

implementation requirement.² The Bus-only Lane Design grew out of AC Transit's long-term vision of having BRT (bus rapid transit) on Telegraph Avenue by 2040 (2016 *AC Transit Major Corridors Study*), as well as the City of Berkeley's proposed plan³ to include bus-only lanes in their Telegraph Avenue Multimodal Corridor Project. Line 6 is the main bus that runs on the project corridor (12-minute headways), along with Line 800 (night service only).

Both initial design concepts included one travel lane in each direction (reduced from two); new pedestrian crossings; upgrades to existing crosswalks; new flashing lights at mid-block crossings; and a curbside separated bike lane. The key differences between the two concepts were:

- Option 1 included new mid-block pedestrian refuge islands; bus boarding islands on both sides of the street; a center turn lane; new left-turn lanes at intersections; and reduced parking on both sides of the street.
- Option 2 included a side-running bus-only lane in each direction; bus boarding islands on one side of the street; shared bus stop / bike lanes on the side with no parking; and reduced parking on one side of the street and full removal of parking on the other side.

Staff conducted extensive outreach to solicit community and business input on the two design options. In addition, staff continued to analyze transit and traffic operations, as well as the impacts of each design on safety, accessibility, commercial parking and loading, equity, costs, maintenance, and consistency with City and other policy. (See last section of this memo for more details.)

After an extensive analysis of all data, including public input, **staff determined that Option 1, the 4-to-3 Road Diet, had more benefits than Option 2, the Bus-only Lane Design.**

Option 1 would allow the greatest number of pedestrian safety improvements, more benefits for bicyclists, more accessibility features, and would allow more commercial loading and parking, with minimal impacts to current transit operations (+3 seconds delay southbound, -9 seconds delay northbound). While Option 1 was slightly favored in public outreach, the public expressed several concerns with Option 1, including removal of a travel lane in each direction, 20-25% parking removal (to increase visibility of pedestrians and bicyclists), and a design that some users describe as confusing.

Option 2 had the most benefit for transit riders, speeding up the bus between 26 and 39 seconds. Option 2 would also allow the City to build separated bike lanes, consistent with the Bike Plan recommendations. At the same time, staff found that Option 2 had major impediments to implementation:

² Section 3.A.2.(a) of City Council resolution authorizing Measure U to be placed on the ballot: "Street paving and reconstruction, which must implement City of Oakland pedestrian and bicycle safety plans wherever and whenever street paving and reconstruction is performed with priority to be given to the high-injury network streets and elsewhere reasonably feasible as determined by the City, as mandated by the City of Oakland's Complete Streets Policy." [Oakland City Council Resolution No. 89314 C.M.S.](#)

³ The City of Berkeley's two initial conceptual plans for the [Telegraph Avenue Multimodal Corridor Project](#), which runs from Woolsey Street to Dwight Street, include bus-only lanes. Initial Concept 1 features transit-only lanes in both directions on the entire project corridor, while Initial Concept 2 includes transit-only lanes in the northbound direction for the entire length and southbound from Russell Street to Woolsey Street. The project, whose goal is to develop conceptual plans, has been paused since 2023. Detailed design and construction have not been funded or scheduled.

- Bus lane separation to limit illegal/unsafe driving is largely infeasible, which could result in:
 - Safety implications for all users, due to unpredictable driving
 - Decrease in expected transit efficiencies
 - Strong public pushback
- Low number of bus routes on Telegraph (one line during the day, with 12-minute headways)
- Inability to implement Option 2 along the full length of the corridor, providing fewer beneficial impacts and less consistency for road users
- Major parking loss (60-65%), which could result in:
 - Negative commercial impacts of no parking/loading on one side of the street
 - Negative accessibility impacts of no parking/loading on one side of the street (lack of accessible parking spaces, difficult Paratransit access, shared bus stop/bike lane)
- Fewer benefits for pedestrians (fewer pedestrian refuge islands, 4-5 vehicle lanes to cross)

Transit Improvements

While Option 1 does not include bus-only lanes, transit operations will benefit from the construction of approximately 10 bus boarding islands, which will include shelters, seating, and signage. In addition, staff is confident that Option 1 can be designed to allow future transit improvements along the project corridor. During the design process, staff will take steps to identify locations for potential queue jumps or other transit signal priority improvements that could be funded with future grants. Where possible, staff will modify designs to make these changes easier in the future.

