

Technical Advisory Meeting #1

November 30, 2021

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Agenda

- Welcome Remarks & Introductions 10:00 am
- Project and TAC Purpose 10:05 am
- Stakeholder Engagement Review 10:15 am
- Best Practices and Peer Cases 10:30 am
- Existing Conditions Preview 11:15 am
- Next Steps 11:25 am



Welcome Remarks & Introductions

Click on the following icons in your menu bar. Additional windows will appear with a list of participants and chat.

- Chat with other participants
- “Raise Your Hand”



- See names of other participants

- Mute or unmute yourself

The Technical Advisory Committee



| County | Organization | Primary | Alternate |
|--------------------|------------------|------------------------|------------------|
| Imperial | ICTC | Virginia Mendoza | Marlene Flores |
| | ICTC | David Aguirre | Marlene Flores |
| Los Angeles | LA Metro | James Shahamiri | Mark Yamarone |
| | LA Metro | Paul Backstrom | Mark Yamarone |
| | AVCJPA | Nader Asmar | Talin Shahbazian |
| | GCCOG | Karen Heit | |
| | LADOT | Tim Fremaux | |
| | LADOT | Makenzi Rasey | |
| | NCTC | Art Sohikian | Michael Behen |
| | SBCCOG | Steve Lantz | |
| | SFVCOG | John Bwari | Nene Ogbechie |
| | SGVCOG | Eric Shen | Alexander Fung |
| | WSCOG | Riley O'Brien | |
| | AVTA | Gina Romo | Martin Tompkins |
| | Big Blue Bus | Alfredo Torales | |
| | Culver City | Diana Chang | Jane Chan |
| | Foothill Transit | Joe Raquel | Josh Landis |
| Long Beach Transit | Shirley Hsiao | Christopher MacKechnie | |

| County | Organization | Primary | Alternate |
|----------------|-------------------|---------------------------|---|
| Orange | OCTA | Kurt Brotcke | Charles Main |
| | OCCOG | Marnie O'Brien Primmer | |
| Riverside | RCTC | Eric DeHate | Jillian Guizado |
| | CVAG | Jonathan Hoy | |
| | WRCOG | Christopher Gary | Chris Tzeng |
| | RTA | Kristin Warsinski | Jennifer Nguyen |
| | Sunline Transit | Rohan Kuruppu | Jeff Guidry Victor Duran Brittney B. Sowell |
| San Bernardino | SBCTA | Nancy Strickert | Rebekah Soto Josh Lee |
| | Omnitrans | Jeremiah Bryant | Anna Jaiswal |
| | VVTA | Simon Herrera | Nancy Goff |
| Ventura | VCTC | Amanda Fagan | Martin Erickson |
| | VCOG | Hugh Riley | |
| | County of Ventura | Christopher Kurgan | |
| | GCTD | Matt Miller | Vanessa Rauschenberger |

Project and TAC Purpose

How did we get here?



Project Purpose



Support the development of a regional network of dedicated bus lanes and priority treatments to enable enhanced transit services, improve mobility, accessibility and sustainability, and advance implementation of Connect SoCal.

The Study will :

- Identify **key benefits** of dedicated bus lanes and **primary factors for implementation**,
- provide a preliminary assessment on **where dedicated bus lanes might be most feasible** and beneficial in the SCAG region, and
- provide **recommendations and guidance** for local jurisdictions that are seeking to pilot or implement dedicated bus lanes.

The Technical Advisory Committee

What is the role of the TAC?

- Guide the direction of the project
- Review methods, insights, and major deliverables
- Provide input on key decision points in the project

What is the commitment of the TAC?

- The TAC will meet four times over the course of the project, about every 6–8 weeks

Who is serving on the TAC?

- Transportation planning directors and staff at CTCs, COGs, and other transit operators or municipalities
- Relevant participants from other governmental groups or CBOs identified by these stakeholders

Stakeholder Engagement Review

Stakeholder Series



| | Stakeholder Kickoff | TAC 1 | TAC 2 | TAC 3 | TAC 4 | Draft Report Review |
|-------------------|---|---|---|--|---|--|
| Audience | <ul style="list-style-type: none"> • CTC • COG • Other agency staff • Transit operators | <ul style="list-style-type: none"> • Technical Advisory Committee | <ul style="list-style-type: none"> • Technical Advisory Committee | <ul style="list-style-type: none"> • Technical Advisory Committee | <ul style="list-style-type: none"> • Technical Advisory Committee | <ul style="list-style-type: none"> • TAC • Other CTC, COG, CBO, or agency staff |
| | | Discovery & Visioning | Corridor Identification and Eval Framework | Refined Corridor Evaluation | Recommendations and Implementation | |
| When | October 6 | November 30 | January 25 | March 8 | April 19 | June |
| Discussion Topics | <ul style="list-style-type: none"> • Introduce project • Discuss objectives and needs • Identify TAC participants • Identify discovery interviewees • Identify document and data sources | <ul style="list-style-type: none"> • Review best practices and peer cases • Group meeting themes • Identify additional interview or data needs | <ul style="list-style-type: none"> • Review existing conditions and future forecasts • Discuss screening goals, criteria, methodology • Discuss preliminary screening universe | <ul style="list-style-type: none"> • Discuss screening results • Select evaluation corridors • Discuss evaluation methodology | <ul style="list-style-type: none"> • Discuss evaluation results • Discuss implementation planning • Discuss final report format and roll out | <ul style="list-style-type: none"> • Review draft report (purpose, best practices, existing conditions, evaluation method and results, implementation guidance) |

Stakeholder Kickoff: Survey Results



Poll 1: What is your level of knowledge of transit lanes or priority treatments?

13% – extremely knowledgeable

30% – somewhat knowledgeable

52% – mostly knowledgeable

4% – not knowledgeable

Poll 2: What role can you imagine transit lanes or priority treatments playing for your agency?

39% – are already implementing transit priority treatments

48% – see a future role for transit priority treatments

Poll 3: What would be most useful for your agency to gain from this study?

