CALTRANS BAY AREA

TRANSIT PLAN

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TRANSIT NEEDS ASSESSMENT REPORT

JUNE 2026

Transit Needs Assessment Report

The Transit Needs Assessment (TNA) *is an addendum report for the* Caltrans Bay Area Transit Plan *which identifies and tiers locations along the State Transportation Network (STN) where increased investment in transit-supportive facilities could be the most impactful to transit service.*

The Transit Needs Assessment Team (made of up of Caltrans District 4 staff) conducted an analysis to identify tiered locations for transit facility investments along the State Transportation Network (STN) in Caltrans Bay Area (District 4). **Tiering "location-based needs" will help Caltrans Bay Area make informed strategic decisions about how to allocate resources and efforts that improve the STN, supporting local and regional transit systems in the Bay Area.** This analysis builds off the work of the Alta Planning + Design Transit Plan Team during the Bay Area Transit Plan Report development, including the collection and investigation of transit data and partner engagement.

This report presents the methods, findings, limitations and recommendations derived from the complete Transit Needs Assessment *process.*

Bus only lane near the Imola Park and Ride in Napa. Source: Caltrans.

The information, analysis, and conclusions presented in this memo includes data collected for *Appendix 3: Transit-Supportive Infrastructure Inventory* completed as part of the **Caltrans Bay Area Transit Plan**. The Transit Plan Team collected data from the Metropolitan Transportation Commission (MTC), public transit agencies throughout the Bay Area via online survey, and supplemented by accessing publicly available data from the US Census and OpenStreetMap. While some agencies collected and shared comprehensive sets of data on transit priority and transit access facilities as well as ridership counts, other agencies' data collection practices were limited. To that end, there were limits in what data was included in this analysis. A complete account of data collected can be found in *Appendix 3: Transit-Supportive Infrastructure Inventory.*

The *Transit Needs Assessment* Team used a tiered categorization methodology (i.e., Tier 1 through 3) to rank STN corridors based on their relative need in relation to transit access and transit priority facility improvements, a similar system used by Caltrans Bay Area on its most recent Bicycle and Pedestrian Master Plans. The maps, with scoring and other data points, can be viewed online via ArcGIS.

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Location-Based Needs: Transit Priority

Transit priority facilities enable faster, more reliable transit, increasing person throughput on State highways by making transit a more attractive and used travel option. See the Caltrans Bay Area Complete Streets Transit Toolbox for best practices on transit priority infrastructure improvements.

The Transit Priority three-step methodology focused on determining which STN segments are best suited for allocating resources to support transit priority infrastructure to help local and regional transit systems be more efficient and reliable (see Figure 2).

Location-Based Needs Methodology : Transit Priority

STEP 1: IDENTIFY SEGMENTS OF THE STN WITH TRANSIT

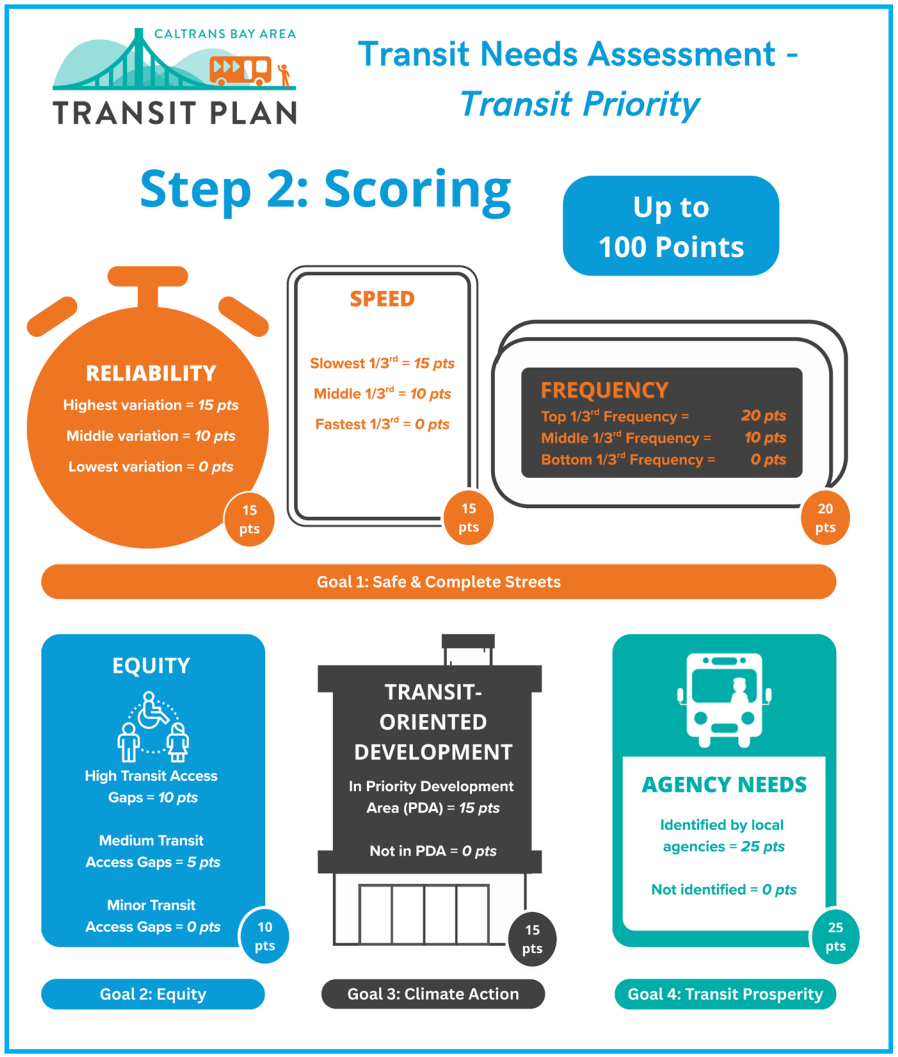
For the development of ***transit priority*** tiering, the Transit Plan Team first worked to identify segments of the STN with existing transit routes (e.g., State Route (SR) 185 in Alameda County, SR 82 in San Mateo and Santa Clara counties). While some existing transit services intersect the STN – and there might be potential transit improvements at these locations (e.g., routes crossing United States Highway (US) 101 in Santa Clara County) – this assessment focused on existing transit along the STN only.