DESIGN CONSIDERATIONS AND ANALYSIS

Staff considered a wide range of factors when deciding on a recommended design.

Consistency with Policy

- **City of Oakland**
 - **2017 Oakland Walks! Pedestrian Plan:** Option 1 contains more pedestrian safety elements, specifically including more pedestrian refuge islands and fewer travel lanes to cross (3, versus 4-5 in Option 2).
 - **2019 Let's Bike Oakland! Bike Plan:** While both options close the bike network gap on Telegraph and separate the bike facility from the travel lane, Option 1 features a wider bike lane, which moves bicyclists further from opening car doors. It also allows riders to pass each other more easily or ride side-by-side, resulting in a lower-stress biking experience.
 - **Safe Oakland Streets Initiative:** As described in the Safety section below, Option 1 has more safety elements and fewer safety challenges.
 - **Oakland's Resolution in Support of Public Transit and Other Alternatives to Single-Occupant Vehicles (Reso. 73036).** While Option 2 may encourage transit use more than Option 1, its implementation would also have major impacts on safety, accessibility, and small business operations (described in sections below). Option 1 includes improvements for public transit in addition to providing superior improvements for pedestrians and bicyclists and is in alignment with the policy by providing "the greatest mobility for people rather than vehicles."

- **AC Transit.** Option 2 would be most consistent with AC Transit’s recommendation to have BRT on Telegraph Avenue by 2040.

Transit Operations

- Line 6, AC Transit’s sixth highest ridership line, runs on the project corridor every 12 minutes most of the day. Line 800, which provides night service to BART, also runs on Telegraph.
- The scheduled run time of Line 6 from end-to-end (Downtown Oakland to Downtown Berkeley) is approximately 35 minutes.
- Option 2 will speed up transit (26-39 seconds faster), which should improve reliability. This delay analysis assumes the only private vehicles using the bus lane will be right-turning vehicles.
- Option 1 will have minimal impacts on transit travel time (+3 secs southbound, -9 secs northbound) and will add bus-boarding islands on both sides of the street to streamline boarding and alighting.

Traffic Operations

- Option 1 will result in smoother traffic operations, since it can be implemented on most of the corridor and also will include center turn lanes, which will facilitate access to and from neighborhood side streets and driveways.
- Traffic analysis showed that Option 2 could not be implemented between 55th Street and 52nd Street, due to backups that could not be solved with design changes.

Public Outreach. Staff visited Neighborhood Council meetings and the Temescal Farmer’s Market, hosted a Project Open House, met with the Temescal/Telegraph Business Improvement District (BID) and other stakeholders, published an online survey, and visited retail establishments on the project corridor. Outreach results:

- **Businesses** (50+ touch points, 30+ conversations): While most businesses did not want any travel lanes removed, Option 1 was favored due to more parking/loading.
- **General public:**
 - Open House (~70 attendees): Option 1 preferred
 - Survey (1,154 responses): Even split between options
 - Farmer’s Market (~75 conversations): Even split between options
 - Themes:
 - Importance of keeping cars out of the bus lane
 - Pedestrian safety
 - Need for more street lighting
 - Need to retain vehicle access to/from side streets
 - Temescal design is confusing
- **Transit Riders** (via survey): 64% preferred Option 2

Safety. Telegraph Avenue from 52nd Street to 58th Street is on Oakland’s 2024 High-Injury Network, and between 2017 and 2021, there were 52 crashes on the project corridor (12% pedestrians, 10% bicyclists).

