to burn and spread fire, like trees, shrubs and dried grass.

### **State of California**

In March 2019, Governor Newsom proclaimed a state of emergency throughout California ahead of the coming fire season. The Governor directed his administration to immediately expedite forest management projects that will protect 200 of California's most wildfire-vulnerable communities. This action follows the release of a report earlier by the California Department of Forestry and Fire Protection (CalFire), which identified 35 priority fuel-reduction projects that can be implemented immediately to help reduce the public safety risk for wildfire. The state of emergency provides time-saving waivers of administrative and regulatory requirements to protect public safety and allow for action to be taken in the next 12 months, which will begin to systematically address community vulnerability and wildfire fuel buildup through the rapid deployment of forest management resources. But will there be funding to maintain wildland fuelbreaks in the years that follow?

### **Regional Agencies**

The East Bay Regional Park Fire Department uses several different methods to modify or reduce the amount or availability of wildland fuels for any fire that may occur. Ladder and surface fuels such as grass, brush, forest litter, and down logs and branches are modified or removed by hand crews, prescribed fire, mowing, weed-eating, masticating, or animal grazing. Dense tree stands are often thinned to remove some of the trees that contribute to fuel loading and to reduce the potential for wildfire to spread in the tree canopies. Visitors to the East Bay Regional Parks may encounter cattle, sheep or goats grazing on the grasslands. The District uses grazing animals as a practical and economic resource management tool. Grazing helps reduce fire hazards by controlling the amount and distribution of grasses and other potential fuel.

The Orinda-Moraga Fire District entered into an agreement with CalFire in May 2019 to begin planning and work on the North Orinda Shaded Fuel Break (NOSFB) project. The project area encompasses 1,515 acres along 14 miles of open space in the East Bay between the eastern portions of Tilden Regional Park and Pleasant Hill Road. This project is being carried out to reduce dangerous wildfire fuels in a deliberate manner designed to minimize environmental impacts to wildlife and

protected plants. This area receives seasonal “Diablo winds”, that were the dominant influence in several major nearby wildfires. These fuels are understory vegetation, dead/dying trees, and highly combustible brush. Reducing the quantities of these fuels will lower the intensity and speed of a wildfire. This fuel break will provide essential opportunities for firefighting success by providing areas of lower fire intensity and enhanced fire line production rates.

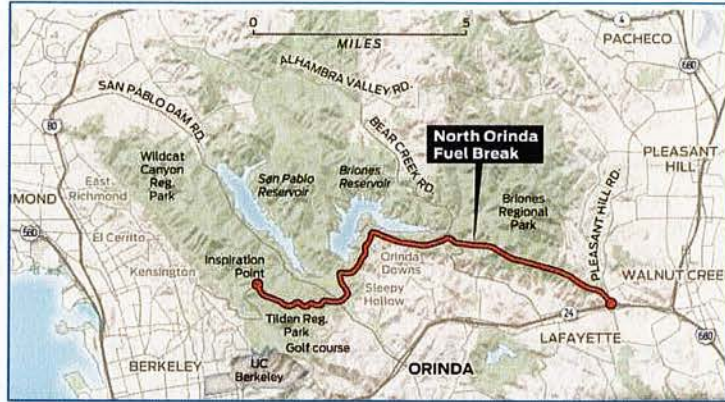


Figure B-4 – North Orinda Fuel Break Map from SF Chronicle

**City of Berkeley**

Berkeley currently has an active vegetation management program both for its public space and for property owners in the Very High Hazard Fire Zone. Property owners can learn about appropriate vegetation management on its Wildfire Evacuation- City of Berkeley webpage. We know that effective vegetation management includes reducing fire laddering fuels, removing dead limbs, limbing up trees, regulating the height of hedges, and maintaining at least 5 feet of vegetation-free space next to homes. Currently, compliance is largely voluntary except for annual inspections of vacant properties in the Very High Hazard Fire Zone (VHHFZ) and all properties in the Extreme Hazard Fire Zone (EHFZ).

**PG&E**

PG&E also has a vegetation management program. The following is from the PG&E website:

*In response to the growing risk of wildfire in our state, we are enhancing our vegetation and safety work. Our focus will be on addressing vegetation that poses a higher potential for wildfire risk in high fire-threat areas as designated by the California Public Utilities Commission (CPUC). Our Enhanced Vegetation Management program involves multiple steps to help further reduce the risk of trees, limbs and branches from coming into contact with power lines in high fire-threat areas.*

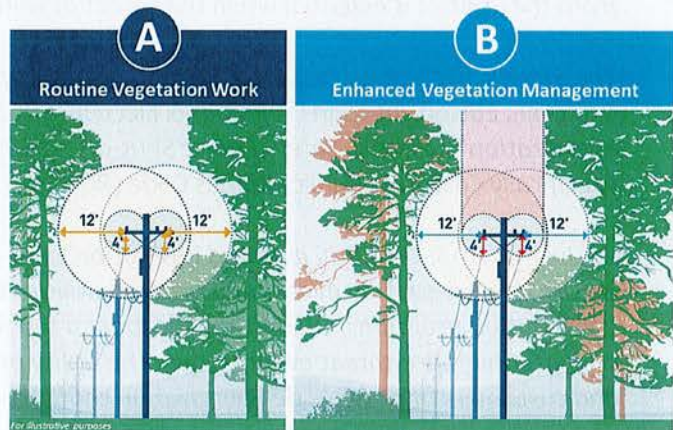


Figure B-5 – PG&E Vegetation Management

The San Francisco Chronicle reported in October 2019 that PG&E was behind schedule in carrying out their vegetation management program. The following is an excerpt from their report:

As the most dangerous part of California's wildfire season continues, Pacific Gas and Electric Co. says it has finished only about 31% of the aggressive tree-trimming work it planned this year to prevent vegetation from falling on power lines and starting more deadly infernos.

PG&E told a federal judge Tuesday that as of Sept. 21, the company had completed 760 miles out of the 2,455 miles of power lines where it intends to take extra steps to cut back vegetation. The company said its ability to meet the tree-trimming target by the end of the year depends on whether it can "significantly increase the number of qualified personnel engaged" in the effort.

## **Electrical Power Service Curtailments**

The cause for some of the recent wildland fires has been traced back to faulty overhead electrical wires or equipment. As an extreme measure to help reduce the risk of a fire, PG&E has proposed shutting electricity to high risk areas under Red Flag conditions. This program, called Public Safety Power Shutoff (PSPS), has been approved by the CPUC. It has now been done twice.

### **CPUC**

The CPUC has reviewed the risks of wildfires and worked with the State's investor-owned utilities and determined the following:

*Wildfires are more destructive and deadlier than in the past, and the threat of wildfires is more prevalent throughout the state and calendar year. The overall pattern shows the emerging effects of climate change in our daily lives.*

*Throughout the year, the CPUC works with CalFire and the Office of Emergency Services to reduce the risk of utility infrastructure starting wildfires, to strengthen utility preparedness for emergencies, and to improve utility services during and after emergencies. Interagency coordination, and cooperation from the utilities is essential when the threat of wildfires is high.*

*The State's investor-owned electric utilities, notably Pacific Gas and Electric Company (PG&E), Southern California Edison, and San Diego Gas & Electric (SDG&E), may shut off electric power, referred to as "de-energization" or Public Safety Power Shut-offs (PSPS), to protect public safety under California law, specifically California Public Utilities Code (PU Code) Sections 451 and 399.2(a).*

*On July 12, 2018, the CPUC adopted Resolution ESRB-8 to strengthen customer notification requirements before de-energization events and ordered utilities to engage local communities in developing de-energization programs. Utilities must submit a report within 10 days after each de-energization event, and after high-fire-threat events where the utility provided notifications to local government, agencies, and customers of possible de-energization though no de-energization occurred.*

### **PG&E**

PG&E has implemented the PSPS program. October 2019 saw the occurrence of dry conditions, Red Flag days and strong Diablo and Santa Ana winds in California. The following events have happened:

- **October 9 – 10, 2019** -- PG&E implemented its first major PSPS. About 800,000 homes and businesses in 34 counties lost power. This event tested the readiness of PG&E's public notification system and saw their website overwhelmed with contacts. Also, other facilities (such as the Caldecott Tunnel) scrambled to find back up power.

- **October 26 - 28, 2019** -- PG&E implemented a PSPS that affected about 1 million homes and businesses in 36 counties. The total number of people affected was more than 2.5 million. This was the largest intentional power shutoff in PG&E's history. This shutoff was in response to a very strong Diablo wind condition and very dry conditions.




Other shutdowns are proposed, depending on climatic conditions. PG&E's policies and procedures require inspection of their power lines and equipment before re-energizing. An outage can last several days. Figure 9 shows a summary of PG&E's PSPS policies and procedures.

SEP 2019

## PACIFIC GAS AND ELECTRIC COMPANY PUBLIC SAFETY POWER SHUTOFF POLICIES AND PROCEDURES

The following is a description of Pacific Gas and Electric Company's (PG&E) policies and procedures related to proactively turning off power for safety – and later restoring power – when gusty winds and dry conditions, combined with a heightened fire risk, threaten a portion of the electric system. This is often called proactive de-energization and restoration in the industry; PG&E is calling this a **Public Safety Power Shutoff**.

Given the continued and growing threat of extreme weather and wildfires, and as an additional precautionary measure following the 2017 and 2018 wildfires, we are expanding and enhancing our Community Wildfire Safety Program to further reduce wildfire risks and help keep our customers and the communities we serve safe. Our ongoing and expanded wildfire safety actions include:

| <br><b>REAL-TIME MONITORING AND INTELLIGENCE</b>   | <br><b>NEW AND ENHANCED SAFETY MEASURES</b>   | <br><b>SYSTEM HARDENING AND RESILIENCY</b>  |
|---|--|---|
| <ul style="list-style-type: none"> <li>Coordinating prevention and response efforts by monitoring wildfire risks in real time from our Wildfire Safety Operations Center</li> <li>Expanding our network of PG&amp;E weather stations to enhance weather forecasting and modeling</li> <li>Supporting the installation of new high-definition cameras in high fire-threat areas</li> </ul> | <ul style="list-style-type: none"> <li>Further enhancing vegetation management efforts to increase focus on vegetation that poses a higher potential for wildfire risk</li> <li>Conducting accelerated safety inspections of electric infrastructure in high fire-threat areas</li> <li>Disabling automatic reclosing of circuit breakers and reclosers in high fire-risk areas during wildfire season</li> <li>Proactively turning off electric power for safety (Public Safety Power Shutoff) when gusty winds and dry conditions combine with a heightened fire risk</li> </ul> | <ul style="list-style-type: none"> <li>Installing stronger and more resilient poles and covered power lines, along with targeted undergrounding</li> <li>Upgrading and replacing electric equipment and infrastructure to further reduce wildfire risks</li> <li>Working with communities to develop new resilience zones to provide electricity to central community resources during a Public Safety Power Shutoff event</li> </ul> |

[VISIT \[pge.com/wildfiresafety\]\(http://pge.com/wildfiresafety\) for more information](http://pge.com/wildfiresafety)

Public Safety Power Shutoff is one component of the Community Wildfire Safety Program. PG&E has created a set of procedures for:

- Monitoring **fire danger conditions**
- Determining what **combination of conditions** necessitates turning off lines for safety
- Identifying **potentially impacted areas**
- Notifying customers**, municipalities, agencies and critical facilities
- Restoring power as quickly as possible** once it is safe to do so

*Following the wildfires in 2017 and 2018, some of the changes included in this document are contemplated as additional precautionary measures intended to further reduce future wildfire risk.*

1

Figure B-6 – PG&E's PSPS Policies and Procedures



Issues that have arisen from the shutdowns have included:

- The Diablo winds were very strong with speeds up to 100 miles per hour in the upper peaks. The high winds caused tree limbs to take down overhead power lines in the shutdown and non-shutdown areas.
- Public notification on the timing and extent of the shutdowns were critical. The shutdown on October 9<sup>th</sup> saw the PG&E website overwhelmed from the volume of contacts. AC Alert, City of Berkeley notifications, and local news broadcasts were effective.
- The shutdowns have been a major disruption to people and businesses. Especially affected were people with medical, mobility and other needs. UC Berkeley cancelled classes and many school districts closed. The economic impact has been estimated to be more than \$1 billion.
- Governor Newsom has criticized PG&E for decades of mis-management and for not maintaining their system.
- The local news reported that PG&E is beginning to think that undergrounding overhead utility wires may be needed to improve safety.

## Reducing the Impacts from a Fire

If a wildland fire occurs in Berkeley or in neighboring areas, we need to be prepared to reduce the impacts. The following are some options for Berkeley to prepare itself, including evacuation planning, undergrounding overhead wires and creating defensible space around our homes.

### Evacuation Planning

When a wildland fire occurs, it will be important to evacuate the area with or without notice from public safety officials. Berkeley has established evacuation procedures posted on the City's website ([www.cityofberkeley.info/wildfireevacuation/](http://www.cityofberkeley.info/wildfireevacuation/)). Some of the important features of the plan include:

- **Safe Passages** – The Berkeley Safe Passages pilot program is designed to blend traditional parking restrictions with innovative road markings and signage. Many roads in Fire Zones 2 and 3 are too narrow for parking and safe passage of vehicles when emergencies arise. Three locations will be selected so staff and the public can evaluate the efficacy and impact. The Fire Chief listed three actions that need to be done for the Safe Passages Program:
  - Identify, paint, and provide signage for new “Keep Clear” pinch points on streets
  - Expand “No Parking” areas throughout dangerously narrow streets
  - Identify funding to enable additional capacity for parking enforcement
- **Evacuation Routes** – Berkeley's evacuation routes are shown on Figure 10. The City has also shown the location of temporary evacuation sites, fire stations and schools.
- **CERT and Simulated Exercises** -- In a catastrophic disaster, government resources (people and supplies) may not be available for several days following the event. The Community Emergency Response Team (CERT) Program provides education in disaster preparedness and provides training in basic emergency skills. By preparing neighborhoods and community groups with basic emergency skills, we can lessen the effects of a disaster and help sustain

ourselves until assistance can arrive. Berkeley held simulated evacuation exercises in three parts of the City in the summer of 2019.

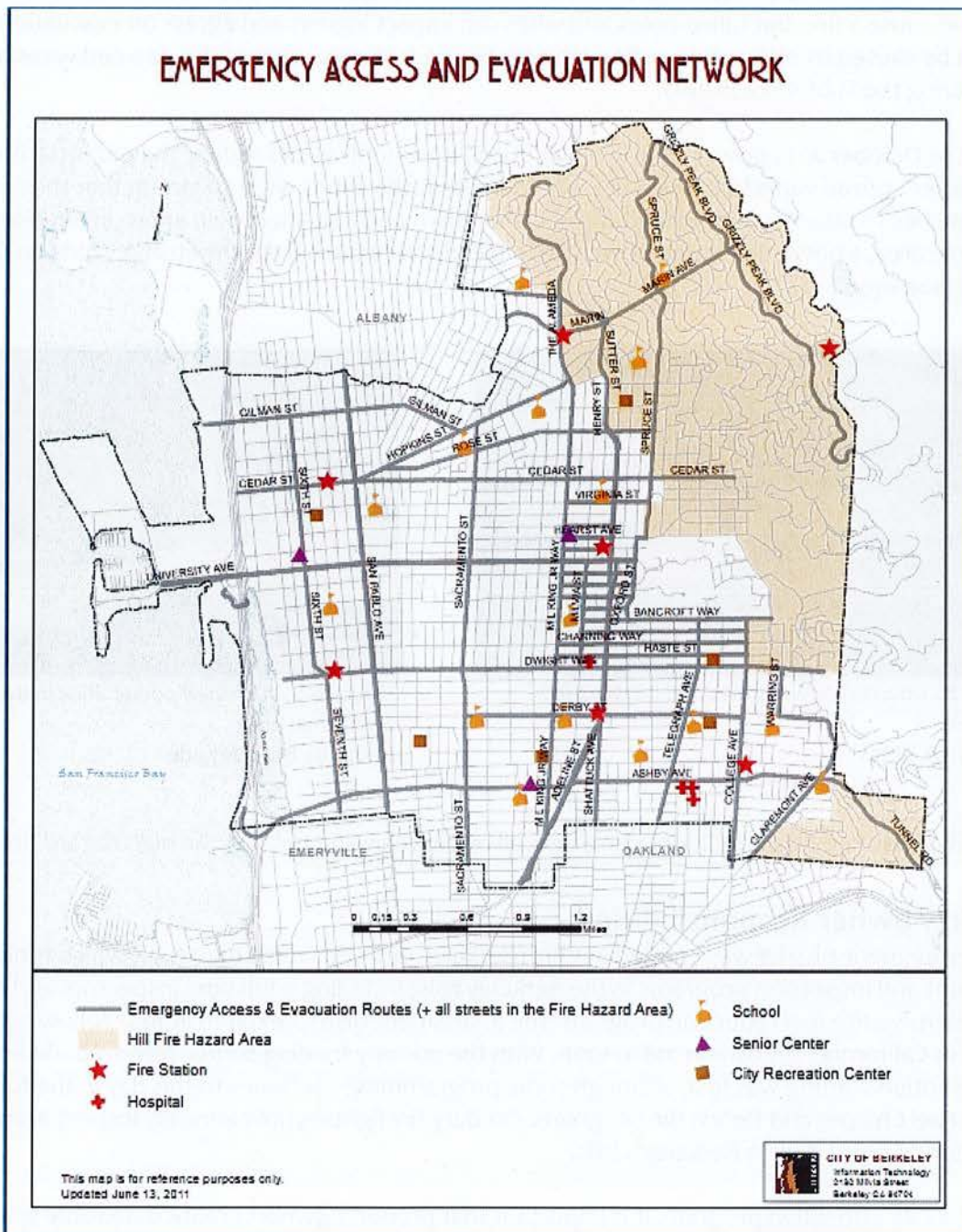


Figure B-7 – Berkeley’s emergency access and evacuation network

## Undergrounding Overhead Wires

Each wildland fire in California is investigated for the cause of the fire. In many cases, problems with PG&E's overhead wires or equipment have been contributing factors. Overhead wires not only can spark and cause a fire, but fallen poles and wires can impact ingress and egress on evacuation routes. This can be caused by high winds or fire damage. Figure 11 shows some of the downed wires and poles during the Tubbs Fire in 2017.

During the October 2019 power shutdown by PG&E, the intent was to reduce the potential for overhead energized wires to cause a fire. We found that the winds were so strong that they caused tree branches to take down overhead wires in shutdown and non-shutdown areas. In Berkeley's Northbrae area, a power line came down with a felled tree branch from the strong winds on October 27, 2019 (see Figure 12).



Figure B-8 - Downed power poles and lines in 2017 Tubbs Fire  
Photo by LA Times



Figure B-9 – Downed power lines in Berkeley's Northbrae area  
Photo by Berkeleyside

This shows that Red Flag conditions can affect all of Berkeley and not just the high hazard fire zones.

## Property owner Responsibilities

A Fire Assessment District was created in 1992 (Berkeley City Ordinance 6129-N.S.) which funded fuel abatement and inspection programs in the Berkeley hills, including 3 full-time inspectors and a comprehensive fire fuel reduction program. The assessment district expired in 1997 following the passing of California Proposition 218 in 1996. With the primary funding source removed, dedicated Fire Prevention staffing was lost, although some programming continues to this day in the form of the Fire Fuel Chipper and Debris Bin programs. On-duty firefighters now annually inspect a small proportion of properties in Berkeley's hills.

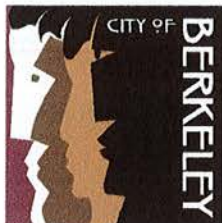
Without a City inspection program, it is important that property owners create defensible space and harden their homes to reduce the impacts from a fire. Guidance information is available from the California Fire Safe Council ([www.cafiresafecouncil.org](http://www.cafiresafecouncil.org)).

- **Hardening Your Home** -- Fire hardened means your home is prepared for wildfire and an ember storm. It does not mean fireproof. Home hardening addresses the most vulnerable components of your house with building materials and installation techniques that increase resistance to heat, flames, and embers that accompany most wildfires.
- **Key Elements of a Defensible Space**
  - Keep your gutters and roofs clear of leaves and debris.
  - Maintain a 5-foot noncombustible zone around your home and deck.
  - Break up fuel by creating space between plants and between the ground and the branches of trees.
  - Mow grass to a height of less than 4 inches.
  - Keep mulch away from the house. Bark mulch helps plants retain water but ignites and becomes flying embers during a wind-driven fire.
  - During a wildfire, move anything burnable—such as patio furniture or gas BBQ tanks—30 feet away from structures.



**Appendix C**  
**Declaring Wildfire Prevention and Safety a Top Priority in the City of Berkeley**





Susan Wengraf  
Councilmember District 6

CONSENT CALENDAR  
October 15, 2019

To: Honorable Mayor and Members of the City Council  
From: Councilmember Wengraf  
Subject: Declaring Wildfire Prevention and Safety a Top Priority in the City of Berkeley

RECOMMENDATION

Adopt a Resolution declaring Wildfire Prevention and Safety a Top Priority in the City of Berkeley

FINANCIAL IMPLICATIONS

None

BACKGROUND

The East Bay hills are home to extremely high fire hazards due to proximity to park land where the fuel load is high; narrow, curvy roads, hampering access by first responders and obstructing efficient evacuation routes; and steep topography and changing weather conditions. On April 23, 2019 Governor Newsom held a press conference in Berkeley, at the edge of Tilden Park, restating his declaration of a state of emergency regarding wildfires in California. Historically, California is at high risk of wildfire and the Governor was dedicating new resources to wildfire prevention. The Governor, in choosing the location for his press conference, was no doubt aware of Berkeley's history.

In 1923, a wildfire swept through north Berkeley, ultimately destroying approximately 600 homes, including churches, schools, libraries, and student living quarters. At that time, the population of Berkeley was 52,000. Today, the population density has more than doubled. In 1980, a fire in Berkeley's Wildcat Canyon destroyed 5 homes and then, on October 17, 1991, a fierce and destructive wildfire consumed southeast Berkeley and Oakland, claiming 25 lives and reducing approximately 3,000 structures to ashes. Had the wind direction not shifted, it is likely that many more people would have died and more of Berkeley would have been destroyed.

Since 1991, due to climate change, wildfires have become larger, hotter, more destructive, and more difficult to control. Vulnerable communities throughout the state have been ravaged. Potentially greater risk exists today not only in the Berkeley Hills but to neighborhoods between the hills and the Bay, as evidenced by the total destruction of Coffey Park in the 2017 Tubbs Fire. Berkeley is ranked at the same risk



level of many of the cities that have already been decimated by fire. Berkeley's risk is ranked as the highest designation in the state.

Berkeley is also at extreme risk for a devastating earthquake on the Hayward Fault, which cuts right through Berkeley's high fire severity zone; when fire ensues it will cause even further destruction to life, property and further challenge the City's resiliency.

It is time for Berkeley to acknowledge our risk and make wildfire prevention and safety a top priority. Our full commitment, by resolution, will allow us to move forward with projects and programs to achieve our shared goals of wildfire prevention and safety; ensure wildfire prevention and safety are reflected in allocation of resources and city policies; and make certain wildfire prevention and safety are addressed as the highest priority in the next updates to the City's General Plan, Climate Action Plan, Local Hazard Mitigation Plan, Resiliency Strategy, 2050 Vision and any other plans where it may be appropriate.

#### ENVIRONMENTAL SUSTAINABILITY

This item supports the City's environmental sustainability goals. Fire prevention is critical for environmental sustainability. In 2018, California wildfires emitted as much carbon dioxide as an entire year's worth of California's electricity according to a November 30, 2018 press release from the U.S Department of the Interior.

#### CONTACT PERSON

Councilmember Wengraf

Council District 6

510-981-7160

#### Attachments:

1: Resolution

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

Declaring Wildfire Prevention and Safety a Top Priority in the City of Berkeley

WHEREAS, wildfires have grown larger and increased in intensity over the last several decades due to climate change and increased density in the wildland/urban interface (WUI), and

WHEREAS, areas of the City of Berkeley are designated by CAL FIRE as having the highest rating of "very high severity" risk to wildfire, and

WHEREAS, on March 22, 2019, Governor Newsom declared a state of emergency in of California with regard to wildfire risk, and

WHEREAS, since 1922, more than a dozen major wildfires have impacted the Berkeley hills, resulting in extensive damage, economic harm and loss of life. The 1991 Oakland/Berkeley firestorm, considered the third most deadly fire in California, burned over 1,500 acres, caused the deaths of 25 people and injured over 150 people, and

WHEREAS, wildfires in this decade are larger, faster and more destructive than in 1991, potentially causing greater risk to not only the Berkeley Hills but to neighborhoods between the hills and the Bay, as evidenced by the total destruction of Coffey Park in the 2017 Tubbs Fire, and

WHEREAS, Berkeley is also at extreme risk for a devastating earthquake on the Hayward Fault, which cuts right through Berkeley's high fire severity zone; when fire ensues it will cause even further destruction to life, property and further challenge the City's resiliency, and

WHEREAS, when a wildfire destroys a neighborhood, the short and long-term economic impact multiplies exponentially. The 1991 Berkeley/Oakland Tunnel Fire resulted in the loss of 2,900 structures and 25 lives. The 1923 North Berkeley fire destroyed about 600 homes and burned all the way to the corner of Hearst and Shattuck, before the winds shifted.

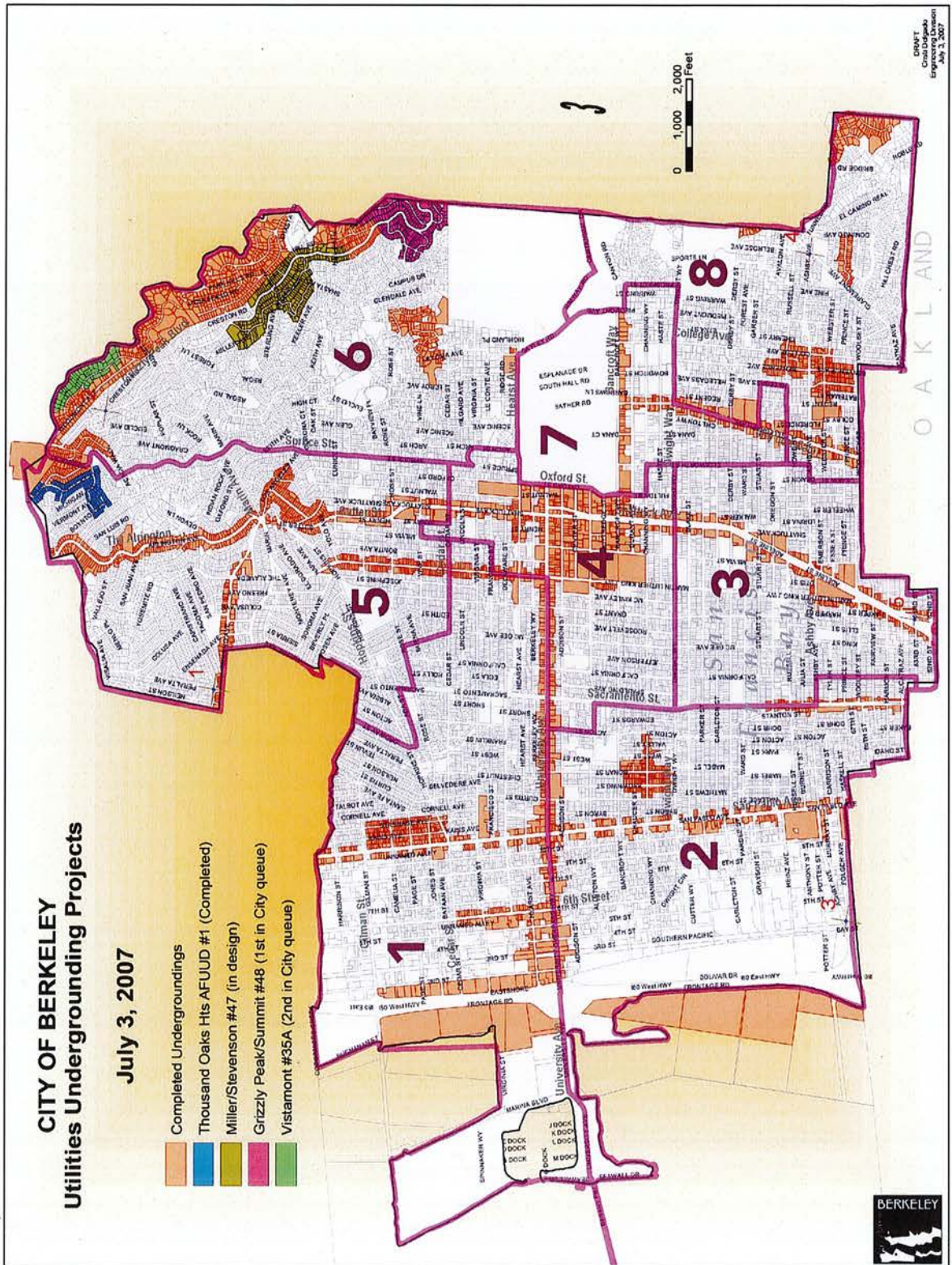
WHEREAS, major disasters such as the 2017 Tubbs Fire and the 2018 Camp Fire severely strain the limited housing stock in a community when survivors are forced to replace housing destroyed in the wildfire. Berkeley already has an affordable housing crisis, and nearby communities would be hard pressed to accommodate thousands of residents displaced by a wildfire or other major disaster, and

WHEREAS, a wildfire in the Berkeley hills threatens the entire City of Berkeley, both hill areas and flat areas and impacts air quality, loss of housing, injury as well as the tragic loss of life.

NOW, THEREFORE, BE IT RESOLVED, that the City Council pass this resolution making wildfire prevention and safety a stated top priority for the City of Berkeley.

BE IT FURTHER RESOLVED, that wildfire prevention and safety be addressed as the highest priority in the next updates to the City's General Plan, Climate Action Plan, Local Hazard Mitigation Plan, Resiliency Strategy, 2050 Vision and any other plans where it may be appropriate; and be reflected in city policies and allocation of resources.

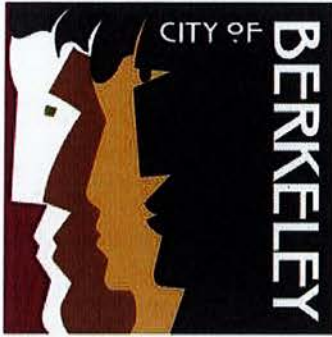
# Appendix D Utilities Undergrounded in Berkeley





**Appendix E**  
**Report on Undergrounding Costs by Bellecci & Associates**





# Projected Costs of Undergrounding Utilities along City of Berkeley's Evacuation Routes

City of Berkeley

January 2020



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# Table of Contents

|  |    |
|--|----|
| <b>Acknowledgements</b> .....                  | 3  |
| <b>Section I – Executive Summary</b> .....     | 4  |
| <b>Section II – Methodology</b> .....          | 5  |
| <b>Section III – Analysis</b> .....            | 7  |
| <b>Section IV – Planning Level Costs</b> ..... | 17 |
| <b>Appendix A</b> .....                        | 20 |
| <b>Appendix B</b> .....                        | 22 |
| <b>Appendix C</b> .....                        | 24 |
| <b>Appendix D</b> .....                        | 29 |
| <b>References</b> .....                        | 33 |

## Acknowledgements

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## Section I – Executive Summary

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In December 2014, the Berkeley City Council directed “the Public Works Commission, Transportation Commission and Disaster and Fire Safety Commission [to] develop a comprehensive funding plan to underground utilities along all arterials and collectors in the City of Berkeley.” An Underground Subcommittee was formed of representatives from these commissions, and has begun a four-phase study for the City Council's referral. Phase 1 was a report titled “Baseline Study for the Development of a Utility Undergrounding Program,” prepared by Harris & Associates in 2016. Phase 2 conducted a “Conceptual Study to Underground Utility Wires in Berkeley”, which was presented by the Public Works, Disaster and Fire Safety, and the Transportation Commissions in 2018. The program is proceeding into the third phase, which involves multiple tasks: defining the phase 3 projects, developing the financing plan, conducting community input, coordinating with utilities, and preparing an implementation plan. Phase 4 will include implementing the plan, including financing, design and construction.

The priority evacuation routes, which have been designated in the City's General Plan, are the routes along state highways and major streets that would allow citizens to evacuate in case of emergencies and disasters. The City provides a map for East/West evacuation routes along with fire zones (Appendix A). With the considerations of both safety and power reliability, these routes are the highest priorities for utility undergrounding and are the focus of this report.

This report mainly studies the utility status along the evacuation routes and provides a planning level cost estimate for undergrounding the overhead utilities along the routes. The major objectives are to:

- a) Summarize the current status of overhead and underground facilities along the City's major evacuation routes;
- b) Identify the segments of the City's major evacuation routes with existing overhead facilities to be undergrounded;
- c) Prepare a tabular documentation with percentage of overhead and underground facilities for each roadway;
- d) Provide an opinion of probable construction costs for undergrounding the existing overhead facilities along these evacuation routes.

## Section II – Methodology

The City's major East/West evacuation routes are the highest priorities for utility undergrounding and a map of these routes is included in Appendix A. These routes include:

- Spruce Street, Oxford Street, Rose Street, Grizzly Peak Boulevard
- Marin Avenue
- Gilman Street, Hopkins Street
- San Pablo Avenue, Cedar Street
- University Avenue, 6th Street, Dwight Way
- Ashby Avenue, Tunnel Road
- San Pablo Avenue, Alcatraz Avenue, Claremont Avenue

The presence of overhead and underground facilities along these routes were verified using a combination of these three methods: a) utility maps, b) field visits, and c) Google Street View.

### Utility Maps

The major utility companies that possess dry utilities within the City are PG&E, AT&T, Comcast, Verizon and Century Link (Level 3). Utility map request letters were sent to the aforementioned utility companies in June 2019. The utility maps provided by PG&E, AT&T, and Comcast identified the status of their existing dry utilities. However, these maps are not included in this report due to the utility companies' confidentiality clauses.

- The Comcast maps were received on June 27, 2019.
- The AT&T maps were received on July 22, 2019.
- The PG&E Electric maps were received on August 20, 2019.
- Verizon maps were received on September 18, 2019
- Century Link Level 3 utility maps were received on August 1, 2019

The utility maps listed above were evaluated for the presence of existing overhead and underground wires, conduits, joint trenches and duct banks. While other dry utilities exist within the city, it is assumed that the utility maps listed above provide sufficient coverage of existing overhead and underground facilities.

### Field Visits

Field visits of the City's major evacuation routes were performed by driving along each route and noting the presence of utility poles and overhead wires. The field visits were conducted on July 2 and 3, 2019. The observations from the field visits were compared with the utility maps and the images from Google Street View to verify the presence of existing utility poles and overhead wires. Photos were taken for perceptual understanding with selected photos shown below. More photos from the field visits are included in Appendix C.

### Street View Images

Google Street View provides panoramic images from positions along streets and other paths of travel. The entirety of each of the City's major evacuation routes were captured in Google Street View. The Google Street View images were compared with the utility maps to evaluate the presence of existing utility poles

and overhead wires. Google Street View, by default, shows the most recently captured images. If available, previously captured images can be shown for the location. At the time of this report, the majority of the Google Street View images along the major evacuation routes were most recently captured within the past six (6) months.