STEP 2: SCORE SEGMENTS

Once segmentation of the STN was completed, the Transit Plan Team worked with Caltrans Bay Area staff to select data based on their relative impact on the project goals as it pertained to transit priority facilities Additional details on data utilized, sources of data, methods, and allowable points, are presented in Figure 1. The data selected included:

- **Travel speed variation** of transit as a measure for reliability
- **Speed** of transit as a measure for potential transit operations improvements
- **Frequency** of transit as a measure for current transit demand and ridership
- **Caltrans Transportation Equity Index (EQI) Access to Destinations Screen** as a measure for equity
- Location within **MTC's Priority Development Areas** as a

Figure 1. Transit Priority Scoring



measure for alignment with transit- oriented development

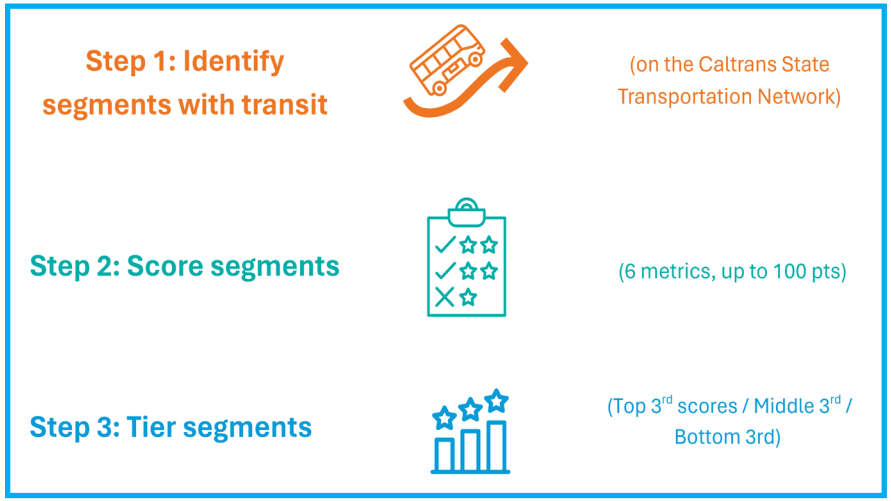
- Location within **Agency-Identified Needs** as a measure of alignment with regional transit priorities (prioritized segments were obtained from regional transit partners)

STEP 3: TIER SEGMENTS

Finally, the tiers were established by identifying the **top 1/3 highest scoring segments (Tier 1)**, **the middle 1/3rd scoring segments (Tier 2)**, and the lowest **1/3 scoring segments (Tier 3)**; following a similar methodology to the District's bicycle and pedestrian modal plans. Segments without transit were not tiered (with the exception of segments

Note: The metrics were aligned with the Goals of the Caltrans Bay Area Transit Plan, Chapter 3 - Safe & Complete Streets, Equity, Climate Action, Transit Resource Prosperity, and Cultivating Excellence. These Plan goals build off the Caltrans Strategic Plan 2024-2028.

Figure 2. Transit Priority - 3 Steps



A bus using the bus only lane, bypassing traffic in San Francisco. Source: SFMTA.

2

Location Based Needs: Transit Access

Transit access facilities are infrastructure treatments or projects that provide first- and last-mile connections to transit, improve the transit experience and the ease of use and connections to transit for people walking, biking, or rolling. See the Caltrans Bay Area Complete Streets Transit Toolbox for best practices on transit access infrastructure improvements.

The three-step methodology focused on determining which STN segments to focus on and allocate resources to for supporting access to transit services in the Bay Area (see Figure 6).

Location-Based Needs Methodology: Transit Access

STEP 1: IDENTIFY TRANSIT ACCESS LOCATIONS

The first step was to determine the general locations where access to transit exists (see Figure 3). The Transit Plan identified:

1. **Transit Stops within the Caltrans right-of-way (ROW)**
2. **Transit Connections**, which identify **locations where transit crosses the controlled access segments of the STN and/or has a transit stop within a ¼ mile of the STN.** These connection points are places where improvements to the Caltrans ROW can improve transit off the STN as well. These locations, particularly at freeway interchanges, present some of the more complex and potentially useful improvements for bicycle and pedestrian access to transit.

The Transit Plan Team also identified the need to differentiate between Controlled Access Freeways and Conventional Routes (see Figure 4). Controlled Access Freeways are identified as points because bicyclists and pedestrians cannot usually access the full span of a freeway, as access locations on freeways are typically limited to ramp intersections or other spot locations. Conventional Routes are identified as segments, as bikes and pedestrians can access these routes throughout their span; with segments being at least ¼ mile in each direction of a transit stop or transit connection point.