Rank 1 – Understanding where dedicated lanes or priority treatments might be most feasible

Rank 2 – Supporting SCAG to develop a broad view of where dedicated lanes and priority treatments improve regional transportation

Rank 3 – Understanding steps to take to pilot or implement dedicated lanes or priority treatments

County Group Meetings: Key Themes

- **Most counties have had prior discussions about transit priority**, particularly as it relates to transit signal priority (TSP).
- **Most counties have already identified key corridors** for BRT or transit priority treatments.
- SCAG counties see **benefits of transit priority treatments** such as:
 - potential to increase ridership, change travel habits, and improve convenience,
 - improved travel times for riders and drivers, and
 - high impact at a relatively low cost.
- SCAG counties see **challenges of transit priority** including:
 - resistance to removing parking or potentially slowing vehicular traffic,
 - justifying the financial investment,
 - coordination across jurisdictions, and
 - community opposition related to RHNA.
- From this Study SCAG counties want to **understand the benefits of transit priority, how to communicate the benefits of transit priority, and general implementation guidance.**

County Group Meetings: Existing and Proposed Treatments



| County | Project Name | Organization | Capital | Ops/Tech | Policy/Other |
|-----------------------------|--|--------------------|---------|----------|--------------|
| Los Angeles | Metro Rapid | LA Metro | | ● | ● |
| | J (Silver) Line | LA Metro | ● | ● | ● |
| | G (Orange) Line | LA Metro | ● | ● | ● |
| | Wilshire Blvd Peak Hour Bus Lane | LA Metro | ● | | |
| | Grand Av & Olive St Bus Priority Lanes | LA Metro & LADOT | ● | | |
| | Alvarado St Peak Hour Bus Lanes | LA Metro & LADOT | ● | | |
| | Flower St & Figueroa St Peak Hour Bus Lanes | LA Metro & LADOT | ● | | |
| | 5th & 6th St Peak Hour Bus Lanes | LA Metro & LADOT | ● | | |
| | Aliso St Peak Hour Bus Lane and Curb Treatments | LA Metro & LADOT | ● | | |
| | Signal Queue Jumper at 5th Street/Flower Street | LA Metro & LADOT | | ● | |
| | La Brea Av Bus Priority Lanes | LA Metro & LADOT | ● | | |
| | BRT Candidates (Atlantic, Broadway, Cesar Chavez/Sunset, La Cienega, Venice) | LA Metro | ● | | |
| | NoHo to Pasadena Transit Corridor | LA Metro | ● | | |
| | Culver and Washington Blvd Mobility Lanes | Culver City | ● | | |
| | Colorado Blvd Transit Priority Corridor | Foothill Transit | | ● | |
| Lincoln Blvd Bus-Only Lanes | Santa Monica/Big Blue Bus | ● | | | |
| Orange | Bravo Service (Beach, Harbor, Westminster/17 th) | OCTA | | ● | ● |
| | I-5 BRT | OCTA | ● | | |
| | SR-55 BRT | OCTA | ● | | |
| Riverside | RapidLink | RTA | | ● | |
| | Highway 111 Transit Signal Priority | CVAG | | ● | |
| San Bernardino | sbX Green line | Omnitrans | ● | | |
| | West Valley Connector | Omnitrans | ● | | |
| Ventura | GoVC Bus Pass | VCTC | | ● | ● |
| | Right Turn Priority Lanes | Gold Coast Transit | | | ● |
| | Oxnard Blvd Transit Signal Priority | VCTC | | ● | |
| | US 101 Express Bus Lanes | VCTC | ● | | |

Stakeholder Engagement: Meetings



Imperial

- *11/8: Group Meeting with ICTC*

Los Angeles

- *11/8: Group Meeting with Metro, LADOT, SBCCOG, West Hollywood, Culver City, Santa Monica, Long Beach Transit*
- *11/10: Group Meeting with Metro, SGVCOG, AVTA, AVCJPA, Foothill Transit, SFVCOG*
- *Future Meeting – BOS*

Orange

- *11/2: Group Meeting with OCTA*
- *Future Meeting – OCCOG TAC*

Riverside

- *11/4: Group Meeting with RCTC, WRCOG, Sunline, RTA*
- *11/16: Meeting – RCTC TAC*

San Bernardino

- *11/4: Group Meeting with SBCTA, SBCOG, Omnitrans, VVTA*

Ventura

- *11/2: Group Meeting with VCTC, VCCOG, Gold Coast Transit, Ventura County Public Works*
- *Future Meeting – VCTC TAC and/or TransCOM*

Best Practices and Peer Cases

Best Practices Case Studies and Research include:

1. **WHY** build dedicated lanes and priority treatments?

- Four key elements: **Reliability, Speed, Comfort, and Convenience.**
- Results in faster travel times, safer traveling environments, improved schedule reliability, user confidence, convenience and experience

2. **WHERE** are lanes most feasible and beneficial?

- Metrics used to identify and evaluate potential corridors
- Supportive conditions and context for potential implementation

3. **HOW** do jurisdictions pilot or implement?

- Peer regions and agency stakeholders with track record of successful implementation

Best Practices Focus Areas

1. Project Identification / Prioritization
2. Speed & Reliability Design Treatments
3. Speed & Reliability Operations and Technology
4. Coordination & Implementation
5. Getting On Board



Research and Data Collection

Literature Review

Design guidelines, performance analysis tools, operational best practices

- **Project identification and performance data analytics**
- **Design treatments and operating strategies**

Agency and stakeholder interviews

Peer regions with recent implementation of transit priority projects in a range of place type contexts

- **Agency roles and coordination responsibilities**
- **Implementation strategies**
- **Climate, equity, and impacts of pandemic**

Stakeholders

- **Transit Operators, DOTs, MPOs, COGs, City Staff**

Peer Regions and Operators

- **Washington, DC**
- **Boston, MA**
- **Los Angeles, CA**
- **Mexico City, EM (Mexico)**
- **Minneapolis, MN**
- **Vancouver, BC (Canada)**
- **Baltimore, MD**
- **Portland, OR**
- **Seattle, WA**

Key Performance Indicators and Analytics

Potential Performance Indicators

- Schedule Reliability
- Vehicle Delay and Passenger Delay
- Travel Time Savings and Delay Reduction
- Racial and Social Equity
- Access to Jobs and Opportunities
- People Throughput
- Changing Travel and Land Use Patterns
- Climate and Environmental Equity

Potential Analysis Approaches

- Systemwide
- Line-level
- Project-specific
- Location-specific
- Person / Rider-level

Establish appropriate targets and thresholds

Context Sensitive and Equity Focused Data Collection

Key community-first questions

- How does this project satisfy unfulfilled community needs or issues?
- How would the proposed project benefit bus riders and surrounding communities? Who would be burdened? How does it potentially benefit other users?
- How would the proposed project impact the ways residents, local businesses, workers, and visitors currently use the corridor?