Photo 1: Taken from Dwight Way facing West near Jefferson Avenue with poles and overhead utilities

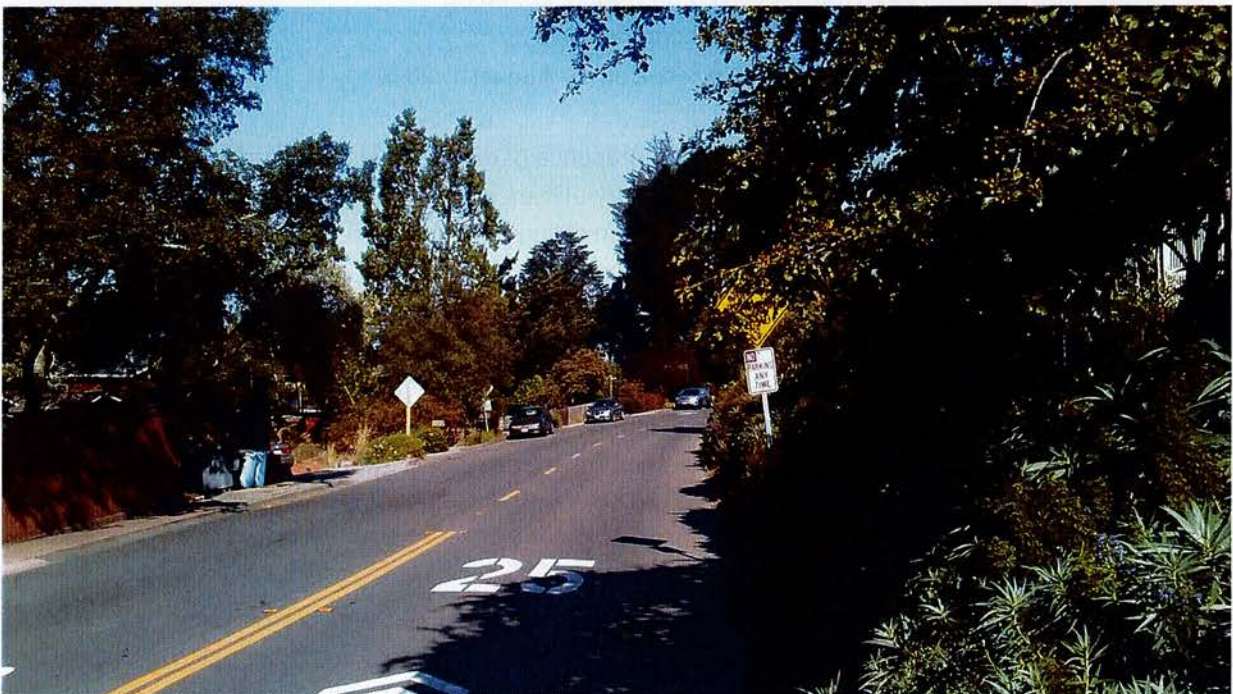


Photo 2: Taken from Grizzly Peak Boulevard facing West near Hill Road with no overhead utilities

## Section III – Analysis

In general, utility maps provide a comprehensive understanding of the utility status along the City's major evacuation routes. However, utility maps can be outdated. When discrepancies between utility maps and the field visit observations are spotted, Google Street View provides insight by showing the changes in the status of undergrounding over time. For example, along Grizzly Peak Boulevard between Latham Lane and Arcade Avenue, the utility map shows overhead Comcast utilities. However, the utility poles and overhead wires were removed between May 2011 and March 2015, based on Google images captured during those times. And field visits verify the findings from Google Street View by providing the current conditions. With the information combined and verified by all three methods, a mapping exhibit that shows the presence of overhead and underground facilities along the City's major evacuation routes was created and included in Appendix B, with overhead facilities marked in red and underground facilities marked in green. A route by route analysis is presented below with tables and figures showing utility status with descriptions. The length of overhead utility (OH) is the length of street that exists with overhead utilities. It also includes segments of street that have both overhead and underground utilities, indicating that the undergrounding status is incomplete. The length of underground utility (UG) is the length of street with only underground dry utilities. There are more north-south segments of streets that are completely undergrounded than east-west segments. Because the evacuation routes are established to bring emergency access to citizens through the Interstate 80/580, the streets that travel east-west form the basis of the evacuation routes, while the undergrounded streets that travel north-south do little to optimize evacuation. However, evaluation and adjustments of the existing evacuations routes are not part of the scope of this report, and will not be discussed further.

Street classifications are based on the volume of traffic, services, and functions that the streets are intended to provide. From the Highway Design Manual, a highway is "in general a public right of way for the purpose of travel or transportation"; an arterial highway is "a general term denoting a highway primarily for through travel usually on a continuous route"; and a collector road is "a route that serves travel of primarily intra county rather than statewide importance in rural areas or a route that serves both land access and traffic circulation within a residential neighborhood, as well as commercial and industrial areas in urban and suburban areas". The Federal Highway Administration provides definitions to the following applicable terms:

- The Interstate System is the highest classification of roadways in the United States. These arterial roads provide the highest level of mobility and the highest speeds over the longest uninterrupted distance. Interstates nationwide usually have posted speeds between 55 and 75 mph.
- Other Arterials include freeways, multilane highways, and other important roadways that supplement the Interstate System. They connect, as directly as practicable, the Nation's principal urbanized areas, cities, and industrial centers. Land access is limited. Posted speed limits on arterials usually range between 50 and 70 mph.
- Collectors are major and minor roads that connect local roads and streets with arterials. Collectors provide less mobility than arterials at lower speeds and for shorter distances. They balance mobility with land access. The posted speed limit on collectors is usually between 35 and 55 mph.
- Local roads provide limited mobility and are the primary access to residential areas, businesses, farms, and other local areas. Local roads, with posted speed limits usually between 20 and 45 mph, are the majority of roads in the U.S.

## Spruce Street, Oxford Street, Rose Street, Grizzly Peak Boulevard Route

This evacuation route is within or along the perimeter of Fire Zone 2, indicating a relatively high potential of fire. It is composed of primarily residential areas with high population density. Grizzly Peak Boulevard and half of Spruce Street are hilly and winding with fire potential due to the presence of vegetation. Around three-quarters of the route has incomplete utility undergrounding as shown in Table 1 and Figure 1.

Spruce Street is a north-south minor arterial street. It is primarily residential and provides access to Cragmont School, Step One Nursery School, and Congregation Beth El pre-school and synagogue. There are bulb-outs at the intersection of Spruce Street and Rose Street, which narrow Spruce Street. The evacuation route along Spruce Street is 2 miles long. Overhead lines are present for 1.8 miles between Michigan Avenue and Rose Street, and between Cedar Street and Hearst Avenue. All the overhead utilities are distribution lines.

Oxford Street is a north-south minor arterial street. It is primarily residential with a few houses and apartment buildings. The evacuation route along Oxford Street is 0.25 miles long from Rose Street to Cedar Street. Overhead lines are present for the entire length. All of the overhead utilities are distribution lines.

Rose Street is an east-west residential hillside collector street. The evacuation route along Rose Street is 0.06 miles connecting Oxford Street and Spruce Street, with overhead lines present for the entire length.

Grizzly Peak Boulevard is a north-south minor arterial street and is a major access road for mutual responders from both El Cerrito and Oakland, and provides access to the Space Sciences Laboratory and other University of California properties. Shepherd of the Hills Lutheran Church resides near the intersection of Grizzly Peak Boulevard with Spruce Street. The evacuation route along Grizzly Peak Boulevard is 2.29 miles long from the City limit near Centennial Drive to Spruce Street. Overhead lines are present for 1.4 miles from Cragmont Avenue to Latham Lane and from Hill Road to the City limit near Centennial Drive.

| <b>Evacuation Route: Spruce/Oxford/Rose/Grizzly Peak (4.60 miles)</b> |                   |    |            |                     |                     |      |
|---|-------------------|----|------------|---------------------|---------------------|------|
| Street  | Segment           |    |            | Segment Length (mi) | Utility Length (mi) |      |
|   |                   |    |            |                     | OH                  | UG   |
| Grizzly Peak  | Centennial Dr     | to | Arcade Ave | 0.60                | 0.44                | 0.16 |
| Grizzly Peak  | Arcade Ave        | to | Lathan Ln  | 0.67                | -                   | 0.63 |
| Grizzly Peak  | Lathan Ln         | to | Spruce St  | 1.02                | 0.91                | 0.06 |
| Spruce St   | Grizzly Peak Blvd | to | Rose St    | 1.69                | 1.45                | 0.24 |
| Rose St   | Spruce St         | to | Oxford     | 0.06                | 0.06                | -    |
| Oxford  | Rose              | to | Cedar      | 0.25                | 0.25                | -    |
| Spruce St   | Cedar             | to | Hearst Ave | 0.31                | 0.31                | -    |
| Total of each OH/UG Utilities   |                   |    |            |                     | 3.42                | 1.09 |
| Percentage of each OH/UG Utilities                                    |                   |    |            |                     | 76%                 | 24%  |
| Total Utilities   |                   |    |            |                     | 4.51                |      |

Table 1: Detailed utility status for route Spruce/Oxford/Grizzly Peak

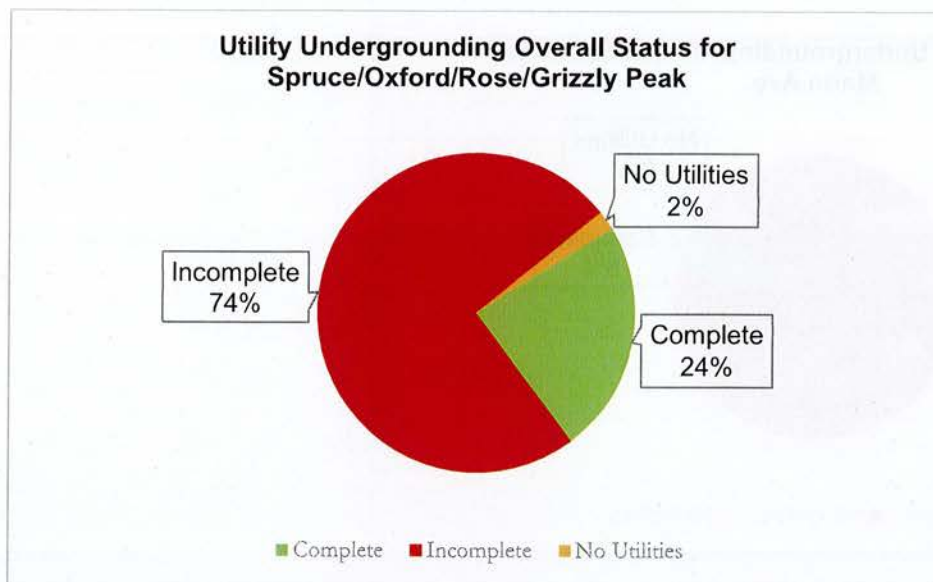


Figure 1

### Marin Avenue Route

Marin Avenue is an east-west principal arterial street with primarily residential land uses along the evacuation route. It provides access to Cragmont School at the intersection with Spruce Street, Angel Academy Pre-school near the intersection with Oxford Ave, and Fire Station 4 at the intersection with The Alameda. Around 70% of the route is inside the boundary of Fire Zone 2. The evacuation route along Marin Avenue is 1.3 miles long from Tulare Avenue to Grizzly Peak Boulevard. Overhead lines are present for almost the entire length with a 94% incompleteness rate for utility undergrounding as shown in Table 2 and Figure 2.

| Evacuation Route: Marin Ave (1.32 miles) |                                     |  |                     |                     |      |
|--|-------------------------------------|--|---------------------|---------------------|------|
| Street                                   | Segment                             |  | Segment Length (mi) | Utility Length (mi) |      |
|  |                                     |  |                     | OH                  | UG   |
| Marin Ave                                | Tulare Ave                          | to The Traffic Circle at Arlington Ave | 0.53                | 0.53                | -    |
| Marin Ave                                | The Traffic Circle at Arlington Ave | to Grizzly Peak                        | 0.79                | 0.71                | 0.08 |
| Total of each OH/UG Utilities            |                                     |  |                     | 1.24                | 0.08 |
| Percentage of each OH/UG Utilities       |                                     |  |                     | 94%                 | 6%   |
| Total Utilities                          |                                     |  |                     | 1.32                |      |

Table 2: Detailed utility status for route Marin Avenue



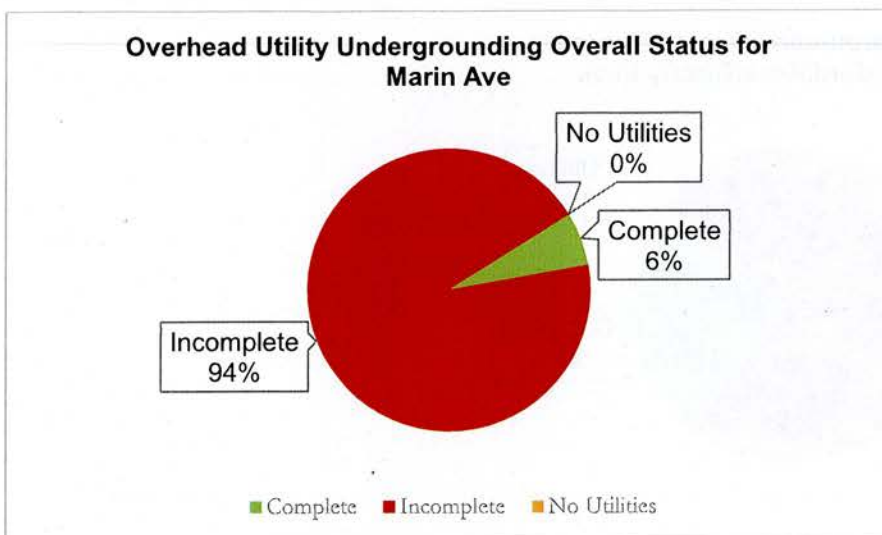


Figure 2

### Gilman Street, Hopkins Street Route

This evacuation route is partially inside the boundary of Fire Zone 2 and connects to Interstate 80/580 with a railroad crossing near Interstate 80. It is composed of mostly residential areas towards the east side and mostly commercial areas towards the west side. It has over 90% incompletions for utility undergrounding as shown in Table 3 and Figure 3.

Gilman Street is an east-west principal arterial street connected to Interstate 80, and provides access to St. Ambrose Church. It is mostly commercial between Interstate 80 and San Pablo Avenue. However, between San Pablo Avenue and Hopkins Street, it is mostly residential. The evacuation route along Gilman Street is 1.2 miles long. Overhead lines are present for over 90% of the entire length.

Hopkins Street is an east-west major collector street. It is primarily residential with a few commercial buildings and a park, and it provides access to the North Branch Public Library, a couple of preschools, school facilities for Martin Luther King Junior High School, and two churches. The evacuation route along Hopkins Street is 0.9 miles long from Gilman Street to Sutter Street. Overhead lines are present for almost 90% of the entire length.

| Evacuation Route: Gilman/Hopkins (2.16 miles) |                                     |                     |                     |      |  |
|---|-------------------------------------|---------------------|---------------------|------|--|
| Street  | Segment                             | Segment Length (mi) | Utility Length (mi) |      |  |
|   |                                     |                     | OH                  | UG   |  |
| Gilman  | Interstate 80 Ramp to San Pablo Ave | 0.62                | 0.57                | 0.05 |  |
| Gilman/Hopkins                                | San Pablo Ave to The Alameda        | 1.23                | 1.20                | 0.03 |  |
| Hopkins                                       | The Alameda to Sutter St            | 0.31                | 0.20                | 0.11 |  |
| Total of each OH/UG Utilities                 |                                     |                     | 1.97                | 0.19 |  |
| Percentage of each OH/UG Utilities            |                                     |                     | 91%                 | 9%   |  |
| Total Utilities                               |                                     |                     | 2.16                |      |  |

Table 3: Detailed utility status for route Gilman/Hopkins

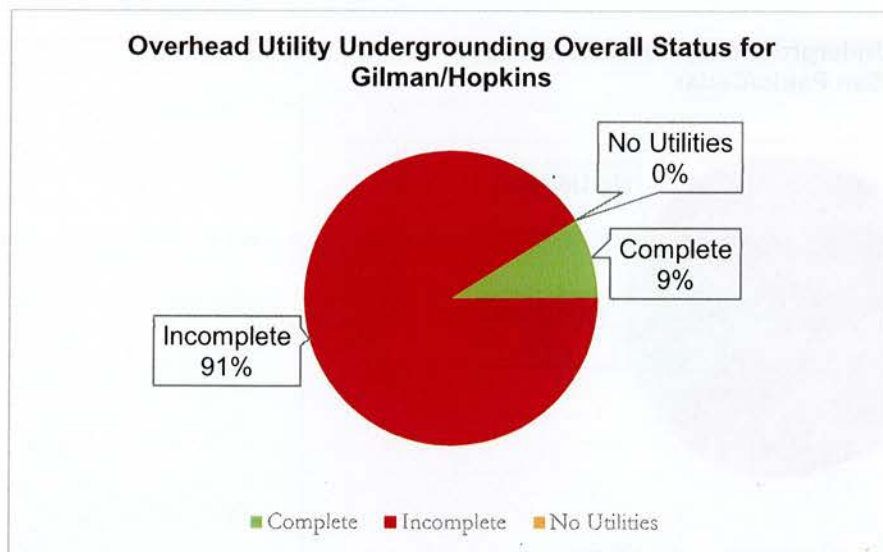


Figure 3

### San Pablo Avenue, Cedar Street Route

This evacuation route is partially inside the boundary of Fire Zone 2 and connects to Gilman Street, which leads to Interstate 80. It has almost 80% incompletions for utility undergrounding as shown in Table 4 and Figure 4.

San Pablo Avenue is a north-south principal arterial street and is also State Highway Route 123 under Caltrans jurisdiction, with commercial land uses along the street frontage. The evacuation route along San Pablo Avenue, connecting Gilman Street and Cedar Street, is 0.4 miles long. There are no overhead lines along the evacuation route, and the whole street connecting Albany and Oakland has been completely undergrounded.

Cedar Street is an east-west minor arterial street. It is primarily residential, with a few businesses and provides access to two churches. The evacuation route along Cedar Street is 2.0 miles from San Pablo Avenue to La Loma Avenue. Overhead lines are present for almost the entire length.

| Evacuation Route: San Pablo/Cedar (2.38 miles) |                           |                     |                     |      |  |
|--|---------------------------|---------------------|---------------------|------|--|
| Street   | Segment                   | Segment Length (mi) | Utility Length (mi) |      |  |
|  |                           |                     | OH                  | UG   |  |
| San Pablo                                      | Gilman to Cedar           | 0.37                | -                   | 0.37 |  |
| Cedar  | Cedar to Juanita Way      | 0.39                | 0.32                | 0.04 |  |
| Cedar  | Juanita Way to MLK Jr Way | 0.71                | 0.71                | -    |  |
| Cedar  | MLK Jr Way to La Loma Ave | 0.91                | 0.84                | 0.07 |  |
| Total of each OH/UG Utilities                  |                           |                     | 1.87                | 0.48 |  |
| Percentage of each OH/UG Utilities             |                           |                     | 80%                 | 20%  |  |
| Total Utilities                                |                           |                     | 2.35                |      |  |

Table 4: Detailed utility status for route San Pablo/Cedar

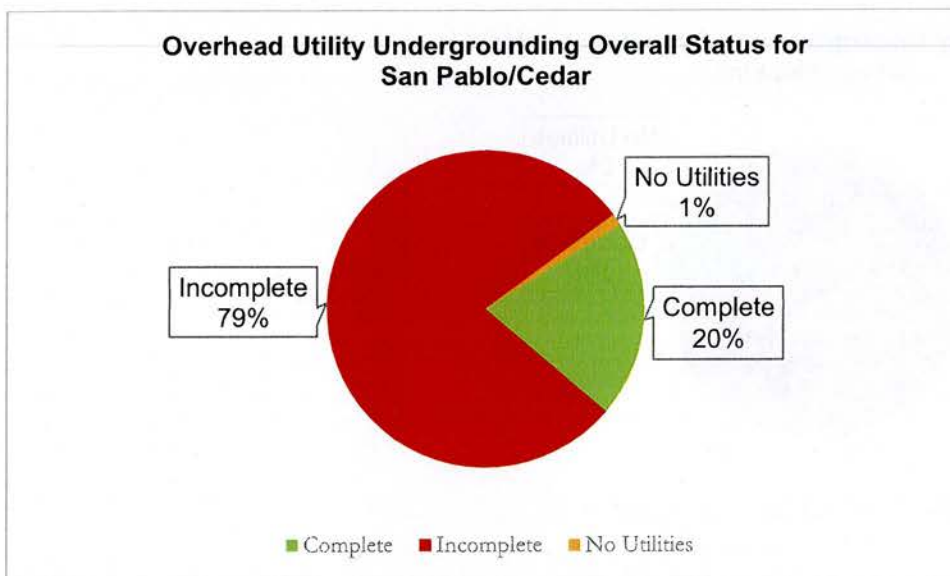


Figure 4

### University Avenue, 6<sup>th</sup> Street, Dwight Way Route

This evacuation route is partially inside the boundary of Fire Zone 2, reaches the edge of Fire Zone 3, and connects to Interstate 80. It is composed of mostly residential areas towards the east side and mostly commercial areas towards the west side. Around one-third of the route only allows one-way traffic to the east, which is from Martin Luther King Junior Way to Piedmont Crescent on Dwight Way. It has around 93% incompletions for utility undergrounding as shown in Table 5 and Figure 5.

University Avenue is an east-west principal arterial street connected to Interstate 80 with primarily commercial land uses along the street frontage. The evacuation route along University Avenue is 0.3 miles from Interstate 80 to 6<sup>th</sup> Street. For the entirety of the street spanning from Interstate 80 to the University of California campus, there is only a small segment with overhead lines near Interstate 80. This street might be a better option for an evacuation route that provides safer access to citizens than many existing routes with overhead lines.

6<sup>th</sup> Street is a north-south minor arterial street. It is primarily residential with a few businesses. The evacuation route along 6<sup>th</sup> Street is 0.6 miles long connecting University Avenue and Dwight Way. Overhead lines are present for the entire length.

Dwight Way is an east-west minor arterial street. It is primarily residential with a few businesses and provides access to two urgent care centers, a couple of churches, a preschool, university residence halls, and many apartment buildings. The evacuation route along Dwight Way is 2.68 miles long from 6<sup>th</sup> Street to the street end near Fernwald Rd. Overhead lines are present for the entire length. Almost half of this segment only allows for one-way traffic to the east, however, evacuation routes should provide access to the Interstate 80 in the west side. Therefore, further investigations and discussions should be carried out for modifying the existing evacuation route.

| Evacuation Route: University/6th/Dwight (3.57 miles) |                        |                |                     |                     |      |
|--|------------------------|----------------|---------------------|---------------------|------|
| Street   | Segment                |                | Segment Length (mi) | Utility Length (mi) |      |
|  |                        |                |                     | OH                  | UG   |
| University Ave                                       | Interstate 80 Overpass | to 6th         | 0.31                | 0.07                | 0.17 |
| 6th  | University Ave         | to Dwight Way  | 0.56                | 0.56                | -    |
| Dwight Way   | 6th                    | to Fernwald Rd | 2.68                | 2.68                | -    |
| Total of each OH/UG Utilities                        |                        |                |                     | 3.31                | 0.17 |
| Percentage of each OH/UG Utilities                   |                        |                |                     | 95%                 | 5%   |
| Total Utilities                                      |                        |                |                     | 3.48                |      |

Table 5: Detailed utility status for route University/6th/Dwight

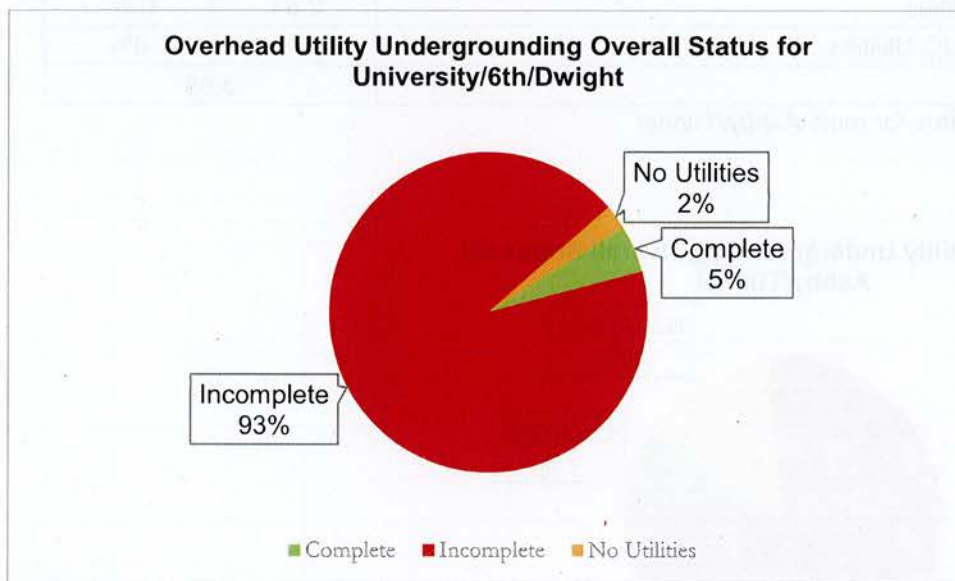


Figure 5

### Ashby Avenue, Tunnel Road Route

This evacuation route is along State Highway Route 13. It is partially inside the boundary of Fire Zone 2 and connects to Interstate 80. It has a 79% incompleteness rate for utility undergrounding as shown in Table 6 and Figure 6.

Ashby Avenue is an east-west principal arterial street and is also State Highway Route 13 under Caltrans jurisdiction. It is primarily residential with a few businesses, mostly between Interstate 80 and San Pablo Avenue. It provides access to the Claremont Branch Library, a hospital, a nursing home, many apartment buildings, and a couple of gas stations. The evacuation route along Ashby Avenue is 2.9 miles long. Overhead lines are present for 2.4 miles from 9<sup>th</sup> street to Martin Luther King Jr Way, Adeline Street to Benevue Avenue, Piedmont Avenue to Domingo Avenue, a section between Bay Street and 7<sup>th</sup> Street, and at the intersection with Elmwood Avenue.

Tunnel Road is an east-west principal arterial street and is also State Highway Route 13 under Caltrans jurisdiction with residential land uses along the street frontage. The evacuation route along Tunnel Road is 0.6 miles from Domingo Avenue to the City limit near Vicente Road. Overhead lines are present for the entire length.

| Evacuation Route: Ashby/Tunnel (3.56 miles) |             |                  |                     |                     |      |
|---|-------------|------------------|---------------------|---------------------|------|
| Street                                      | Segment     |                  | Segment Length (mi) | Utility Length (mi) |      |
|   |             |                  |                     | OH                  | UG   |
| Ashby Ave                                   | Bay St      | to Sacramento St | 0.98                | 0.61                | 0.10 |
| Ashby Ave                                   | Sacramento  | to College Ave   | 1.44                | 1.15                | 0.14 |
| Ashby/Tunnel                                | College Ave | to Vicente Rd    | 1.14                | 1.05                | -    |
| Total of each OH/UG Utilities               |             |                  |                     | 2.81                | 0.24 |
| Percentage of each OH/UG Utilities          |             |                  |                     | 92%                 | 8%   |
| Total Utilities                             |             |                  |                     | 3.05                |      |

Table 6: Detailed utility status for route Ashby/Tunnel

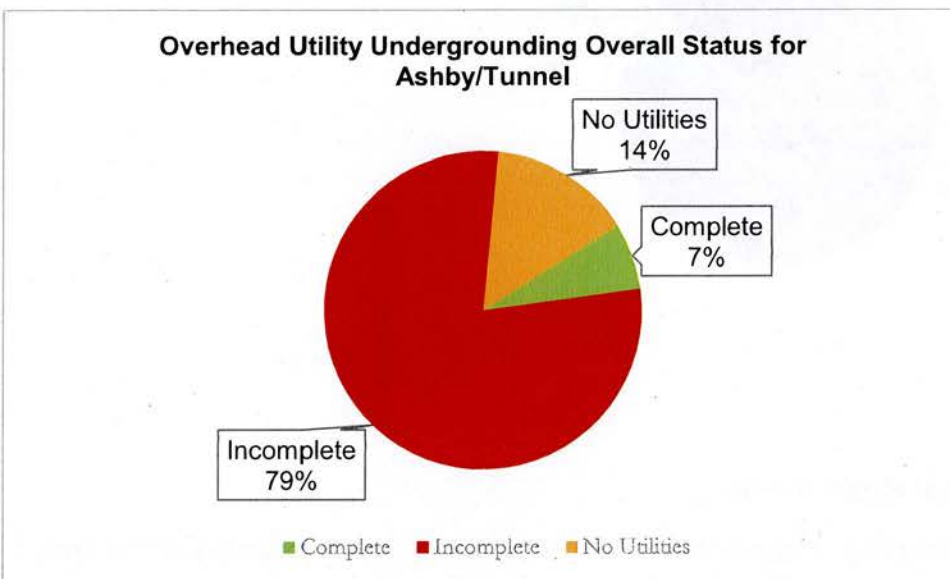


Figure 6

### San Pablo Avenue, Alcatraz Avenue, Claremont Avenue Route

This evacuation route reaches the edge of Fire Zone 2 and connects to State Highway Route 13 with about one half of the route inside the City of Oakland. It has around 82% incompletions for utility undergrounding as shown in Table 7 and Figure 7.

San Pablo Avenue is a north-south principal arterial street and is designated as State Highway Route 123 under Caltrans jurisdiction with commercial land uses along the street frontage. The evacuation route along

San Pablo Avenue, connecting Ashby Avenue and Alcatraz Avenue, is 0.4 miles long. There are no overhead lines along the evacuation route except at the intersection with 65<sup>th</sup> Street.

Alcatraz Avenue is an east-west minor arterial street. It provides access to a school and a church. The evacuation route along Alcatraz Avenue is 1.9 miles long. Overhead lines are present for over 90% of the street segment.

Claremont Avenue is a north-south minor arterial street. It is primarily residential with a few businesses between Woolsey Street and Prince Street and provides access to the John Muir Elementary School near the intersection with Ashby Avenue. The evacuation route on Claremont Avenue is 0.5 miles from Alcatraz Avenue to State Highway Route 13. Overhead lines are present for the entire length.

| Evacuation Route: San Pablo/Alcatraz/Claremont Ave (2.79 miles) |           |              |                     |                     |      |
|---|-----------|--------------|---------------------|---------------------|------|
| Street  | Segment   |              | Segment Length (mi) | Utility Length (mi) |      |
|   |           |              |                     | OH                  | UG   |
| San Pablo   | Ashby     | to Alcatraz  | 0.37                | -                   | 0.37 |
| Alcatraz  | San Pablo | to Claremont | 1.93                | 1.81                | 0.12 |
| Claremont   | Alcatraz  | to Ashby     | 0.49                | 0.49                | -    |
| Total of each OH/UG Utilities                                   |           |              |                     | 2.30                | 0.49 |
| Percentage of each OH/UG Utilities                              |           |              |                     | 82%                 | 18%  |
| Total of all Utilities  |           |              |                     | 2.79                |      |

Table 7: Detailed utility status for route San Pablo/Alcatraz/Claremont

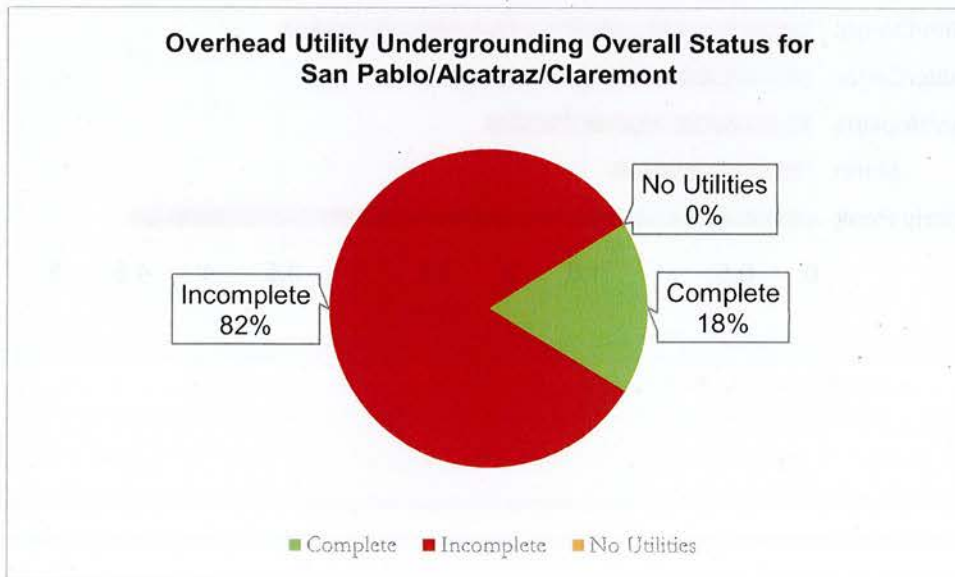


Figure 7

### Summary

Currently, around 86% of the City's major evacuation routes have not yet been undergrounded. The utility maps show that along the majority of each of the City's major evacuation routes, there exists overhead utilities, underground utilities, or both, with a few minor segments that do not possess utilities. For the majority of the major evacuation routes, if utility poles and overhead wires are not observed, then it is reasonable to assume that there are underground utilities present along these segments.

Based on the compiled information, Table 8 shows the overall status of the utilities along the City's major evacuation routes. Figure 8 shows the length of each evacuation route and the length with existing overhead and underground facilities. Figure 9 shows the total utility undergrounding status for the City's major evacuation routes.

| Total of OH/UG Utilities along all Evacuation Routes |       |      |
|--|-------|------|
|  | OH    | UG   |
| Total of each OH/UG Utilities (mi)                   | 16.92 | 2.74 |
| Percentage of each OH/UG Utilities                   | 86%   | 14%  |
| Total Utilities (mi)                                 | 19.66 |      |
| Total Route Length (mi)                              | 20.38 |      |

Table 8: Overall utility status for Berkeley evacuation routes

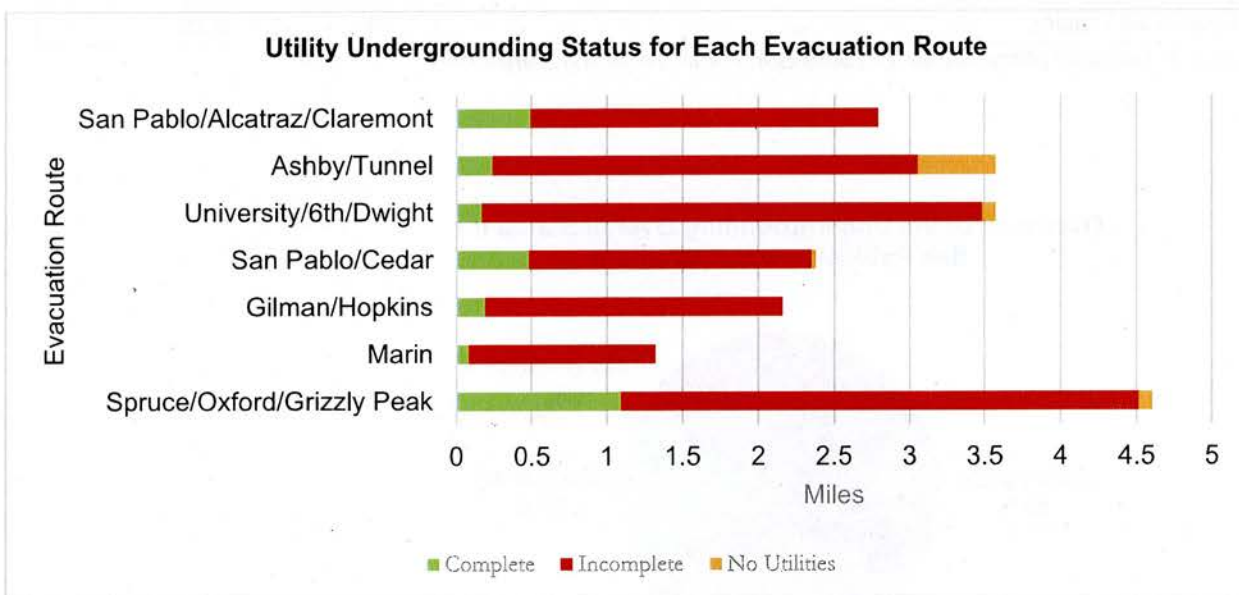


Figure 8

## Section IV – Planning Level Costs

### Cost Estimate Methodology

Three methods are used to determine the per mile unit cost of undergrounding: Method 1 is from a California Public Utilities Commission report regarding undergrounding program costs, Method 2 is from recent publicly bid utility undergrounding projects and Method 3 is an average of a few listed projects in a report from the City and County of San Francisco Board of Supervisors Report. Below is a description of each method.