Figure 3. Stops and Connections

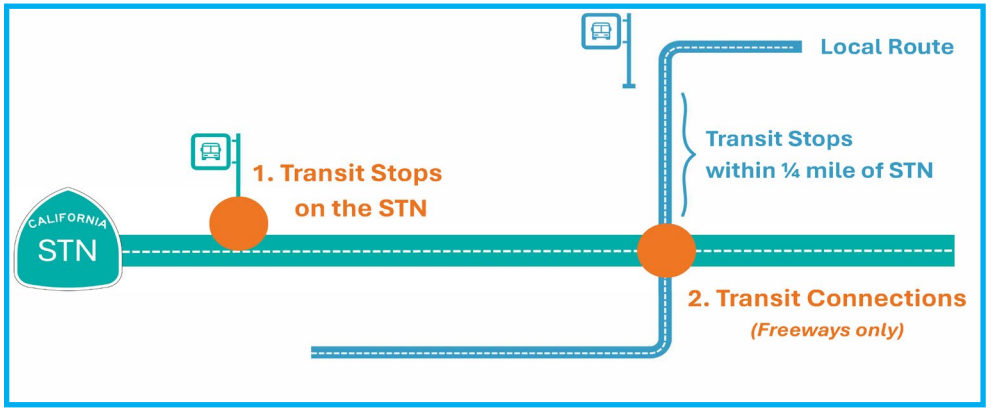
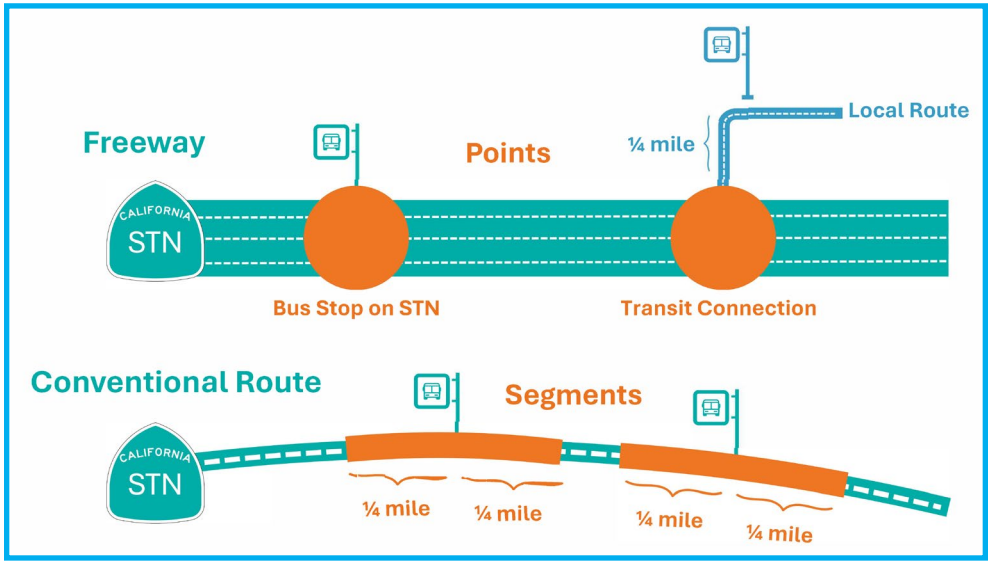


Figure 4. Transit Access - Points & Segments



STEP 2: SCORE POINTS AND SEGMENTS

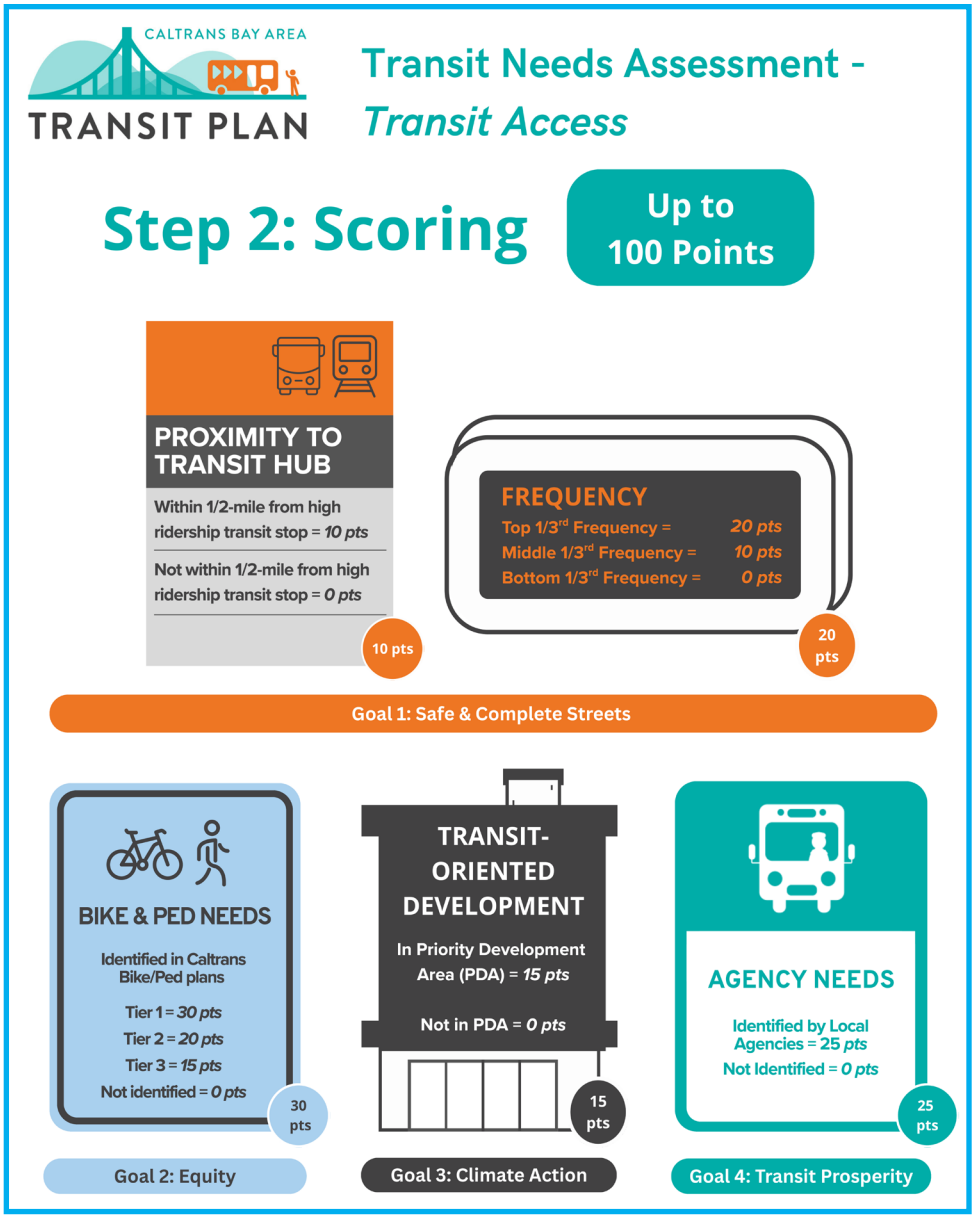
Once the Transit Stops and Connections of the STN were identified, the Transit Plan Team worked with other Caltrans Bay Area staff to select the most relevant data available, based on their relative impact on the project goals as it pertained to *transit access* infrastructure. Additional details on data utilized, sources of data, methods, and allowable points, is presented Figure 6 below.