Data collection

- On-board rider surveys or use community engagements to gather public data and input
- Engage bus operators who drive the corridor to learn about issues and trends they observe
- Record observations on street and curbside activities during different types of days

How to join

Web



- 1 Go to PollEv.com
- 2 Enter **CAMBRIDGESYS310**

Which of the following goals are most important from transit priority treatments?

Transit Speeds

Transit Travel Time Reliability

Overall Mobility/ Reduce Congestion

Safety

Comfort/ Convenience

Equity

Economic Growth

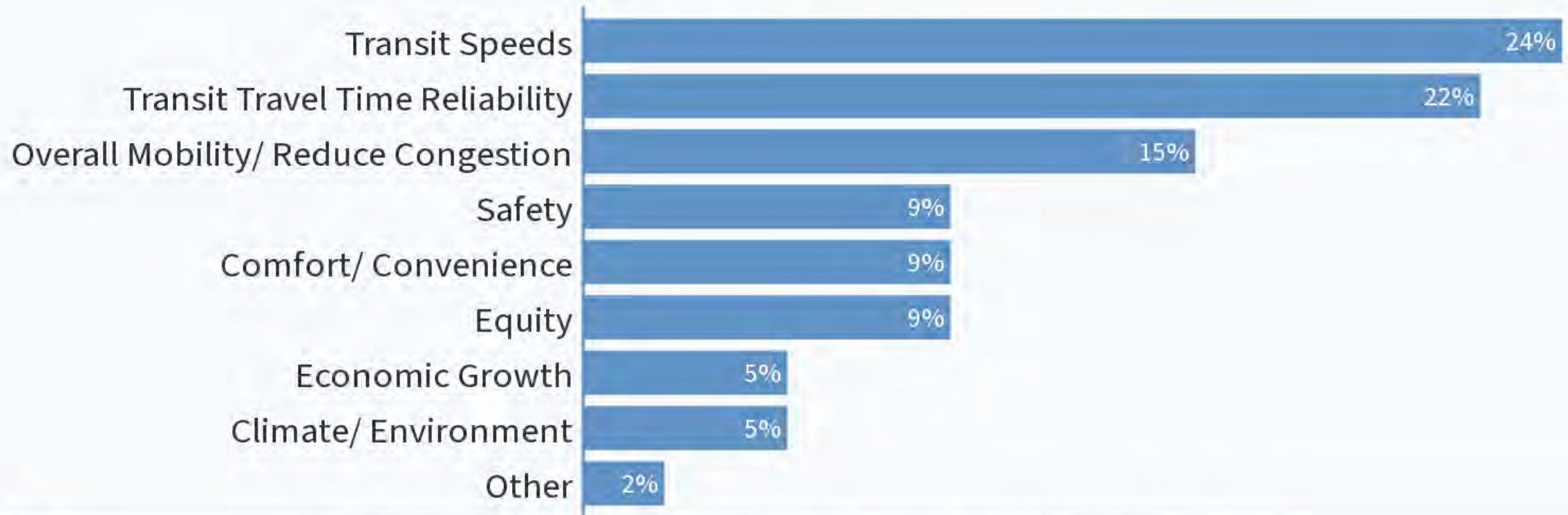
Climate/ Environment

Other

When poll is active, respond at pollev.com/cambridgesys310

Text **CAMBRIDGESYS310** to **22333** once to join

Which of the following goals are most important from transit priority treatments?



Potential Transit Priority Treatments and Solutions

1. Example Capital Improvements:

- Transit-only lane configurations
- Stop positioning and spacing/consolidations
- Bus and bicycle facilities

2. Example Operational and Technology Enhancements:

- Traffic Signal Priority (TSP) and queue jumps
- Optimized bus routes

3. Example Policies and Other Actions:

- Technology, information, and responsibility sharing
- Enforcement
- Project programming and funding



Which treatments effectively address your agency's challenges?

Arterial Dedicated Lanes

Peak Hour/ Temporary Lanes

Freeway Lanes

Queue Jumps/ Right Turn Lanes

Transit Signal Priority

Stop Spacing and Location

Stop Enhancements (all-door boarding, off-board fares, etc)

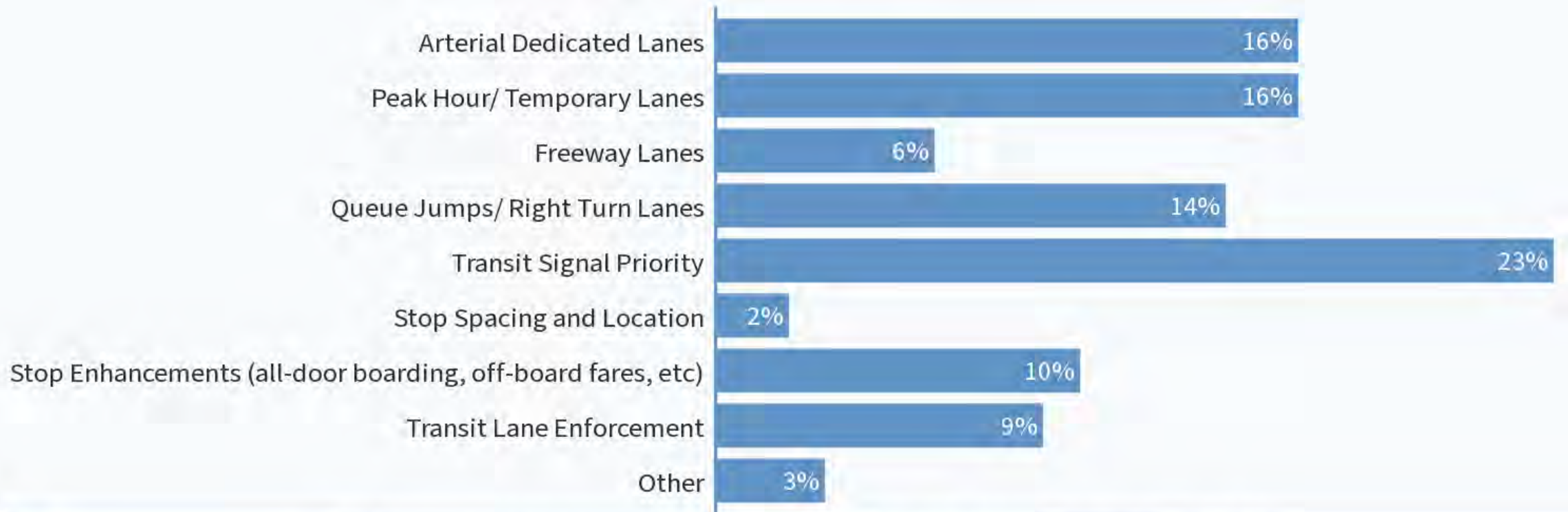
Transit Lane Enforcement

Other

When poll is active, respond at pollev.com/cambridgesys310

Text **CAMBRIDGESYS310** to **22333** once to join

Which treatments effectively address your agency's challenges?