#### Method 1: CPUC/Edison Electric Institute Studies on Utility Undergrounding Costs

The Policy and Planning Division of the California Public Utilities Commission (CPUC) completed a report entitled "Program Review California Overhead Conversion Program, Rule 20A for Years 2011-2015". The report references the Edison Electric Institute study titled "Out of Sight, Out of Mind" for the unit cost per mile for undergrounding utilities. The 2012 report prepared by Edison Electric Institute concluded that the cost to underground in an urban area is approximately \$5,000,000 per mile. Using this unit cost combined with a construction inflation coefficient of 4%, the undergrounding unit cost for an arterial street in an urban area in 2019 is as shown below for Method 1.

|   |                      |
|---|----------------------|
| Method 1 Costs for Utility Undergrounding | \$6,580,000 per mile |
|---|----------------------|

#### Method 2: Utility Undergrounding Costs in the San Francisco Bay Area

Comparison of the bid unit prices from recent local agency utility undergrounding projects totaling more than \$40 million in construction costs located in Redwood City, Pleasanton, Dublin, San Pablo, Half-Moon Bay, Martinez, and South San Francisco. These combined projects were evaluated to develop a general cost for utility undergrounding in the San Francisco Bay Area. The representative projects are publicly bid, incorporate the bid results of various complicated urban utility undergrounding projects, and reflect a balance of pricing from various contractors in the San Francisco Bay Area. When reviewing the bids for local utility undergrounding projects, these projects often included incidental items that will not be associated with the Berkeley evacuation route undergrounding project and therefore can be removed from the Method 2 cost. Examples of construction cost items to be removed from the Method 2 estimates are upgrades related to: storm drain systems, sidewalks and curb ramps, Caltrans and other agency requirements, wet utilities and landscape improvements. The City of Berkeley is also anticipating a programmatic approach for the evacuation route undergrounding program; it is estimated that a programmatic approach would result in a 20% reduction in overall cost due to savings in mobilization, project overhead, and materials purchases. After consideration of the added costs of streetlights, private property service conversions, and the utility company costs per mile for wiring and vaults, engineering design fees, construction management costs; the resulting unit cost is as shown below for Method 2.

|   |                      |
|---|----------------------|
| Method 2 Costs for Utility Undergrounding | \$7,058,000 per mile |
|---|----------------------|



**Method 3: San Francisco Report on Utility Undergrounding Costs**

City and County of San Francisco Board of Supervisors also prepared a report to review cost of undergrounding utility wires in San Francisco in March 2015. This report references several other cities that have implemented undergrounding of utility wires and included associated costs per mile. This method includes per mile cost based on some of the undergrounding projects in San Diego, San Francisco, Oakland, and San Jose with inflation costs to the Year 2019. The average of the above projects costs (excluding the highest and lowest) for Year 2019 represents the resulting unit cost for Method 3, which is shown below.

|   |                      |
|---|----------------------|
| Method 3 Costs for Utility Undergrounding | \$6,760,000 per mile |
|---|----------------------|

**Utility Undergrounding Costs per Mile**

The per mile unit cost for utility undergrounding for a major arterial street is calculated using the average of Method 1, Method 2 and Method 3. See below unit costs per mile with and without street lighting. These planning level cost estimates are not actual costs and may be lower or higher depending upon the project length, locations, extent of improvements, and bidding environment due to economy, when the projects are out to bid.

|  |                      |
|--|----------------------|
| Avg. of Method 1, 2 & 3 Costs for Utility Undergrounding with Street Lighting FY 2019 (BASELINE) | \$6,800,000 per mile |
| Avg. of Method 1, 2 & 3 Costs for Utility Undergrounding without Street Lighting FY 2019         | \$6,300,000 per mile |
| Cost for Street Lighting FY 2019   | \$500,000 per mile   |

Street lighting costs are also shown separately as per mile cost above, since the City is considering installing solar street lighting. The above baseline includes planning costs, engineering design fees, construction costs, utility wiring costs, service conversions, street lighting costs, and project management costs.

**Construction Complexity Level for City of Berkeley Evacuation Routes**

The Construction Complexity Level metric is broken down into five levels; Level 1 represents the least complex conditions for utility undergrounding, and Level 5 represents the most complex conditions for utility undergrounding. The Construction Complexity Level metric is dependent on four different categories:

1. Existing wire quantity and size: The utility company record maps identify the size and quantity of overhead wires for each street segment, including high voltage conductors and transformers. Wire sizes, quantities and substructures affect the cost of the underground duct banks.
2. Average Daily Traffic (ADT): ADT levels were determined from the City of Berkeley Traffic Engineering Average Total Daily Traffic Volume Map. High traffic volumes cause increased construction costs for traffic control during construction.
3. Street categorization as either residential, commercial, or mixed-use: Commercial buildings have greater utility demands and more service conversions when compared to a single family residential building.

4. Type of pavement surfacing: Streets were categorized as either asphalt or concrete streets. Concrete streets are more expensive for trenching and resurfacing.

The City's Evacuation Routes were examined for each of the four different categories and they were assigned a Construction Complexity Level. Level 5 represents the greatest cost at \$6,800,000 per mile. A Level 4 street is assumed to be 10% less than the cost of a Level 5 street, a Level 3 street is assumed to be 20% less than the cost of a Level 5 street, a Level 2 street is assumed to be 30% less than the cost of a Level 5 street, and a Level 1 street is assumed to be 40% less than the cost of a Level 5 street.

A summary of these unit costs in FY 2019 for each Construction Complexity Level can be found below which includes planning costs, engineering design fees, construction costs, utility wiring costs, service conversions, street lighting costs, and project management costs.

|  |                      |
|--|----------------------|
| Level 5 Construction Complexity for Utility Undergrounding | \$6,800,000 per mile |
| Level 4 Construction Complexity for Utility Undergrounding | \$6,120,000 per mile |
| Level 3 Construction Complexity for Utility Undergrounding | \$5,440,000 per mile |
| Level 2 Construction Complexity for Utility Undergrounding | \$4,760,000 per mile |
| Level 1 Construction Complexity for Utility Undergrounding | \$4,080,000 per mile |

For greater detail of each evacuation route undergrounding costs for FY 2019-Programmatic Approach, refer to Appendix D.

**Other Construction Cost Scenarios**

If the undergrounding program is implemented by ballot measure, the projects are anticipated to begin construction in 2023. See Appendix D for revised program costs to include inflation to year 2023. If the program is implemented in a traditional capital improvement program (CIP) implementation of one project at a time, the 20% savings will not be realized. Appendix D shows the program costs to year 2023 with a CIP approach.

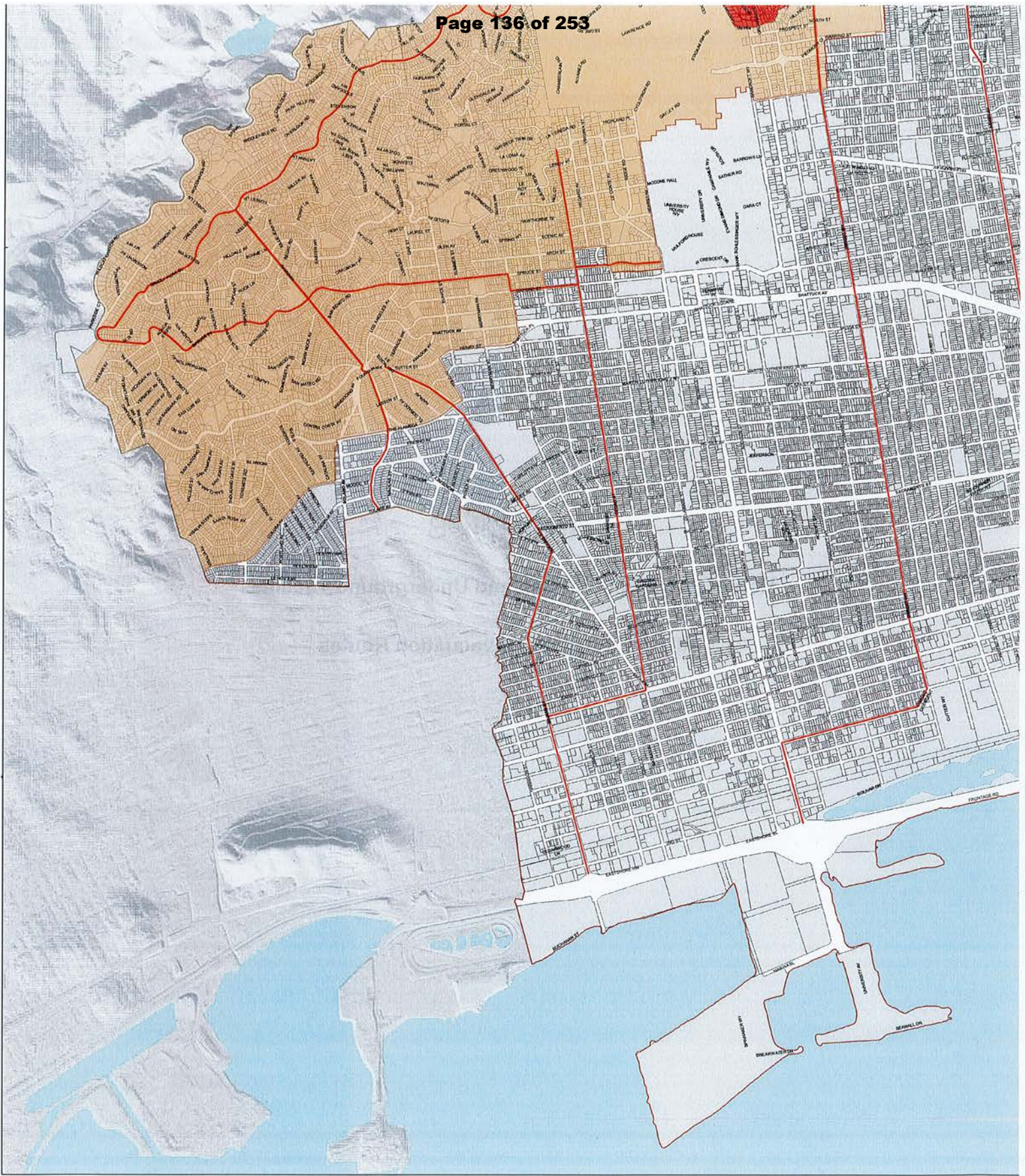
**Summary of Total Program Undergrounding Costs**

The total program costs for utility undergrounding along the City of Berkeley's evacuation routes is \$102.6 Million (FY 2019), \$120 Million (FY 2023) with a programmatic approach and \$139.5 Million (FY 2023) with a CIP approach.

## Appendix A

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### Map of City's Major East/West Evacuation Routes



## Appendix B

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### Map of Existing Overhead and Underground Facilities

### Along City's Major Evacuation Routes

# CITY OF BERKELEY EVACUATION ROUTES UTILITY STATUS



## Appendix C

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### Photos from Field Visits

*Spruce/Oxford/Grizzly Peak Route*



*Grizzly Peak Blvd – Facing Northwest*



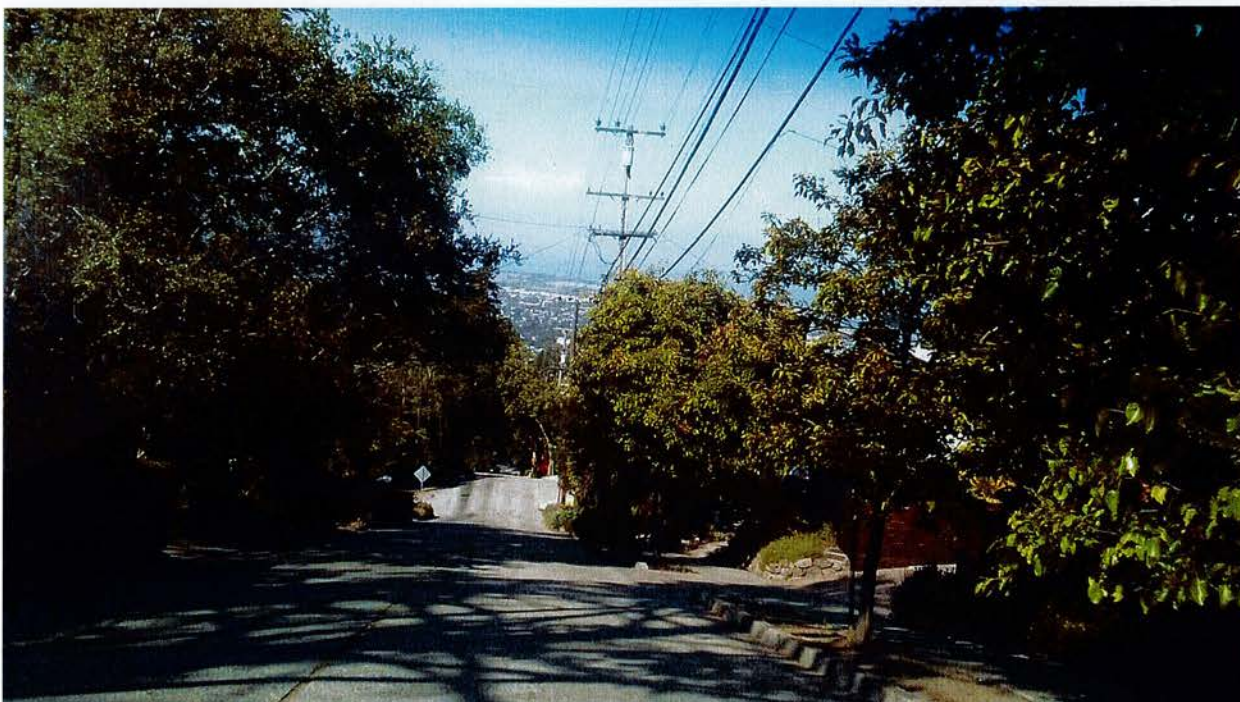
*Spruce St – Facing South*



**Marin Ave Route**



*Marin Ave – Facing North*



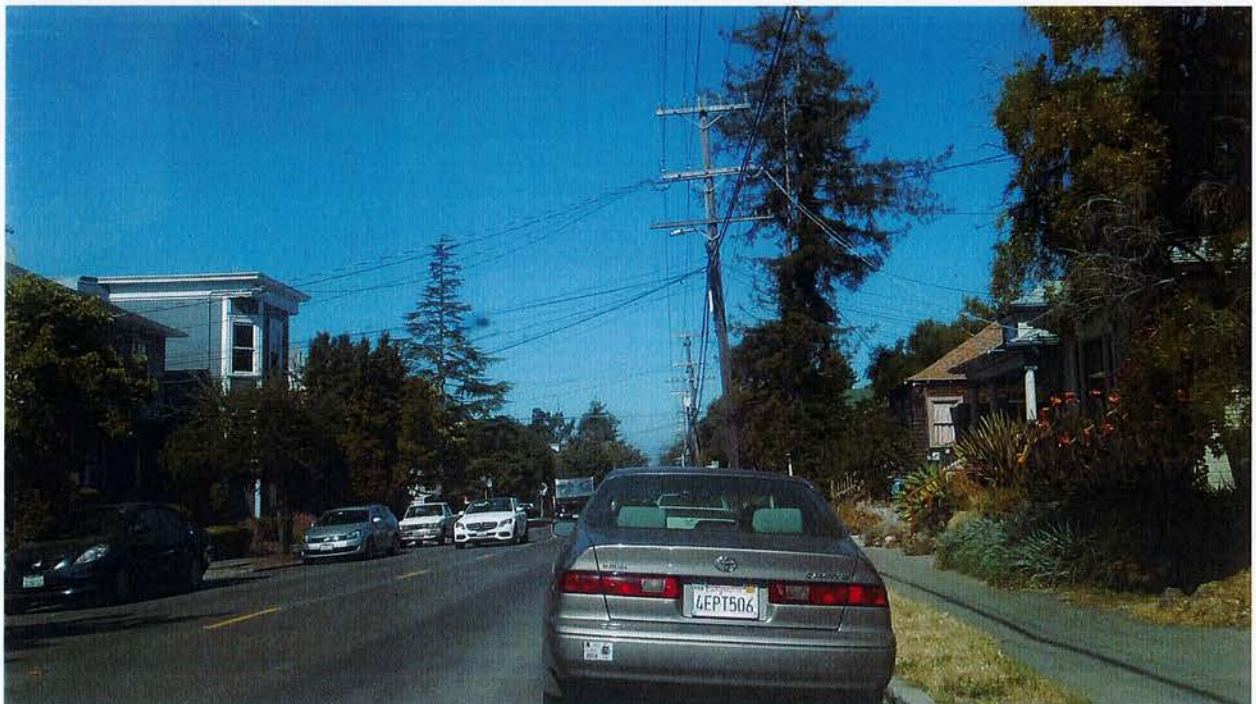
*Marin Ave – Facing Southwest*

**Gilman/Hopkins Route**



*Gilman St – Facing West*

**San Pablo/Cedar Route**



*Cedar St – Facing West*

Ashby/Tunnel Route



Ashby Ave – Facing West



Ashby Ave – Facing West

| Utility    | Length (ft) | Depth (ft) | Cost (\$/ft) | Total Cost (\$) | Notes |
|------------|-------------|------------|--------------|-----------------|-------|
| Water      | 100         | 4          | 100          | 10,000          |       |
| Sewer      | 100         | 4          | 100          | 10,000          |       |
| Gas        | 100         | 4          | 100          | 10,000          |       |
| Electric   | 100         | 4          | 100          | 10,000          |       |
| Telecom    | 100         | 4          | 100          | 10,000          |       |
| Stormwater | 100         | 4          | 100          | 10,000          |       |
| Other      | 100         | 4          | 100          | 10,000          |       |

### Appendix D

#### City of Berkeley Evacuation Route Utility Undergrounding Costs

| Utility    | Length (ft) | Depth (ft) | Cost (\$/ft) | Total Cost (\$) | Notes |
|------------|-------------|------------|--------------|-----------------|-------|
| Water      | 100         | 4          | 100          | 10,000          |       |
| Sewer      | 100         | 4          | 100          | 10,000          |       |
| Gas        | 100         | 4          | 100          | 10,000          |       |
| Electric   | 100         | 4          | 100          | 10,000          |       |
| Telecom    | 100         | 4          | 100          | 10,000          |       |
| Stormwater | 100         | 4          | 100          | 10,000          |       |
| Other      | 100         | 4          | 100          | 10,000          |       |

FY 2019 Base line costs for Utility Undergrounding with Street Lighting with a Programmatic Approach is as shown below:

| Street  | Construction Complexity | Centerline of Street with Overhead | Unit of Measure | Unit Cost    | Total Cost            |
|---|-------------------------|------------------------------------|-----------------|--------------|-----------------------|
| San Pablo Ave   | N/A                     | 0                                  | MILE            | \$ -         | \$ -                  |
| Cedar St  | 3                       | 1.87                               | MILE            | \$ 5,440,000 | \$ 10,172,800         |
| Alcatraz Ave  | 1                       | 1.81                               | MILE            | \$ 4,080,000 | \$ 7,384,800          |
| Claremont Ave   | 1                       | 0.49                               | MILE            | \$ 4,080,000 | \$ 1,999,200          |
| Grizzly Peak  | 2                       | 1.35                               | MILE            | \$ 4,760,000 | \$ 6,426,000          |
| Spruce St   | 2                       | 1.76                               | MILE            | \$ 4,760,000 | \$ 8,377,600          |
| Rose  | 2                       | 0.06                               | MILE            | \$ 4,760,000 | \$ 285,600            |
| Oxford St   | 2                       | 0.25                               | MILE            | \$ 4,760,000 | \$ 1,190,000          |
| Marin Ave   | 4                       | 1.24                               | MILE            | \$ 6,120,000 | \$ 7,588,800          |
| Gilman St   | 5                       | 1.16                               | MILE            | \$ 6,800,000 | \$ 7,888,000          |
| Hopkins   | 2                       | 0.81                               | MILE            | \$ 4,760,000 | \$ 3,855,600          |
| University Ave  | 3                       | 0.07                               | MILE            | \$ 5,440,000 | \$ 380,800            |
| Sixth St  | 3                       | 0.56                               | MILE            | \$ 5,440,000 | \$ 3,046,400          |
| Dwight Way  | 4                       | 2.68                               | MILE            | \$ 6,120,000 | \$ 16,401,600         |
| Ashby Ave   | 5                       | 2.21                               | MILE            | \$ 6,800,000 | \$ 15,028,000         |
| Tunnel Road   | 3                       | 0.6                                | MILE            | \$ 5,440,000 | \$ 3,264,000          |
| <b>Total</b>  |                         | <b>16.92</b>                       |                 |              | <b>\$ 93,289,200</b>  |
| <b>Total (including 10% contingency)</b>              |                         |                                    |                 |              | <b>\$ 102,618,120</b> |
| <b>Per Mile Unit Cost (including 10% contingency)</b> |                         |                                    |                 |              | <b>\$ 6,064,901</b>   |

FY 2023 Base line costs for Utility Undergrounding with Street Lighting with a Programmatic Approach is as shown below:

The construction costs included below use the following assumptions:

1. Construction costs with inflation of 4% per year to 2023,
2. Undergrounding projects will be implemented as a City-wide program to reduce overall cost,
3. Construction costs are scaled based on the Construction Complexity Level of the street segment, and
4. Transportation and pedestrian amenities, wet utility upgrades, and other non-undergrounding expenditures are assumed not to be included.

| Street  | Construction Complexity | Centerline of Street with Overhead | Unit of Measure | Unit Cost    | Total Cost            |
|---|-------------------------|------------------------------------|-----------------|--------------|-----------------------|
| San Pablo Ave   | N/A                     | 0                                  | MILE            | \$ -         | \$ -                  |
| Cedar St  | 3                       | 1.87                               | MILE            | \$ 6,364,000 | \$ 11,900,680         |
| Alcatraz Ave  | 1                       | 1.81                               | MILE            | \$ 4,773,000 | \$ 8,639,130          |
| Claremont Ave   | 1                       | 0.49                               | MILE            | \$ 4,773,000 | \$ 2,338,770          |
| Grizzly Peak  | 2                       | 1.35                               | MILE            | \$ 5,569,000 | \$ 7,518,150          |
| Spruce St   | 2                       | 1.76                               | MILE            | \$ 5,569,000 | \$ 9,801,440          |
| Rose  | 2                       | 0.06                               | MILE            | \$ 5,569,000 | \$ 334,140            |
| Oxford St   | 2                       | 0.25                               | MILE            | \$ 5,569,000 | \$ 1,392,250          |
| Marin Ave   | 4                       | 1.24                               | MILE            | \$ 7,160,000 | \$ 8,878,400          |
| Gilman St   | 5                       | 1.16                               | MILE            | \$ 7,955,000 | \$ 9,227,800          |
| Hopkins   | 2                       | 0.81                               | MILE            | \$ 5,569,000 | \$ 4,510,890          |
| University Ave  | 3                       | 0.07                               | MILE            | \$ 6,364,000 | \$ 445,480            |
| Sixth St  | 3                       | 0.56                               | MILE            | \$ 6,364,000 | \$ 3,563,840          |
| Dwight Way  | 4                       | 2.68                               | MILE            | \$ 7,160,000 | \$ 19,188,800         |
| Ashby Ave   | 5                       | 2.21                               | MILE            | \$ 7,955,000 | \$ 17,580,550         |
| Tunnel Road   | 3                       | 0.6                                | MILE            | \$ 6,364,000 | \$ 3,818,400          |
| <b>Total</b>  |                         | <b>16.92</b>                       |                 |              | <b>\$ 109,138,720</b> |
| <b>Total (including 10% contingency)</b>              |                         |                                    |                 |              | <b>\$ 120,052,592</b> |
| <b>Per Mile Unit Cost (including 10% contingency)</b> |                         |                                    |                 |              | <b>\$ 7,095,307</b>   |

*Planning level cost estimate for utility undergrounding (with street lighting) along City of Berkeley evacuation routes for Year 2023 with programmatic approach.*

FY 2023 Base line costs for Utility Undergrounding with Street Lighting traditional Capital Improvement Program implementation is as shown below:

| Street  | Construction Complexity | Centerline of Street with Overhead | Unit of Measure | Unit Cost    | Total Cost            |
|---|-------------------------|------------------------------------|-----------------|--------------|-----------------------|
| San Pablo Ave   | N/A                     | 0                                  | MILE            | \$ -         | \$ -                  |
| Cedar St  | 3                       | 1.87                               | MILE            | \$ 7,394,000 | \$ 13,826,780         |
| Alcatraz Ave  | 1                       | 1.81                               | MILE            | \$ 5,545,000 | \$ 10,036,450         |
| Claremont Ave   | 1                       | 0.49                               | MILE            | \$ 5,545,000 | \$ 2,717,050          |
| Grizzly Peak  | 2                       | 1.35                               | MILE            | \$ 6,469,000 | \$ 8,733,150          |
| Spruce St   | 2                       | 1.76                               | MILE            | \$ 6,469,000 | \$ 11,385,440         |
| Rose  | 2                       | 0.06                               | MILE            | \$ 6,469,000 | \$ 388,140            |
| Oxford St   | 2                       | 0.25                               | MILE            | \$ 6,469,000 | \$ 1,617,250          |
| Marin Ave   | 4                       | 1.24                               | MILE            | \$ 8,318,000 | \$ 10,314,320         |
| Gilman St   | 5                       | 1.16                               | MILE            | \$ 9,242,000 | \$ 10,720,720         |
| Hopkins   | 2                       | 0.81                               | MILE            | \$ 6,469,000 | \$ 5,239,890          |
| University Ave  | 3                       | 0.07                               | MILE            | \$ 7,394,000 | \$ 517,580            |
| Sixth St  | 3                       | 0.56                               | MILE            | \$ 7,394,000 | \$ 4,140,640          |
| Dwight Way  | 4                       | 2.68                               | MILE            | \$ 8,318,000 | \$ 22,292,240         |
| Ashby Ave   | 5                       | 2.21                               | MILE            | \$ 9,242,000 | \$ 20,424,820         |
| Tunnel Road   | 3                       | 0.6                                | MILE            | \$ 7,394,000 | \$ 4,436,400          |
| <b>Total</b>  |                         | <b>16.92</b>                       |                 |              | <b>\$ 126,790,870</b> |
| <b>Total (including 10% contingency)</b>              |                         |                                    |                 |              | <b>\$ 139,469,957</b> |
| <b>Per Mile Unit Cost (including 10% contingency)</b> |                         |                                    |                 |              | <b>\$ 8,242,905</b>   |

*Planning level cost estimate for utility undergrounding (with street lighting) along City of Berkeley evacuation routes for Year 2023 with CIP approach*

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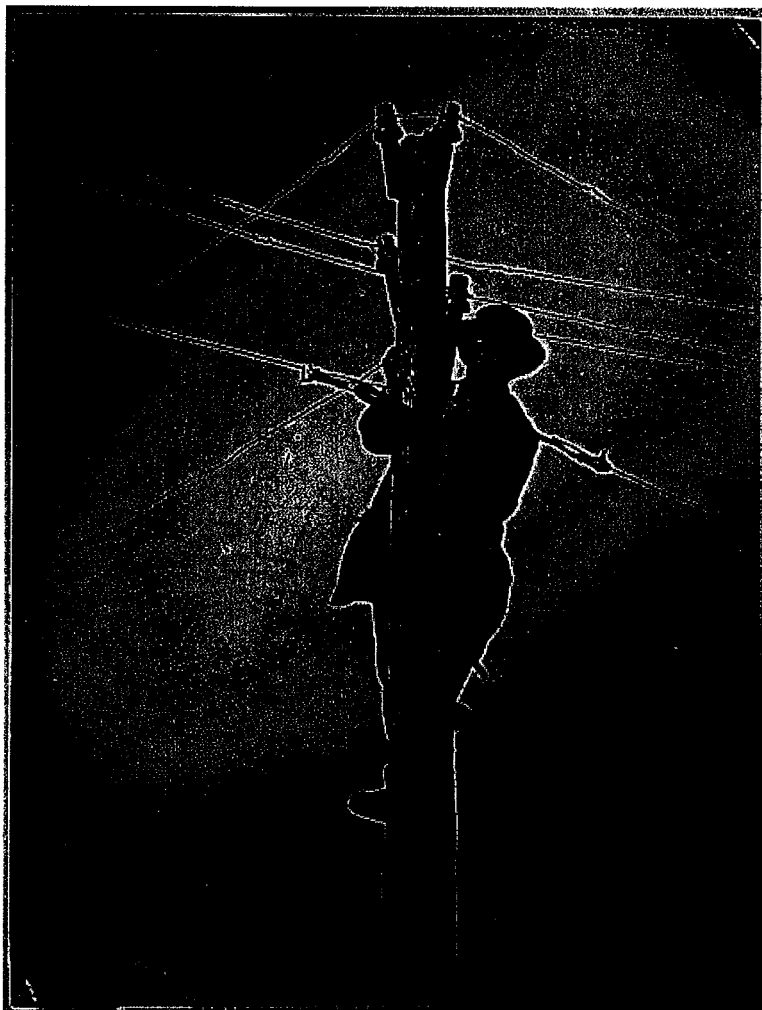




**Appendix F**  
**A Natural History of the Wooden Utility Pole**



# A NATURAL HISTORY OF THE WOODEN UTILITY POLE



**California Public Utilities Commission**

**July 2017**

**April Mulqueen  
Policy and Planning Division  
California Public Utilities Commission  
San Francisco**



...Yet they are ours. We made them.  
See here, where the cleats of linemen  
Have roughened a second bark  
Onto the bald trunk. And these spikes  
Have been driven sideways at intervals handy for human legs.  
The Nature of our construction is in every way  
A better fit than the Nature it displaces  
What other tree can you climb where the birds' twitter,  
Unscrambled, is English? True, their thin shade is negligible,  
But then again there is not that tragic autumnal  
Casting-off of leaves to outface annually.  
These giants are more constant than evergreens  
By being never green.

----- Excerpt from "Telephone Poles" by John Updike, 1963



### 1. Early Communications: Eyes, Wings, and Feet

Before the modern communications era, it was very difficult to communicate over a distance.

Clockwise from upper left: beacon towers along the Great Wall of China used fire and smoke to warn of approaching armies; Phidippides ran 26 miles to deliver the news of the Greek victory at the battle of Marathon, and died from the effort; carrier pigeons have been used to carry brief (and lightweight) messages for thousands of years; and in 1775, lanterns in a window at Boston's Old North Church signaled the direction of the British Army's march towards Lexington and Concord, Massachusetts: "one if by land, two if by sea!"



Figure 1



Figure 2

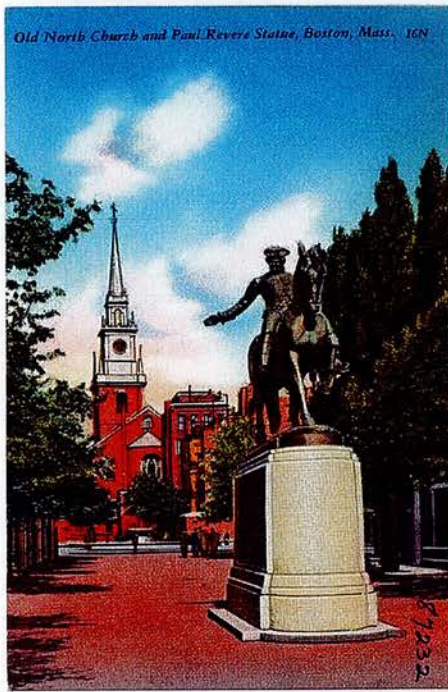


Figure 4



Figure 3

More complicated messages had to be written down and carried, and delivery over a distance could be quite slow. For example, in 1841, it took 110 days for news of President William Henry Harrison's death to reach Los Angeles.<sup>1</sup> 110 days is more than three times as long as William Henry Harrison served as President. 110 days is also the gestational period of a lion. While 110 days might be the right length of time to wait for a lion cub to be born, it is a long time to wait for important news.



Figure 5

## 2. The Telegraph: Forty Miles, and a Mistake

In 1843, the United States Congress gave Samuel Morse \$30,000 for a demonstration project to prove he could send messages over a distance more quickly and efficiently than the means available at the time. Morse and his partners began laying underground telegraph wires between the Capitol Building in Washington, D.C., and a railroad station in Baltimore, a distance of forty miles.

Unfortunately, the wires were defective, and Morse and his partners were running out of time and money. One of Morse's partners suggested that the quickest way to complete the project would be to string telegraph wires overhead on trees and wooden poles.

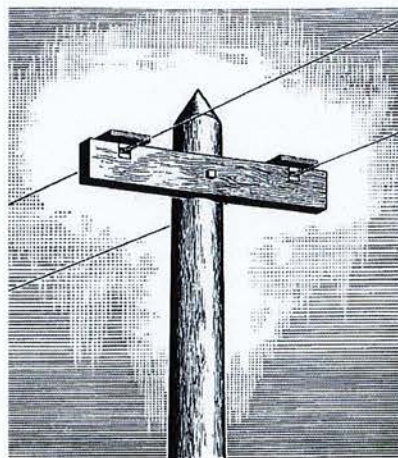


FIG. 2 MORSE'S FIRST TELEGRAPH LINE—1844

Figure 6

<sup>1</sup> Global Connections: Volume 2, Since 1500: Politics, Exchange, and Social Life in World History By John H. Coatsworth, Charles Tilly, Juan Cole, Louise A. Tilly, Michael P. Hanagan, and Peter C. Perdue, Cambridge University Press, March 2015, at 247.



The wooden utility pole was born, albeit as a mistake.

On May 24, 1844, thanks to telegraph wires hastily strung on hundreds of wooden utility poles, the phrase "What Hath God Wrought" was successfully telegraphed via Morse code from D.C. to Baltimore and back.

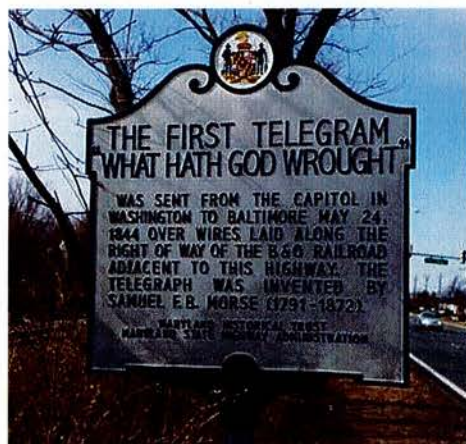


Figure 7

Although the first wooden utility poles were the result of a mistake, they caught on quickly; aside from the Plains, the United States is richly forested, and the raw material for wooden utility poles was readily available. Soon there were thousands of wooden utility poles carrying telegraph signals around the eastern and the western portions of the United States, although the eastern and western networks were not yet connected.

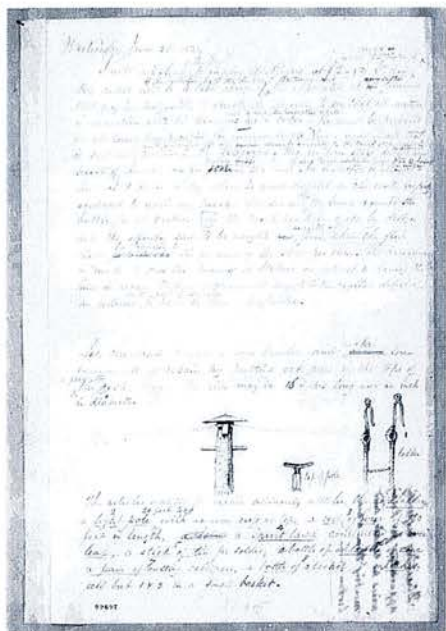



Figure 8

### 3. Coast to Coast: The Pony Express and the Transcontinental Telegraph

The California Gold Rush created a need for swift communications between the Atlantic and Pacific coasts. Standard overland mail took weeks or months to travel from New York to San Francisco, and the eastern and western telegraph networks were not connected. Beginning in 1860, the Pony Express used teams of riders on horseback to deliver letters from New York to San Francisco in a remarkably swift ten days. News intended for a wider audience could be carried by a combination of telegraph and Pony Express; in November 1860, the Pony Express riders bridged the gap between the eastern and western telegraph networks to bring news of Abraham Lincoln's election as President to California in eight days.

# PONY EXPRESS!

---

CHANGE OF  
TIME!

REDUCED  
RATES!

---

**10 Days to San Francisco!**

## LETTERS

WILL BE RECEIVED AT THE

### OFFICE, 84 BROADWAY,

NEW YORK,

Up to 4 P. M. every TUESDAY.

AND

Up to 2½ P. M. every SATURDAY,

Which will be forwarded to connect with the PONY EXPRESS leaving  
ST. JOSEPH, Missouri,

**Every WEDNESDAY and SATURDAY at 11 P. M.**

---

## TELEGRAMS

Sent to Fort Kearney on the mornings of MONDAY and FRIDAY, will connect  
with PONY leaving St. Joseph, WEDNESDAYS and SATURDAYS.

---

### EXPRESS CHARGES.

LETTERS weighing half ounce or under..... \$1 00  
For every additional half ounce or fraction of an ounce 1 00  
In all cases to be enclosed in 10 cent Government Stamped Envelopes,  
And all Express CHARGES Pro-paid.

PONY EXPRESS ENVELOPES For Sale at our Office.

**WELLS, FARGO & CO., Ag'ts.**

New York, July 1, 1861.

SLOPE & JAMES, STATIONERS AND PRINTERS, 8, CULLEN STREET, NEW YORK

Figure 9

Almost as swiftly as the Pony Express carried mail to California, however, the Pony Express itself was swiftly overtaken by technology. In October 1861, thanks to tens of thousands of wooden utility poles installed across the Plains to connect telegraph networks in the eastern and western portions of the United States, the transcontinental telegraph was born. With the east and west coasts able to communicate instantaneously by telegraph, there was no more need for teams of riders on mustangs to gallop across the American Plains, and the Pony Express was disbanded.