The data selected included:

- Frequency of transit as a measure for ridership
- Identified **needs for bicycle or pedestrian improvements** as a measure for both equity and bicycle and pedestrian needs, incorporating equity considerations from bicycle and pedestrian planning
- Location within **MTC's Priority Development Areas** as a measure for alignment with transit-oriented development
- Location within Agency-Identified Needs as a measure of alignment with regional transit priorities (prioritized segments were obtained from regional transit agency partners)

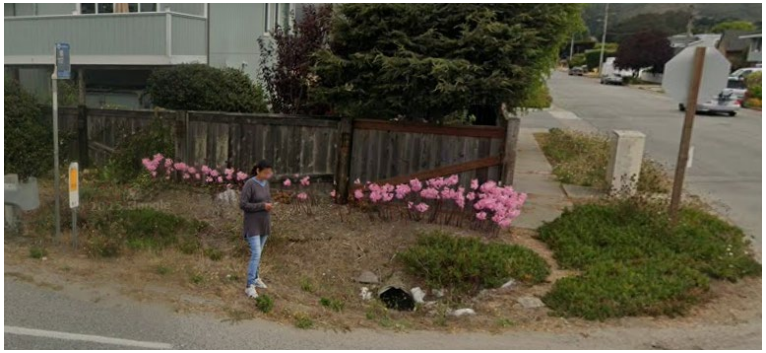
Note: The metrics were aligned with the Goals of the Caltrans Bay Area Transit Plan, Chapter 3 - Safe & Complete Streets, Equity, Climate Action, Transit Resource Prosperity, and Cultivating Excellence. These Plan goals build off the Caltrans Strategic Plan 2024-2028.