Capital Improvements

Design treatments and infrastructure that make transit faster and more reliable.

Transit-Only Lanes

1. WHY build dedicated lanes and priority treatments?

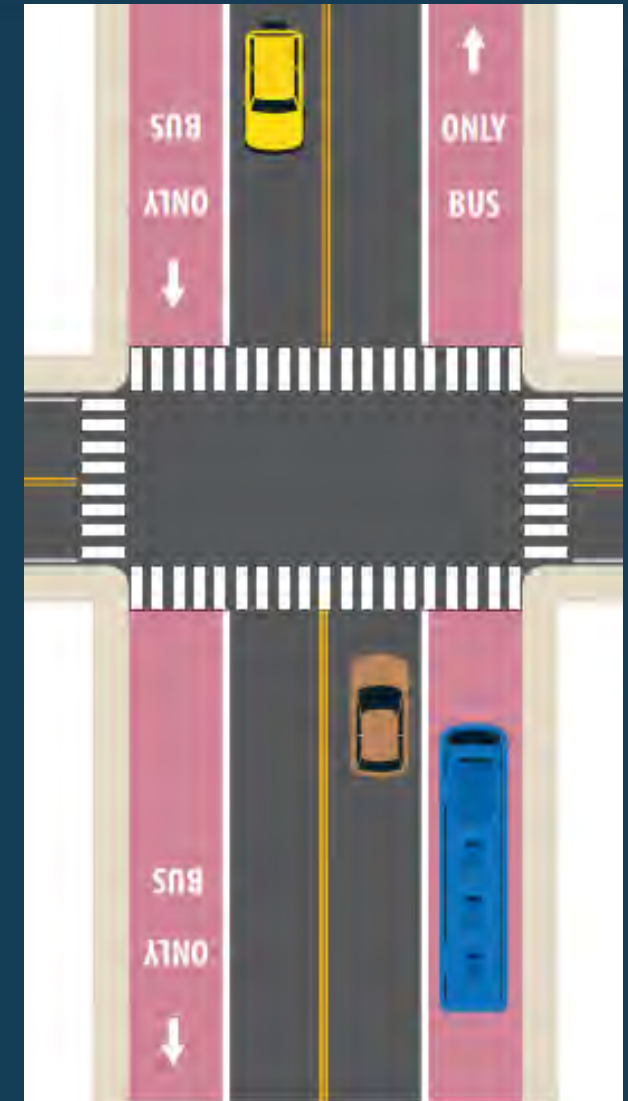
- Improves reliability
- Reduces travel times

2. WHERE are lanes most feasible and beneficial?

- Urban areas with high traffic volumes and high transit demand
- Corridor hotspots and opportunistic locations with slow transit speeds or available ROW (suburban/exurban)

3. HOW do jurisdictions pilot or implement?

- Consistent project development, policies, and enforcement
- Quick build implementation opportunities with standardized treatments -- cones/barriers/temp signage/etc..



Transit-Only Lanes

| Cost | Coordination |
|---------------|--------------|
| \$\$-\$\$\$\$ | High |

What is it?

Transit Only / Bus lanes keep buses out of general traffic. Can be exclusive to transit or permit certain other vehicles. Hours of operation can vary (e.g. peak commute hours only)

What does it look like?

- **Curbside:** The lane adjacent to the curb is dedicated for transit use. Right-turning vehicles may be permitted as well to allow access to businesses and driveways.
- **Center running:** The two center lanes of the road are bus only. Center-running lanes are often separated from other traffic by curbs or median islands.
- **Floating lane:** Buses run in the right lane, but are offset from the curb by street parking, curb extensions, or raised cycle tracks

Considerations

- Station layout may vary depending on lane configurations
- Can be achieved through repurposing ROW or facility expansion
- Designated spaces through marking or barrier separation

Potential Benefits
WMATA (D.C.) improved travel times by 10% - 25%
LA Metro peak reliability improved 12% - 27%

Curbside lane in Los Angeles



Source: Streetsblog LA

Center Running lane in San Bernardino



Source: Omnitrans

Transit-Only Lanes

Operational Considerations

- **Peak-Only lanes** are reserved for buses at peak travel periods (such as the morning and evening commute)
- **Contraflow lanes** operate against the flow of traffic on a one-way street, enabling more direct routing and decreasing bus-lane violations.
- **Reversible lanes** have access and egress controls (signage, signals, etc.) to allow use of the same space (lane) for alternate directions of travel during different parts of the day, based on demand

Policy Considerations

- Managing turning movements across transit lanes
- Thresholds and justifications for reallocating ROW
- Thresholds for potential impacts to surrounding traffic operations
- Consistent enforcement of transit exclusivity, especially for parking violations
- Coordination of bus lane use across transit agencies/local DOTs/DPWs, as well as changes in roadway conditions geometry, traffic volumes, etc..

Peak-Only Bus lane Signage in Seattle



Source: SDOT

Contraflow lane in San Francisco



Source: SFMTA

Freeway Transit Lanes

1. **WHY** are bus only facilities on freeways considered?

- Benefits intercity and commuter express routes operating on freeways or arterial highways subject to delays during peak congestion periods

2. **WHERE** are Freeway BRT or bus only spaces appropriate?

- Median ROW or shared HOV / Managed lane facilities
- Terminal and intermediate stations at (major) interchanges / access points

3. **HOW** are appropriate treatments and operations determined and implemented?