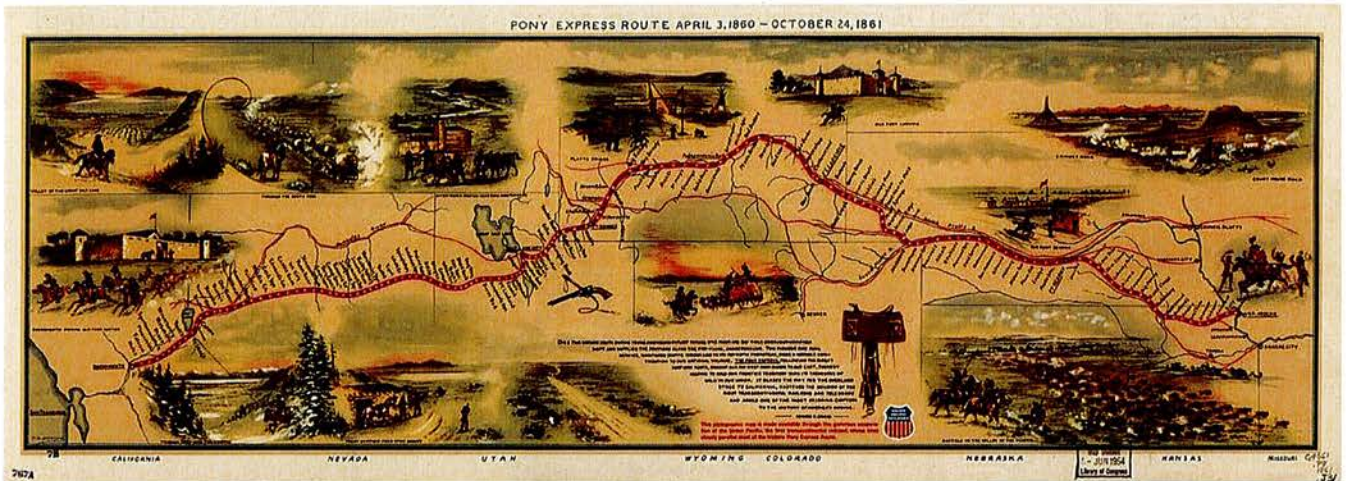


Figure 10



Figure 11

In 1860, it took eight days for news of Abraham Lincoln's election as President to reach California through a combination of telegraph and Pony Express. In 1865, thanks to tens of thousands of wooden utility poles carrying the transcontinental telegraph, the sad news of President Lincoln's assassination reached California instantly.

#### 4. From the Telegraph to Telephones and Electric Lights

By the early 20<sup>th</sup> Century, wooden poles were carrying telephone lines and electrical lines as well as telegraph lines. Between electrification and the rapid adoption of telephony, wooden poles grew larger and more heavily burdened with utility lines to an extent that is unimaginable today.



Figure 12



Figure 13

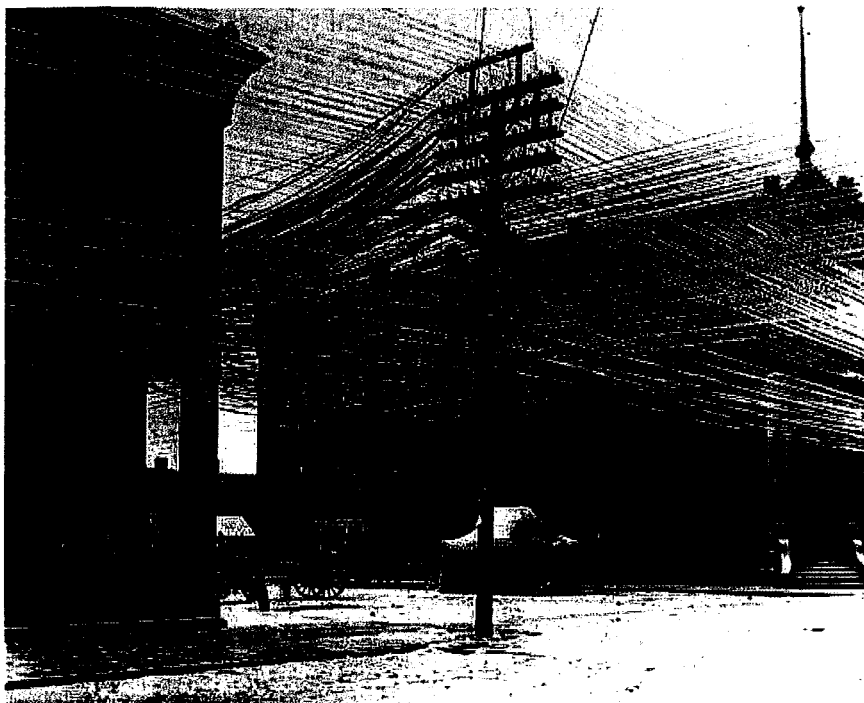


Figure 14

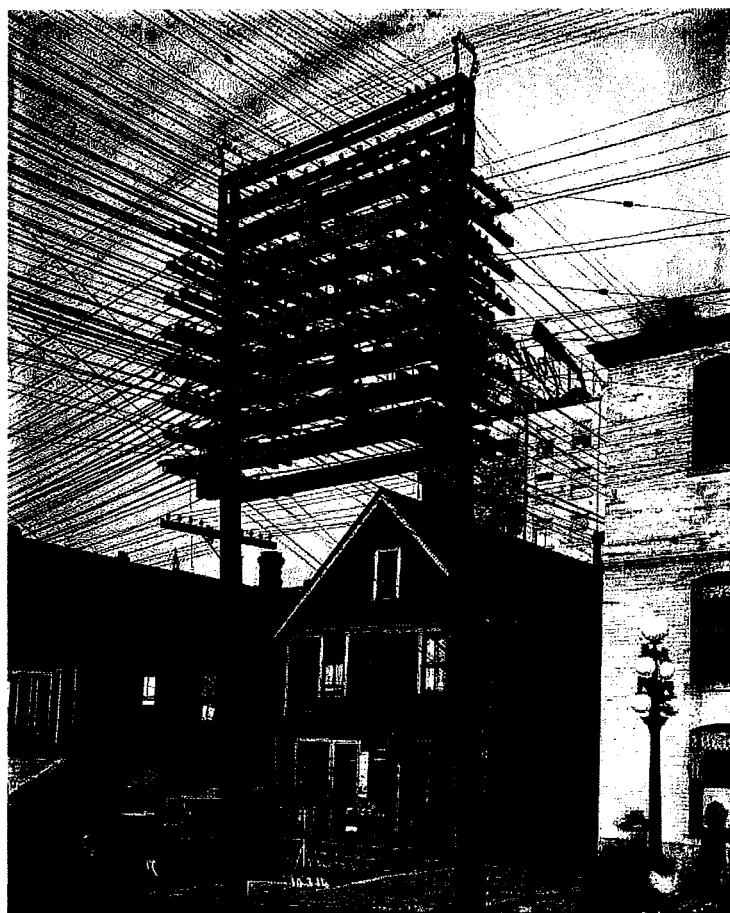


Figure 15

5. Technological Change and Competition

Although many Americans continue to use the term “telephone pole” to refer to utility poles, wooden utility poles now carry infrastructure necessary for such services as wireline and wireless voice communications, electricity, communications facilities for electric smart meter backhaul, video service, internet, communications lines for municipalities and water companies, and sometimes streetlights.

Southern California Edison provides this overview of the elements of a modern wooden utility pole carrying electric and communications lines:

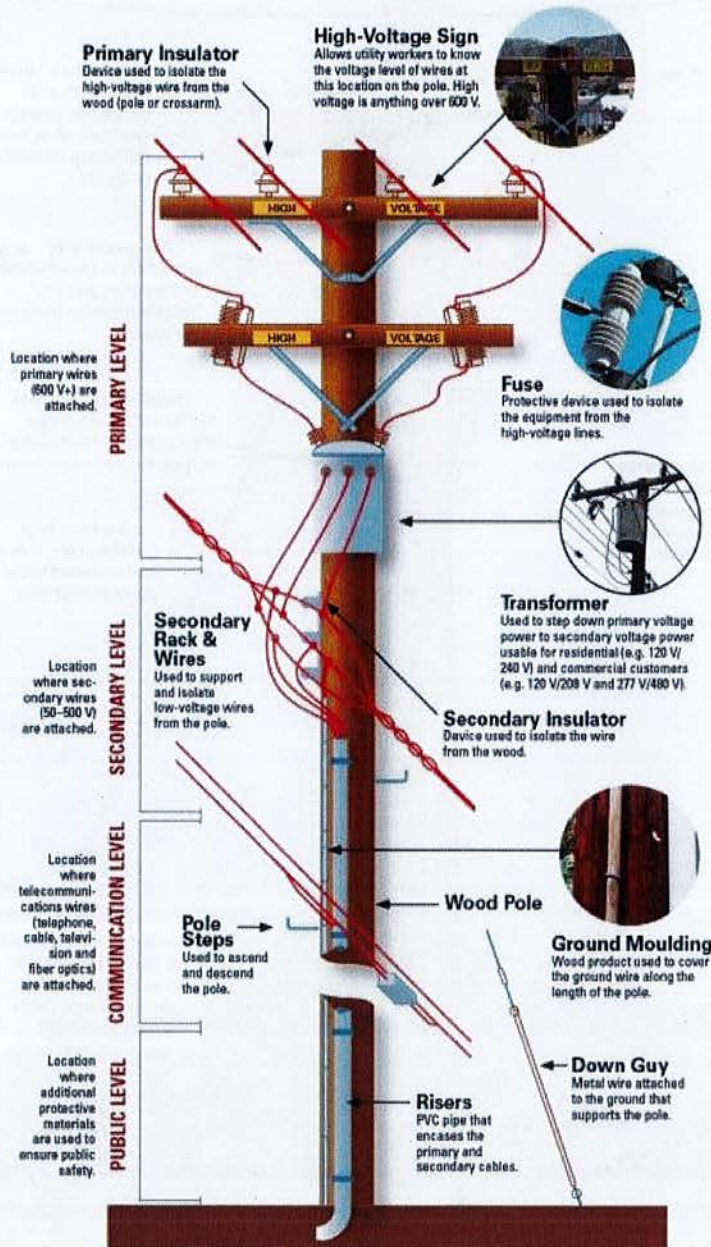


Figure 16

The following diagram, from Clay Electric Cooperative in Flora, Illinois, describes the basic electrical infrastructure on a utility pole:

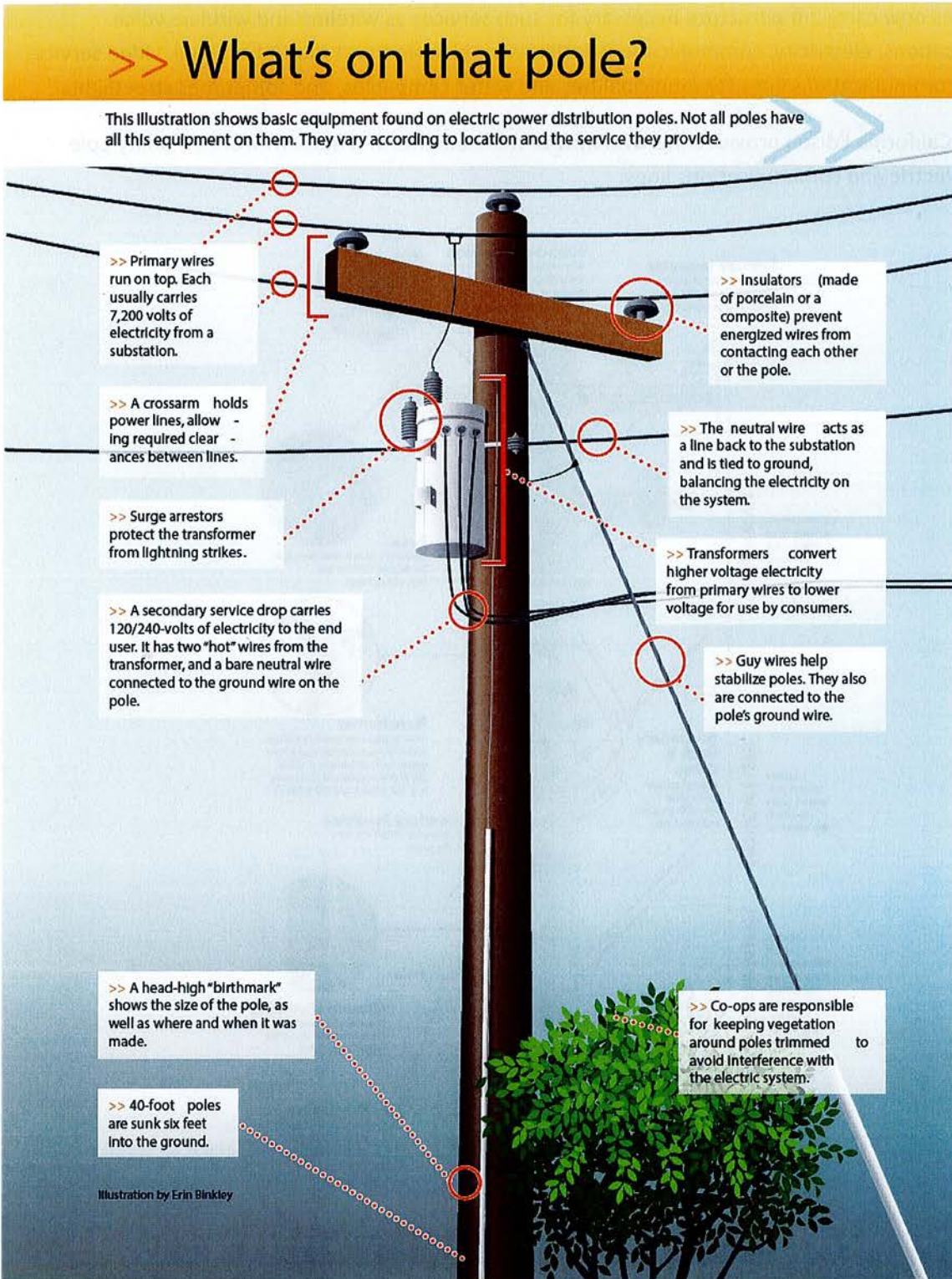


Figure 17

Of course, utility poles in the field rarely appear as neat and tidy as the utility poles in the diagrams above. The utility pole below was photographed in San Francisco in 2008:

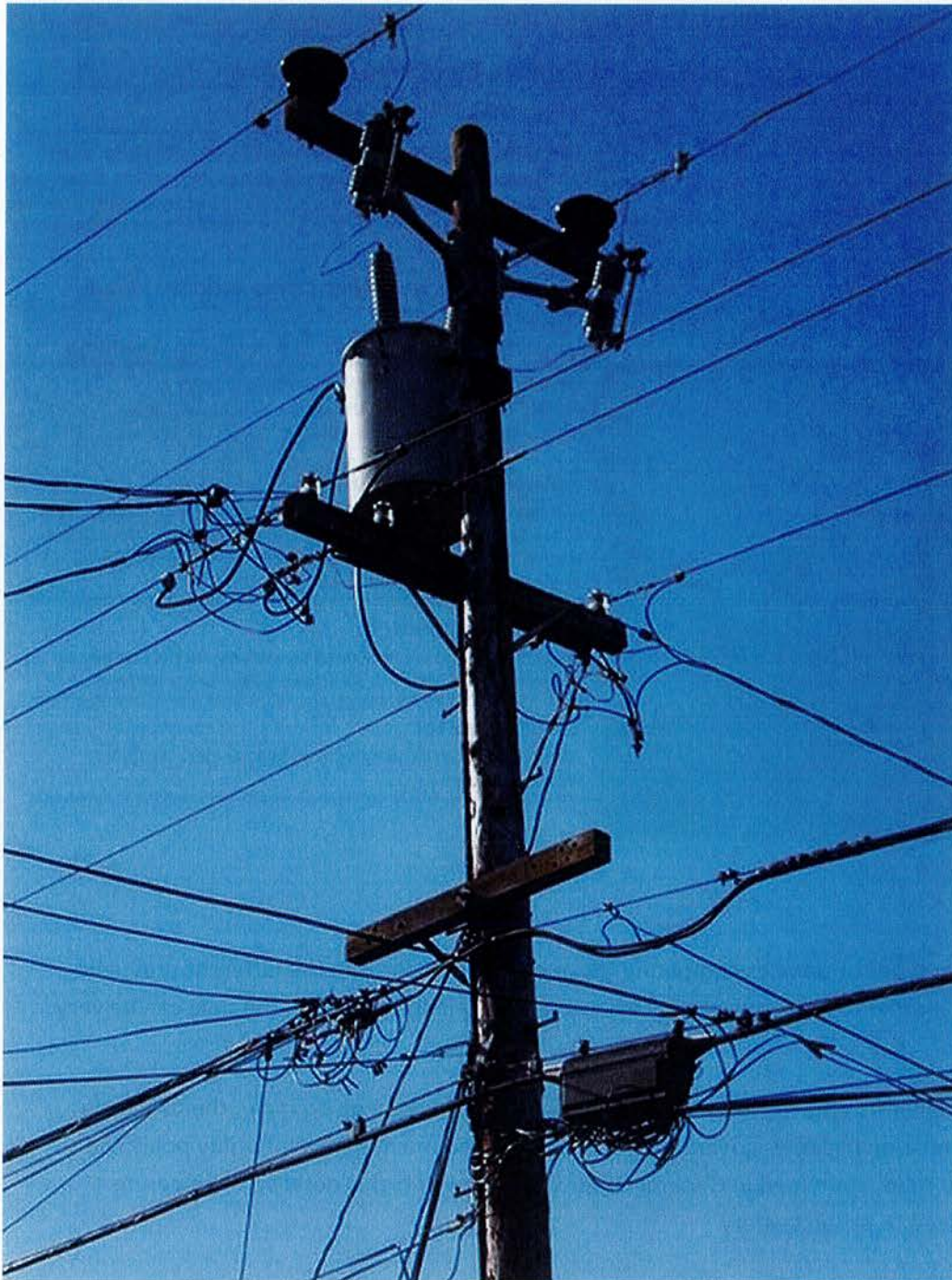


Figure 18



The image below, from the San Francisco Planning Department, shows a potential arrangement of electric lines, communications attachments, and a streetlight.

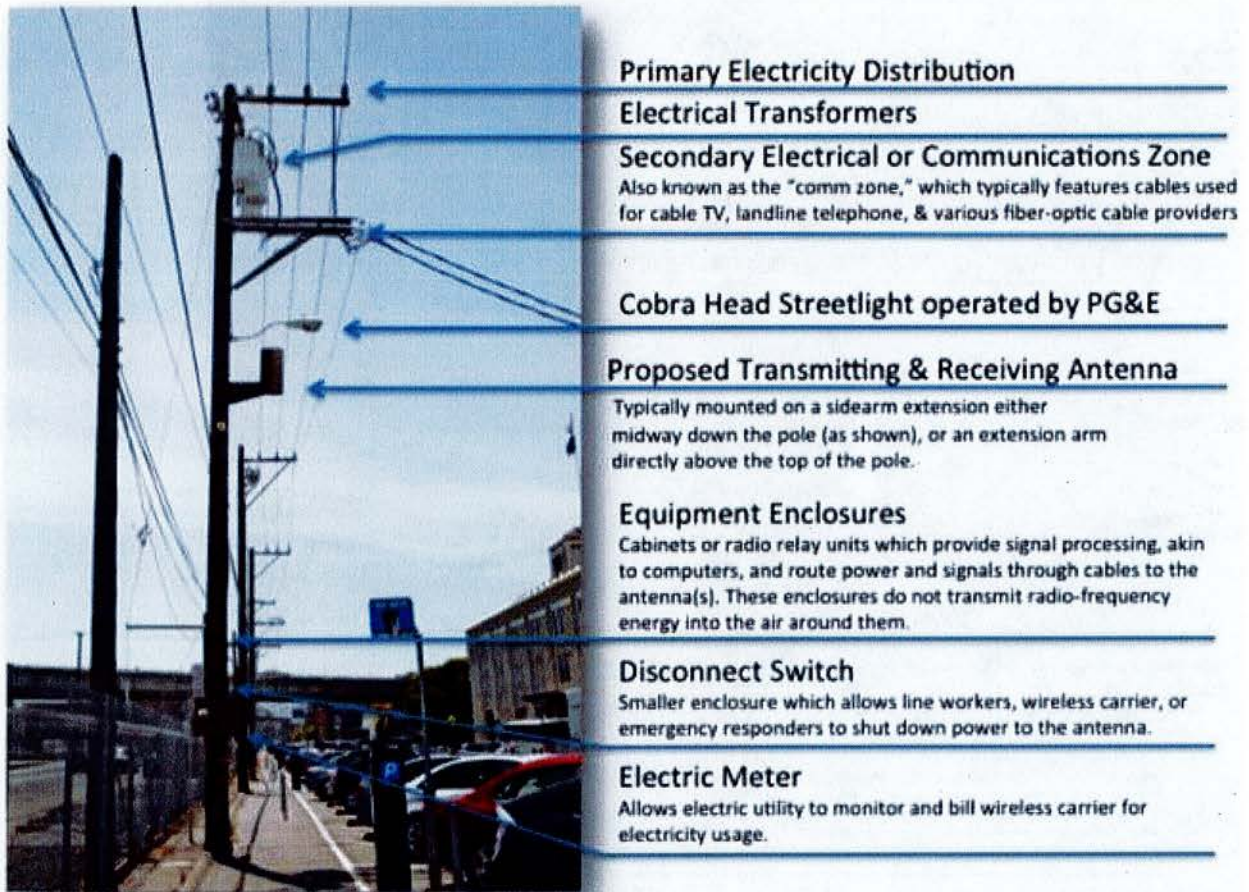


Figure 19

With all the different types of services competing for space on the pole, and the different providers competing with each other to offer those services, managing their shared use of the pole can be very complicated.

State and federal regulators enforce some rules regarding utility poles. For example, the California Public Utilities Commission has rules governing the operation and maintenance of utility poles and attachments. These rules, contained in General Order 95, consist of highly detailed engineering requirements designed to protect safety.

The Commission updates General Order 95 in response to changes in technology, engineering, or markets; for example, the Commission recently updated General Order 95 to ensure the safety of wireless attachments. The three slides below, from a 2016 Commission staff presentation, describe some of the changes:



## GO 95 Safety Amendments

(page 1 of 3)

- Prohibit antenna installations that obstruct pole climbing space or interfere with fall-protection gear.



4

Figure 20



## GO 95 Safety Amendments

(page 2 of 3)

- Require pole-overturning calculations for new pole-top antenna attachments.



5

Figure 21



## GO 95 Safety Amendments (page 3 of 3)

- Generally prohibit antennas on guard arms.
- Clarify requirements for signs regarding radio-frequency radiation of antennas.
- Clarify protocols for de-energizing antennas.
- Only qualified workers may work on wireless facilities installed above supply lines.



6

Figure 22

Double poles are another challenge arising from joint use. When a utility pole is replaced, all the joint users must transfer their attachments from the old pole to the new pole. Some joint users fail to transfer their attachments in a timely manner, creating unsightly double poles, such as those below, that last for months or years longer than is safe or necessary.



Figure 23

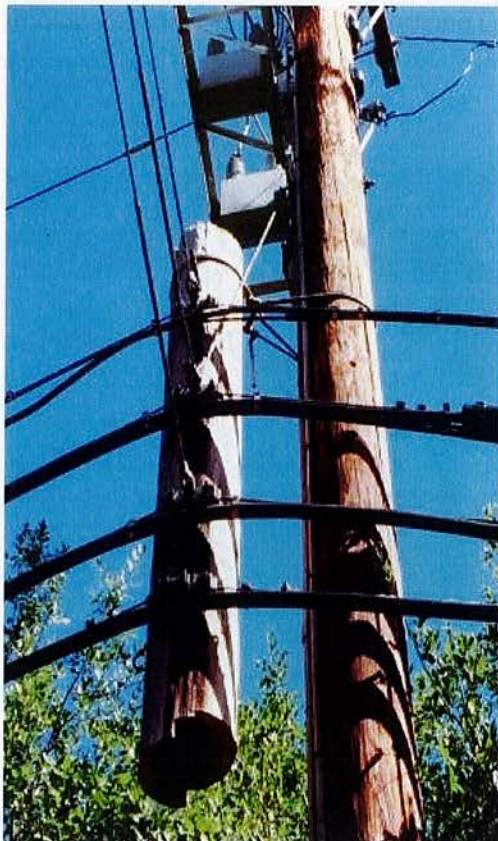


Figure 24

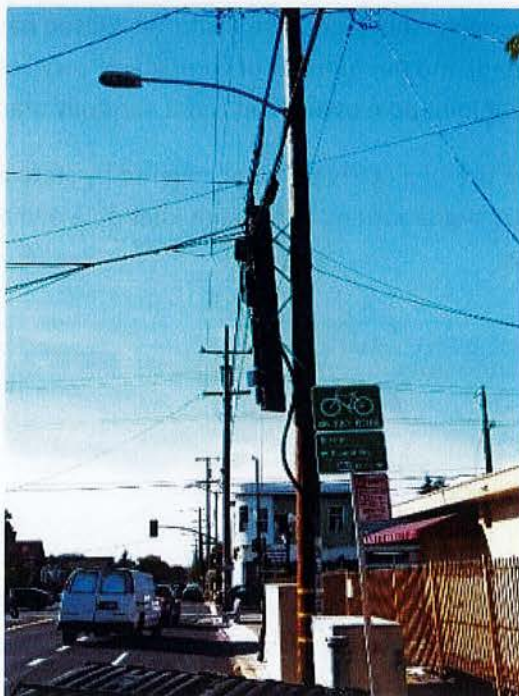


Figure 25

Another complication of joint use concerns abandoned or unused equipment on a pole. For example, loops of spare communications lines not being used to serve customers can frequently be seen attached to utility poles.

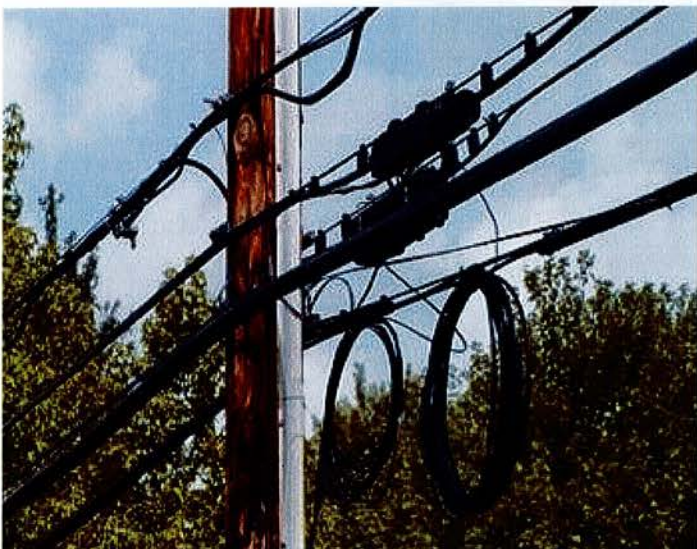


Figure 26

State and federal rules do not cover every possible question that might arise when sharing space on a utility pole. For example, if a company wants to rent space on a utility pole, or even become a joint owner of a utility pole, who do they call? What is the process?

Given the frequency of joint pole ownership (Southern California Edison has stated that 70% of the poles in its service area are jointly owned) and the number of companies, services, and technologies involved, reliability and safety could suffer if joint pole ownership is not carefully managed.

To handle aspects of their shared use of a utility pole not covered by state and federal law, some companies have formed voluntary organizations to manage joint pole ownership. In California, there are two such joint pole organizations.



The Northern California Joint Pole Association and the Southern California Joint Pole Committee handle many aspects of joint pole ownership, including: billing; joint pole planning process; pole abandonment and removal; and identifying poles and attachments for record-keeping purposes.

An example of the territory covered by the Northern California Joint Pole Association:



Figure 27

And an example of the territory covered by the Southern California Joint Pole Committee:



Figure 28

## 6. Safety

In October 2007, strong Santa Ana winds swept across Southern California and caused dozens of wildfires. Several of the worst wildfires were reportedly ignited by power lines. These included the Grass Valley Fire (1,247 acres); the Malibu Canyon Fire (4,521 acres); the Rice Fire (9,472 acres); the Sedgewick Fire (710 acres); and the Witch Fire (197,990 acres). The total area burned by these five power line fires was more than 334 square miles. During the Fire Siege, transportation was disrupted, and portions of the electric network, communications network, and community water sources were destroyed.

One of the fires, the Malibu Canyon Fire, started when three wooden utility poles came down in a windstorm and the downed power lines sparked a vegetation fire. A California Public Utilities Commission staff report determined that the three utility poles were not in compliance with the safety and engineering rules in General Order 95, and that they would have been able to withstand the wind gusts if they had been in compliance.

The California Public Utilities Commission ultimately approved settlement agreements between all the joint owners involved. Among the admissions made as part of the settlement agreement, one party admitted having placed attachments on a pole despite having been informed that the attachments would overload the pole, i.e. cause it to become too heavy, in violation of General Order 95.

The pictures below illustrate what can happen when companies do not follow utility pole safety rules:



Figure 29



Figure 30

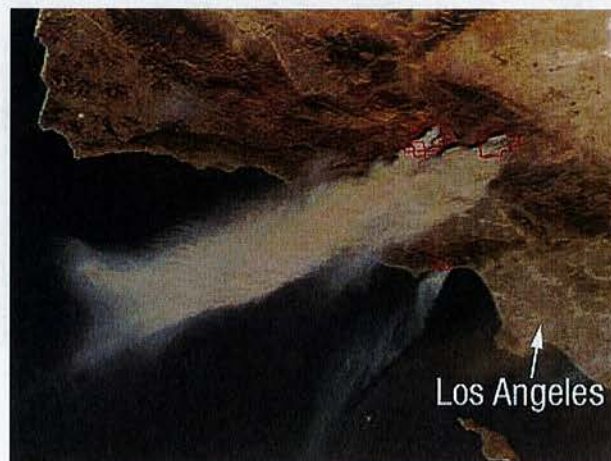
The pictures below were taken by NASA three hours apart on the first day of the Fire Siege. Although not every fire was caused by downed utility poles and electric lines, the pictures demonstrate how quickly fires can spread in California's dry, rugged terrain. According to NASA:

This pair of images, depicting the area around Los Angeles on October 21, 2007, shows just how quickly the fires grew.

The left image, captured by NASA's Terra satellite at 11:35 a.m. local time, shows several fires giving off small plumes of smoke. Just over 3 hours later, at 2:50 p.m. when NASA's Aqua satellite passed overhead, large amounts of smoke were pouring from blazes northwest of Los Angeles. Actively burning fires are outlined in red.



11:35 am (PDT)



2:50 pm (PDT)

Figure 31



## 7. Vegetation Management

Utility pole safety does not stop with engineering and maintenance of the poles and attachments and coordination between the joint owners. Vegetation management is an important component in maintaining the safety of the poles for utility employees and the general public, and for ensuring the reliability of the services carried on the poles.

The following two pictures show a utility pole in Walnut Creek, California, that is surrounded by vegetation. There is no safe climbing space for utility workers, and branches appear to be in contact with the communications lines. If the tree falls, either during a storm or because it is weakened by drought, it could conceivably take down the utility pole.



Figure 32



Figure 33

Fortunately, a rigorous vegetation management program at the utility company can prune back surrounding vegetation before it threatens service reliability, or the safety of utility employees or the general public.

Vegetation management at San Diego Gas & Electric...



Figure 34

...and at Pacific Gas & Electric



Figure 35

Customers have an important role to play in vegetation management. Customers may create threats to utility safety and reliability if they plant the wrong tree in the wrong place, where it can come into contact with utility lines. Fortunately, California's three large electric companies make information available to their customers concerning vegetation management and its role in safety.

**San Diego Gas & Electric** provides a recommended tree planting list with detailed tree characteristics, as well as a customer brochure on vegetation management, explaining why trees must be pruned in a way that prioritizes safety over aesthetics.<sup>2</sup>

**Southern California Edison's** consumer information page, "Let's Keep Trees Away From Power Lines," also provides information on what to plant, where to plant it, power line safety, and even how to use shade trees to lower energy costs.



Figure 36

**Pacific Gas & Electric's** information on Power Lines and Trees provides links to brochures on tree planting and management, including a tree selection guide managed by California Polytechnic State University.



Figure 37

<sup>2</sup> [https://www.sdge.com/sites/default/files/documents/594331938/Tree\\_Planting\\_List.pdf?nid=19891](https://www.sdge.com/sites/default/files/documents/594331938/Tree_Planting_List.pdf?nid=19891);  
<https://www.sdge.com/sites/default/files/documents/808851578/pruningTrees.pdf>

According to Pacific Gas & Electric, palm trees near utility poles create special challenges, because they cannot be pruned to grow away from the utility pole and any associated electric and communications lines. Pacific Gas & Electric recommends that palm trees be planted at least 50 feet away from utility poles to reduce the risk of contact from wind-blown palm fronds.

## 8. Animal Management

Utility poles are outside, so in addition to vegetation management, animal management is also necessary.

### Bears

Bears rub, claw, and bite trees to communicate with other bears via scent, and to find food.



Figure 38



Figure 39

Unfortunately, bears are very bad at distinguishing living trees from utility poles. The utility poles below in West Virginia have been clawed and bitten nearly in half by bears. Appalachian Power utility workers began bear-proofing their wooden utility poles by swaddling the poles with layers of plastic pipe, which has proven to be an effective deterrent. Other utilities in the area are reportedly having luck installing a new utility pole next to the damaged utility pole, finding that the bears will continue to scratch the old pole and leave the new pole undisturbed.



Figure 40



Figure 41

Some bear incursions on utility poles are more adorable than others.

A customer in West Virginia called Mon Power to report a bear cub on top of a 40 foot wooden utility pole. Two linemen were able to de-energize the utility pole and rescue the cub, with the assistance of a state game commissioner who stood lookout for the bear cub's mother.



Figure 42

Southern California Edison shared this photograph of a bear with impressive climbing skills. No word on how the bear got down. The bear was doubtless disappointed by the lack of acorns on utility poles, although information shared at the California Public Utilities Commission's Utility Pole Safety En Banc in 2016 suggests that there is an ingredient in insulation materials that bears find irresistibly tasty.



Figure 43

### Woodpeckers



Figure 44

Woodpeckers also treat wooden utility poles like trees, and peck holes in the wooden poles to store nuts. This damage can be quite extensive, and will weaken the pole by removing wood and exposing remaining wood to water and insects. Woodpeckers are impervious to topical chemical deterrents, sounds, and fake owls, although covering the pole with wire mesh may aid in deterrence.<sup>3</sup>

### Birds and Electrocutation

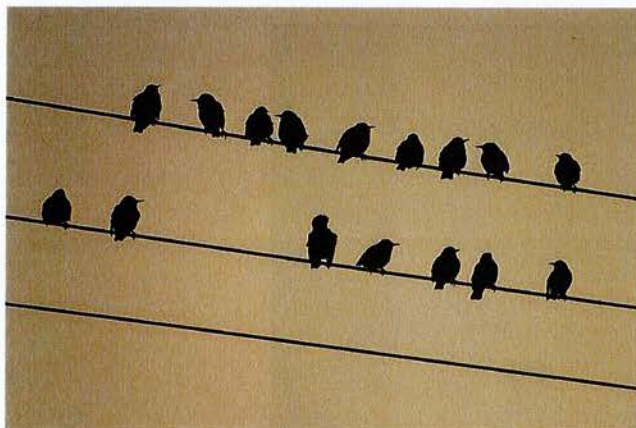


Figure 45

Have you ever looked at birds sitting on power lines and wondered why they aren't electrocuted?

It isn't because the power lines are shielded (they aren't), or because the birds are not good conductors of electricity (they are).

So why aren't the birds electrocuted?

The birds are not electrocuted because electrons are lazy. Electrical current travels along the path of least resistance; if the bird is only touching one power line, there is not a significant difference in electrical potential between the bird's feet and the power line sufficient to cause the electrons to deviate from their path, so the electrons will not leave the power line to travel through the bird's body.<sup>4</sup>

However, if the bird touches two power lines at the same time, especially if the power lines have different voltages, the bird will become a conductor between the different electrical potentials and the bird will be electrocuted.

Similarly, if the bird touches an electrical line and the wooden utility pole at the same time, the bird's body will provide the electrons with a path to ground through the utility pole and the bird will be electrocuted.

<sup>3</sup> Woodpeckers and Utility Pole Damage, Richard E. Harness and Dr. Eric L. Walters, 2004, IEEE  
<http://www.ericlwalters.org/harnesswalters2004.pdf>

<sup>4</sup> <https://engineering.mit.edu/engage/ask-an-engineer/how-do-birds-sit-on-high-voltage-power-lines-without-getting-electrocuted/>



The larger the bird's wingspan, the greater the risk that it will touch two energized lines at the same time, or an energized line and a grounded part of the pole, and be electrocuted. Because birds' contact with power lines endangers the integrity of the electrical line and public safety (an electrocuted bird started a 1.5 acre brushfire in Novato in 2012<sup>5</sup>), the Avian Power Line Action Committee<sup>6</sup> recommends specific clearances between energized lines to prevent electrocution, and deterrent measures to prevent birds from nesting on utility poles.