Figure 5. Transit Access Scoring



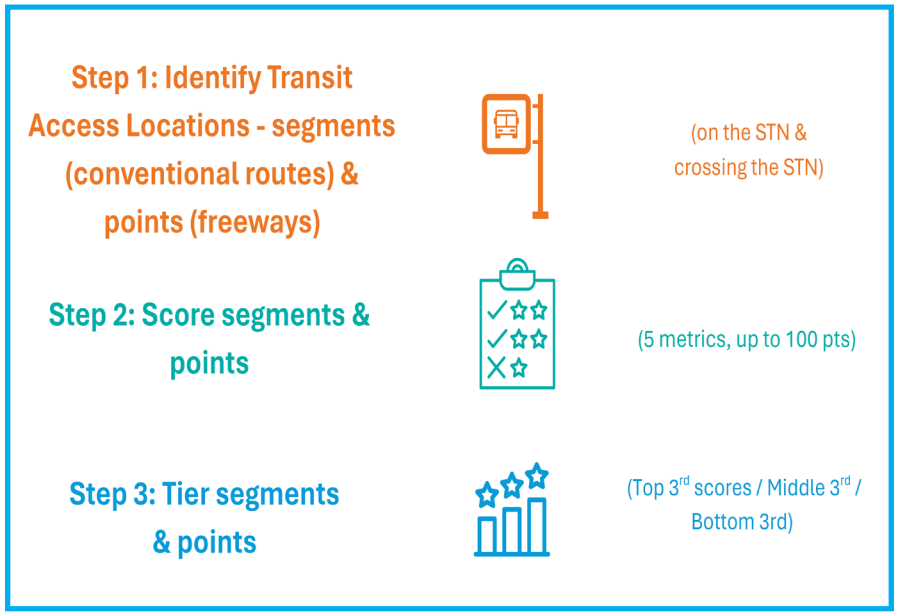
STEP 3: TIER POINTS AND SEGMENTS

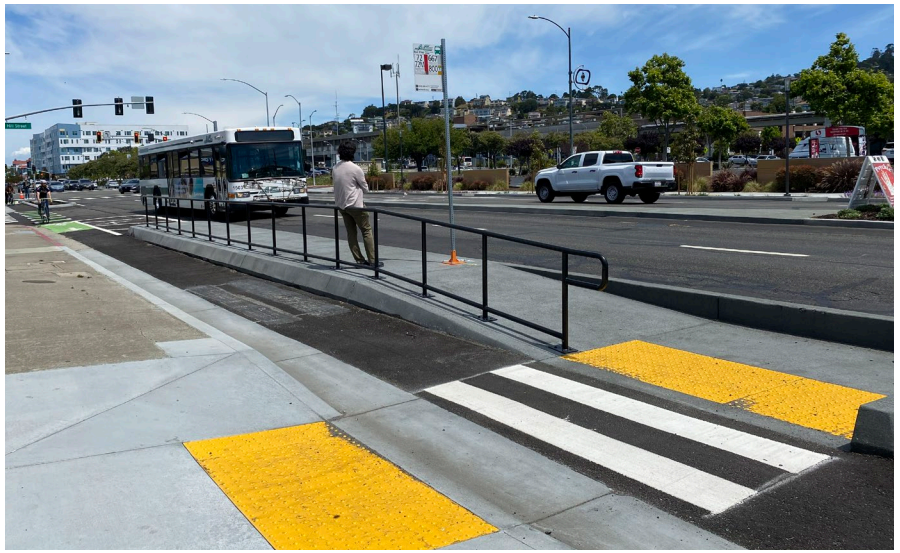
Finally, the tiers were established by identifying the **top 1/3 highest scoring segments (Tier 1)**, the **middle 1/3rd scoring segments (Tier 2)**, and the **lowest 1/3 scoring segments (Tier 3)** (following a similar methodology to the District's bicycle and pedestrian modal plans). Freeway and Conventional Routes were tiered separately.



Examples of transit access issues at a bus stop on SR 1 in Half Moon Bay (top) and a bus stop on SR 12 in Santa Rosa (bottom). An example of transit access infrastructure (a bus boarding island and a bike lane), on SR 123 in El Cerrito (right).

Figure 6. Transit Access - 3 Steps





TNA Development & Public Outreach

The *Transit Needs Assessment (TNA)* was developed in close coordination with transit agency partners and with public and stakeholder feedback.

The first draft of the of the *TNA* was presented to the Caltrans Bay Area Transit Plan Technical Advisory Committee (TAC) in January 2025. The initial results of the *TNA* did not fully reflect transportation agency partners' understanding of regional transit needs, so the Transit Plan Team conducted a series of focus groups to better understand current needs from local partners in each of the nine bay area counties. The Transit Plan Team then developed a new framework to locate and score transit priority and transit access needs.

The second *TNA* draft was reviewed by the TAC with positive feedback, generally in line with regional priorities.

To align with the September 2025 Bay Area Transit Month, the Transit Plan Team released the Public Draft *TNA* with an online StoryMap and Survey, and conducted in-person outreach at Transit Month events to receive public feedback.

After making a small number of revisions, the *TNA* was finalized in December 2025.

Overall, the survey respondents supported the methods and outcome of the Public Draft Transit Needs Assessment (*see figures 7-10*).

Transit Month Rally attended by Caltrans Staff for public outreach. Source: Telegraph for People

Twitter post encouraging the public to take the *TNA* map survey. Source: Caltrans

Figure 7. Transit Priority Scoring Methodology Feedback

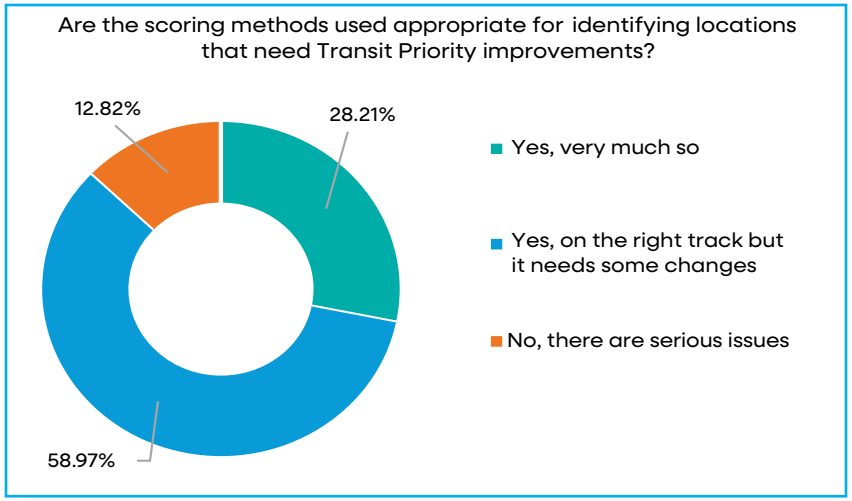
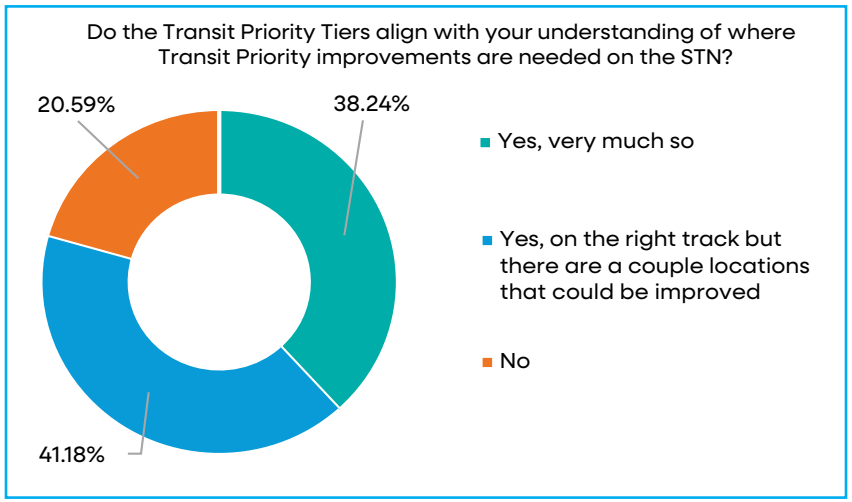