- Conditions of existing median support construction of new lanes
- Planned facility expansion or widening; HOV or Managed lanes

Shared Bus/HOV lane



Houston Metro Park and Ride Facility off I-45



Freeway Transit Lanes

| Cost | Coordination |
|---------------|--------------|
| \$\$-\$\$\$\$ | High |

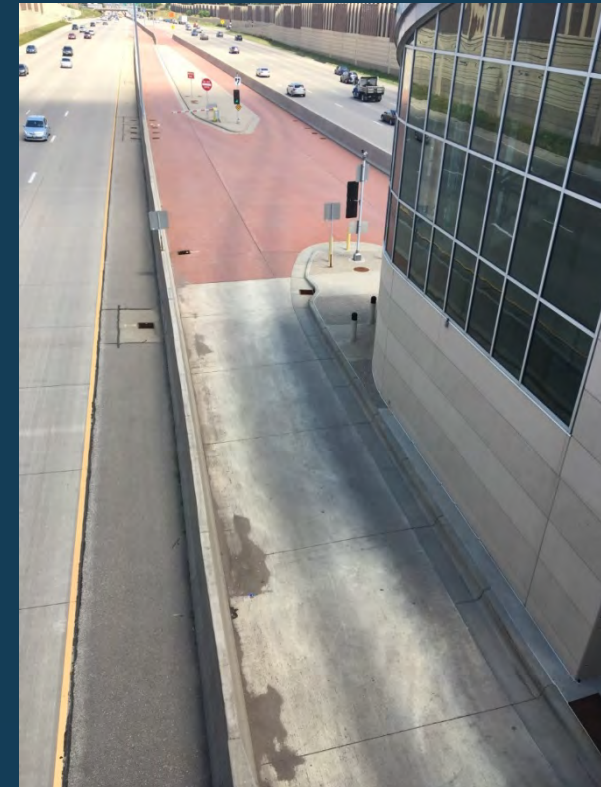
What Is it?

Bus lanes on a highway can be on the shoulder, shared with high-occupancy (carpool) vehicles, or include separated bus-only segments

Design Considerations

- Barrier separation (high investment)
 - Median openings for bus access/egress
 - Direct connectors and slip ramps to adjacent station areas and Park and Rides
 - Managed lane access / egress
 - Station access and traffic noise mitigation (median vs side platforms)
- Bus on Shoulder (low investment)
 - Permission from jurisdictional Agency required (ROW owner) and specific thresholds for use
 - Incremental evolution of shoulder operations aligned with planned facility expansion or widening (ROW preservation)
- Parallel utility corridors (Surf! BRT Monterrey-Salinas, CA)

I-35W Orange line Station (Minneapolis, MN)



Bus Stop Modifications

1. WHY should bus stop modifications be considered?

- Strategic opportunities to reduce cumulative dwell time at bus stops along a route

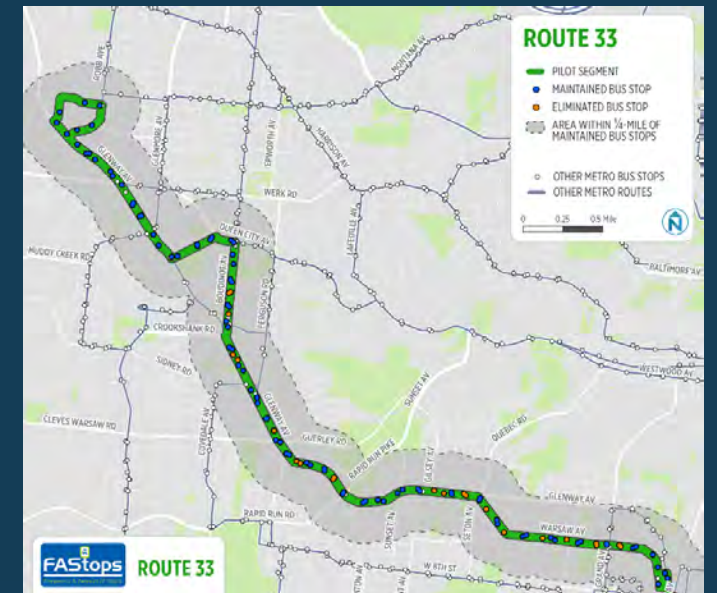
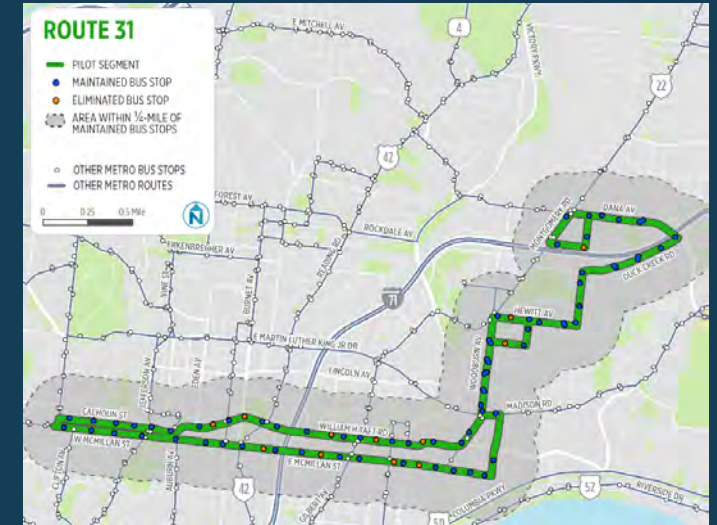
2. WHERE are bus stop modifications appropriate?

- Routes where legacy bus stops, added over time, creating stop-and-go service due to frequent boarding/alighting
- Regular service planning updates to reduce line branching to simplify scheduling and concentrate resources

3. HOW are appropriate bus stop modifications determined?

- Review existing stop spacing and boarding/alighting counts
- Surveys to understand passenger origins/destinations

SORTA FASTops bus stop optimization project (Cincinnati, OH)



Stop Positioning

| Cost | Coordination |
|---------|--------------|
| \$-\$\$ | Moderate |

What is it?

Strategic placement of bus stops and amenities to support safe bus operations and mitigate impacts to traffic operations

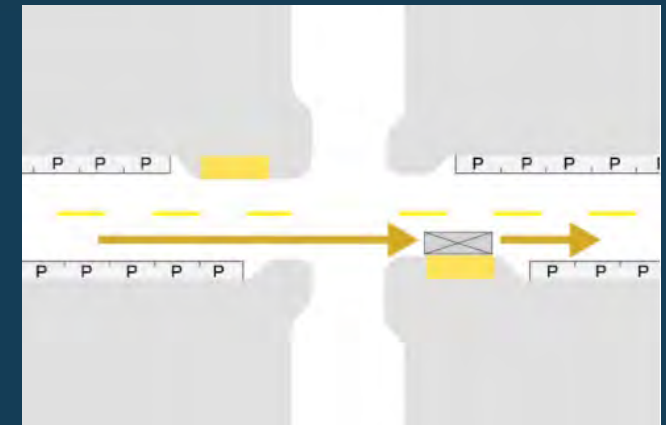
What are the Benefits?