- Option 1 has more safety benefits and less drawbacks than Option 2 for vulnerable road users. Option 1 has three lanes for pedestrians to cross, versus four to five lanes in Option 2; Option 1 can more easily accommodate pedestrian refuge islands compared to Option 2; and in Option 1, bicyclists ride further from opening car doors than in Option 2.
- Option 2 introduces a safety challenge that is difficult to eliminate: keeping private vehicles out of the bus lane. In this design alternative, vehicles would have to use the bus lane to turn right, which would necessitate no barrier between the lanes in the lead up to intersections and at driveways. In addition, vehicles would need to cross the bus lane to access parking on one side of the street, resulting in no continuous barrier along these parking spaces. With much of the bus lane open to the travel lane, private vehicles frustrated with slow traffic may move into the bus lane to bypass other drivers, creating dangerous conditions due to speeding and unpredictable driving. With only one bus line running on the project corridor during peak hours (line 6), there will be times the bus lane is completely empty while the travel lane is fairly full – conditions that could lead to reckless driving behavior.

Accessibility. Option 1 includes parking on both sides of the street, while Option 2 has parking on only one side. No parking on an entire side of Telegraph Avenue will result in zero accessible on-street parking spaces on this side. It will also require bus stops on the side without parking to share space with the bike lane, which can cause challenging interfaces between bicyclists and blind and low vision bus riders, riders who use mobility devices, and older bus riders. Finally, designing access for Paratransit where there is no existing parking or loading may result in design compromises that impinge on safety features of the design.

Commercial Parking/Loading. Option 1 will have less impact on the parking and loading needs of small businesses, since it retains substantially more parking and loading than Option 2, including on both sides of the street. Businesses on the project corridor have identified parking and loading as the project elements most crucial to their operations (goods delivery, pickups by delivery drivers, etc.).

Equity Considerations

- **Accessibility impacts.** Option 1 is more beneficial, as described above.
- **Small business impacts.** Option 1 is more beneficial, as described in the Commercial Parking/Loading section above.
- **Transit riders**
 - Demographics of Oakland AC Transit riders⁴
 - 18% more likely to be Black/African American than Oakland at large
 - Over 82% have a household income less than the Oakland median
 - 4 times less likely than the average Oaklander to have access to a car
 - Design Preference: 64% of transit riders who took the survey favored Option 2
 - Transit Operations: Option 2 would potentially result in faster transit speeds and greater reliability. Option 1 would likely have a minimal impact on transit operations (see Transit Operations section).

⁴ Analysis provided by AC Transit staff in a 9/19/23 email to OakDOT staff.

- Safety: Option 1 allows more pedestrian safety elements, which will benefit the majority of bus riders who walk or roll to the bus stop.
- **Safety.** Black people make up a disproportionate number of crash victims on the project corridor, compared to the make-up of the city and the surrounding neighborhood. Because Option 1 has more safety benefits, it should have a greater impact on reducing these crash inequities.

	All Crash Victims on Project Corridor (2017-2021)		% Oakland Population	% Population in Census Tracts Surrounding the Project
	Number	Percentage		
Asian	6	11%	16%	9.5%
Black	18	32%	22%	16.3%
Hispanic	8	14%	27%	4.4%
White	21	38%	32%	56.3%
Other	3	5%		
Total	56			

Cost. Options 1 and 2 would have similar costs unless Option 2 includes red “bus-only” paint, which would make Option 2 slightly more costly.