Figure 8. Transit Priority Map Survey Results



- 85% of survey respondents agreed that our Transit Priority methodology was appropriate (or on the right track with minor changes
- 97% of respondents agreed with our Transit Access methodology

Figure 9. Transit Access Scoring Methodology Feedback

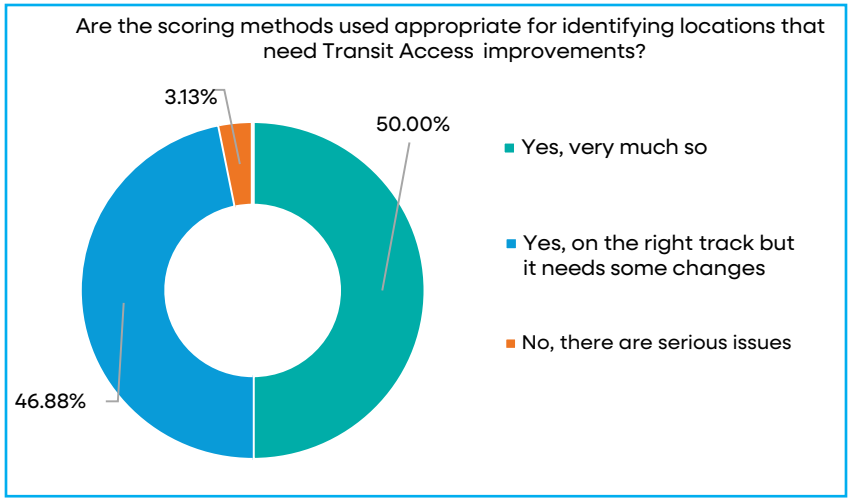
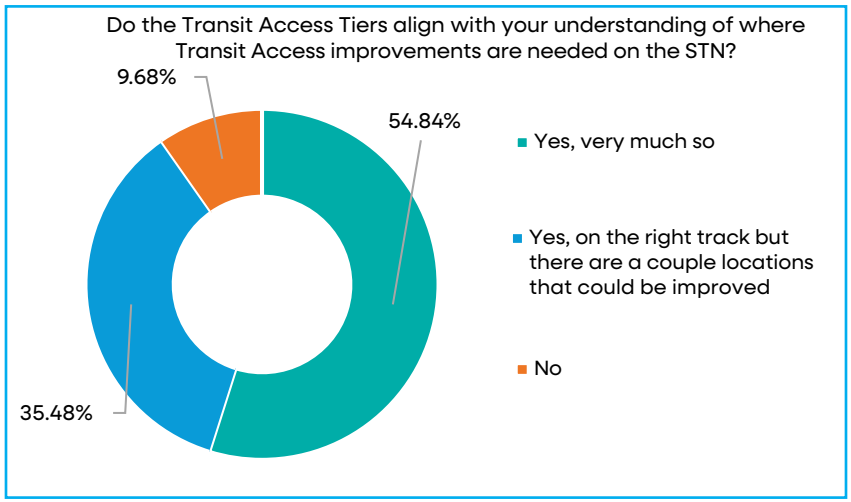


Figure 10. Transit Access Map Survey Results



- 80% of respondents said the Transit Priority map (tiered results) generally matches their own assessment of priority locations
- 90% of respondents said the Transit Access map generally matches their assessment – though some had specific comments on locations

Findings

The *Transit Needs Assessment* identifies where transit infrastructure investments should be emphasized along the STN based on transit priority and transit access needs (see Figures 13 & 14).

A Tempo BRT in Oakland. Source: AC Transit.

Tier 1 locations represent STN segments that would benefit the most from focused transit investments, and in turn, help improve transit travel speeds and access. This may also help make transit service more attractive to users, improving equitable access to jobs and regional destinations, and encouraging mode shift to help support Caltrans' climate action and other strategic goals.

Table 1. Transit Priority – Highest Scoring Segments By County

County	Location	Route	Score	Tier
ALA	International Blvd – entire segment	185	95	1
CC	I-580 – through Richmond /approach to San Rafael Bridge	580	100	1
MRN	Hwy 101 – through Downtown San Rafael	101	100	1
NAP	Hwy 29 – north of the City of Napa	29	80	1
SCL	El Camino Real – entire segment	82	95	1
SF	Hwy 1 – near Stonestown and SF State University	1	90	1
SM	El Camino Real – entire segment	82	90	1
SOL	Hwy 37 – through Vallejo	37	90	1
SON	Hwy 116 – through Petaluma	116	70	1

Note: Final score does not affect level of priority for transit investment, only Tier level. This table is meant to show methodology's highest scoring segments to determine how the methods are working.

As the Tier level increases, the benefits of transit investment may be less effective, albeit worthwhile. Segments without current transit are not tiered. (Note: there are segments where bus routes depart the STN and then quickly return, which may cause some confusion as to why a segment is not scored.) Planned transportation improvements, or potential projects being considered along the STN, may create opportunities to improve transit access along these corridors.