- Reduce potential delays from traffic signals
- 7% increase in corridor-wide speeds using in-lane stops

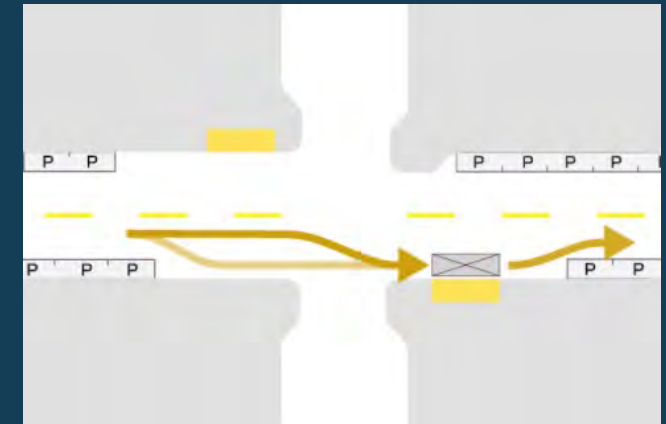
Design Elements

- Farside of intersection preferred to allow buses to travel through intersection prior to boarding / alighting
- Unobstructed by parking and / or loading zones
- In-lane stops preferred when possible
- Safety features for pedestrian access, such as enhanced crossing treatments

Far-Side, In-lane Bus Stop



Far-Side, Pull-Out Bus Stop



Source: NACTO

Stop Spacing / Consolidation

What is it?

Stop rebalancing optimizes the spacing between stops. It can involve removing, redesigning, or relocating multiple stops along a route or corridor.

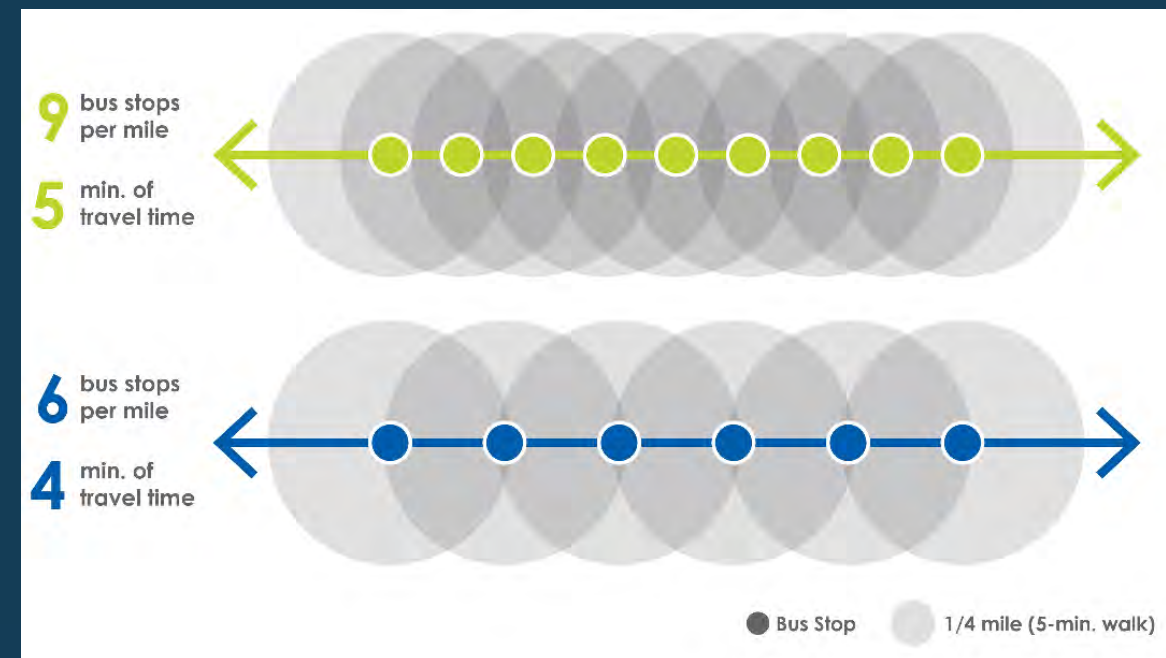
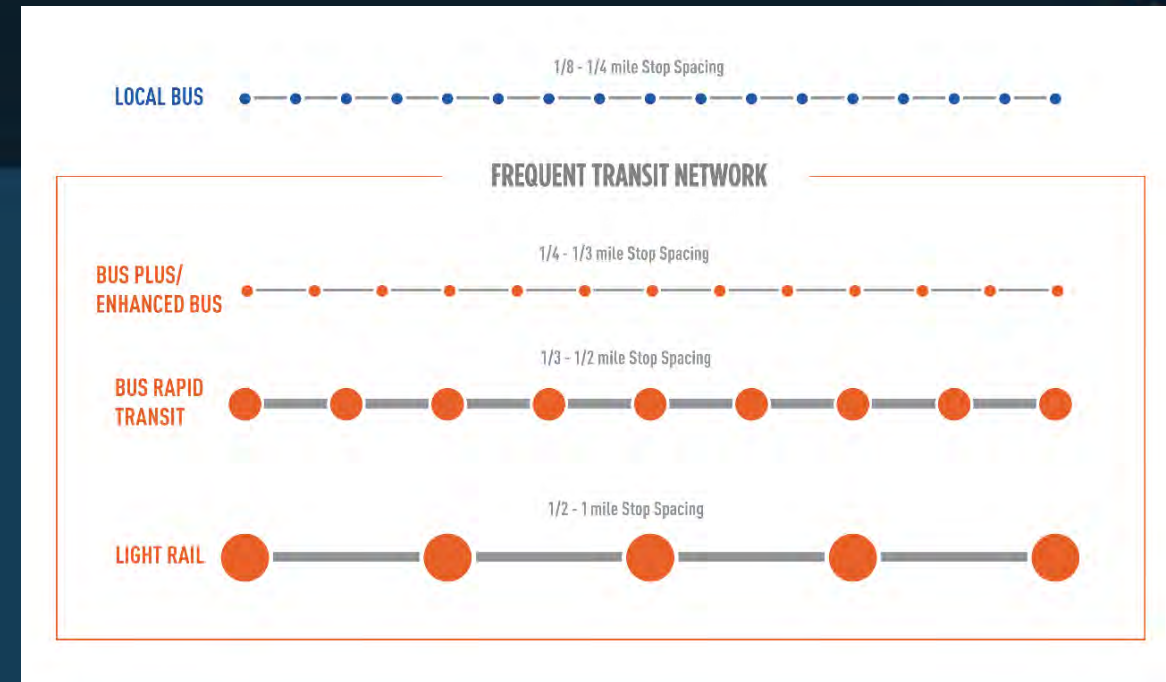
What are the Benefits?