Figure 46

## 9. The Future

A member of the public who is handed a paper on utility poles might be forgiven if they exclaimed: "Utility poles? Who cares about utility poles? I'm walking around downtown and I don't see a single utility pole, everything is underground."

It is true that new developments in many parts of the country tend to favor (and sometimes require) that utility facilities be placed underground rather than aboveground on utility poles. The California Public Utilities Commission mandated, in General Order 128, that residential subdivisions built after 1970 locate their electrical distribution lines underground.

Despite the fact that new residential and commercial construction projects underground their utility infrastructure, California still has more than 4 million utility poles, most of which are wood. Although

<sup>5</sup> <https://patch.com/california/sanrafael/electrocuted-bird-sparks-fire-near-skywalker-ranch>

<sup>6</sup> <http://www.aplic.org/index.php>

some utilities and municipalities are replacing wood utility poles with utility poles made of concrete, metal, or fiberglass composite, all of which are bear and woodpecker resistant, the North American Wood Pole Council estimates that there are 130 million wooden utility poles across North America.<sup>7</sup>

Although a wooden utility pole will never be as flashy as this metal Mickey Mouse-inspired utility pole outside of Disney World, the wooden utility pole has been an important part of our communications history since 1844 and will likely be with us for years to come.



Figure 47

<sup>7</sup> <http://woodpoles.org/WhyWoodPoles/HowPolesAreMade.aspx>

## 10. In Case of Emergency

The California Public Utilities Commission puts safety first and offers the following tips on the importance of staying safe around overhead and underground power lines.<sup>8</sup>

### What if I spot a downed wire?

Incidents related to accidents, severe weather, trees, etc., can cause a power line to fall to the ground. If you see a downed power wire, stay clear of it and call 9-1-1 immediately to report an electrical emergency. All lines down should be treated as dangerous. Never touch a downed power line or go near one. Always call 9-1-1 immediately.

### What should I do if I see a person, animal, or object that is in contact with a downed power line?

Do not touch the person, animal, or object because the power line may still be energized. Call 9-1-1 immediately.

### What if I need to do outside work near an overhead power line?

If your outside work requires you to be near an overhead power line, always remember to keep everything – and everybody – at least 10 feet away from the power line. If you have any questions or concerns, contact your local utility company before starting any work.

### What if a power line falls on and/or comes into contact with my vehicle while I am still in it?

Remain calm and stay in your car, as the ground around your car may be energized. Call 9-1-1 on your cell phone or tell someone to call for you. Tell everyone to stay clear and do not touch the vehicle. If there is a fire and you have to exit your vehicle that has come in contact with a downed power line, remove loose items of clothing, keep your hands at your sides, and jump clear of the vehicle, so you are not touching the vehicle when your feet hit the ground. Keep both feet close together and shuffle away from the vehicle without picking up your feet.

A power line carries electricity, which can be dangerous and cause serious injury or even death if you come into contact with it. The California Public Utilities Commission wants you to stay informed and alert to stay safe.

## 11. Contact the Commission

If you ever see a downed power line, call 9-1-1 immediately. However, if you live in California, don't forget that you can also file utility pole complaints with the California Public Utilities Commission. You may file a complaint with the Commission after calling 9-1-1 to report an immediate threat, but you may

<sup>8</sup> The Buzz About Power Line Safety, July 2016,

[http://www.cpuc.ca.gov/uploadedFiles/CPUC\\_Public\\_Website/Content/News\\_Room/Fact\\_Sheets/English/PowerLineSafety.pdf](http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/News_Room/Fact_Sheets/English/PowerLineSafety.pdf)

also contact the Commission about utility poles that appear unsafe or dangerous even if they do not present the immediate and obvious safety risk of a downed power line.

To file a public safety complaint with the California Public Utilities Commission:

The fastest way to file a complaint is using the [online complaint form](https://appsssl.cpuc.ca.gov/cpucapplication/), available at <https://appsssl.cpuc.ca.gov/cpucapplication/>

Please be aware that the CPUC cannot help you resolve issues with:

- Publicly owned or municipal utilities, such as SMUD or the Los Angeles Department of Water and Power
- Federal, city, or county taxes and surcharges on your bills
- Long-distance telephone, cable TV, cellular phone rates, paging, or Internet rates and services

The CPUC also cannot award claims for damages, or help you determine a utility's alleged negligence or liability. If you cannot resolve this type of problem with the utility directly, you can file a claim in civil court.

If you do not want to file your complaint online, you can send us a written complaint letter. Be sure to include:

- Your name
- The name the account is billed under (if it is different than your name)
- Your mailing address
- The service address (if it is different than your mailing address)
- The name of the utility or company
- The name of the utility or company's representative you contacted (if applicable)
- A brief description of the problem (no more than two pages)
- Daytime phone number where you can be reached
- The phone number or account number of the service (if applicable)

You can mail your written complaint to:

CPUC Utilities Safety Branch  
505 Van Ness Avenue  
San Francisco, CA 94102-3298

If you have any questions about mobile home park safety, you can call us at 1-415-703-1126. For all other public safety complaints, you can call us at 1-800-755-1447.

**References:**

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**Front cover:** National Archives, circa 1862-1863, NWDNS-77-F-194(6)(62), available at <https://catalog.archives.gov/id/519420>

**Back cover:** Utility pole in Walnut Creek, California. Photo by April Mulqueen.

**Page 3: Top:** View west down the Carlin Canyon from the hill above the Carlin Tunnel in Elko County, Nevada, with an old telephone pole in the foreground, April 19, 2015, by Famartin

[https://commons.wikimedia.org/wiki/File:2015-04-](https://commons.wikimedia.org/wiki/File:2015-04-19_16_05_45_View_west_down_the_Carlin_Canyon_from_the_hill_above_the_Carlin_Tunnel_in_Elko_County,_Nevada,_with_an_old_telephone_pole_in_the_foreground.jpg)

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**Bottom:** Telephone pole sunset, July 23, 2005, by Chas Redmond from Seattle, WA, [https://commons.wikimedia.org/wiki/File:Telephone\\_Pole\\_Sunset.jpg](https://commons.wikimedia.org/wiki/File:Telephone_Pole_Sunset.jpg)

**Figure 1:** Great Wall of China near Simatai, May 29, 2009, photo by Jakub Halun;

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**Figure 2:** Statue of Phidippides, who ran 26 miles to deliver the news of the Greek victory at the battle of Marathon; posted by Hammer of the Gods 27, June 1, 2003,

[https://commons.wikimedia.org/wiki/File:Statue\\_of\\_Pheidippides\\_along\\_the\\_Marathon\\_Road.jpg](https://commons.wikimedia.org/wiki/File:Statue_of_Pheidippides_along_the_Marathon_Road.jpg)

**Figure 3:** Young Lady in Oriental Clothing with a Homing Pigeon, unknown, 19<sup>th</sup> Century

[https://commons.wikimedia.org/wiki/File:Junge\\_Frau\\_mit\\_Taubenpost.jpg](https://commons.wikimedia.org/wiki/File:Junge_Frau_mit_Taubenpost.jpg)

**Figure 4:** Postcard depicting Paul Revere and Boston's Old North Church from The Tichnor Brothers Collection, Boston Public Library; <http://ark.digitalcommonwealth.org/ark:/50959/wh246s22h>

**Figure 5:** Lioness and Cub, Otjiwarongo, Namibia by Greg Willis. October 13, 2006,

<https://www.flickr.com/photos/gregw66/3685503278/>

**Figure 6:** Morse's First Telegraph Line - 1844, by Bill Meier,

<http://www.insulators.info/pictures/?id=145113243>

**Figure 7:** Historical marker of first telegram, [https://en.wikipedia.org/wiki/Baltimore-Washington\\_telegraph\\_line#/media/File:MD\\_Historical\\_Marker\\_First\\_Telegram.jpg](https://en.wikipedia.org/wiki/Baltimore-Washington_telegraph_line#/media/File:MD_Historical_Marker_First_Telegram.jpg)

**Figure 8:** Early Drawing of Telegraph Poles, June 25, 1844. Library of Congress, Samuel Finley Breese Morse papers, <http://hdl.loc.gov/loc.mss/mmorse.018001>

**Figure 9:** Smithsonian Institution Poster Museum, [https://arago.si.edu/record\\_219560\\_img\\_1.html](https://arago.si.edu/record_219560_img_1.html)

**Figure 10:** Pony Express Route April 3, 1860 – October 24, 1861. William Henry Jackson, creator; Library of Congress, Geography and Map Division, <https://www.loc.gov/item/2004629249/>

**Figure 11:** Pony Express rider and the advancing telegraph. Original sketch in Oregon Trail Museum. [https://www.nps.gov/parkhistory/online\\_books/hh/28/hh28o.htm](https://www.nps.gov/parkhistory/online_books/hh/28/hh28o.htm)

**Figure 12:** Etching of Overhead Telephone and Telegraph Wires in Broadway, 1890, [https://commons.wikimedia.org/wiki/File:New\\_York\\_utility\\_lines\\_in\\_1890.jpg](https://commons.wikimedia.org/wiki/File:New_York_utility_lines_in_1890.jpg)

**Figure 13:** Streetscape with wooden utility poles, Allentown PA, 1891, [https://commons.wikimedia.org/wiki/File:600\\_Block\\_Hamilton\\_Street\\_Allentown\\_PA\\_1891.jpg](https://commons.wikimedia.org/wiki/File:600_Block_Hamilton_Street_Allentown_PA_1891.jpg)

**Figure 14:** Wooden Utility Pole in Pratt, Kansas, circa 1911, [http://www.thisistrue.com/blog-rural\\_electrification\\_meet\\_the\\_rural\\_internet.html](http://www.thisistrue.com/blog-rural_electrification_meet_the_rural_internet.html)

**Figure 15:** Power lines and supporting structure in lane west of Main Street at Pender Street. March 10, 1914. Photo: British Columbia Electric Railway Company, CoV Archives, AM54-S4-: LGN 1241. <https://vanalogue.wordpress.com/tag/the-vancouver-electric-illuminating-company/>

**Figure 16:** <http://sce.tumblr.com/post/59329041377/the-anatomy-of-a-distribution-pole-this>

**Figure 17:** <http://www.ceci.coop/blog?page=7>

**Figure 18:** A Utility Pole in South San Francisco, California, March 22, 2008, © BrokenSphere / Wikimedia Commons [https://commons.wikimedia.org/wiki/File:SSF\\_utility\\_pole\\_1\\_front.JPG](https://commons.wikimedia.org/wiki/File:SSF_utility_pole_1_front.JPG)

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**Figure 26:** Unused communications drops on a utility pole, <http://info.aldensys.com/joint-use/managing-joint-use-utility-poles-attachments-overloading>

**Figure 27:** Fog Over Potrero Hill, Lynn Friedman, <https://www.flickr.com/photos/lynnfriedman/7800224336>

**Figure 28:** Los Angeles Plaza Church circa 1905, USC Libraries Special Collections, [https://commons.wikimedia.org/wiki/File:Los\\_Angelos\\_Plaza\\_Church\\_\(CHS-545\).jpg](https://commons.wikimedia.org/wiki/File:Los_Angelos_Plaza_Church_(CHS-545).jpg)

**Figure 29:** Flames roaring towards homes in the hills above Malibu. Taken from a United Airlines flight that just departed from LAX for SEA, by Ron Reiring, October 22, 2007.

[https://commons.wikimedia.org/wiki/File:Malibu Fire October 2007 \(2\).jpg](https://commons.wikimedia.org/wiki/File:Malibu_Fire_October_2007_(2).jpg)

**Figure 30:** The 2007 Malibu fire. (Los Angeles Times) <http://articles.latimes.com/2013/may/20/local/la-me-ln-edison-admits-errors-in-malibu-fire-settles-now-top-60-million-20130520>

**Figure 31:** NASA/MODIS Rapid Response. Story credit: Laura Spector, NASA Goddard Space Flight Center. [https://commons.wikimedia.org/wiki/File:Nasa\\_satellite\\_photo\\_side\\_by\\_side\\_2007-10-22.jpg](https://commons.wikimedia.org/wiki/File:Nasa_satellite_photo_side_by_side_2007-10-22.jpg)

**Figures 32, 33:** Photos taken in Walnut Creek, California, August 27, 2016 by April Mulqueen.

**Figure 34:** Vegetation management at San Diego Gas & Electric, April 4, 2013, <https://www.sdge.com/newsroom/press-releases/2013-04-04/sdge-tree-trimmers>

**Figure 35:** Enrique Nabarrete of Davey Tree Surgery prepares to bring down a dead 75-foot ponderosa pine near a 21,000-volt electric line. (Photos by David Kligman.)

<http://www.pgecurrents.com/2012/09/13/pge%E2%80%99s-tree-trimming-protects-electric-lines-reduces-outages/>

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**Figure 37:** [https://www.pge.com/en\\_US/safety/yard-safety/powerlines-and-trees/right-tree-right-place/right-tree-right-place.page](https://www.pge.com/en_US/safety/yard-safety/powerlines-and-trees/right-tree-right-place/right-tree-right-place.page)

**Figure 38:** National Park Service Photo / K. Jalone, <https://www.nps.gov/akr/photosmultimedia/photogallery.htm?id=43AA5C46-1DD8-B71C-07974EB8392075C1>

**Figure 39:** Grizzly bear rubbing on a tree, Northern Divide Grizzly Bear Project, by GlacierNPS, USGS photo.

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**Figure 42:** Mon Power Lineman Rescue Bear Cub, FirstEnergy Corp, <https://www.flickr.com/photos/firstenergycorp/17208905806>

**Figure 43:** Southern California Edison tweet, March 13, 2016.

**Figure 44:** Acorn Woodpecker, by Teddy Llovet, February 26, 2009,  
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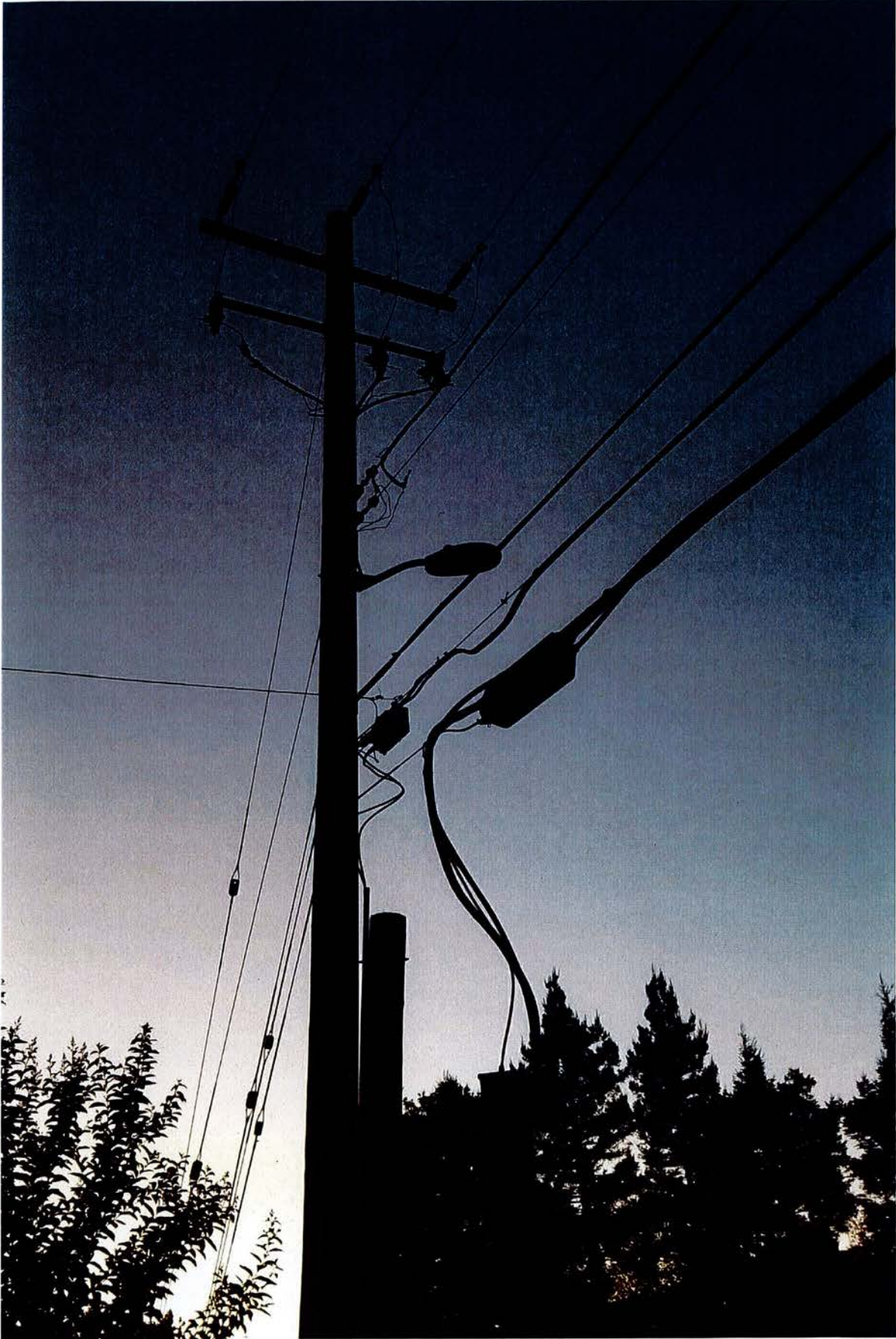
**Figure 45:** Birds on Far Bank's Power Line, Hedon, East Riding of Yorkshire, England, by Andy Beecroft.  
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**Figure 46:** Red-tailed Hawk by Rennett Stowe, January 4, 2011,  
<https://www.flickr.com/photos/tomsaint/5327481818>

**Figure 47:** A Mickey Mouse-shaped utility pole near Disney World, by akampfer, March 20, 2013,  
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**Appendix G**  
**Staff Proposal for Rule 20 Program Reform and Enhancements**





EW2/nd3 2/13/2020

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**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Consider  
Revisions to Electric Rule 20 and Related  
Matters.

Rulemaking 17-05-010

**ADMINISTRATIVE LAW JUDGE'S RULING (1) ISSUING AND ENTERING INTO THE RECORD AN ENERGY DIVISION STAFF PROPOSAL FOR IMPROVING THE ELECTRIC TARIFF RULE 20 UNDERGROUNDING PROGRAM; (2) REQUESTING COMMENTS ON THE PACIFIC GAS AND ELECTRIC COMPANY'S RULE 20A AUDIT REPORT; AND (3) SETTING A SCHEDULE FOR COMMENT**

**Summary**

The Administrative Law Judge's (ALJ) Ruling of March 6, 2019, stated the Commission's Energy Division shall develop a staff proposal on improvements to Rule 20A, which shall be presented to the parties for comment by a subsequent ruling.

This ruling serves to issue, and to enter into the record, the attached Energy Division's *Staff Proposal for Rule 20 Program Reform and Enhancements (Staff Proposal)*. This ruling also establishes a schedule for providing comments on the *Staff Proposal* and the *October 2019 Audit of PG&E Rule 20A Undergrounding Program (PG&E Audit Report)* prepared by AzP Consulting, LLC and previously made part of this record by ruling of December 20, 2019.

This proceeding will be submitted following the receipt of comments and a proposed decision will follow, unless the ALJ requires further evidence or argument.

R.17-05-010 ALJ/EW2/nd3

**1. Comments**

The parties shall specifically identify the page and section of the *Staff Proposal* to which any comment refers. Parties shall file comments to the *Staff Proposal* on or before 30 days after the date of this ruling. Reply comments may be filed within 15 days thereafter.

The parties are also requested to provide comments on the *PG&E Audit Report*. Parties shall specifically identify the page and section of the *PG&E Audit Report* to which any comment refers and are asked to focus any comments regarding recommended program modifications on those that are applicable to all the investor-owned utilities. Parties shall file comments to the *Audit Report* on or before 40 days after the date of this ruling. Replies to comments on the *Audit Report* may be filed within 10 days thereafter

**IT IS SO RULED.**

Dated February 13, 2020, at San Francisco, California.

/s/ ERIC WILDGRUBE

Eric Wildgrube  
Administrative Law Judge

R.17-05-010 ALJ/EW2/nd3

ATTACHMENT A

CALIFORNIA PUBLIC UTILITIES COMMISSION

*Energy Division's Staff Proposal for Rule 20 Program Reform and Enhancements*

R.17-05-010 ALJ/EW2/nd3

# Undergrounding Proceeding (R.17-05-010) Staff Proposal for Rule 20 Program Reform and Enhancements

---

Jonathan Frost  
Grid Planning and Reliability Section  
Energy Division  
California Public Utilities Commission

February 2020



R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

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R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

# CONTENTS

**GLOSSARY OF TERMS**..... 4

**1. EXECUTIVE SUMMARY**..... 7

**2. BACKGROUND**.....10

    2.1 RULE 20 PROGRAM STRUCTURE ..... 11

    2.2 RULE 20 PROGRAM HISTORY AND CONTEXT..... 12

    2.3 WINNERS AND LOSERS UNDER THE CURRENT PROGRAM STRUCTURE ..... 13

**3. RULE 20 PROGRAM GOALS, CHALLENGES AND GUIDING PRINCIPLES**.....17

    3.1 CURRENT PROGRAM GOALS ..... 17

    3.2 CHALLENGES TO THE EXISTING PROGRAM ..... 17

    3.3 PROPOSED GUIDING PRINCIPLES ..... 21

**4. MODIFICATIONS TO THE RULE 20 PROGRAM DESIGN** ..... 22

    4.1 RULE 20A PROJECT ELIGIBILITY CRITERIA ..... 22

    4.2 RULE 20A WORK CREDIT ALLOCATION METHODOLOGY..... 28

    4.3 SUNSETTING THE CURRENT RULE 20A AND RULE 20D PROGRAMS ..... 37

    4.4 OPTIONS FOR OBTAINING ADDITIONAL RULE 20A WORK CREDITS ..... 38

    4.5 RULE 20D MODIFICATIONS ..... 43

**5. RULE 20 PROGRAM REPORTING, EVALUATION AND TRANSPARENCY**..... 45

**6. RULE 20 PROJECT COMPLETION ISSUES** ..... 52

**Appendix A – Rule 20A Maps**..... 59

**Appendix B – PG&E 2017 Humboldt County Rule 20A Allocation Letter**..... 63

**Appendix C – SCE 2019 Rule 20A Work Credit Allocation Report to the CPUC** ..... 65

**Appendix D – SDG&E 2018 Rule 20A Completion Report** ..... 74

**Appendix E – Staff April 22, 2019 Presentation on R.17-05-010 Data Request Findings** ..... 85

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

## Glossary of Terms

1. **Active Communities:** Refers to communities that meet either one or more of the following criteria that was established in Resolution E-4971:
  - A. Formally adopts an undergrounding district ordinance which expires at completion of work within the district boundaries; or
  - B. Has started or completed construction of an undergrounding conversion project within the last 8 years; or
  - C. Has received Rule 20A allocations from the utility for only 5 years or fewer due to recent incorporation.
2. **Assessment District:** A financing mechanism the California Streets and Highways Code, Division 10 and 12 which enables cities, counties to designate Districts to collect special assessments to finance the improvements constructed or funded by the District. In Rule 20B, an assessment district is formed based on a petition to the city council or county board of supervisors from 60 percent or more of the residents of the affected area.
3. **Borrow Forward:** Also known as the “five-year borrow”. Refers to the process allowed under the Rule 20A Tariff in which municipalities may borrow up to five years of additional Rule 20A work credit allocations against their future allocations from the utility to help fund a project.
4. **Communities:** In the Rule 20A program, this refers to cities and unincorporated county entities that are served by the investor-owned utilities.
5. **Cultural Resources:** Tangible remains of past human activity. These may include buildings; structures; prehistoric sites; historic or prehistoric objects or collection; rock inscriptions; earthworks, or canals.
6. **Disadvantaged Communities:** These areas represent the 25% highest scoring census tracts in State of California’s CalEnviroScreen 3.0 tool.
7. **Facilities:** Also referred to as “equipment”. Refers to wires, conductors, antennas, guy wires, cables, and/or any other equipment used to facilitate the transmission of communications or energy.
8. **Five Year Borrow:** See “borrow forward.”

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

9. **General Conditions Agreement:** (Or General Terms and Conditions) A document that is utilized by the electric utilities and the municipalities that clarifies the specific responsibilities for both the communities and the utilities in the preparation for and construction of a Rule 20A undergrounding project. It is referred to as the General Conditions Agreement, Sample Form 79-1127 by PG&E; General Conditions policy by SCE; and the General Conditions Form 106-35140F by SDG&E.
10. **High Fire Threat District:** Refers to the high fire threat areas in the CPUC's Fire-Threat Map which was adopted by the Commission in Decision (D.) 17-12-024. The map consists of three fire-threat areas (Zone 1; Tier 2 and Tier 3) that have increasing levels of risk of wildfires associated with overhead utility power lines or overhead utility power-line facilities that also support communication facilities.
11. **Inactive Communities:** Refers to communities that fail to meet any of the criteria described in the definition of Active Communities described above.
12. **Joint Trench Participants:** Refers to all the electric, telecommunication, and local government entities that are involved with a given undergrounding project.
13. **Non-Ratepayer Costs:** Refers to project costs that are not covered by Rule 20A. These include street lighting, repaving, sidewalk repair, undergrounding communication facilities, removal or replacement of other signage, environmental assessment, hazardous material removal, , discovery of archeological materials, permit fees and community administrative costs.
14. **Overhead Infrastructure:** Also referred to as above ground infrastructure. Refers to the conductors (wires), insulators, transformers, switches, reclosers, and other related equipment that span wooden or metal poles.
15. **Overhead Meter:** Refers to a meter at a home or business that is served by an overhead service drop.
16. **SDG&E Fire Threat Zone:** These are areas with extreme and very high fire threat risk within San Diego Gas & Electric's service territory that were identified in the Commission in Decision (D.) 09-08-029 and are currently the only areas where Rule 20D is applicable.
17. **Subsurface Equipment:** Refers to equipment that is installed in an underground vault, such as an underground transformer.

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

18. **Underground Meter:** Refers to a meter at a home or business that is served by an underground service line.
19. **Underground Utility District:** Also referred to as an underground or undergrounding district, or UUD. An area in the City within which poles, overhead wires, and associated overhead structures are to be converted underground. Underground utility districts are legislated by communities' city councils or by county board of supervisors.
20. **Viewshed:** The natural environment that is visible from one or more viewing points.
21. **Work Credit Trading:** Refers to any form of work credit exchange in which two or more cities or counties buy, sell, loan, trade, or donate Rule 20A work credits. The utilities sometimes refer to this as work credit transfers.

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R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

## 1. Executive Summary

This Staff Proposal presents recommendations for improving the Electric Tariff Rule 20 applicant-driven undergrounding program and for resolving significant issues in the existing program which includes the Rule 20 A, B, C and D programs. While much of the focus and attention of the public has been on Rule 20A, this Staff Proposal looks holistically at the Rule 20 undergrounding program as a whole and proposes changes across all four of the component programs. This Staff Proposal does not propose changes to undergrounding requirements along State Scenic Highways in Public Utilities Code (PUC) § 320, or for distribution line or service line extensions under Electric Tariff Rules 15 and 16 respectively. Nothing in this Staff Proposal inhibits utility-led undergrounding efforts for technical or safety reasons nor any local government-driven undergrounding separate from Rule 20.

The program reforms presented in this document are intended to make the program objectives relevant to current undergrounding goals held by various stakeholders by including a focus on safety, reliability, equity, and the alignment of cost allocation with cost-causation. The proposed reforms will allow communities to use their limited funds towards undergrounding the areas that pose the greatest safety threats and/or subject to chronic outages. These reforms seek to reduce the barriers to entry for program participation for communities that have had limited opportunities or resources to initiate undergrounding projects in the past. Additionally, the reforms are intended to lessen the burden on the general ratepayer and incentivize local communities to apply more of their own funding towards undergrounding. Furthermore, this proposal offers a plan to enhance program operation and efficiency and maintain regulatory efficiency of the program.

The California Public Utilities Commission (“CPUC”) Energy Division Staff (“Staff”) developed this proposal in response to the March 6, 2019 Administrative Law Judge’s (ALJ) the Guidance Ruling Outlining Additional Activities (“Guidance Ruling”). Staff based its recommendations on Staff’s evaluation of the comments that parties submitted on January 11, 2019 in response to the November 9, 2018 Scoping Memo and Ruling. Staff also relied on the ideas that parties shared during the April 2019 workshop that was focused on near-term improvements to the Rule 20 undergrounding program. Staff is also informed by our many years overseeing the program, our own analysis and data gained through our data requests, as well as CPUC studies on the program including a recent audit of PG&E’s Rule 20A program.

Throughout this document, Staff provides information on the history of the Rule 20 Program, program rules, data related to recent experience in the program, issues with the program, and various options for mitigating these issues.

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

A summary of Staff's primary recommendations are as follows:

- **Refine and Expand the Rule 20 Public Interest Criteria:**

This will consist of refinements to the existing criteria for Rule 20A and the addition of new criteria based on safety and reliability concerns, such as if the street serves as an egress, ingress, or is designated as an evacuation route, and if the overhead facilities cross through Tier 2 or Tier 3 areas of the State's High Fire Threat District (HFTD). These criteria would be applicable towards a Rule 20A sunset phase and a modified Rule 20B program should either come into fruition. (Section 4.1, pg.24-26)

- **Modify Rule 20B to Incorporate Tiered Ratepayer Contributions Commensurate with Public Benefits**

The CPUC should utilize a three-tiered Rule 20B program with higher portions of ratepayer contribution commensurate with greater public benefits and public policy objectives. The three tiers are:

- Tier 1 – 20% Ratepayer contribution – Meets existing Rule 20B criteria.
- Tier 2 – 30 % Ratepayer contribution – Meets Tier 1 criteria **and** one or more of the expanded public interest criteria of this staff proposal, including wildfire safety mitigation.
- Tier 3 – 50% Ratepayer contribution – Meets Tier 2 criteria **and** one or more equity criteria.

(Section 4.2, pg.31)

- **Sunset the Rule 20A and 20D Programs as Currently Designed:**

The existing allocation-based Rule 20A and Rule 20D programs should be sunsetted over a 10-year period and either be replaced with the modified Rule 20 B program, other new programs or be terminated. (Section 4.3, pg. 37-38)

- **Incentivize Municipal Utility Surcharge Undergrounding Programs:**

The CPUC encourages governmental bodies to pursue self-taxation programs in collaboration with their local utilities and Staff proposes for the utilities to provide municipalities matching funds of up to \$5 million per year per participating community. An example of such a program is the City of San Diego's utility surcharge program (see page 10) which has accelerated undergrounding in San Diego. The CPUC does not oversee this type of program but can authorize the utility to collect the franchise fee through rates that goes directly to funding the undergrounding. (Section 4.2, pg. 33)

- **Eliminate Work Credit Trading with Limited Exceptions:**

The CPUC should prohibit the trading of work credits and review all utility requests to apply additional Rule 20A work credits to a project that has insufficient funds. The limited exceptions are to allow intra-county non-monetary transfers from a county government to cities and towns within the county and to allow credit pooling amongst

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

two or more adjoining municipalities for a project with community benefit. (Section 4.4, pg. 41)

- **Modify the Rule 20A Annual Completion and Allocation Reports:**

The utilities should provide more details to the CPUC, communities and the public regarding the projects that are underway, cost breakdowns for projects, project cost trends, performance metrics, and modify the summary statistics. Additionally, the utilities' allocation reports should include how the utilities derive the allocations from the general rate case and the allocation formula in the Rule 20A Tariff. (Section 5, pg. 47-49)

- **Adopt an Updated Rule 20 Guidebook:**

The utilities should meet and confer with the League of California Cities, the California State Association of Counties, AT&T and the CPUC Staff to draft an updated version of the Rule 20 Guidebook that would be subject to CPUC review prior to its formal adoption and circulation among the cities and counties. (Section 5, pg. 49-50)

- **Improve Communications with the Communities and Publish Relevant Rule 20 Program Information, Documents and Reports Online**

New utility program communication strategies should include annual meetings with interested cities and counties to discuss their ten-year plans for undergrounding. The utilities should coordinate more closely with the communities and the broader public to enhance transparency and allow them public to have a greater voice in the planning process for projects. Staff also recommends publishing the relevant Rule 20A program information and reports online on dedicated utility and CPUC undergrounding webpages to enhance the public's access to information about the Rule 20 program. (Section 5, pg. 50)

- **Implement Incentives to Reduce Project Completion Timelines and Costs:**

These new incentives would include requiring the communities to serve as the default project lead, establishing threshold timeframes for project milestones, and delineating all Task and Cost Responsibilities in updated guidance documents. (Section 6, pg. 56-58)

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

## 2. Background

### 2.1 Rule 20 Program Structure

The investor-owned utilities (IOUs) regulated by the CPUC have broad responsibilities to manage the electric utility distribution infrastructure. As part of their responsibilities, the IOUs build and maintain distribution facilities that service customers. Since the late 1960s, most new distribution facilities have been designed and installed underground. For communities developed prior to the late 1960s, most distribution infrastructure is overhead. Undergrounding is typically more expensive than overhead lines to build and maintain, so most existing overhead systems in California remain above ground.

Nevertheless, there are several ways that these historic overhead systems are converted to underground. Utility distribution planners may decide to convert an overhead system to underground, a process referred to as “undergrounding,” for safety, cost, reliability or maintenance reasons. To support non-utility driven overhead conversion, the CPUC adopted and oversees an Overhead Conversion Program known as Electric Tariff Rule 20. The program allows cities and unincorporated counties (collectively communities), and private applicants (such as residents and businesses) to identify areas for undergrounding. Depending on the project characteristics and eligibility under pre-established criteria, the utility may fund some, all, or none of the costs of an overhead conversion.

The Rule 20 undergrounding program directs the conversion of overhead electrical facilities to below ground for municipal or other applicant-identified projects. This program is focused primarily on aesthetic enhancement by removing overhead electric wires from an area’s viewshed. The Electric Rule 20 Tariff governs the undergrounding program which is divided into four subprograms – Rule 20A through Rule 20D – which provide diminishing levels of ratepayer contribution to projects.

Rule 20A projects are fully ratepayer-funded but must meet strict criteria to in order to demonstrate that they will be in the public interest (see Section 3.1 for more details on the criteria). The utilities annually allocate funds in the form of Rule 20A work credits (or “work credits”) to communities which they may accumulate indefinitely. According to Rule 20A Section 2, 50 percent of the allocation is based on the ratio of overhead meters in a community relative to the total utility overhead meters. The other 50 percent is based on the ratio of total meters (both overhead and underground-served meters) relative to the utility total system meters.

In addition to the annual allocations, the utilities also allow the communities to borrow forward the equivalent of an additional five years of allocations in order to more efficiently fund their projects. Once a community has accumulated and/or borrowed enough work credits, identified a project that is in the public interest, and passed a municipal resolution forming an



## R.17-05-010 ALJ/EW2/nd3

## Undergrounding Proceeding (R.17-05-010) Staff Proposal

undergrounding district, the community can then initiate the project with the utility. The Community must retire a sufficient quantity of work credits to cover the cost of the project.

Projects that do not meet the Rule 20A public interest criteria and are at a minimum of 600 feet may be completed as Rule 20B projects. Apart from the 600 feet minimum length, there are no other required criteria for 20B projects. For example, a 20B project could be carried out for wildfire safety reasons. The undergrounding is paid for by the applicant – typically a group of residents, commercial entities, or government entities – and funded in part by a ratepayer credit in the range of 20 to 40 percent. The credit is equal to the estimated cost of a new equivalent overhead system and the removal of the existing overhead system. Applicants may use Rule 20A work credits to “seed” their Rule 20B projects by initially covering the engineering and design costs and reimburse the utility later provided that the project goes forward.

In the case of projects that are unable to meet either the Rule 20A or 20B criteria, they may be completed under the Rule 20C program. In Rule 20C projects, the applicant – often an individual property owner – pays for the full cost of undergrounding, less the cost of the estimated salvage value and depreciation of the removed electrical facilities.

Rule 20D is currently only in SDG&E’s service territory and it applies specifically to undergrounding in SDG&E’s high fire threat areas where undergrounding is deemed by SDG&E to be a preferred method for wildfire mitigation in a given area. Rule 20D is structured similarly to the Rule 20A program and is similarly-community-driven. SDG&E annually allocates work credits to eligible communities and that they may borrow forward five years to obtain additional funds. Unlike Rule 20A, Rule 20D only allows communities to utilize work credits towards the conversion of primary distribution to underground. The program does not pay for undergrounding secondary lines or services, or for panel conversions for residences or businesses. Rule 20D has been in existence since 2014 and SDG&E has not started or completed a single project to date through this program.