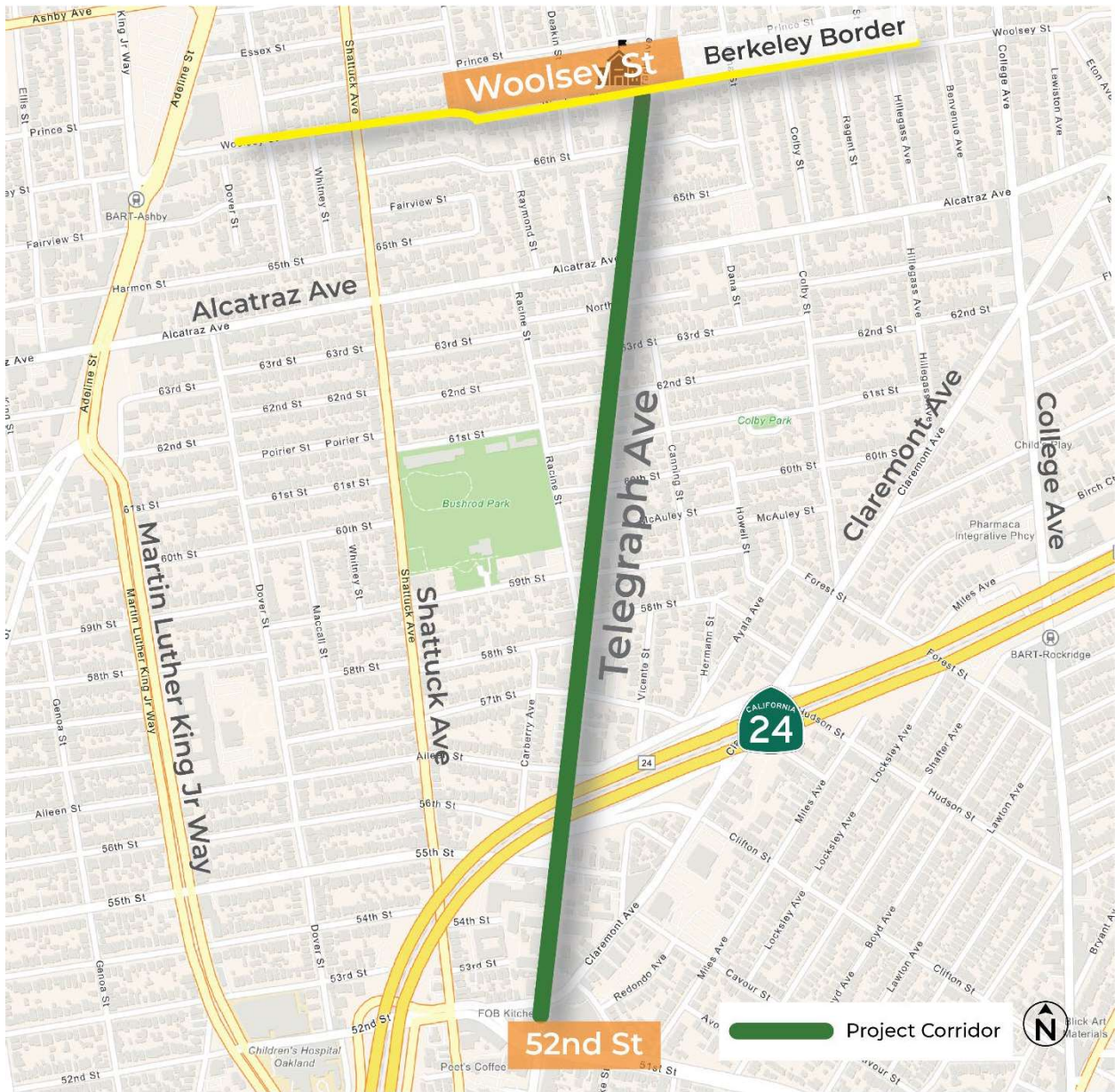
Maintenance. Option 2 is likely to have more features that require maintenance, including flexible posts between the bus lane and the travel lane, longer trench drains along the shared bus stop / bike lane locations, and possible red “bus-only” paint.