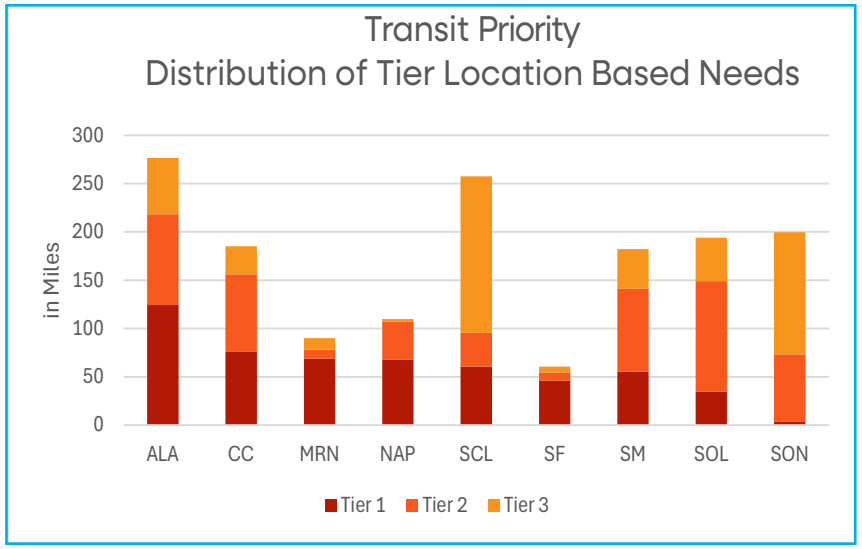


Figure 11. Transit Priority Distribution by County (Miles)

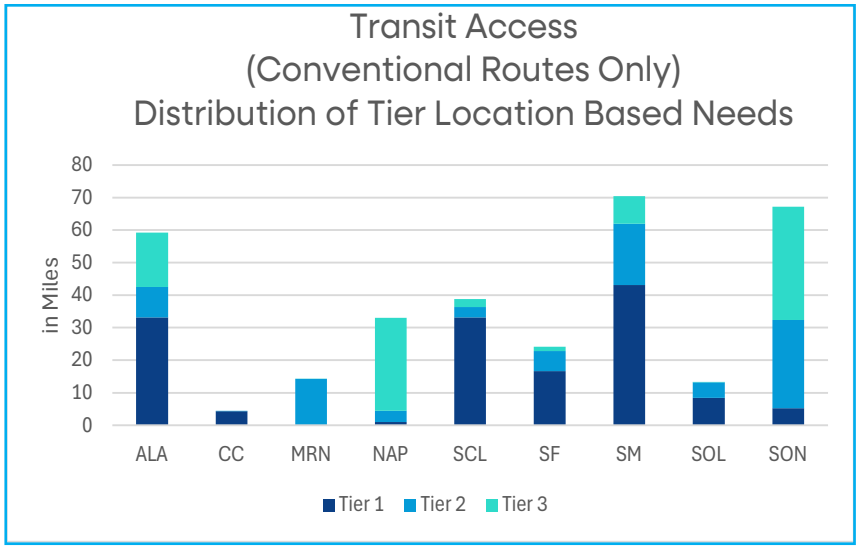


Figure 12. Transit Access Distribution by County (Miles)

Distribution of Tiers

For Transit Priority, the distribution of tiers by county (Figure 11 Transit Priority Distribution by County) show a fairly consistent range of Tier 1 road miles, with the exception of Sonoma County, whose frequency of transit seems to prevent segments from scoring at a Tier 1 level (the highest scoring segment is on SR 116 in Petaluma, Table 1). Santa Clara County has the lowest percentage of Tier 1 from overall road miles that are tiered, but the Tier 1 seems to be appropriately organized with the full length of SR 82 as a focal point.

For Transit Access, San Mateo County has the highest overall Tier 1 road miles and most miles overall for transit access improvements (conventional routes only counted here, Figure 12). Some examples include segments of SR 82 El Camino Real in San Mateo and Santa Clara, US 101 in Marin, SR 12 Sonoma Highway in Sonoma, and SR 13 Ashby Ave in Alameda County.

Looking at the highest scoring segments by county (Table 1), many of the segments reflect where regional transit and transportation stakeholders have emphasized a need for improved transit, including SR 185 International Boulevard in Alameda County, SR 82 El Camino Real in San Mateo and Santa Clara Counties, and US 101 in Marin.

Transit Priority Tiers

Figure 13 shows the distribution of tiers for Transit Priority. Many **Tier 1** segments are within urban areas with well utilized transit corridors, which tend to experience slower operating speeds. These segments are exemplified by corridors like SR 82 in Santa Clara and San Mateo Counties, which received a Tier 1 score based on existing high-frequency transit service and congestion experienced along these corridors.

Tier 2 corridors are concentrated along STN segments serving small-to-mid size cities throughout the District, such as stretches of Interstate (I) 580 between Dublin and Livermore in Alameda County. **Tier 3** corridors were located in more rural areas with mountainous characteristics, where infrequent transit service exists, such as US 101 north of Santa Rosa in Sonoma County.

Figure 13. Map of Transit Priority Tiers

Transit Access Tiers

Figure 14 shows the distribution of tiers for Transit Access - with *points* for freeways, and *segments* for conventional highways (see Figure 4). Unsurprisingly, **Tier 1** conventional highway segments are concentrated in the denser urban areas, which tend to experience higher volumes of people trying to access transit service, as well as higher collision rates for pedestrians. **Tier 1** segments are also located in rural locations where transit stops or Transit Connections are marked by gaps in pedestrian infrastructure.