Related to the Rule 20 program, the telecommunications entities such as AT&T have a Tariff Rule 32 that closely resembles the Rule 20 Tariff. Rule 32 is specific to the undergrounding of telecommunications facilities and it is virtually identical in structure as Rule 20. For instance, Rule 32 has the same public interest criteria in its Section A as are in Rule 20A.

The City of San Diego also has an undergrounding program in partnership with SDG&E that is not under CPUC oversight and is not subsidized by the general ratepayer. In December 2002, CPUC Resolution E-3788 authorized SDG&E to collect a 3.53% franchise fee surcharge within the City of San Diego for undergrounding work separate from Rule 20. By using this surcharge program to augment the Rule 20 program, the City of San Diego has managed to convert 429 miles of overhead electrical facilities to underground and 1,238 miles of overhead remain.<sup>1</sup> The

<sup>1</sup> Based on a July 17, 2019 email to Jonathan Frost from James Nabong, the City of San Diego’s Assistant Deputy Director for the Transportation and Storm Water Department.

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

City of San Diego currently targets 15 miles of undergrounding per year through the surcharge program and seeks to underground all overhead facilities within its city limits.

## 2.2 Rule 20 Program History and Context: Undergrounding for Aesthetic Enhancement

The Rule 20 undergrounding program was initiated in 1967 by the CPUC in Decision D.73078 with the intent of enhancing the appearance of areas that had been “victimized by man’s handiwork” by the development of overhead electric infrastructure.<sup>2</sup> The Rule 20 program established a structured means of facilitating municipal-driven underground conversion projects in a consistent manner throughout the State with the costs covered by utility ratepayers. The program was developed around the same time as the State’s requirements to construct underground distribution lines and service line extension to new residential and commercial developments, as well as near State scenic highways took effect.<sup>3</sup> Since the late 1960s, the Rule 20 undergrounding program has remained focused primarily on aesthetic enhancement and has seen limited changes to aspects of the program such as the Rule 20A work credit allocations (“work credits” or “allocations”) are determined, the public interest criteria for project eligibility, and the municipalities’ ability to borrow forward future work credit allocations.

Over the past 52 years, it is estimated that over 2,500 miles of overhead utility lines have been converted in California under the Rule 20A program.<sup>4</sup> In recent years, the utilities have collectively completed on average 50 projects per year, equal to approximately 20-25 miles in length under Rule 20A at an average cost ranging from \$1.85 million to \$6.1 million per mile.<sup>5</sup> The Rule 20B and 20C programs together see a total of 15 to 20 miles per year of lines converted to underground.<sup>6</sup>

Relative to the approximately 147,000 miles of overhead distribution infrastructure in California – enough wires to wrap around Earth six times – this is a modest rate of undergrounding. In fact, it would take nearly 3,300 years to underground the entire state at this rate. Figure 1 provides further context with a breakdown of the overhead and underground infrastructure for each of the utilities.

<sup>2</sup> Note that the Rule 20 program was initiated by the CPUC and is not grounded in statute.

<sup>3</sup> See Electric [Tariff Rule 15](#) & [Tariff Rule 16](#), and [Public Utilities Code Section 320](#) for more information.

<sup>4</sup> Kurtovich, Martin, “[Program Review – California Overhead Conversion Program, Rule 20A for Years 2011-2015 the Billion Dollar Risk!](#)” California Public Utilities Commission, January 2017.

<sup>5</sup> This is based on the data provided by the utilities to Staff as part of their R.17-05-010 data request responses for the years 2005-2017.

<sup>6</sup> Data from Staff June 2019 data request.

R.17-05-010, ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

**Figure 1. Overhead and Underground Line Miles by Transmission and Distribution**

| <b>Overhead vs. Underground Miles – CPUC Regulated Utilities</b> |                                |                    |               |                                |                    |                |
|--|--------------------------------|--------------------|---------------|--------------------------------|--------------------|----------------|
|  | <b>Transmission (in miles)</b> |                    |               | <b>Distribution (in miles)</b> |                    |                |
|  | <b>Overhead</b>                | <b>Underground</b> | <b>Total</b>  | <b>Overhead</b>                | <b>Underground</b> | <b>Total</b>   |
| <b>PG&amp;E</b>  | 18,000                         | 180                | 18,180        | 81,000                         | 18,000             | 99,000         |
|  | <b>99%</b>                     | <b>1%</b>          |               | <b>82%</b>                     | <b>18%</b>         |                |
| <b>SCE</b>   | 13,259                         | 270                | 13,529        | 52,731                         | 39,607             | 92,338         |
|  | <b>98%</b>                     | <b>2%</b>          |               | <b>57%</b>                     | <b>43%</b>         |                |
| <b>SDG&amp;E</b>   | 1,840                          | 166                | 2,006         | 9,049                          | 14,719             | 23,768         |
|  | <b>92%</b>                     | <b>8%</b>          |               | <b>38%</b>                     | <b>62%</b>         |                |
| <b>PacifiCorp</b>  | 729                            | 0                  | 729           | 2,340                          | 633                | 2,973          |
|  | <b>100%</b>                    | <b>0%</b>          |               | <b>79%</b>                     | <b>21%</b>         |                |
| <b>Liberty</b>   | 99                             | <1                 | 99            | 1,405                          | 538                | 1,942          |
|  | <b>100%</b>                    | <b>0%</b>          |               | <b>72%</b>                     | <b>28%</b>         |                |
| <b>Bear Valley</b>   | 88                             | 3                  | 91            | 482                            | 87                 | 569            |
|  | <b>97%</b>                     | <b>3%</b>          |               | <b>85%</b>                     | <b>15%</b>         |                |
| <b>Total</b>   | <b>34,015</b>                  | <b>619</b>         | <b>34,634</b> | <b>147,007</b>                 | <b>73,583</b>      | <b>220,590</b> |
|  | <b>98%</b>                     | <b>2%</b>          |               | <b>67%</b>                     | <b>33%</b>         |                |

(CPUC Data as of Dec. 2018)

### 2.3 “Winners and Losers” Under the Current Rule 20A Program Structure

Under the current Rule 20A program, the communities that benefitted the most are the largest cities and counties by population. These communities have received the highest levels of allocations and have seen the highest levels of expenditures over recent years. This is in part because the Rule 20A Tariff awards work credits to communities based on the number of meters that the IOUs serve relative to the total number of meters in their systems. The largest cities and counties have the highest proportion of meters and consequently receive the bulk of the work credit allocations. The larger communities likely are better able to dedicate greater internal staff and outside consulting services to help them plan for Rule 20A projects. Figure 2 below shows the top 10 communities in terms of expenditures in nominal dollars from 2005 to 2018. For

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

more perspective, the utilities prepared maps in advance of the April 22-23, 2019 CPUC Rule 20 Workshop that provides a geospatial representation of the communities that have seen the highest level of benefits and those which have not. The maps suggest that the economic core coastal areas in California such as the San Francisco Bay Area and San Diego see the highest levels of undergrounding through the Rule 20A program. They also seem to indicate that rural areas may only see limited to no benefits from the program. See Appendix A for the utility maps.

As a caveat, it is worth noting that the maps are only reflective of undergrounding expenditure under Rule 20A. For instance, they do not reflect the benefits that communities have seen with new underground distribution and service line extensions in newer neighborhoods and commercial areas per Electric Tariff Rules 15 and 16.

**Figure 2. Cities and Counties with the Highest Levels of Rule 20A Nominal Expenditures (2005-2018)**

|    | Community                            | Total Work Credit Expenditures<br>(2005-2018) |
|----|--------------------------------------|---|
| 1  | City and County of San Francisco     | \$174,194,533                                 |
| 2  | City of San Diego                    | \$123,959,969                                 |
| 3  | Unincorporated Los Angeles County    | \$80,199,098                                  |
| 4  | Unincorporated San Diego County      | \$66,219,539                                  |
| 5  | City of Long Beach                   | \$66,113,635                                  |
| 6  | City of Oakland                      | \$59,290,182                                  |
| 7  | City of San Jose                     | \$54,445,341                                  |
| 8  | Unincorporated San Bernardino County | \$38,824,162                                  |
| 9  | City of Fresno                       | \$ 34,846,837                                 |
| 10 | City of Chula Vista                  | \$30,601,828                                  |

(CPUC Data as of April 2019)

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

While the communities shown above have completed projects worth hundreds of millions of dollars funded by general ratepayers' contributions, there are 82 communities across the State which have not completed a single project since 2005. Ratepayers in these communities have contributed to the cost of undergrounding projects outside of their communities without seeing any projects initiated or completed in their own communities. See Figure 3 below for the list of these communities.

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R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

Figure 3. Communities that Did Not Complete Any Rule 20A Projects 2005-Present

| Utility            | Total Rule 20A Expenditures 1967-2018 (Million USD) | Total No. of Communities Served | Percent of Communities Which Have Not Completed Projects 2005-Present | Communities which have not completed projects 2005 – Present  |
|--------------------|---|---------------------------------|---|---|
| <b>PG&amp;E</b>    | \$1,500   | 266                             | 11%   | (30 Total) Unincorporated Alpine County, Atherton, Biggs, Blue Lake, Brisbane, Buellton, Calistoga, Cloverdale, Corcoran, Dos Palos, Foster City, Ione, Lakeport, Lassen County, Livingston, Maricopa, Marysville, Mendota, Menlo Park, Monte Sereno, Oakley, Plymouth, Point Arena, Roseville, Unincorporated Sacramento County, Unincorporated San Benito County, San Bruno, San Joaquin, San Juan Bautista, Saratoga |
| <b>SCE</b>         | \$1,200   | 208                             | 12%   | (24 Total) Aliso Viejo, Anaheim, Banning, Calabasas, Colton, Eastvale, Glendale, Goleta, Grand Terrace, Jurupa Valley, Laguna Hills, Laguna Niguel, Laguna Woods, City of Los Angeles, Menifee, Pasadena, Rancho Santa Margarita, City of Riverside, Unincorporated Imperial County, Unincorporated Madera County, Unincorporated San Diego County, Unincorporated Tuolumne County, Wildomar, Yucca Valley              |
| <b>SDG&amp;E</b>   | \$735.3   | 27                              | 11%   | (3 Total) Dana Point, Laguna Beach, Mission Viejo   |
| <b>Liberty</b>     | \$20.10   | 10                              | 80%   | (8 Total) Alpine County, Mono County, Nevada County, Plumas County, El Dorado County, Portola, Loyalton, Sierra County  |
| <b>PacifiCorp</b>  | \$4.20  | 16                              | 94%   | (14 Total) Alturas, Modoc County, Crescent City, Del Norte County, Shasta County, Dorris, Dunsmuir, Etna, Fort Jones, Montague, Mt. Shasta, Tulelake, Yreka, Siskiyou County  |
| <b>Bear Valley</b> | \$0   | 2                               | 100%  | (2 Total) Big Bear Lake, Unincorporated San Bernardino County   |
| <b>Total</b>       | <b>\$3,460</b>                                      | <b>529</b>                      | <b>16%</b>  | <b>82 Total</b>   |

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

### 3. Rule 20 Program Goals, Challenges and Guiding Principles

#### 3.1 Current Program Goals

The current Rule 20 program is focused on promoting the construction of city- and county-sited undergrounding projects that enhance the appearance of public areas such as major corridors, parks and natural areas. Broad participation in the program is encouraged by proportionately allocating work credits based on the number of meters in a community regardless of its location and if it is urban, suburban and rural. The program is also structured to assist communities that may not have enough work credits to initiate a project by allowing them to borrow work credits up to five-years ahead. The program also incentivizes businesses, homeowners, and governmental entities with a modest contribution to construct projects through its Rule 20B and Rule 20C sub-programs that may not necessarily benefit the general public.

The program is not currently focused on safety (i.e. wildfire or traffic safety) or reliability and does not prioritize projects based on these concerns, though these are benefits commonly associated with undergrounding in general. While the Rule 20 program is not oriented towards safety enhancement, the utilities engage in strategic undergrounding under limited circumstances for safety enhancement or for technical reasons. For instance, the utilities developed Wildfire Mitigation Plans (WMPs) in compliance with SB 901 to detail their plans for increasing system awareness and fire hardening their grids in high fire risk areas, known as the HFTD. In PG&E's 2019 WMP for example, PG&E proposed fire hardening 7,100 circuit miles of their system in the HFTD by "upgrading or replacing transformers to operate with more fire-resistant fluids, installing more resilient poles to increase pole strength and fire resistance, and in rare cases, undergrounding."<sup>7</sup>

The program does not offer any additional funding or assistance to communities who are smaller or disadvantaged. Furthermore, the program is not intended to underground all the overhead electric facilities in the State as that would be cost prohibitive.

#### 3.2 Challenges to the Existing Program

Over the past several years, the CPUC's Rule 20 program has been fraught with issues related to the allocation of work credits and the buildup of unused Rule 20A work credits across the State. As of March 2019, there is a balance of \$489.3 million in equivalent unused and un-committed work credits among the communities served by all the utilities.<sup>8</sup> Additionally, 57 communities

<sup>7</sup> [PG&E 2019 Wildfire Mitigation Plan](#), p.13-14.

<sup>8</sup> The total unused, uncommitted Rule 20A work credits by utility are as follows:

- PG&E – \$254 Million

## R.17-05-010 ALJ/EW2/nd3

## Undergrounding Proceeding (R.17-05-010) Staff Proposal

have borrowed beyond the 5 year forward limit placing them in “work credit debt” and some have work debt that exceeds 50 years in equivalent annual allocations. See Table 3 on page 49 for more details. Through an unsanctioned secondary work credit marketplace, some communities sell, trade, or donate their unused work credits to other communities that need them to complete a project. While there is a provision in the Rule 20A Tariff for reallocating unused work credits from inactive communities to those in need of additional credits, it has seen limited use and appears to be an unworkable solution to work credit shortfalls.

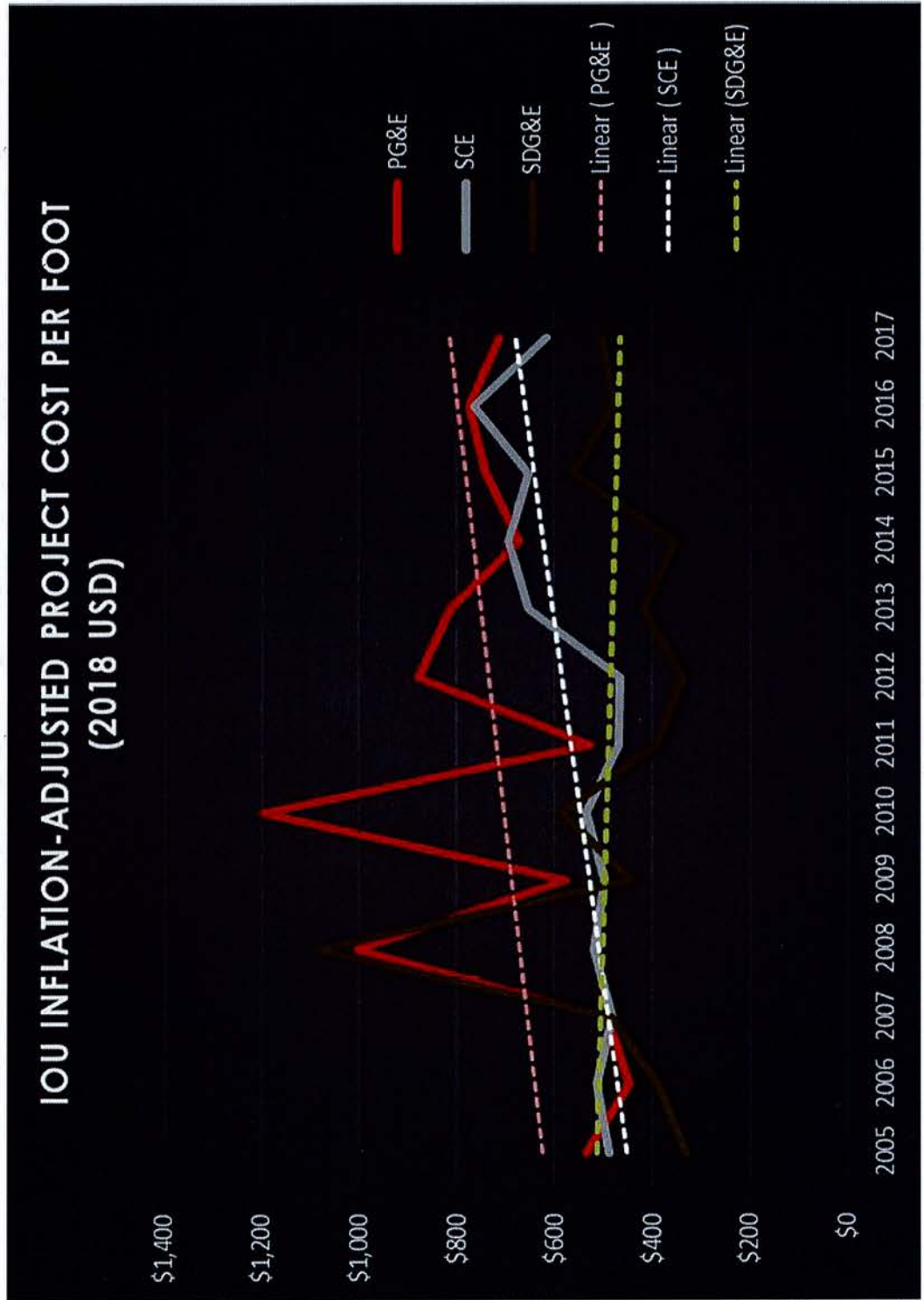
Numerous municipalities have expressed that the current Rule 20A is not meeting their needs as the program is too narrowly focused on aesthetic enhancement. Instead, these municipalities are eager to leverage the program to enhance wildfire mitigation and meet other community safety and reliability objectives. Additionally, some municipalities report that the electric utilities and telecommunications companies are challenging to work with due to a misalignment of incentives for timely and cost-efficient project completion and due to disagreements over cost responsibility. Consequently, there have been several instances where project costs have vastly exceeded design cost estimates and project timelines have been drawn out seven years or longer. Complicating the matter is that the utilities are incentivized to hold back on completing projects, to ensure that they do not overspend relative to their approved GRC budgeted amounts. Furthermore, by delaying project completion, the cost of the projects and in turn the cost of the capital of the underground facilities increases which allows the utilities to put higher amounts into ratebase than they would otherwise be able to.

Another issue with the program in recent years is the significant increase in project costs. Data from the R.17-05-010 discovery and the PG&E Rule 20A Audit (discussed in more detail below) demonstrate that the project costs in real terms have increased by approximately 33 percent and 44 percent for PG&E and SCE respectively. On the other hand, SDG&E’s costs appear to have declined modestly by less than six percent. See Figure 4 below.

- 
- SCE – \$207.6 Million
  - SDG&E – (\$79.1Million); the \$489.3 million total excludes SDG&E’s over-commitment of \$79.1 million
  - Liberty – \$18.9 Million
  - PacifiCorp – \$8.8 Million
  - Bear Valley – \$0



Figure 4. Inflation-Adjusted Cost per Foot for all IOUs 2005-2017 (in 2018 USD)



(CPUC Data as of April 2019)

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

*Issues Uncovered in the PG&E Rule 20A Audit*

The Rule 20A Program Audit, conducted by AzP Consulting in compliance with D.18-03-022 of the PG&E 2017 Test Year GRC Application (A.)15-09-001, uncovered several issues with PG&E's administration of the Rule 20A program.<sup>9,10</sup> Between, 2007 and 2016, the Audit found that PG&E consistently underspent their annual Rule 20A GRC budgets for every year over the 10-year period. Of the \$555,776,000 that PG&E collected in rates for Rule 20A cumulatively over this period, PG&E spent \$123 million, or 22 percent, on programs other than Rule 20A. As a consequence of reprioritizing funds away from Rule 20A, several of PG&E's Rule 20A projects experienced project delays and project cost increases leading to great frustration by the affected communities. AzP Consulting's assessment of program metrics shows PG&E's assertion that measures such as creating Rule 20A government liaison positions and revising the Rule 20 Program Guidebook and Rule 20A General Conditions Agreement have increased the ability of PG&E to carry out Rule 20A projects is inconsistent with the data on PG&E's actual program performance. Furthermore, PG&E's internal controls were found to be insufficient and unable to facilitate the proper functioning and management of PG&E's Rule 20A program. The CPUC is still considering further actions to rectify these issues with PG&E's Rule 20A program.

The Audit also found that relative to recognized nation-wide industry costs reported in the Edison Electric Institute's (EEI) 2012 study on undergrounding, PG&E's costs per converted mile were higher than the "maximum" conversion cost for two out of the three population densities – rural (50 or fewer customers per square mile) and suburban (51 to 149 customers per square mile). EEI's suburban undergrounding costs range from \$329,280 to \$2,541,000 while PG&E's average cost was reported to be \$4,790,559. Similarly, EEI's rural undergrounding costs ranged from \$166,005 to \$2,058,000 while PG&E's average cost was \$2,540,321. Additionally, PG&E reported to the auditors that it did not perform any benchmarking studies from 2007 to present and did not provide any explanation as to why its costs were higher than nation-wide average undergrounding costs.<sup>11</sup>

While the D.18-03-022 audit was specific to PG&E's Rule 20A program, the Audit Report recommendations may be applicable to other utilities and offer them a means of enhancing their Rule 20A programs. AzP Consulting's findings and recommendations were considered in the formation of Staff's recommendation for this proposal detailed in the subsequent sections.

<sup>9</sup> For the full text for D.18-03-022, please visit: <http://docs.cpuc.ca.gov/DecisionsSearchForm.aspx>.

<sup>10</sup> Please see the following link to the PG&E Rule 20A Audit final report: <https://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=6442462983>.

<sup>11</sup> While the audit was unable to provide an explanation for PG&E's relatively high conversion costs, cities such as the Town of Tiburon have reported that costs have increased in recent years due in part to constraints in the construction market. In a 2018 Tiburon Staff Report on a recently cancelled Rule 20A project, Tiburon Staff cited reconstruction efforts for the Oroville Dam, the Napa and Sonoma county rebuild post 2017 wildfires, increased spending by Caltrans, and labor shortages as drivers behind construction constraints and cost drivers. For more information, see: [https://townoftiburon.granicus.com/MetaViewer.php?view\\_id=5&clip\\_id=197&meta\\_id=9477](https://townoftiburon.granicus.com/MetaViewer.php?view_id=5&clip_id=197&meta_id=9477).

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

### 3.3 Proposed Guiding Principles

Staff recommends the following guiding principles to guide the program reform of Rule 20:

- 1) **Program objectives should be defined and made relevant to current undergrounding goals held by various stakeholders including safety and reliability.**

These new objectives can include a focus on safety, reliability, equity and the alignment of cost allocation with cost causation. Undergrounding safety objectives will be focused on providing communities with the ability to use their limited funds to underground areas that pose the greatest risk for wildfires or impeding emergency evacuations. Similarly, the proposed reliability goals will allow communities to underground circuits that are subject to chronic weather-related outages. The equity objectives will be focused on providing ample undergrounding opportunities for large and small communities alike and the need to target communities which have historically not benefitted from the program.

- 2) **Program reform should be informed by the governmental entities which have benefitted from undergrounding and those which have not.**

As is described in Section 2.3 above, the primary beneficiaries of the Rule 20 program are the economic core cities in coastal California. However, it is not simply the largest cities that have seen the most benefits from the CPUC's various undergrounding programs, but also the outlying suburbs of the economic core which were built out with underground utilities since the 1970s.<sup>12</sup> All of these newer communities have seen significant benefits from underground utilities that have been subsidized in part by older communities which are served by overhead facilities.

- 3) **Maintain regulatory efficiency of the program.**

The utilities should remain responsible for day-to-day administration. Staff intends to keep its oversight role over the program and mediate issues when necessary. Staff does not support taking on additional program administration responsibilities unless it is warranted.

- 4) **Minimize general ratepayer impacts.**

Undergrounding for aesthetic purposes in localized areas benefits few ratepayers at the expense of the many. While society at large may benefit from the reduction of overhead facilities in scenic viewsheds, it is not a sustainable or equitable proposition to continue placing the burden on ratepayers at large. Undergrounding of overhead infrastructure can

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<sup>12</sup> Electric Tariff Rules 15 and 16 have required that all new distribution line extensions and service extensions in both residential and commercial areas be constructed underground since the 1970s. These Tariff requirements are separate from the CPUC Rule 20 program.

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

be conducted when desired by local communities, but costs should be primarily borne by those who will benefit directly from the projects.

**5) Recognize and encourage projects that can leverage local funds.**

Staff is promoting program reforms that will incentivize projects funded by local communities such through Rule 20B or 20C, and through municipal surcharge-based programs such as the City of San Diego's undergrounding surcharge program. The CPUC does not oversee this type of program but can authorize the utility to collect the franchise fee through rates that goes directly to funding the undergrounding. (See Section 2.1, pg. 10-11 and Section 4.2, pg. 36 for more details)

**6) Improve program operation and efficiency.**

Staff seeks to resolve common issues in the program that prevent timely and cost-efficient undergrounding. Furthermore, Staff intends to uncomplicate the design of the program and remove program barriers to entry.

## 4. Modifications to Rule 20 Tariff

This Section, in addition to Section 5 and 6, begins with background information on specific program issues related to recent experience with the Rule 20 program, and various options for resolving these problems. Many of the options presented are not mutually exclusive and those recommended by Staff are indicated as such in parenthesis.

### 4.1 Rule 20 Project Eligibility Criteria

#### Background

The Rule 20A project eligibility criteria were initially developed in 1967 in D.73078 and were focused specifically on aesthetics and traffic considerations.<sup>13</sup> Since 1967, the criteria have seen subsequent refinements and any new proposed Rule 20A project must be at a minimum of 600 feet or one block (whichever is less) and meet one or more of the five criteria listed below:<sup>14</sup>

- 1) Such undergrounding will avoid or eliminate an unusually heavy concentration of overhead electric facilities;

<sup>13</sup> See [D.73078](#) for more information.

<sup>14</sup> The criteria for Rule 20A projects are listed below. Note that the third criteria is only featured in [SDG&E's Rule 20A tariff](#). While not a public interest criteria per se, [PG&E's Rule 20A Tariff](#) requires in 1.A.c. that the governing body has: "Acknowledged that wheelchair access is in the public interest and will be considered as a basis for defining the boundaries of projects that otherwise qualify for Rule 20A under the existing criteria set forth in Section A(1)(a) above."

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

- 2) The street or road or right-of-way is extensively used by the general public and carries a heavy volume of pedestrian or vehicular traffic;
- 3) Wheelchair access is limited or impeded (SDG&E only);
- 4) The street or road or right-of-way adjoins or passes through a civic area or public recreation area or an area of unusual scenic interest to the general public; or
- 5) The street or road or right-of-way is considered an arterial street or major collector as defined in the Governor's Office of Planning and Research General Plan Guidelines.

Several communities in recent years have argued that the criteria for Rule 20A is too restrictive and that they are interested in undergrounding for safety and reliability reasons. In the wake of the destructive wildfires that occurred across the state in 2017 and 2018, some communities have expressed interest in leveraging Rule 20A funds to underground overhead lines in high fire threat areas for wildfire risk mitigation and ingress and egress routes in communities to prevent poles and live wires from blocking evacuation routes. There is also an expressed interest among some communities to reduce vehicle-pole collisions in certain areas.

Another issue is that the existing criteria is not standard among all the utilities (as SDG&E is the only utility that lists impeded wheelchair access) and the first two criteria are not very specific with regards to an "unusually heavy concentration of overhead electric facilities" or a "heavy volume of pedestrian or vehicular traffic." There is a fair bit of confusion and dispute with these criteria, though the utilities have authority to interpret the criteria and determine if a proposed project meets any of them or not. For example, with the "heavy volume of pedestrian or vehicular traffic," PG&E has in practice interpreted this to mean that such streets carry through traffic as opposed to only serving local traffic and checks to see if the streets meet the major collector/arterial criterion as part of their evaluation. In the event that a community consults with the utility and disagree with its evaluation of the criteria for a given area, the community would have little recourse but to file a complaint with the CPUC.

### Options

Note: Options B-F are not mutually exclusive.

#### A. Status Quo – Maintain Current Rule 20 Public Interest Criteria

Under the status quo scenario, the project eligibility criteria remain the same. The downside of status quo is the evolving public interest would not be fully met under criteria focused almost entirely on aesthetic enhancement.

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

## B. Safety and Reliability as additional criteria (Staff Recommendation)

Undergrounding can be an effective means of enhancing safety and reliability of the distribution system and under this proposal there are several additions to the Rule 20A eligibility criteria to encourage projects that meet these ends.

We recommend including wildfire mitigation as one additional safety criteria because of strong interest from stakeholders. Each community can leverage a limited pool of ratepayer funds for undergrounding projects. If a community wants to prioritize their limited Rule 20 funds on undergrounding to address wildfire safety, staff believes that this option should be added to the public interest criteria. See the proposed criteria below:

- 6) The existing above ground infrastructure is within a Tier 2 or Tier 3 area of the State's High Fire-Threat District as defined by the CPUC and the California Department Forestry and Fire Protection;

We caution the parties to have realistic expectations. Given that it will take over 3,000 years to covert the nearly 147,000 miles of overhead distribution lines to undergrounding and the high cost of conversion, this program change would have limited impact on wildfire safety. Additionally, the ALJ Guidance Ruling noted that there are several open wildfire-related dockets that may have a much greater impact on wildfire mitigation than the Rule 20A program. Staff agrees and finds that transforming Rule 20A into a wildfire mitigation program may not be the most cost-effective means of addressing wildfire risk. The utilities reported to Staff that undergrounding costs between \$2.6 million and \$6.1 million per mile which is far more expensive than other fire hardening measures such as replacing wooden poles with steel poles and installing covered conductors which the utilities report as costing \$480,000 per mile.<sup>15</sup>

In addition, projects that either underground overhead infrastructure along county-designated evacuation routes and/or major ingress and egress roads can reduce the risk of escape routes being blocked by fallen poles and live wires during natural disasters. To that end, the following proposed criterion states:

- 7) The street or road or right-of-way serves as an egress, ingress, or is designated an evacuation route by local or state government entities.

Another safety-related issue along roadways that could be addressed in revised Rule 20A criteria is that above ground infrastructure may reduce road users' visibility and increase the

<sup>15</sup> Steel poles and covered conductors have been identified as a preferred method for fire hardening in the State's High Fire Threat District. According to SCE in its Grid Safety and Resiliency Program (GSRP) filing (A.18-09-002) the incremental cost of upgrading wooden poles to fire resistant steel composite poles is \$52,000 per mile and installing covered conductors is \$428,000 per mile. For more information, see pages 54-54 of SCE's GSRP testimony: <https://www.edison.com/content/dam/eix/documents/investors/wildfires-document-library/201809-gsrp-filing.pdf>.

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

risk of accidents in areas such as in intersections. To minimize this risk, the proposed criterion states:

- 8) The above ground infrastructure dangerously limits visibility for motorists, pedestrians, bicyclists, and/or other road users, particularly in intersections;

Additionally, the above ground infrastructure may be at high risk for vehicle damage, such as vehicle-pole collision, due to the placement of the poles along the road and the area's weather. The proposed criterion eight would allow for the conversion of such overhead equipment to qualify under Rule 20A:

- 9) The existing above ground infrastructure is along a road or right-of way that has a history of vehicle-pole collisions;

Similar to Section 4.3.B, these proposed new criteria would be applicable to Rule 20A if it is either continued or sunsetted, and to a modified Rule 20B program.

C. Refine and standardize existing Rule 20 public interest criteria (Staff Recommendation)

The CPUC would refine the existing public interest criteria used to determine project eligibility in the Rule 20A Tariff to include objective requirements, add clarity, and allow more projects to qualify that are in the public interest without changing the focus away from aesthetic and traffic concerns. These enhanced criteria would be applicable to Rule 20A if it is either continued or sunsetted, and to a modified Rule 20B program. See the proposed changes below in redline.

- 1) Such undergrounding will avoid or eliminate an unusually heavy concentration of overhead electric facilities. This is defined as poles that serve circuits in addition to a single primary and secondary circuit;

This change would allow communities to utilize Rule 20A to underground not only poles that are unsightly due to too many electric wires, but also poles that may be unsafe due to pole overloading. The last sentence adds an objective description as to what an unusually heavy concentration of overhead electric facilities would be.

- 2) The street or road or right-of-way serves as a major thoroughfare for is extensively used by the general public and carries a heavy volume of pedestrian, bicycle, rail, vehicular, or other traffic. Heavy traffic volume means a minimum of 5,000 average trips per day among all personal and public transportation forms collectively;

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

This removes “extensively used” which is vague and replaces it with a major thoroughfare. Bicycle and micro-mobility traffic are also included. Heavy traffic volume is clarified based on the State of California’s General Plan Guidelines minimum traffic volume for collectors.<sup>16</sup>

- 3) Wheelchair access is limited or impeded by existing above ground electric and/or telecommunications infrastructure including pad mounted facilities on sidewalks or in other areas in the pedestrian right-of-way that is otherwise not compliant with the Americans with Disabilities Act;

This adds clarity as to how wheelchair access is impeded and allows for any above ground infrastructure on sidewalks or other areas in the pedestrian right-of-way, such as plazas, that do not comply with the Americans with Disabilities Act to be undergrounded via Rule 20A.

- 4) The street or road or right-of-way adjoins or passes through a civic area or public recreation area or an area of significant unusual scenic, cultural and/or historic interest to the general public; or

This allows other areas of importance to the public to be eligible under Rule 20A in addition to scenic areas.

- 5) The street or road or right-of-way is considered an arterial street or major collector as defined by the California Department of Transportation’s California Road System functional classification system, in the Governor’s Office of Planning and Research General Plan Guidelines.

This change conforms the definitions of arterial and major collector to the definitions used by the California Department of Transportation and the rest of the State of California.

#### D. Include benefit-to-cost metrics as additional criteria (Staff Recommendation)

Under the current criteria, there is no consideration of costs or using benefit-to-cost analysis as a criterion under the Rule 20A program. By creating a new criterion which states that projects which meet a benefit-to-cost ratio of one or greater would qualify under Rule 20A, the program could encourage projects that would yield quantifiable positive net benefits for the ratepayers and the general public. Possible benefit streams could include safety, reliability, efficiency/economies of scale from combining undergrounding with other planned civil construction projects and/or constructing large-scale undergrounding projects, and replacement of aging overhead infrastructure. Alternatively, there could be a minimum benefit-to-cost threshold that would need to be met by any prospective project to qualify under Rule 20A to ensure that they are a prudent investment of ratepayer funds. The challenges with benefit-to-cost criteria are that there are limited third-party benefit-cost

<sup>16</sup> 2003 General Plan Guidelines, page 256-257. For the full text of the State’s 2003 General Plan Guidelines, see: [http://opr.ca.gov/docs/General\\_Plan\\_Guidelines\\_2003.pdf](http://opr.ca.gov/docs/General_Plan_Guidelines_2003.pdf).



R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

studies that exist to draw from at this time for underground conversion, so the utilities would have to play a considerable role in determining the costs and benefits for the time being. Additional studies may be needed first by the utilities and/or third parties before the CPUC may be able to adopt benefit-to-cost metrics as additional criteria for the Rule 20A program.

E. Minimum Project Distance, Service Laterals, Panel Conversions – Rule 20A Section 3 (Staff Recommendation)

In Rule 20A Section 3, the utilities specify their requirements for the minimum project distance is the lesser of 600 feet or one block. Staff proposes to increase the minimum distance to the lesser of half a mile or five blocks to minimize ratepayer liability created by short, relatively expensive projects. Projects less than five blocks may be constructed as a Rule 20B project, if eligible, or as a Rule 20C project. Rural communities would be exempt from this minimum.

In terms of service laterals, the Tariff limits the length for installing underground service laterals at “no more than 100 feet” in Rule 20A Section three. However, some customers may require longer service laterals as the service lines may be routed through an alley, or because a 100-foot service lateral is otherwise infeasible. Staff recommends making 100 feet as an average for service laterals, rather than a maximum, so the utilities do not need to seek out a deviation from Rule 20A in order to underground a service line that exceeds 100 feet.

In Section three of the Rule 20A Tariff, the utilities currently limit the conversion of electric service panels to accept underground service at \$1,500 per service entrance, excluding permit fees. It is unclear how the \$1,500 figure was arrived at or if it is still a relevant figure today. Thus, Staff recommends changing the language of the fourth paragraph of Rule 20A Section three to:

The conversion of electric service panels to accept underground service. ~~up~~  
to \$1,500 per service entrance, excluding permit fees.