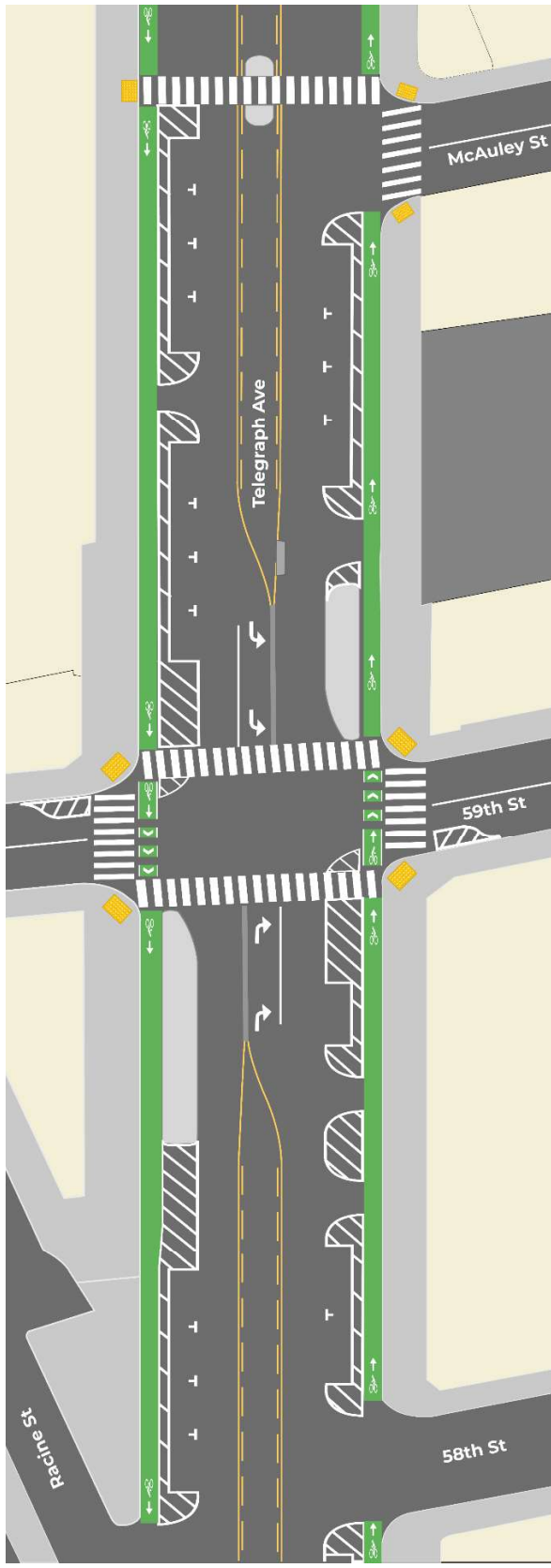
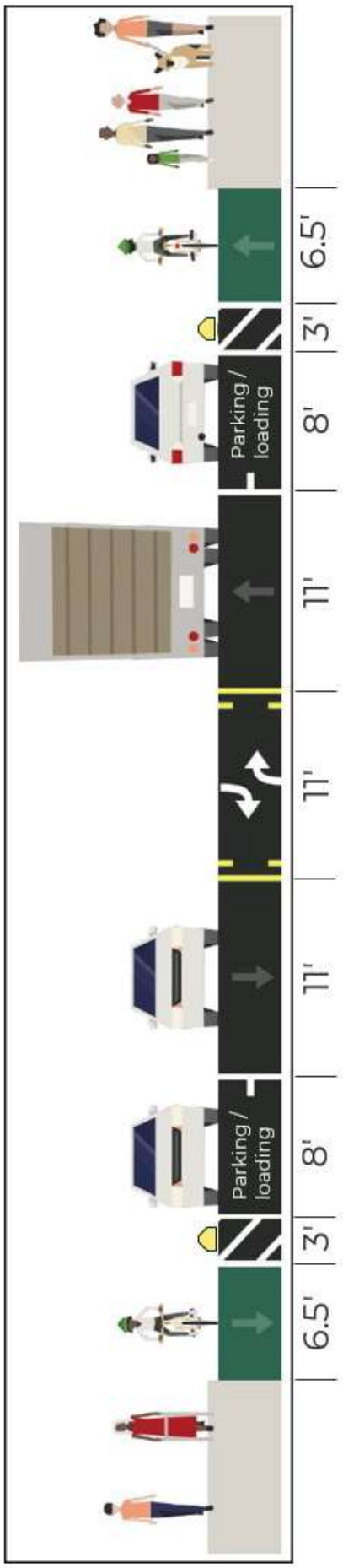
Oakland
DEPARTMENT OF
TRANSPORTATION

Upper Telegraph Avenue Complete Streets Project

Attachment A



Option 1: 4-to-3 Lane Road Diet + Separated Bike Lanes



Option 2: Bus-Only Lanes + Separated Bike Lanes