Tier 2 corridors are mostly located in suburban areas and are also marked by gaps in the pedestrian infrastructure. **Tier 3** corridors are found in urban, suburban, and rural locations where transit service is minimal or bicycle and pedestrian needs were not identified. For rural contexts, locations are marked by access issues related to a lack of comfortable pedestrian and bicycle infrastructure (e.g., separated bikeways, and sidewalks).

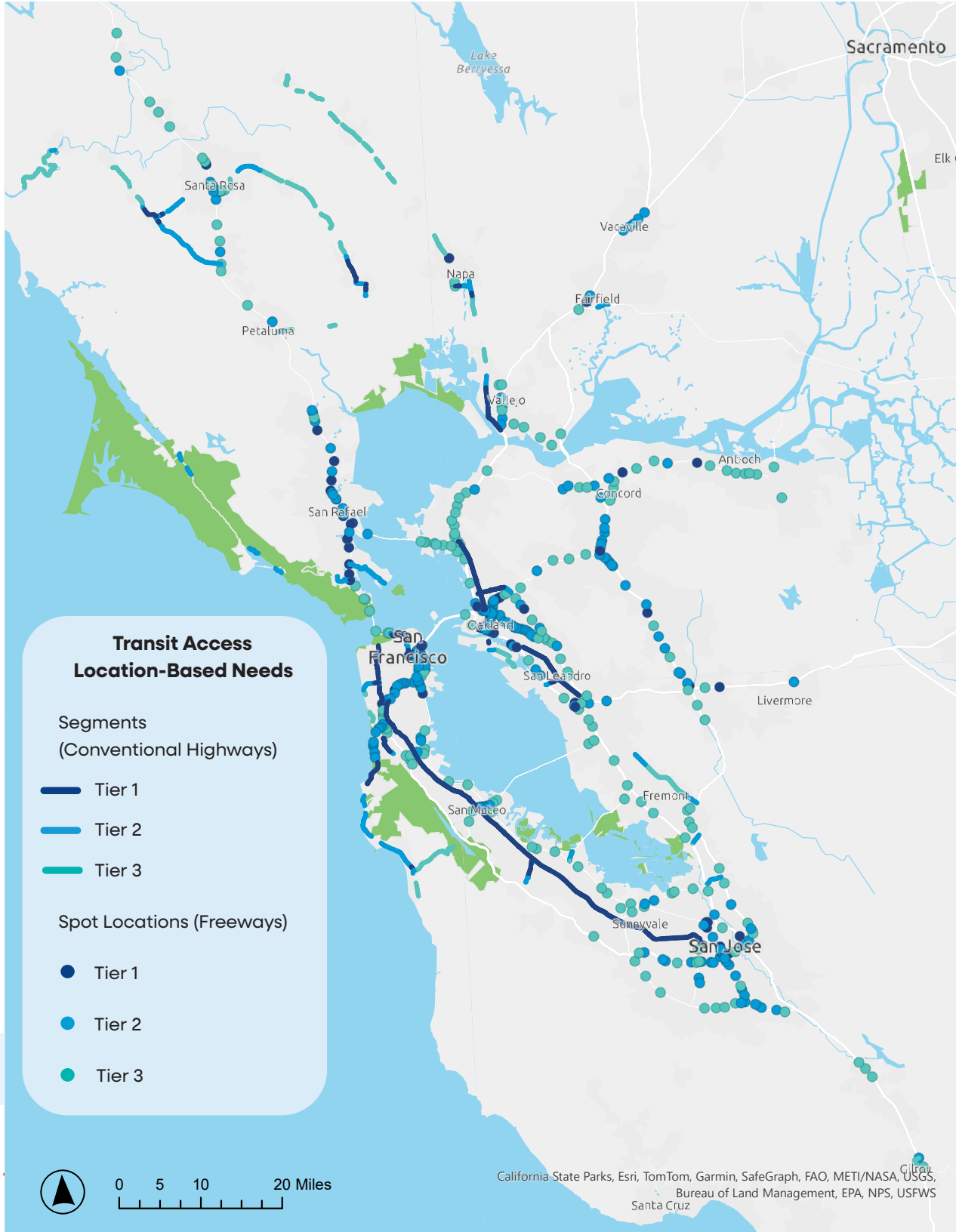


Figure 14. Map of Transit Access Tiers

Next Steps

While there are data limitations within the current methodology, the Transit Needs Assessment *has identified tiered location-based needs for Transit Priority and Transit Access facilities on the Caltrans State Transportation Network. Additional study and engagement with transit partners is recommended at the corridor and project level to understand transit priority and transit access needs for specific locations.*

People crossing the street while a muni bus passes. Source: SFMTA.

Future Data Analysis

The *Transit Needs Assessment* is intended as a snapshot in time using available data and will need to be updated regularly to ensure the location-based needs reflect evolving transit needs and future policies and plans. For future iterations, the Transit Plan Team has identified potential improvements:

- Route-level ridership demographics, as a better tool to document equity concerns on the route level
- Improved transit stop accessibility data
- Transit Demand modeling, to ascertain currently unfulfilled transit demand needs
- Comparing transit speed in relation to auto speeds, to better understand gaps in transit service quality

Statewide Assessment

A separate methodology is being developed, informed in part by the Caltrans Bay Area *Transit Needs Assessment*, to assess transit needs across the State, inform other Caltrans district transit plans, and establish future performance measures for transit in the State Highway System Management Plan. A separate assessment may be needed in District 4 to align with the statewide methodology. However, the Caltrans Bay Area *Transit Needs Assessment* will continue to serve as an important source to identify transit needs at the regional level.

Next Steps for the Transit Plan are included in the Caltrans Bay Area Transit Plan Report.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