F. Project Viability and Actionability (Staff Recommendation)

A final criterion to add to the prospective new list would be for the community to sufficiently demonstrate that the project is sufficiently funded and can be completed within seven years. To meet this criteria, the community would need to demonstrate that it could absorb at least a 100% increase in price, which is not a reasonable expectation for Class 5 project cost estimate during the project initiation or planning phase in accordance with the Association of the Advancement of Cost Engineering’s (AACE) estimation guidelines, with additional work credits or pre-arranged community funds.<sup>17</sup> Furthermore, the prospective

<sup>17</sup> Estimates at the planning phase of a project are based on less detailed information and assumed precision than estimates during the construction phase of a project. For more information about the AACE’s cost estimation guidelines, please visit the AAC website: <https://web.aacei.org/>.

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

joint trench participants (i.e. city, telecommunications companies, electric utility) for the project would draft a binding charter for the project in which they would agree to complete the project in seven years or less and plan to execute it following the formation of the undergrounding district. This new criterion could act as a safeguard against projects dragging on for years or being prematurely cancelled due to a lack of adequate preparation or funding.

*Questions for Parties:*

- 4.1.i. If the CPUC ultimately decides to sunset the Rule 20A program, should any of the modified criteria be adopted for the sunset period?
- 4.1.ii. Is half a mile or 5 blocks a reasonable minimum distance for Rule 20A projects?
- 4.1.iii. How can the “unusually heavy concentration of overhead electric facilities” and “heavy volume of pedestrian or vehicular traffic” criteria be more objectively and concretely defined?
- 4.1.iv. How will the telecommunications companies modify their Rule 32 programs to align with any changes that may occur to the Rule 20 program as a result of this proceeding?
- 4.1.v. Are there other safety and reliability criteria that can be considered aside from those listed above in section D?

## 4.2 Rule 20A Work Credit Allocation Methodology

### **Background**

Under the current allocation methodology, each IOU has a limit to the number of allocations that is set in their general rate cases for the Rule 20A program. The utilities allocate the Rule 20A work credits proportionately based on the number of meters (representing customer accounts) to all of their cities and counties within their service territories.<sup>18</sup> All the utilities, except for PG&E, provide a baseline allocation based on the 1990 allocation amount to each of the communities and utilize an allocation formula to determine the additional amount of work credits to allocate.<sup>19</sup> The allocation formula bases 50 percent of the allocations on the proportion of a municipality’s total overhead meters to the total system overhead meters that the utility serves. The other 50 percent is based on the total meters (both overhead and underground-served meters) in a municipality to the total utility system meters.

<sup>18</sup> In 2019, the total allocations were \$102 million in total for 2019 for all the utilities. The breakdown of 2019 allocation amounts are as follows: Liberty Utilities – \$1.43 Million, PacifiCorp – \$520,000, Bear Valley – \$0, PG&E – \$41.3 Million, SCE – \$30.1 Million, and SDG&E – \$28.7 Million.

<sup>19</sup> PG&E does not use a 1990 baseline; it simply uses the weighted allocation formula based on overhead and total meters. See [PG&E’s Rule 20 Tariff](#) for more information.

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

This allocation structure has proven to be problematic in recent years as many communities receive too few work credits to undertake a project. There are many small communities that are put at a disadvantage by this methodology as they receive annual allocations that are less than \$250,000 – the minimum allocation amount needed to save enough work credits over a five year period to complete a project of five city blocks (about 3000 feet) in length.<sup>20</sup> Under the current allocation methodology, many of these communities face a significant financial barrier to entry and are fortunate to have completed any projects over the past 50 years. Smaller communities with insufficient allocations may save up work credits for decades but see the value of their saved allocations diminish in value due to inflation and rising project costs.

Further complicating matters is the fact that the current work credit allocation rules do not distinguish between communities that have an expressed interest in undergrounding, disadvantaged communities, or urban, rural and suburban communities. Many communities which either have most if not all of their system underground, or have not developed a five or ten year plan, or have not formed an undergrounding district, or otherwise have not expressed any interest in participating in Rule 20A still receive work credits each year under the current program structure. Partly as a result, there are \$489.3 million in unused and uncommitted work credits that are held by numerous communities across the state.

Another issue with the current allocation methodology is that it apportions work credits no differently to wealthy active communities as it does to disadvantaged communities which have completed few or no underground conversions through Rule 20A. The Rule 20A maps that the utilities developed in response to the R.17-05-010 show that the bulk of undergrounding investments in the state have occurred in the state's affluent and economic core areas, such as the San Francisco Bay Area and San Diego.

In recent years, the CPUC has become more focused on promoting environmental and social justice and has committed to advance equity in CPUC programs and policies. However, the Rule 20A program current allocation structure predates environmental and social justice objectives and, in some cases, underserves disadvantaged communities. The level of allocations can be insufficient for some disadvantaged communities, and allocations do not cover municipal administrative costs, which may represent a significant financial burden on disadvantaged communities and a barrier to entry for this program. However,

Finally, the current methodology is structured such that communities that are simply larger and have more meters are awarded more work credits. This process fails to consider factors such as the community's level of interest in the program, the level of potential aesthetic impacts, or urban density. Some communities may receive large allocations but do not

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<sup>20</sup> This assumes a median project cost of \$825 per foot and that the community will utilize its five-year borrow. According to the data the utilities provided in response to the Staff data request for R.17-05-010, the cost per foot for Rule 20A projects ranges from \$500-\$1,150.

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

prioritize aesthetic utility undergrounding in their neighborhoods for whatever reason. While the program is designed to enhance aesthetics there is no prioritization of allocations to areas where the highest societal aesthetic benefits can be made, such as near scenic coastlines, state parks or historical landmarks. Similarly, this allocation structure ignores urban density, which experts have associated with greater benefits relative to costs for undergrounding than in less dense areas due to greater economies of scale and due to existing and extensive underground rights-of-way.<sup>21,22</sup>

### Options

*Note: Options B-G are not mutually exclusive.*

#### A. Status quo Rule 20A Program

With the status quo option, the allocation methodology would remain unchanged and assumes that the CPUC does nothing to address work credit reallocation or trading and keeps the borrowing limit at five years. Should the CPUC choose this path, none of the equity issues would be resolved for the small and disadvantaged communities. Furthermore, many communities would still have to rely on the informal, unregulated work credit trading market, reallocation and the five year borrow in order to make up for insufficient allocation levels.

#### B. Eliminate Rule 20A, require cities and counties to leverage Rule 20B and 20C as written

In this scenario, the CPUC eliminates the Rule 20A program which leaves the cities and counties with Rule 20B and 20C programs to construct undergrounding projects in their respective jurisdictions. Under Rule 20B, a city or county can construct an undergrounding project that otherwise would not meet any of the Rule 20A criteria and receive a 20 to 40 percent ratepayer contribution provided that the project would include both sides of the street for a minimum of one block or 600 feet. In Rule 20C, there is no minimum length requirement and like Rule 20B, there is no public interest that the community's project would need to meet.

There are several benefits to this proposal. The equity issues around the buying, selling, and reallocating work credits would no longer be present if 20A is eliminated. The Communities would continue to benefit from a 20-40 percent ratepayer contribution from the utility for projects and can choose projects without the constraint of the Rule 20A project eligibility

<sup>21</sup> Larsen, Peter H., "[Severe Weather, Power Outages, and A Decision To Improve Electric Utility Reliability](#)," PhD dissertation, Stanford University, 2016, p.114.

<sup>22</sup> To put this in perspective, a community such as Maywood in unincorporated Los Angeles County with a population density of 23,216 per square mile would not receive a higher weighting with its Rule 20A allocation than Long Beach which has less than half of Maywood's population density at 9,191 people per square mile. Only the aggregate number of meters are considered in the allocation formula.

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

criteria. There would not be any dispute as to whether projects would qualify or not under the five Rule 20A criteria. Finally, the allocation of undergrounding costs in the Rule 20 program would better match cost causation as the communities would have to pay for the bulk of their projects rather than the ratepayers who may not live in the community.

However, there are several drawbacks of this option. For instance, the 20-40 percent ratepayer contribution might not be insufficient to reduce barriers to entry to the Rule 20 program for smaller and disadvantaged communities. The CPUC may want to consider increasing the ratepayer contribution to 50 percent for smaller and disadvantaged communities or institute a matching fund scheme to enable these communities to obtain enough funding to construct projects through the Rule 20B program. Cities and counties would likely not be in favor of eliminating 20A without providing a comparable substitute. Furthermore, with the elimination of the public interest criteria, there would be no guarantee that undergrounding would occur in areas of interest to the general public or in disadvantaged communities.

**C. Modify Rule 20B to Incorporate Tiered Ratepayer Contributions and Sunset the Rule 20A Allocation-Based Program (Staff Recommendation)**

Another option for moving away from the allocation-based Rule 20A program would be for the CPUC to end Rule 20A and replace it with an enhanced Rule 20B program which would provide higher levels of ratepayer contributions to applicants on a tiered basis. The modified Rule 20B program would have three ratepayer contribution tiers for applicants based on public interest criteria and policy objectives:

**Tier 1 – Ratepayer Contribution = 20%**

Minimum distance of one block or 600 feet on both sides of the street, whichever the lesser. Tier 1 is roughly equivalent to the current 20B program.

**Tier 2 – Ratepayer Contribution = 30%**

Tier 1 and meets one or more of the revised Rule 20A public interest criteria proposed in the staff proposal including aesthetics, safety, and fire threat mitigation.

**Tier 3 – Ratepayer Contribution = 50%**

Tier 2 and meets one or more of the following equity criteria:

- Lies within or is adjacent to a disadvantaged community census tract the time of creating the undergrounding district;
- Community has not completed a Rule 20 project in 10 or more years<sup>23</sup>;

<sup>23</sup> If a community is in work credit debt in excess of 5 years, then it cannot meet this criterion.

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

Replacing the Rule 20A program with a tiered Rule 20B program could potentially resolve many of the equity issues and administrative challenges that have plagued the program:

- Applicants will be responsible for most of the costs of undergrounding which better reflects cost causation principles;
- Projects would be less of a burden on the general ratepayer than in the case of Rule 20A;
- Communities will be encouraged to form utility surcharge programs to accelerate local undergrounding;
- The playing field would be more even as communities would no longer be reliant on unequal levels of work credit allocations;
- Projects that address one or more of the expanded public interest criteria will receive a modestly higher level of ratepayer contribution;
- The program would be simplified through the elimination of the work credits, and program flaws related to the allocations, borrowing, trading, etc.;
- Expanded public interest criteria enable many different community interests to be served by undergrounding; and
- Disadvantaged and underserved communities will have a greater opportunity to complete projects using the higher tier of ratepayer contribution.

#### Transition Sunset of the Rule 20A Program

To move towards the new 20B style program requires an orderly transition and sunset of the existing Rule 20A program. The 10-year transition can follow these steps:

Year 1 – As of January 1<sup>st</sup> of year 1, there will be no issuance of work credit allocations and work credit trading shall be prohibited. One exception is counties may distribute their county-level work credits to municipalities within the county provided there is no exchange of money or things of value. Communities may continue to redeem their existing work credits for Rule 20A projects throughout the 10-year transition. They may also continue to use their Rule 20A credits to “seed” the pre-project engineering and design costs of Rule 20B projects per current rules.

Year 10 – At the end of the transition period any remaining Rule 20A credits must be applied to a designated undergrounding district in the community. Any unused Rule 20A credits will be eliminated and all work credit balances will revert to zero.

With the equity benefits and flexibility of this new program design it is still possible that some of the smaller communities with fewer resources may have difficulty engaging in this program due to competing priorities or limited resources. To address this issue, it may be necessary to issue a one-time amount of work credits to historically underserved communities that have long paid into Rule 20A but received little benefit. The purpose of

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

this one-time allocation is to allow these communities to have the opportunity to complete an undergrounding project in the near term. One way to operationalize this one-time allocation of funds would be for the communities to apply into a grant program, such as the one described below in Option H.

**D. Incentivize Municipal Undergrounding Surcharge Programs (Staff Recommendation)**

As described earlier in the proposed program guidelines, Staff is interested in promoting more projects that can leverage local funding. Not only is Staff interested in increasing the subsidy that is available to Rule 20B applicants under certain circumstances, but Staff would also like to encourage municipalities to institute self-taxation programs such as the City of San Diego's program. To that end, Staff recommends instituting a dollar-per-dollar match of up to \$2 million per year per participating municipality that would be funded by the IOUs. In order to be eligible, a community must have a self-taxation program such as a municipal utility surcharge that is operational.

There are several benefits that this proposal offers. Self-taxation programs significantly lessen the burden on the general ratepayer by requiring only the ratepayers or taxpayers within a given municipality to be responsible for most of the costs. This matching structure would provide a significant level of assistance to communities, while capping the rate impact of the matching funds.

Surcharge or self-taxation programs also simplify the ratemaking aspect of a utility's undergrounding program as the costs simply pass through to the ratepayers within a municipality. The costs would not need to be approved as part of a forecast in a utility general rate case. However, the matching funds would need to be approved in a general rate case which adds some complication to the process.

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

*Options E and F described below assume that work credit allocations are to continue. Revising the work credit methodology will be unnecessary if Option C is adopted.*

**E. PG&E's, SCE's and SDG&E's proposal: Rule 20A allocation methodology based solely on overhead meters**

During the April 2019 workshop, the investor-owned utilities (IOUs) recommended that the allocation methodology be changed so that the formula would be based entirely on the overhead fed meters in a community and eliminate the 1990 allocation baseline. According to the IOUs, this would simplify the calculation, which is currently based 50 percent on the total meters and 50 percent on the number of overhead fed meters for each community. Furthermore, it would eliminate the outdated "1990 base" from the calculations.

The effect of this allocation methodology change would be an increase in allocations to communities that have a higher ratio of overhead fed meters, such as the City of Long Beach, while lowering the allocations to communities that have a high ratio of underground served meters, such as Foster City. This could potentially reduce the buildup of unused work credits across the state and reduce work credit trading as the communities with more overhead facilities and greater interest in Rule 20A would receive more work credits than communities that are already underground and may not have much need for their work credits and prefer to sell them instead. However, this may not make much of a difference to communities with small allocation levels and they may still struggle to come up with enough work credits for constructing projects. Additionally, this change does not address the transparency and efficiency issues around the unregulated buying, selling, and reallocating work credits. Furthermore, overhead fed meters are not the most accurate proxy for the total volume of overhead facilities; they are only representative of the actual service lines to homes and businesses and not primary and secondary circuits, which make up a significant portion of the overhead facilities. It may be that there are communities with few overhead fed meters that would end up receiving fewer work credits under this new methodology despite having many overhead facilities within their boundaries.

**F. Overhead line miles as the basis of determining work credits**

Another option for modifying the allocation methodology that the IOUs brought up during the workshop is to have overhead distribution line miles within a community's boundaries serve as the basis for determining the work credit allocation. As mentioned earlier meters fed by overhead service are not the most accurate proxy for the total volume of overhead distribution facilities. Thus, by having at least a percentage of the allocation formula be based on overhead line miles, the allocation formula would better reflect the full scope of overhead distribution facilities within a community's boundary. However, the IOUs did not recommend what percentage of the allocation would be based on the overhead line miles. The challenge with using the line miles as a basis for the allocation is that communities may



R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

receive a disproportionately large number of allocations simply by encompassing large geographic areas, such as Mono and Inyo Counties, though their population sizes and densities are small. Should the CPUC keep Rule 20A as an allocation-based program, then Staff recommends that line mileage should factor in no more than 25 percent of the allocation formula.

#### **G. Allocation of mile points rather than work credits**

Also referred to as “decoupling of dollars from miles,” this proposed methodology that the IOUs shared as an alternative during the workshop would change the allocation of work credits based on dollars to mile points. The annual mileage allocation would be based on the equivalent number of miles afforded by the utility’s 2019 work credit allocations unless otherwise changed in the GRC (e.g. SCE would allocate about 10 miles points among of its communities based on its 2019 allocation of \$30.1 million). Some communities would be eligible for an additional one-time baseline allocation of points equal to 3000 feet (equal to 5 city blocks or roughly half a mile)<sup>24</sup> and be allowed to use a one-time conversion of their unused Rule 20A work credits to mile points if they meet one or more of the following:

- The community has never completed a Rule 20A project;
- The community has 80 percent or more of its population living within disadvantaged community census tracts; or
- The community received \$100,000 or less in annual work credits in its 2019 allocation.

One advantage is that mile points protect against inflation and construction cost increases. Additionally, the mile points would not be marketable if the CPUC prohibits their selling, giving and trading. The borrowing-forward and reallocation provisions could still apply, so active communities would be able obtain additional points when needed. Furthermore, the proposed baseline and one-time conversion of work credits to points would help ensure that every community would have the opportunity to complete a project.

The challenges with the mile point system are that the mile point allocations may still be insufficient to reduce barriers to entry for smaller and disadvantaged communities as municipal administrative costs and constraints may prevent them from moving forward with a Rule 20A project. Moreover, mile points would not cover municipal administrative costs. Additionally, it is mile points would not apply to subsurface transformers, securing and paying for easements contaminated soils, and cultural resource findings without a change to the utilities’ general conditions agreements. One additional challenge with mile points is assigning their value in GRC budgets. It would be hard to project the cost of mile points as a

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<sup>24</sup> A project of this length for an individual community would come at an estimated cost of between \$1.5 million and \$3.45 million.

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

variety of factor can increase the cost of a project. Mile points could exasperate the unfunded liability problem already present with the existence of nearly half a billion dollars of unused work credits.

#### **H. Replace the allocations with a grant program**

While several of the modifications above (Options D, E and F) are focused on different variants of an allocation-based program for distributing work credits or mile points to the municipalities, this option would instead require municipalities to apply for grant funding to complete a project. With this Rule 20A program variant, the utilities would each separately create a pool of funds based on their approved Rule 20A budgets in the general rate case. The program administrator could award funds to communities based on a variety of criteria such as the population size and density of the community, if it is proposing a project in a disadvantaged community, if it is replacing aging or overhead infrastructure, if it would measurably enhance safety and reliability, scale of the project (i.e. large-scale), and if it has a benefit-to-cost ratio approaching 1:1 or better. This program design offers a centralized mechanism to award projects that will yield the highest societal benefits. Dedicated set asides in the funding pool for smaller and larger communities will ensure that large and small communities do not have to compete against each other for funding. Grant funding in the form of matching funds could also be provided to communities that establish a surcharge or self-taxation-based program such as in the case of the City of San Diego in the first year of such a program. The grant-based program could be part of the 10-year phaseout of Rule 20A.

There are several benefits that a grant-based program design would yield. For instance, a grant-based Rule 20A would create a more level playing field for cities and counties, particularly small and disadvantaged communities, as they would no longer be dependent on varying magnitudes of allocations or having to purchase work credits from other communities. The grant system would allow communities to move forward more quickly with projects by obtaining funds all at once rather than having to wait for many years to save enough work credit allocations. Grant funds if held in an interest-bearing, one-way balancing account could accumulate interest unlike a community's work credit balance, which loses value over time due to inflation and rising project completion costs. Furthermore, the grant program could incentivize projects that would yield high levels of benefits from various streams such as enhancing safety, reliability, efficiency/economies of scale, and/or by raising property values.

A grant-based Rule 20A would be challenging to administer regardless if it is administered by the utility, the CPUC, or a third-party such as the California Energy Commission. Additionally, it will take more time to design and implement relative to other options for continuing or modifying the current allocation-based program.

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

*Questions for Parties:*

- 4.2.i. Are there other allocation or grant designs from other utility or civil construction programs that could serve as a better model than ideas that have currently been proposed?
- 4.2.ii. What are some grant-based programs that could serve as an appropriate model for a grant-based Rule 20A program should one be adopted?
- 4.2.iii. Are there definitions for “urban,” “suburban” (or “urban clusters”) and “rural” areas that would be more appropriate for this proceeding and the Rule 20A program than U.S. Census Bureau’s definitions?
- 4.2.iv. Is one block or 600 feet a reasonable minimum distance for Rule 20A and Rule 20B or would five blocks or 3,000 feet be more reasonable?
- 4.2.v. Are there other items that would be reasonable for the Tier 1 or Tier 2 categories that can be objectively measured? (Such as a threshold of annual vehicle-pole collisions?)
- 4.2.vi. Is it necessary to have a one-time transition allocation of Rule 20A work credits to underserved/disadvantaged communities at the start of the transition to a revised Rule 20 program? If so, how much would be appropriate and what criteria should be used to determine eligibility?
- 4.2.vii. Who should bear the cost of the approximately \$93 million in work credit debt held among 58 communities if work credit balances are reverted to zero under the tiered Rule 20B program proposal? (See Section 6, page 50 for more information on communities in work credit debt)
- 4.2.viii. Should Rule 20B in its current or any revised form be subject to any annual limitations for the amount of rate payer funds a community can spend or the miles of lines that a community can convert to underground?
- 4.2.ix. Are there ways that the CPUC can better encourage or incentivize self-taxation or surcharge programs among the cities and counties to accelerate undergrounding?
- 4.2.x. How should local surcharge programs interact with the Rule 20 program, for example matching funds?

### 4.3 Sunsetting the Rule 20A and 20D Programs

#### **Background**

The notion of sunsetting the Rule 20A program was considered in the Scoping Ruling in question 27, “If the Rule 20A program is discontinued, how should the existing program be sunset?” Only the City of San Jose and Town of Portola Valley responded in their filed comments on the Scoping Memo and recommended against discontinuing the program.

Rule 20D may no longer serve a function in light of the utilities’ wildfire mitigation plans (“WMP”) which are intended to fire harden overhead infrastructure in the same high fire threat areas that would be eligible for Rule 20D projects. The utilities’ WMPs are not

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

precluded from including undergrounding as a mitigation measure. Rule 20D projects may place higher costs on ratepayers than simply installing steel poles and covered conductors. Furthermore, the program may be too slow to complete undergrounding projects in light of the growing wildfire risk. Not a single Rule 20D project has been initiated since the program began in 2014 and any projects could take up to seven years to complete.

### Staff Recommendation

Staff recommends gradually phasing out the existing Rule 20A and 20D programs over a 10-year period, which would allow projects that are either underway or about to be initiated to be completed with the funds that the communities have already committed to them. Annual allocations of work credits would , and communities would not be allowed to sell their remaining work credits with each other, but county entities may donate them to cities that are within the county. Staff recommends that this gradual sunset of Rule 20A be combined with option 4.2.C. to modify the Rule 20B program to incorporate tiered ratepayer contributions shown on page 20.

### Questions for Parties:

- 4.3.i. Is 10 years a reasonable and sufficient amount of time to phase out the Rule 20A program in its current form?
- 4.3.ii. Should unused, uncommitted Rule 20A work credits be applicable to Rule 20B following the sunset period? If so, should there be a limit to the percentage of a Rule 20B project that can be funded through legacy Rule 20A work credits?

## 4.4 Options for Obtaining Additional Rule 20A Work Credits

### Background

When communities require additional funding for projects beyond what they can accumulate through their annual allocations, there are a few of options that they commonly turn to obtain additional work credits. The most common approach is for communities to borrow forward against their future work credit allocations from the utility. The Rule 20A tariff allows for communities to borrow forward for a maximum of five years.

If five years' worth of additional work credits is insufficient for funding a project, the tariff allows for the utilities to reallocate unused work credits from communities that have been inactive in the Rule 20A program. Inactive communities are defined as cities or unincorporated counties that have not formally adopted a utility undergrounding, started, or completed construction of an undergrounding conversion project within the last eight years, or have received Rule 20A allocations from the utility for only five years or fewer due to recent incorporation. Based on the language in the Rule 20A tariff and the precedent set in

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

Resolution E-4971, the reallocation provision may be invoked when additional funding is necessary for projects underway due to unforeseen funding shortfalls, but only after demonstrating that all alternatives for obtaining funding for the project have been exhausted. Rule 20A at Section 2.c states:

“When amounts are not expended or carried over for the community to which they are initially allocated, they shall be assigned when additional participation on a project is warranted or be reallocated to communities with active undergrounding programs.”

The reallocation provision in the Rule 20A tariff has been invoked only twice over the past two decades and many communities and the utilities have expressed concern over equity issues that the reallocation provision poses. In circumstances in which a community experiences an unexpected increase in the cost estimates or a cost overrun during construction, the utilities would more commonly work with the community to reduce the scope of the project to lower the cost, or recommend that the community come up with additional funding on their own rather than invoke the reallocation provision. This practice causes frustration for everyone involved. The utility is forced to minimize the project and the community must lower its expectations or apply more funding. Even if the project is excellent and clearly in the spirit of the Rule 20A Tariff, the parties have in some cases little option but to shrink the project and leave facilities overhead in some areas in order to fit into the budget constraints. In some cases, communities would either pause or cancel their projects altogether as a result of cost increases.

In other cases, communities have engaged in work credit exchanges – such as buying, selling, trading, loaning, and donating – as a work-around so communities can obtain additional work credits and move forward with projects that they otherwise would not be able to fund. This work credit trading is mentioned nowhere in the tariff and at least 87.6 million work credits have been exchanged in an informal, unregulated secondary market.<sup>25</sup> While work credit trading can lend to greater market efficiency by allowing communities with greater interest in the program to purchase additional work credits from communities that have no immediate interest in constructing a Rule 20A project, there is no CPUC regulatory oversight or reporting of the transactions to the CPUC. There are no set terms for buying and selling, there is no market clearing house, and only a handful of communities appear to be privy to the work credit informal market. Furthermore, there are no restrictions as to how the proceeds may be used and there are instances of communities using proceeds towards projects unrelated to the provision of safe and reliable electric services.<sup>26</sup> Additionally, the utilities claim to be largely uninvolved with the process, though they are complicit by

<sup>25</sup> Per the utility R.17-05-010 Staff data request responses transmitted to the parties via email in January 2020.

<sup>26</sup> For instance, the City of Sonora used proceeds from selling 500,000 work credits to the City of Half Moon Bay to fund the construction of public restrooms. For more information, see: <http://www.uniondemocrat.com/localnews/5607248-151/sonora-council-approves-sale-of-utility-credits-to>.

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

facilitating the final transfer of work credits from one community's work credit ledger to another.

### **Options (Assuming Rule 20A Continues)**

#### **A. Status Quo — unregulated work credit trading**

Should no changes be made with regards to work credit trading, borrowing forward, and reallocation in this proceeding, it is likely that the communities that either receive high levels of allocations or are well versed in the program will continue to reap the benefits of the program while others struggle to get their projects underway. One can argue that the work credit trading process has demonstrated success and is able to reduce the unused work credit balance that has built up among the cities and counties. However, not many communities are aware that they can buy additional work credits and not all communities have the finances to purchase additional work credits.

Additionally, the reallocation process is controversial, as the utility must take away work credits without compensation and has been traditionally a slow process due to formal CPUC review and notification to inactive communities.

#### **B. Regulated work credit trading**

Under this scenario, the CPUC would formally recognize work credit trading as part of the Rule 20A program and implement guidelines with increased transparency for the process. For instance, communities would be free to sell to one another at rates between 25 cents to the dollar and dollar per dollar, but the final negotiated price must be included in a transaction request addressed to the utility. Communities that sell their work credits would be required to use their windfall for electric rate relief and would be prohibited from using their earnings to augment their general funds. The communities would be free to loan work credits to one another and are free to negotiate rates with one another at no higher than five percent subject to utility approval. Additionally, unincorporated counties would be free to donate work credits to cities within their boundaries subject to utility approval. The utility would be required to review all work credit transactions prior to granting approval and ensure that the buyers have a legislated undergrounding district for a workable project and that the seller's terms are reasonable. The utilities should be transparent about the guidelines by including this information in their updated Rule 20A guidebooks, in their annual allocation letters to the communities, during in-person meetings with the communities, and on their public websites. The utilities should also provide information about all work credit exchanges in their annual reporting to the CPUC.

By modifying the current work credit trading practices as described above, the process can potentially be made more transparent and more efficient at drawing down the balance of

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

unused, uncommitted work credits. Additionally, by requiring sellers to use profits specifically for rate relief, the CPUC can ensure that ratepayers who have been paying into the Rule 20A program for years but have had few or no projects constructed in their area would see some form of relief since they cannot opt-out of paying into the program.

However, even with these rule modifications and rate relief for selling communities, many communities that do not receive enough work credits relative to their needs and interest in the program will likely continue to inject public funds into Rule 20A projects by purchasing work credits from other communities. This is problematic as the intent of Rule 20A is to have the ratepayers fund these costs. It is unclear whether it is reasonable to require the municipalities to cover these costs simply because the Rule 20A allocation process does not efficiently allocate funds to communities with an expressed interest in the program.

C. Prohibit unregulated work credit trading and only allow intra-county transfers (Staff Recommendation)

Under this proposal, the CPUC would forbid the trading of work credits effective for the remainder of the Rule 20A program. However, one important exception to the prohibition on credit trading is to allow county governments to distribute county level work credits to municipalities within their county borders. There are several reasons to allow this type of non-monetary transfer activity, such as:

- The benefitting cities are part of the same county;
- The county can have a transparent way of deciding which cities in its jurisdiction to transfer credits to; and
- Small municipalities find it difficult to accumulate sufficient work credits to conduct a Rule 20A project. Sharing the county level allocations can help small municipalities reach a sufficient quantity of credits for a project.

One final additional exception should be allowing adjacent municipalities to pool their credits to enable an undergrounding project that benefits the county or the adjoining communities even if not in the same county. These types of non-monetary credit transfers should be allowed.

The benefit of ending work credit trading include:

- Ends an opaque trading process;
- Prevents work credits from being monetized for non-undergrounding purposes; the exceptions listed above will retain a means for communities to easily access additional work credits when the allocations and five-year borrow do not suffice without having to spend municipal funds to obtain additional work credits.

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

The downside of this proposal is that communities with no interest in participating in the Rule 20A program would no longer be able to monetize their unused work credits.

D. Borrowing forward up to ten years, or \$1 million

Another potential modification to the Rule 20A Tariff aside from adjusting the rules for work credit trading and reallocation would be to allow communities to borrow forward ten years of allocations or \$1 million, whichever is greater. As is the case under the current borrowing practice, it is clear from the experience of many of the communities that the five-year borrow is only effective for some communities and not those that receive small allocations of \$250,000 or less. By allowing communities to borrow forward at least \$1 million regardless of the size of the community, the program would allow communities of all sizes to move forward much faster with projects, rather than having to wait out a decade or more to accumulate the same level of work credits. As a result, project completion rates could potentially increase.

Conversely, allowing the communities to borrow forward at least \$1 million per project could represent a higher potential ratepayer liability due to a potentially higher number of projects going into ratebase. Another issue is that communities would likely go into work credit debt for 10 years or longer, thus limiting their future participation in the Rule 20A program. Additionally, 10 years or \$1 million may not be enough to meet a project's funding shortfall and the community may need to either put their project on hold or leverage its general fund in order to fund the project.

Another variant of this option would be to allow a community to request a "grant" to cover the work credit shortfall, especially if a community has not completed a project or if the project offers multiple benefits in addition to aesthetic enhancement. See Option H under Section 4.2.

*Questions for Parties:*

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| <p>4.4.i. Is 90 calendar days enough time for cities and counties to form a workable underground utility district? Would 90 business days be more appropriate?</p> <p>4.4.ii. Should the definitions for active and inactive communities be based on different criteria than project statuses or an active utility undergrounding district, such as having a current 5-year plan, 10-year plan, or sending the utility and the CPUC a letter of intent?</p> <p>4.4.iii. How have the communities benefitted from Rule 20A work credit trading?</p> <p>4.4.iv. Should the CPUC continue to allow work credit trading among the communities?</p> <p>4.4.v. How should the CPUC approach work credit debt should the Rule 20A program continue?</p> |
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R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

## 4.5 Potential Rule 20D Modifications

### Background

In comparison to the Rule 20A, 20B and 20C programs, Rule 20D is a fledgling program of limited scope that has yet to produce a project. Established in 2014 by D.14-01-002 exclusively for SDG&E's Fire Threat Zone (now recognized as part of the State's High Fire Threat District), Rule 20D was established to allow communities to work with SDG&E to identify undergrounding projects exclusively for wildfire risk mitigation.<sup>27</sup> To qualify, a project must be identified by SDG&E as a preferred method of wildfire mitigation for the given area. Rule 20D is structured to mirror Rule 20A with similar work credit-based structure, of which \$1 million were allocated by SDG&E in 2019, that allows for a five-year borrow and work credit reallocation.

However, Rule 20D is only focused on undergrounding the high-voltage primary circuits on the poles. Under the current Rule 20D structure, poles could remain standing after a project is complete as the program does not pay for the undergrounding of the communications facilities, secondary and service lines below 600 volts, or panel upgrades to accept underground service. According to SDG&E, these costs are not included in the Rule 20D program as the Program is only designed to convert the high-voltage (distribution lines 600 volts or greater) to underground as these pose the greatest wildfire risk.<sup>28</sup> However, it is possible that the lower-voltage secondary and service lines may still pose a wildfire risk. Additionally, the Rule 20D and Rule 20A work credits are held in separate balances by the utilities and cannot be intermingled for use in Rule 20D projects.

### Options

*Options A-B are mutually exclusive*

#### A. Status Quo – continue current Rule 20D program

Under the status quo scenario, the Rule 20D program will remain exclusive to SDG&E and continue to see limited use due to the program's relatively small allocation amounts and restrictions for only covering the costs of undergrounding primary distribution lines and from allowing communities to utilize Rule 20A funds. A benefit to this option is that the Rule 20D program does not interfere with SDG&E's priorities for wildfire mitigation as set in its 2019 Wildfire Mitigation Plan, as proposed Rule 20D projects are few and have been identified to be a preferred means of wildfire mitigation. However, due to the small

<sup>27</sup> Please see the following link for the full text of D.14-01-002:

<http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M086/K541/86541422.PDF>.

<sup>28</sup> See SDG&E Opening Brief of A.11-00-002 at page 12

<http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M031/K744/31744373.PDF> and SDG&E's Rule 20 Tariff.

## R.17-05-010 ALJ/EW2/nd3

## Undergrounding Proceeding (R.17-05-010) Staff Proposal

allocation amounts and the limitations described above, it is unclear if any projects will be completed soon. Another downside to this option is that many of the communities outside of SDG&E's Fire Threat Zone that are eager to utilize Rule 20D would be unable to do so.

## B. Expand a refined Rule 20D

In this scenario, the CPUC would expand a refined Rule 20D program to all the utilities and encompass the State's High Fire Threat District Tier 2 and Tier 3 areas rather than SDG&E's Fire Threat Zone.<sup>29</sup> The refinements would allow the program to cover the costs of undergrounding all the electrical and telecommunications facilities, such as in Rule 20A and allow the communities to leverage their Rule 20A work credits to fund Rule 20D projects.<sup>30</sup> A refined version of the Rule 20D program that is expanded to beyond SDG&E's Fire Threat Zone would facilitate significantly higher levels of Rule 20D project completion in communities throughout the state. Should the program be expanded as described above, the utilities will need to plan carefully with interested communities to ensure that the Rule 20D program does not interfere with the utilities' priorities for wildfire mitigation as set in their Wildfire Mitigation Plans.

## C. Terminate the Rule 20D Program (Staff Recommendation)

Rather than expand the Rule 20D program which has little to show for in SDG&E's service territory, Staff Recommends terminating the program and sunsetting it gradually as described in Section 4.1. In the event that Rule 20 program modifications take place, such as expanding the Rule 20 public interest criteria and/or establishing a replacement for the current Rule 20A program, Rule 20D will no longer serve a purpose as communities will have other opportunities to underground for wildfire mitigation outside of the WMP framework. Rule 20 D program goals could be met through adding wildfire mitigation to the 20 A and B programs.

<sup>29</sup> During the April 22-23 workshop for R.17-05-010, the Joint Local Governments expressed interest in leveraging Rule 20D in PG&E's service territory.

<sup>30</sup> Cost sharing among the electric and telecommunications companies in the joint trench would be structured similar to the structure in Rule 20A in which the facility owners bear the costs related to converting their own infrastructure to underground.

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

## 5. Rule 20 Program Reporting, Communication and Transparency

### Background

Under the current Rule 20 program, the utilities inform communities, the CPUC and the public about the program primarily through their annual allocation letters to the communities, the annual allocation and completion reports to the CPUC, and information on their undergrounding webpages to the extent that they have one. The utilities have also dedicated staff to collaborate with municipal agencies and participate in community meetings. For instance, PG&E has several regional Rule 20 liaisons that assist the project managers and coordinate directly with the government agencies.