- Speed: Eliminating one bus stop typically saves 10 to 15 seconds
- Schedule reliability and sustainable service frequency without additional fleet

Design Elements

- Consolidated stops with amenities to accommodate more passengers
- Safety features for pedestrian access, such as enhanced crossing treatments

| Cost | Coordination |
|---------|--------------|
| \$-\$\$ | Moderate |



Discussion – Other Capital Improvements

What other capital improvements are of interest to you?

Examples:

- Bus / bike lanes
- Station area enhancements and level boarding
- Curb extensions (bus bulbs) and bus pullout lanes



Operations and Technology

Operational and technology strategies that make transit faster and more reliable

Transit Signal Priority (TSP)

1. WHY is TSP important ?

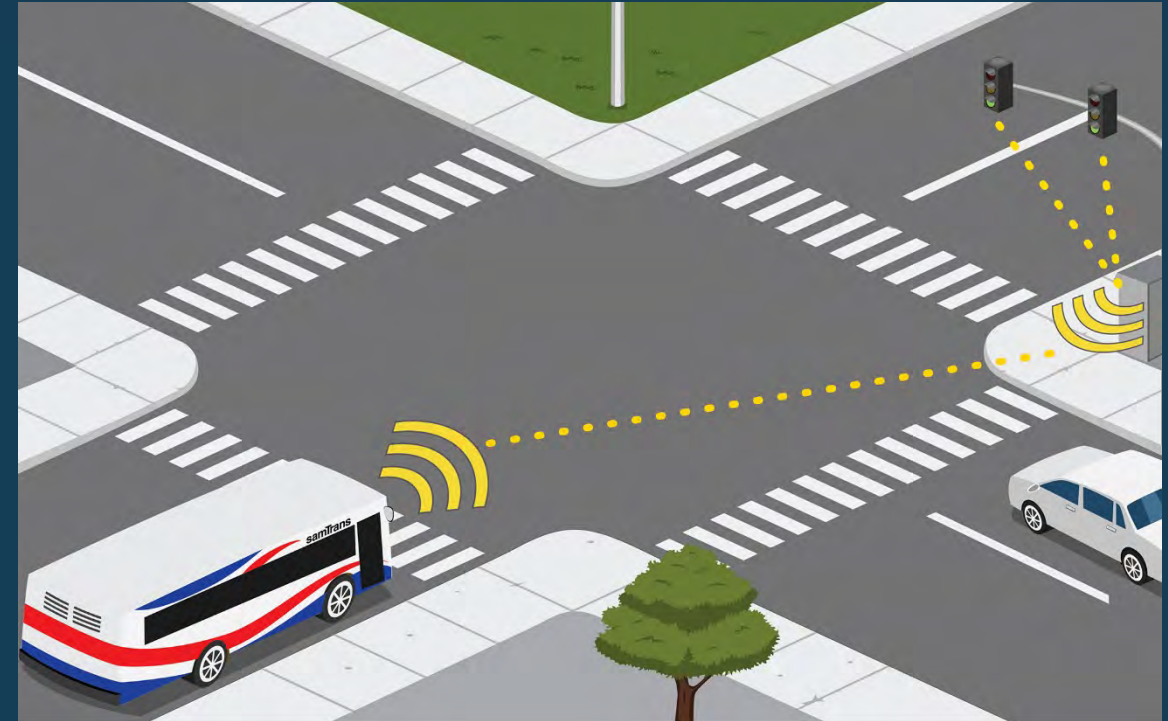
- Travel time savings
- Service reliability

2. WHERE should it be used?

- Along urban corridors with dedicated transit lanes
- Suburban traffic corridors with limited ROW to allow buses to pass traffic in mixed travel lanes.

3. HOW does it get implemented?

- Coordination between transit agency and Public Works/DOT



Transit Signal Priority

| Cost | Coordination |
|---------------|--------------|
| \$\$-\$\$\$\$ | High |

What is it?

Allows transit vehicles to communicate with signals, which then extend green lights, or add a bus-only phase

Technology that allows buses to move through traffic signals without delay.

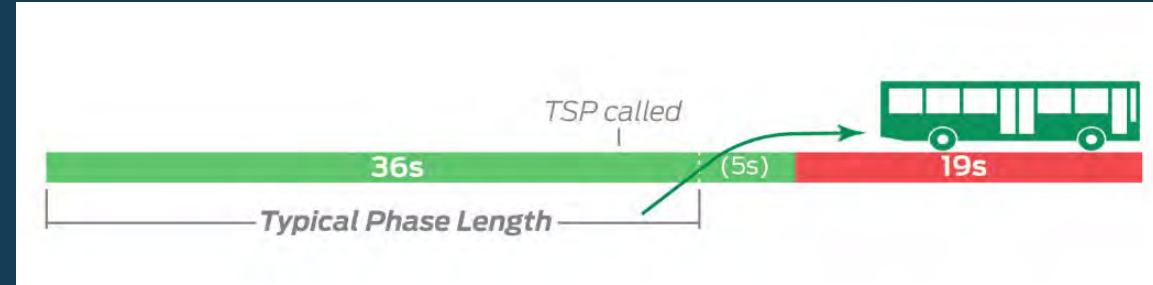
What does it look like?