The allocation letters are sent to each of the communities in each utilities' service territory that receives work credits to explain what a given community's work credit allocation is for the year. The letters also explain the community's total work credit balance, mention the five-year borrow as a means of obtaining additional work credits, and provide contact information to dedicated staff. Apart from these items, the allocation letters are otherwise sparse on information. The letters make no mention of how the allocation for a given community was determined, what the allocation formula is or any reasons behind changes from prior years. The letters do not convey what current or recent project costs are in nearby communities to put the work credit balance into perspective. Additionally, the letters do not mention anything about work credit reallocation, the community's active or inactive status, any relevant contacts at the utility or the CPUC, a program website or handbook, and whether the community can sell its work credits or purchase more. Moreover, the letters do not contain information as to who to contact and what the process is to file a complaint with the CPUC. See Appendix B for an example allocation letter that PG&E sent to Humboldt County in 2017.

The annual allocation reports to the CPUC are similarly sparse on information and only show the individual allocations to the communities and the total allocation for all the communities. There is no mention of how the allocation formula was applied, the change in allocations, the work credit balances, which communities are active and inactive, or which have borrowed forward five or more years of allocations. See Appendix C for an example allocation report that SCE sent to the CPUC in 2018.

The annual completion reports offer much more detail in comparison, but they could benefit from refinements. The completion report shows high-level summary statistics for program expenditures and unexpended work credits for the year and cumulative, breakdowns by Rule 20A, 20B and 20C projects.

See Appendix D for an example completion report that SDG&E submitted for calendar year 2018. During the April 2019 workshop, the utilities and various parties pointed out shortfalls

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

with the current reporting structure such as the lack of data on Rule 20A project activity over the report year, particularly with projects in the queue or in-progress. The parties as explained that the reports omit data on actual project costs inclusive of the telecommunications costs, an explanation of the cost components, what the project costs estimates and any variances are, and costs on a dollar per foot/mile basis. Additionally, the utilities expressed concern over the sections that focus on Rule 20B and 20C given how labor-intensive it is to prepare that information for the report.

In addition to the undergrounding letters, reports and webpages, the utilities have also attempted to utilize a Rule 20 Guidebook, based on PG&E's 1996 "Underground Utilities Conversion Planning Guide" with the cities and counties, but it was never adopted by the League of California Cities (LOCC) and is not in use. From the 1980s to the early 2000s, PG&E, Pacific Bell (now AT&T) and the League of California Cities jointly developed and adopted two versions of a Rule 20 Guidebook to help inform the communities engaging in the program on topics ranging from project planning, funding, coordination and construction. It is unclear how widely these guidebooks were used, but during the April 2019 workshop, the City of San Jose had remarked that the guidebooks were inaccurate and had led the city to rely on inaccurate information. Following the CPUC's order in D.01-12-009 from the last Undergrounding Proceeding to revise the guidebook, the utilities attempted to work with Pacific Bell and the LOCC to update the Undergrounding Planning Guide but failed to do so as described earlier.

Despite the utilities' various forms of communication and reporting for the program, communities and ratepayer advocates have expressed that there is a lack of adequate transparency and the level of knowledge varies among the municipalities about basic information such as how the program works, how the allocations are calculated, how much the ratepayers are paying for the program, how much projects cost, what the cost components are and their unit cost ranges, how long projects typically take, what the responsibilities for all of the joint trench participants (the electric utility, the telecommunications companies and the governmental body) are, and what is in the Rule 20 Tariff.

Similarly, communities are often only able to obtain limited information regarding project cost increases and the utilities' bid results due to confidentiality protection, though the bids are for projects intended for the public benefit. The communities are often left with very little explanation when they encounter significant increases in their project cost estimates and in some cases have to request their city councils to authorize the purchase of millions of additional work credits from an unsanctioned secondary market for reasons they do not fully understand and are not communicated to them by the utility.

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

**Options***Options B-G are not mutually exclusive.***A. Status Quo – continue current reporting requirements**

While maintaining the current reporting and communications protocol may be convenient and less of an administrative burden than adopting new protocols, it has become clear that these protocols are insufficient for disseminating the information that the CPUC and communities need for planning purposes and for informing the public about the program. Should no changes occur here, then information about the program will continue to disseminate unevenly and the utilities may continue to report on areas such as Rule 20B and 20C in more detail than is needed and underreport on information concerning Rule 20A.

**B. Implement refinements to the allocation letters and reports (Staff Recommendation)**

Under this proposal, the utilities will modify their allocation letters to the communities and reports to the CPUC to provide some additional background and context. The updated letters and reports will briefly explain how the allocation was calculated based on the number of meters and the formula, include relevant citations to the Tariff and the most recent general rate case where the allocation totals were approved. The allocation letters and reports are to explain whether communities are inactive or inactive and include information as to how they can become active. Both the letter and report should include an attachment that shows the allocations over the past ten years for each of the communities with the allocation factors and meter totals similar to what the utilities provided the CPUC Staff as part of the R.17-05-010 data request. The utilities would also provide each community with a complete detailed invoice accounting for all the costs associated with any projects for which the community's work credit balance is deducted at project conclusion in the allocation letters. This could be supplemented with a year-end activity summary letter for communities that have active projects. In the allocation report specifically, the utilities should report the work credit balances, indicate and which communities have borrowed forward five or more years of allocations, and which obtained work credits through an exchange with another community. However, should Rule 20A be eliminated or be replaced by a grant-based program, then the allocation letter and report would no longer be necessary and can be replaced with an additional line item in the completion report detailing the growth or decline in funds available for projects. The letter template should be approved by the CPUC via Advice Letter.

**C. Implement refinements to the completion reports based in part on the utilities' recommendations (Staff Recommendation)**

During the workshop, the utilities shared some preliminary ideas for modifying their completion reports and better focusing the reports on data for Rule 20A for the year. The

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

utilities proposed removing the data reported on Rule 20B and 20C projects, which consists of the location, job/work order number, the project applicant's costs and the total net utility costs for each of the Rule 20B and 20C projects completed during the year. By removing the 20B and 20C sections, the utilities would be able to focus their time and attention to reporting data on the Rule 20A program, which they think would provide the most value to the CPUC.

The utilities recommended that the format could be more focused on expenditures for projects in various stages rather than just plant closing data. This would allow the utilities to provide more information regarding the annual expenditures and developments with projects underway rather than the final costs to projects that have been completed. The utilities also suggested that there could be a recap of the annual budget, expenditures by project and variance explanations for being above or below design cost estimates. The utilities further proposed modifying the exhibit for Rule 20A completed projects to be consistent with actual costs for each project. The utilities suggested the use of a consistent definition of "complete," which would be defined as "operational and either the poles removed or topped just above the telecommunications facilities".

*Staff's additional refinements to supplement the utilities' proposal*

To help make the completion report more understandable to the communities and the public would be for the utilities to include an introduction and expanded definitions section that clearly explained the contents of the report and defined all of the terms and explained all of the cost components that make up the expenditure statistics in the report. This could include an explanation for what costs the Rule 20A work credits pay for and what costs the municipalities and the telecommunications companies are responsible for. The utilities could also provide project costs on a per mile basis over the past five years averaged by county for on-going and recently completed projects to convey trends in project costs. The utilities could supplement this with aggregate costs that could be made public for the various project cost components (both hard and soft costs) from on-going and recently completed projects. In addition to this cost information, the utilities could also include the balancing account balances for Rule 20A and any other Rule 20 programs that have balancing accounts established as a result of this proceeding. All this information could provide significant value for planning purposes to the communities and the public and convey key insights into the program to the CPUC.

In addition to including this information in the introduction, the utilities could also include basic details about the projects completed such as job ID, project name, street location, length of the project, and a breakdown of costs to show what the costs were that all the entities were responsible for after any adjustments have been made to date. The utilities could also report on expenditures made since the last completion report was issued for the completed projects and those that are still underway. Additionally, the utilities should submit

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

an Excel version of the report in addition to the pdf version so the data would be more accessible to the CPUC Staff, the communities and the public.

An additional requirement to convey the utilities' program performance and allow the CPUC to evaluate and prescribe changes as needed would be for the utilities to report various program metrics. The completion reports could utilize similar metrics to the Balanced Scorecard methodology<sup>31</sup> that CPUC Staff used in the January 2017 "Program Review California Overhead Conversion Program, Rule 20A for Years 2011-2015".<sup>32</sup> The utilities could report on the following risk factors identified in the report:

- 1) compliance,
- 2) negative balance (number and magnitude),
- 3) low balance or allocation, and
- 4) program reporting.

These could be supplemented with performance factors such as:

- 1) accuracy of design cost estimates,
- 2) efficient timelines and planning, and
- 3) mileage converted relative to the size and number of customers served.

Based on the above factors, the CPUC Staff can evaluate the utilities management of the program and address any performance issues, such as lengthy project timelines or large deviations from design cost estimates. The utilities should be required to file a report template for CPUC approval via an Advice Letter.

In addition to the recommended improvements above, the utilities could file this report to the CPUC on a bi-annual basis and serve it publicly to the members of the R.17-05-010 and/or future undergrounding proceeding service list for comment.

#### D. Update and adopt the Rule 20 Guidebook (Staff Recommendation)

Another means of more effectively disseminating information about the Rule 20 program to the communities is by revising the 2007 draft Rule 20 Guidebook that was never adopted. The utilities could meet and confer with the CPUC Staff, AT&T, the LOCC, and the California State Association of Counties (CSAC) following the issuance of the phase I decision and any potential changes to the Rule 20 program. The Guidebooks should be comprehensive for Rule 20 and all of its sub-programs (A, B, C, and D) and would be

<sup>31</sup> The Balanced Scorecard is an established performance management tool that uses key performance indicators to track strategic performance in a program. For more information see: <https://www.balancedscorecard.org/BSC-Basics/About-the-Balanced-Scorecard>.

<sup>32</sup> See the following link for the full report: [https://www.cpuc.ca.gov/uploadedFiles/CPUC\\_Public\\_Website/Content/About\\_Us/Organization/Divisions/Policy\\_and\\_Planning/PPD\\_Work\\_Products\\_\(2014\\_forward\)\(1\)/PPD\\_Rule\\_20-A.pdf](https://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/About_Us/Organization/Divisions/Policy_and_Planning/PPD_Work_Products_(2014_forward)(1)/PPD_Rule_20-A.pdf).

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

standardized between the utilities.<sup>33</sup> The Guidebooks should largely be uniform across the IOUs. The Guidebooks would be subject to approval by the CPUC via Resolution or Decision and any subsequent updates to it would be submitted to the CPUC's Energy Division via Advice Letter. Once ratified, the utilities and CPUC Staff would put the Guidebooks on their respective public websites and circulate them among the cities and counties serve by the investor-owned utilities.

E. Publish all the relevant program information, documents, and reports on dedicated undergrounding webpages (Staff Recommendation)

To ensure that the information is widely available for the public, the communities, ratepayer and community advocates, the utilities and the CPUC should develop dedicated undergrounding webpages (to the extent that they have not already).<sup>34</sup> The webpages would include detailed information about Rule 20, information about the costs of projects and estimates bill impacts, links to information about related undergrounding programs (such as PUC Code Section 320), links to the Rule 20 Tariff, the updated Rule 20 Guidebook, and the allocation and completion reports for all years since the beginning of the program.<sup>35</sup> The utilities shall also maintain links to their maps that were presented during the April 2019 Workshop and update then on a quarterly basis. The utilities shall also detail the work credit balances of all the communities, include links to the project queues for Rule 20A, 20B, and 20C and have a calendar with upcoming undergrounding community meetings. The websites shall also have contact information and application forms and instructions for prospective Rule 20B and 20C applicants. This information should include the process for how to file a complaint with the CPUC and who to contact regarding recommended program changes. Additionally, there should be a web portal for governmental agencies to review data regarding project status and work credit balance. The webpages should be updated at least on a quarterly basis.

F. Implement the utilities' suggestions for improved communications

During the April 2019 workshop, the utilities proposed several different ways they could improve their in-person and written communications with the communities and the broader public. For instance, they proposed providing more frequent updates to the municipalities as to the availability of their work credits so they can be made more aware of their existence and better track any updates throughout the year such as from project true ups. The utilities also suggested improved collaboration with local governmental body and community groups and providing updates during construction to the wider group of impacted residents and

<sup>33</sup> Items that are specific to any individual utility can be called out specifically or footnoted for reference.

<sup>34</sup> Please see the following links to the [PG&E](#) and [SCE](#) undergrounding webpages. SDG&E, Liberty CalPeco, PacifiCorp and Bear Valley do not currently have dedicated undergrounding webpages.

<sup>35</sup> The Commission's [undergrounding webpage](#) includes the utilities allocation and completion reports that were filed since the late 1960s in pdf format.



## R.17-05-010 ALJ/EW2/nd3

## Undergrounding Proceeding (R.17-05-010) Staff Proposal

businesses. This could improve transparency on the job progress and allow for community members to have a greater voice in the Rule 20 planning and construction process.

Additionally, the utilities proposed to have a pole-out ceremony to mark the conclusion of projects with the communities and celebrate the accomplishment. While this could build rapport with the communities and the residents, it may not make sense in all cases due to costs unless they are larger projects in scope and were identified by the community to be a high priority.

While these suggestions could lead to greater input from the municipalities, it is not clear that they all will encourage a higher level of municipal engagement in the program. Thus, it may make sense to pilot different methods and fine-tune them accordingly.

G. Enhanced written communications to the communities (Staff Recommendation)

An additional suggestion that Staff recommends is to require the utilities to write to the communities to coordinate an annual in-person meeting to discuss ten-year plans with the communities that would like to participate in Rule 20. The utilities should maintain a service list of municipal program participants and stakeholders and should be updated annually in order to maintain a comprehensive and accurate list of phone and email contacts. The utilities could send a letter to each of the communities informing them about the program, provide a contact list for relevant utility and CPUC personnel, the community's annual allocation and work credit balance, and put the work credit balance in context with current project costs in their area. This could be a modified version of the current annual allocation letter. Additionally, the utilities should ask if the communities are interested in initiating a project within the next five years and require them to sign a form acknowledging that they have read the Rule 20 Tariff and that their work credits can be taken away from them if they do not participate in the program. For the communities that indicate that they are interested, they can indicate if they would be interested in having a coordination meeting with the utility to discuss their ten-year plan and any future or on-going projects.

H. Require the utilities to report on aggregate costs for project cost categories based on bids that the utilities receive (Staff Recommendation)

In order to provide information on the individual project cost categories (such as labor, parts, trenching, overhead costs, etc.) without disclosing confidential bid information, the utilities would report on aggregate costs for each of the individual cost categories under this proposal. This would allow the communities and the public to better understand what the major cost drivers are in a project and more effectively budget and plan for projects. Aggregating the costs could be accomplished based on a three-year averaging of costs and on a regional basis to help capture any regional variations in construction costs.

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

*Questions for Parties:*

5.i. Can the cities and counties sign a non-disclosure agreement with the utilities so they can have access to project bid information and other confidential information?

## 6. Rule 20 Project Completion Issues

### Background

In the current Rule 20A program, the average project takes between two to seven years (not including delays) to complete from forming an underground utility district to the restoration of service following removal of the last pole.<sup>36</sup> The cost of the projects on average are around \$3.8 million per mile across all the utilities' service territories. Over the course of the various planning, design and construction phases over the project lifecycle, the project cost estimates are continually refined, and the variability tends to decrease significantly. For instance, during the design phase (AACE Class 4), the costs can vary as much as 50 percent higher and 30 percent lower from design cost estimates. By the time the project has received bids in the pre-construction phase, the estimates (AACE Class 2) can be reasonably expected to vary by +20 percent and -15 percent.

There have been several cases in recent years that have been of great concern due to high project cost variances that merit greater scrutiny in the project cost estimation process. For instance, the County of Napa and City of St. Helena's joint project that was completed in 2013, the project was estimated to cost \$8 million and more than doubled in cost to over \$17 million. As a result, the County of Napa, which had a work credit balance of \$6.15 million in 2010, an allocation of about \$360 thousand Rule 20A work credits and was responsible for the majority of the costs ended up with over 75 years of work credit debt to the dramatic and unexpected rises in the project costs. 58 communities across the State are currently in work credit debt, and some have work debt that exceeds 50 years in equivalent annual allocations. As of 2019, these 58 communities held a cumulative work credit of approximately \$93 million. See Figure 3 below for the communities with the highest levels of work credit debt. To date, the Rule 20A program does not offer any mechanisms for eliminating this debt and the utilities have chosen to continue allocating work credits to indebted communities and forbid them from initiating any projects until they have a positive balance.

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<sup>36</sup> This is based on the average taken from all the utilities and assumes there are 261 workdays a year for projects. Within this timeframe, it takes about three to five years from project design to completion.

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

Figure 3. Top 20 Communities with the Highest Levels of Work Credit Debt

| Community            | Utility | 2019 Allocation | 2019 Balance    | Years in Work Credit Debt |
|----------------------|---------|-----------------|-----------------|---------------------------|
| Chino Hills          | SCE     | \$ 10,204       | \$ (893,909)    | 87.6                      |
| Napa County          | PG&E    | \$ 152,605      | \$ (11,331,024) | 74.3                      |
| Firebaugh            | PG&E    | \$ 17,599       | \$ (989,237)    | 56.2                      |
| Anderson             | PG&E    | \$ 40,122       | \$ (2,016,864)  | 50.3                      |
| San Marcos           | SDG&E   | \$ 6,200.00     | \$ (296,131.00) | 47.8                      |
| Riverbank            | PG&E    | \$ 35,243       | \$ (1,653,339)  | 46.9                      |
| La Canada-Flintridge | SCE     | \$ 76,772       | \$ (3,465,161)  | 45.1                      |
| Belvedere            | PG&E    | \$ 6,036        | \$ (262,373)    | 43.5                      |
| Angels Camp          | PG&E    | \$ 16,682       | \$ (624,828)    | 37.5                      |
| Hillsborough         | PG&E    | \$ 28,109       | \$ (861,117)    | 30.6                      |
| Manhattan Beach      | SCE     | \$ 167,484      | \$ (4,028,934)  | 24.1                      |
| Laguna Hills         | SDG&E   | \$ 1,833.00     | \$ (38,559.00)  | 21.0                      |
| Campbell             | PG&E    | \$ 162,665      | \$ (2,911,057)  | 17.9                      |
| Fowler               | PG&E    | \$ 16,848       | \$ (269,867)    | 16.0                      |
| Brea                 | SCE     | \$ 76,795       | \$ (1,222,996)  | 15.9                      |
| San Francisco        | PG&E    | \$ 2,970,435    | \$ (42,687,251) | 14.4                      |
| Atwater              | PG&E    | \$ 68,848       | \$ (875,490)    | 12.7                      |
| Mill Valley          | PG&E    | \$ 61,858       | \$ (674,340)    | 10.9                      |
| Irwindale            | SCE     | \$ 10,237       | \$ (103,365)    | 10.1                      |
| Malibu               | SCE     | \$ 39,702       | \$ (381,408)    | 9.6                       |

(Source: IOU R.17-05-010 Data Request Responses and 2019 Allocation Reports)

While it did not enter work credit debt, the City of Tiburon was forced to cancel their Tiburon Boulevard Rule 20A project as the costs increased from \$925,980 in 2014 at the initial estimate to \$3,744,566 in 2018 before breaking ground on construction. According to the Town of Tiburon, this was in part attributed to increased construction costs due to shortages in the construction market.<sup>37</sup>

Similarly, the City of Newport Beach saw the initial project estimate of \$4.1 million for a scope of 7,480 linear feet of overhead removal (\$500 per foot) saw its design cost estimate more than double to \$8.6 million and later receive a bid of \$6.43 million. According to SCE, the high prices can be attributed to contractor bids that have become significantly less competitive and overhead costs that collectively represented 35 percent of the project cost

<sup>37</sup> According to the Town of Tiburon, the construction market in 2018 was constrained due to reconstruction efforts for the Oroville Dam, the Napa and Sonoma county rebuild post 2017 wildfires, increased spending by Caltrans, and labor shortages. For more information, see the May 2018 Town of Tiburon Staff Update on the Rule 20A Undergrounding project: [https://townoftiburon.granicus.com/MetaViewer.php?view\\_id=5&clip\\_id=197&meta\\_id=9477](https://townoftiburon.granicus.com/MetaViewer.php?view_id=5&clip_id=197&meta_id=9477).

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

estimate.<sup>38</sup> With SCE's approval, the City of Newport Beach decided to manage and re-bid the project on its own in 2019 and received a final bid at \$4.5 million, which included both the Rule 20A component of the Balboa Blvd project and the Rule 20B components for the adjacent residential areas.<sup>39</sup>

Another issue that some communities have encountered is that the project timelines can get drawn out due to unforeseen circumstances. Situations behind such delays could include a lack of sufficient utility financial and personnel resources, third party delays such as from labor market shortages for contractors, encountering contaminated soils or archeological remains, project cost increases that require the community to obtain additional work credits, and disagreements over project cost and leadership responsibilities. For example, there were several communities in PG&E's service territory that were unwilling to move forward with projects both prospective and planned projects due to the legal and financial uncertainty surrounding PG&E's revision of its Rule 20A General Conditions Agreement (GCA). From 2012 to May 2018, PG&E worked with the LOCC, the CSAC and interested local governments to revise the GCA that was established in 2010 as it contained terms that were too burdensome for many of the communities. Many communities chose to hold out for six years on projects in hopes of constructing projects under more favorable terms. During this time, the CPUC was not only unaware of those negotiations but also unaware of the issues the communities were facing at that time. PG&E eventually filed two Advice Letters following the negotiations which were hotly contested by the Cities of San Jose and Cupertino and required the Commission to issue Resolution E-4919 to resolve the issues and adopt the revised PG&E GCA.

Also associated with increased project timelines are increased costs as described earlier. Typically, these increased costs have been paid for by communities which opt to purchase additional Rule 20A work credits or they are borne by the ratepayers. Given that the costs are often the result of third-party delays or unanticipated consequences, the CPUC in the 2006 Resolution E-4001 did not find it to be reasonable to require the ratepayers to bear these associated costs under all circumstances. In Resolution E-4001, the utilities were ordered not to commit the ratepayers to the costs of Rule 20A projects that cannot be paid for through banked work credits and the five-year borrow alone without prior CPUC approval. Any costs not approved by the CPUC are to be paid either by pre-arranged community funds (general funds) or by the utility shareholders.<sup>40</sup> However, having the communities trade for additional

<sup>38</sup> For more information see: <https://www.latimes.com/socal/daily-pilot/news/tn-dpt-me-utilities-undergrounding-20180615-story.html>.

<sup>39</sup> For more information see: <https://www.latimes.com/socal/daily-pilot/news/tn-dpt-me-peninsula-utilities-20190412-story.html>

<sup>40</sup> For more information on Resolution E-4001, see: [http://docs.cpuc.ca.gov/PublishedDocs/WORD\\_PDF/FINAL\\_RESOLUTION/59265.PDF](http://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_RESOLUTION/59265.PDF).

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

work credits or otherwise pay with pre-arranged funds from their general fund to proceed with a project is problematic as it is not aligned with the intent of the Rule 20A Tariff.

In addition to the above, some communities have expressed frustration over the lack of clarity over which pre-construction and construction tasks and costs the utility is responsible for and which the communities are responsible for. While the Rule 20A Tariff specifies that the utility “will at its expense, replace its existing overhead electric facilities with underground electric facilities,” there is no explanation if the utility is responsible for all costs and tasks or if it is more reasonable for the communities to bear some of the burden. For instance, the Rule 20A tariff makes no mention of who is responsible for paying for underground transformers, which the utilities consider to be non-standard installations. To make up for this lack of guidance in the tariff, the utilities have clarified in their Rule 20A general terms and conditions which tasks and costs the community and the utility are responsible for subject to approval by the CPUC. This has led to a variable approach by the utilities which rely on terms that are inconsistent from one another. For example, PG&E’s GCA allows communities to elect to install subsurface transformers and pay for them using their Rule 20A work credits, while SDG&E only installs pad-mounted, above ground transformers.<sup>41</sup> One consequence of this variable approach is that some communities have come to question whether the utilities’ general terms and conditions are even consistent with the Rule 20A tariff and the CPUC’s intent for the program. For instance, the utilities expect in the general terms and conditions that the communities to pay for securing easements, which appears contradictory to the Rule 20A Tariff which specifically says that the utility is to obtain the rights-of-way at its own expense.

## Options

*Note that Options B-E are not mutually exclusive.*

### A. Status quo – no Rule 20A project completion incentives

Under the status quo scenario, the CPUC would not implement any policy changes that aim to incentivize more efficient project completion and lower costs and would not require any changes to the way the utilities delineate which entities bear which cost and task responsibility. Currently, the utilities Rule 20A general terms and conditions documents in effect spell out the community and utility responsibilities for project planning and they are not subject to a significant level of debate. Thus, one could argue that it is not necessary to revise the Tariff and Guidebooks to delineate the project responsibilities and it is unclear if any of the responsibilities need to change to be consistent with the Rule 20A Tariff.

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<sup>41</sup> PG&E requires in its GCA that the city or county that elects to install underground transformers to pay a one-time maintenance fee representing the difference in maintenance costs between a pad-mounted facility and a subsurface facility.

## R.17-05-010 ALJ/EW2/nd3

## Undergrounding Proceeding (R.17-05-010) Staff Proposal

However, by not implementing any policy changes, it is unclear how effectively the utilities' and communities' incentives can be aligned to enhance the efficient and timely project completion. Additionally, the status quo scenario does nothing to resolve the issues surrounding growing costs and timelines and does not address the dilemma of who should bear the associated costs.

- B. Require cities and counties to be the trench lead by default and allow for them to bid for their own contractors (Staff Recommendation)**

Currently, the electric utilities are designated as the default trench lead unless a community elects to be the project lead. This means that the electric utility is responsible for the project design, planning, bid solicitations and contracting, coordination with the joint trench participants. By designating the community as the default trench lead – unless they assign the electric utility or one of the telecommunications utilities as the trench lead – the community can better ensure that project management and coordination matches their expectations and that these tasks do not get de-prioritized by the utility when circumstances like wildfires arise. Additionally, by allowing the communities to conduct their own bids, they may be able to receive lower bids than the electric utilities and that the results will be made public. To make up for the increased administrative costs for communities leading a project, the community's costs could be reimbursable by the electric utility. However, not all cities and counties would be able to take on this level of responsibility for managing the project and soliciting their own bids. Furthermore, there is little evidence that shows the bids communities receive are lower when they conduct them themselves given that they would still have to rely on a limited pool of pre-approved contractors.

- C. Establish threshold timeframes for project milestones (Staff Recommendation)**

Under this proposal, the CPUC would specify what acceptable timelines are for project milestones in the design, pre-construction, construction and closing phases with a certain degree of flexibility for unforeseen circumstances. If any given milestone is not reached within a specified timeframe, then the utility shareholders will be required to bear any project costs associated with delays in excess of 30 days. When these timelines are exceeded, the utility must additionally notify CPUC Staff within 10 business with the following information in writing:

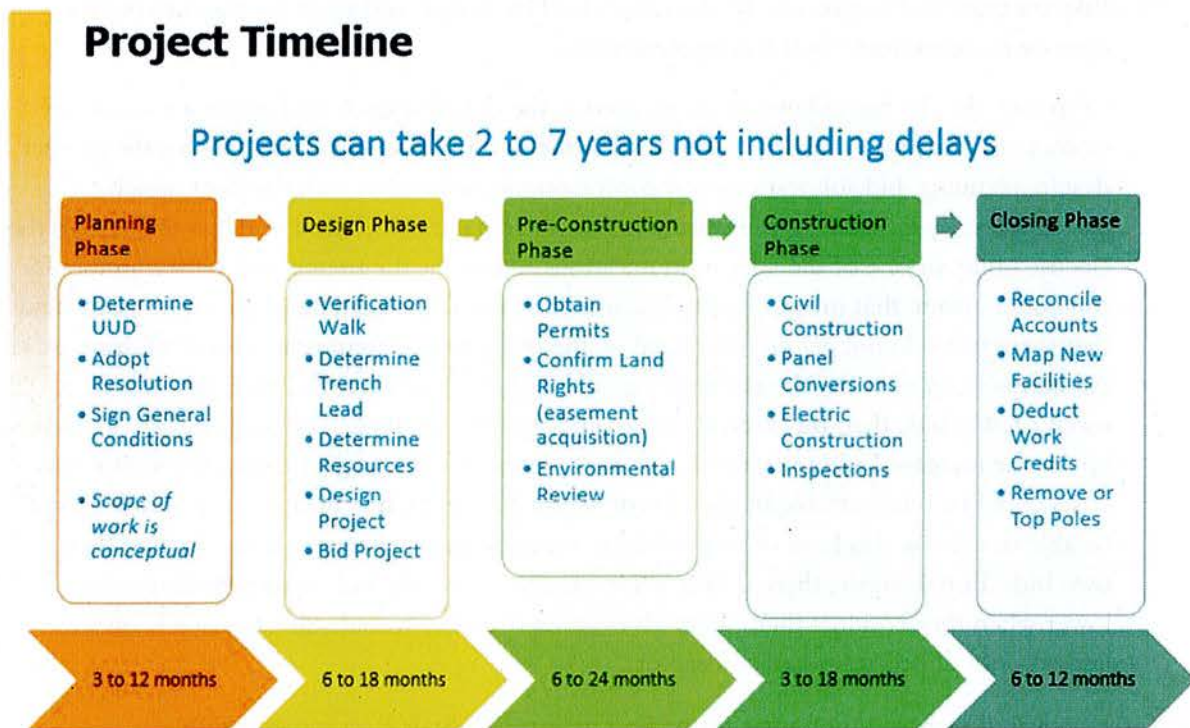
- i. Background on the project
- ii. Targeted timeline for all work steps involved project and actual timeline for completed steps
- iii. An explanation as to why there is a delay and what efforts have been taken to resolve it
- iv. An estimated timeline for the resolution of the delay and
- v. Estimated cost impacts of the delay and how they are to be funded

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

Staff proposes to use the same timelines that the IOUs presented during the April 22-23 workshop for R.17-05-010 as common Rule 20A project timelines. These timelines are shown below in Figure 5.

Figure 5. Typical IOU Rule 20A Project Timeline



(Source: Joint IOU Presentation on Project Completion Issues. April 2019)

To illustrate how this would work, if the pre-construction phase was to exceed 24 months, the utility would be required to notify the CPUC in writing and bear any costs associated with delays in excess of 25 months.

By requiring the utility to report on the delays and bear the costs of excessive delays, this promotes greater transparency into delays and could directly incentivizes the utility to resolve them as quickly as possible.

- D. Delineate costs and responsibilities for Rule 20A projects in the Tariff, General Terms and Conditions, and Updated Rule 20A Guidebooks (Staff Recommendation)

Under this proposal, the CPUC would require the Utilities to modify the Rule 20A Tariff, general terms and conditions, and the Rule 20A Guidebooks to include a complete list of community & utility responsibilities. This would help clarify for the

R.17-05-010 ALJ/EW2/nd3

Undergrounding Proceeding (R.17-05-010) Staff Proposal

communities which costs and tasks they are responsible for versus what the utility is responsible for. This would also ensure that these terms are consistent with the Rule 20A Tariff and the CPUC's intent for the Rule 20A program and are communicated consistently by all the Rule 20A guiding documents to the communities. The IOUs' general terms and conditions documents should be largely the same among the IOUs and be subject to CPUC approval.

- E. Establish one-way balancing accounts for the Rule 20A, 20B, and 20D programs to the extent the utilities do not have them (Staff Recommendation)

In order to prevent the utilities from redirecting funds the CPUC approves in the general rate case for the Rule 20 program, the CPUC could require that the utilities establish one-way balancing accounts for the program. This requirement will help ensure that the utility has adequate financial resources to devote to the program and can hire additional personnel as needed to best manage the program. Furthermore, it would help the utility pay for projects even if they were to exceed their GRC expectations if there are unused funds in the balancing account. Currently PG&E and SCE have one-way balancing accounts for their Rule 20A programs, but none of the utilities have one for their Rule 20B program nor does SDG&E for its Rule 20D program. Rule 20C is paid for almost entirely by the applicant, so establishing a one-way balancing account would be of little use.

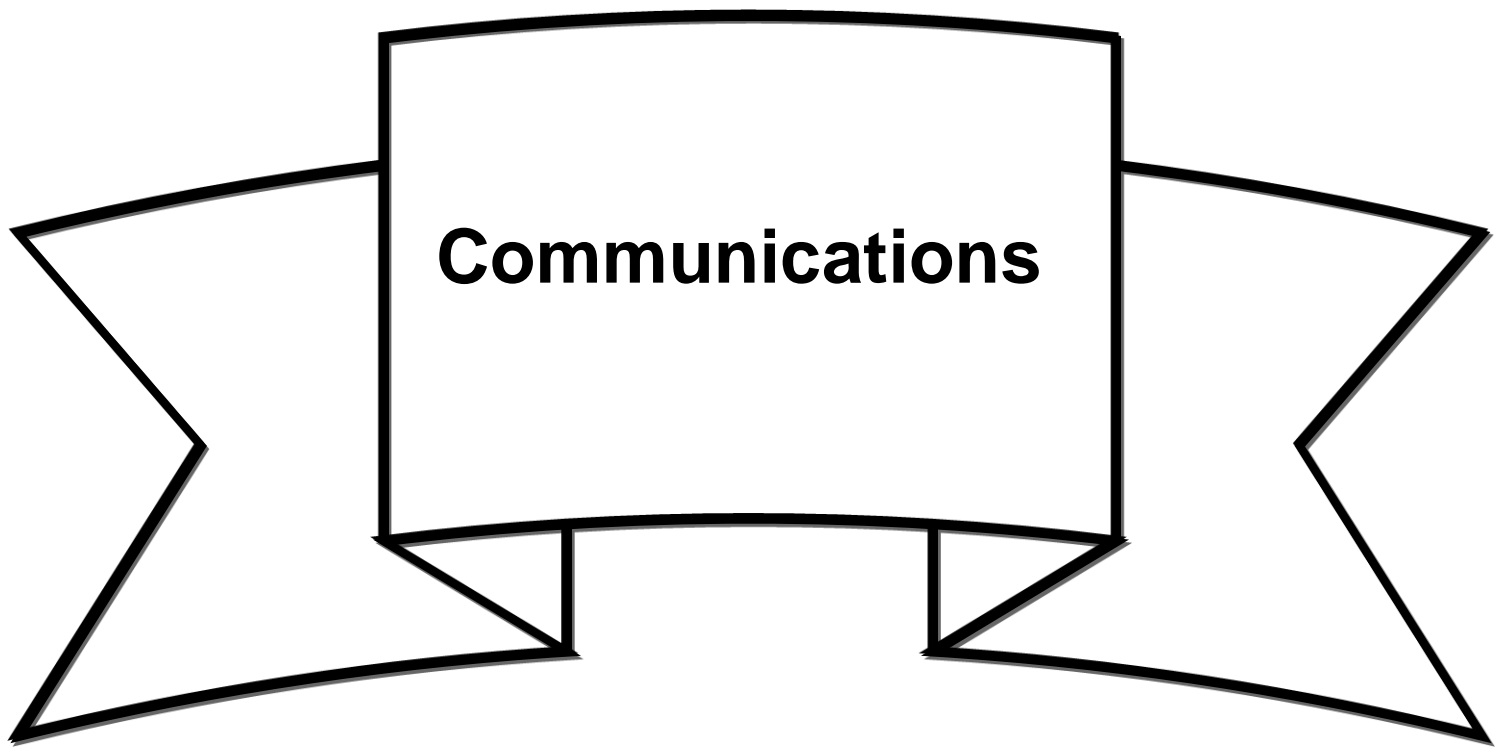
*Questions for Parties:*

- 6.i. Are there other policies that the CPUC can implement to incentivize more efficient and less expensive project completion?
- 6.ii. What are reasonable time thresholds for the project milestones?
- 6.iii. Are there any additional project planning and construction processes that can be outsourced in order to achieve greater cost savings?
- 6.iv. Are there ways to incentivize more efficient construction processes? For instance, directional boring could potentially save time and money by eliminating the need for extensive trenching.
- 6.v. What are additional ways to help align the incentives of all the joint trench participants and enhance greater coordination?
- 6.vi. Should the costs and responsibilities currently borne by the telecommunications companies be modified to enhance project completion and minimize project costs on the electric ratepayers? If so, how can this be accomplished?









All communications submitted to the City Council are public record. Communications are not published directly to the City's website. Copies of individual communications are available for viewing at the City Clerk Department and through Records Online.

**City Clerk Department**

2180 Milvia Street  
Berkeley, CA 94704  
(510) 981-6900

**Records Online**

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To search for communications associated with a particular City Council meeting using Records Online:

1. Select Search Type = “Public – Communication Query (Keywords)”
2. From Date: Enter the date of the Council meeting
3. To Date: Enter the date of the Council meeting (this may match the From Date field)
4. Click the “Search” button
5. Communication packets matching the entered criteria will be returned
6. Click the desired file in the Results column to view the document as a PDF