- Green light extension
- Red light truncation (early green)
- Phase insertion and sequence changes (bus-only phase)

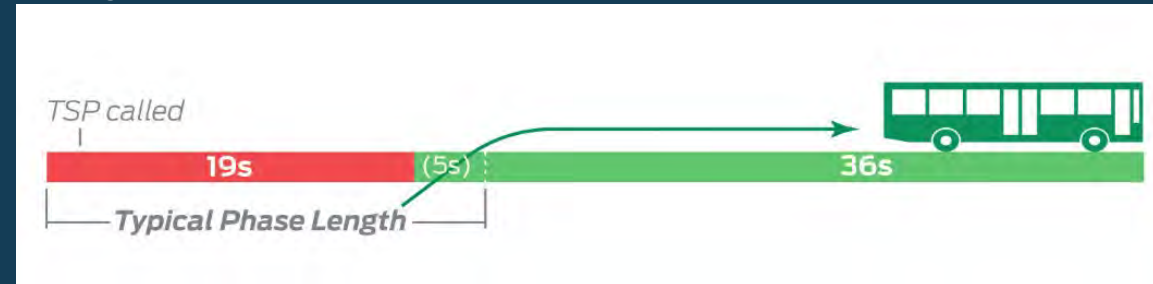
When is it used?

- At intersections where buses are delayed by red lights
- Intersections with a far-side stop or no stop, allowing the bus to clear the intersection without waiting at a signal
- In places where traffic congestion does not prevent the bus from communicating with the signal

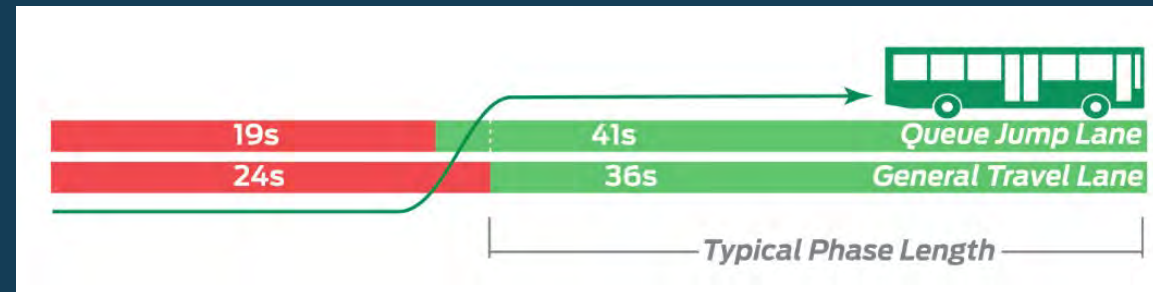
Green light Extension



Red light Truncation



Phase Insertion and Sequence Change Example



Transit Signal Priority

Design Elements

- TSP is most effective at intersections with far-side bus stops
- Requires new or upgraded technology in the signal controller cabinet, on board transit vehicles, or both

Considerations

- High degree of coordination between the agencies responsible for signals and transit vehicles
- Study of potential traffic impacts for all affected intersections
- Analysis and study to determine most appropriate type of TSP technology
- Condition of existing signal infrastructure will impact level of capital investment required



Washington, D.C.
travel times savings of up
to 5% on corridors with
TSP

Queue Jump

1. WHY are queue jumps useful

- Allow buses to bypass traffic queues at signalized intersections, reducing travel times

2. WHERE are queue jumps most feasible and beneficial?

- Opportunistic roadway geometry (right turn lanes / lane drops)
- If a nearside stop cannot be relocated

3. HOW do jurisdictions pilot or implement?

- Transit speed and reliability hotspot or analysis / supporting traffic analyses
- Traffic signal timing and/or network synchronization opportunities

Queue jump with a transit signal phase at Crestview Station (Austin, TX)



Queue Jump

| Cost | Coordination |
|---------|--------------|
| \$-\$\$ | High |

What is it?

A Queue Jump is a section of travel lane that allows buses to proceed through a signalized intersection ahead of traffic.

Transit signal phase gives the bus a green light while general traffic waits at the red light; on the far side of the intersection the bus can merge into the travel lane seamlessly while traffic is still stopped

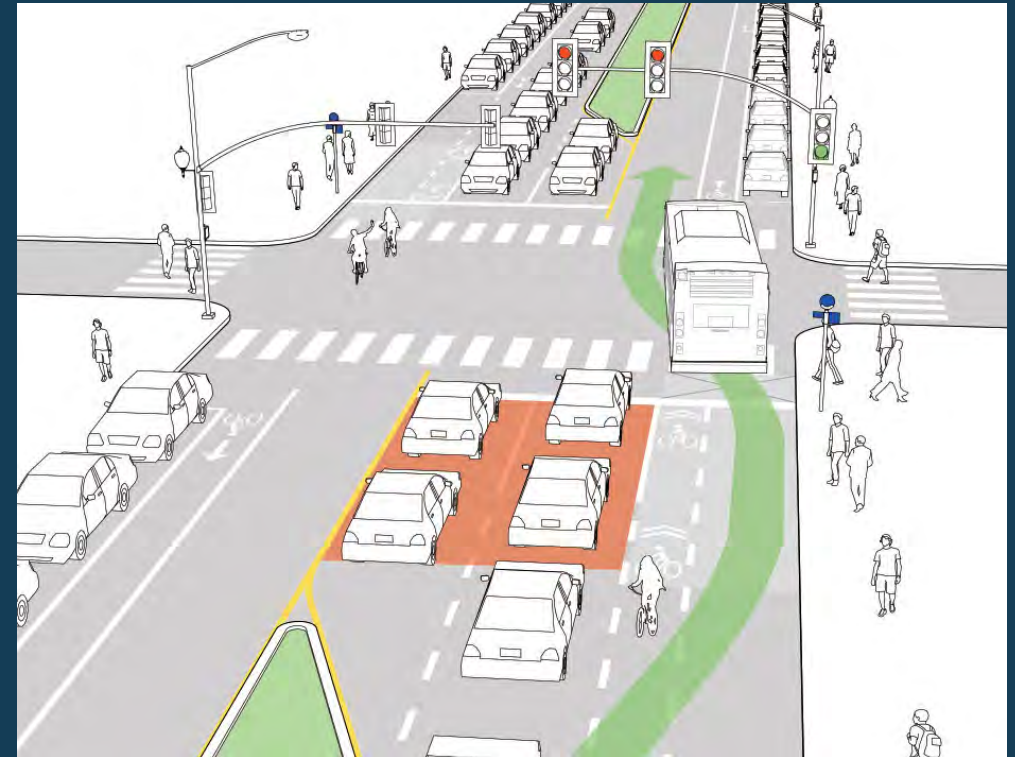
What does it look like?

- Approach lanes are right turn only (except bus) or bus-only and do not allow other vehicles to turn.

Considerations

- Appropriate signage to alert drivers

Queue jump with a transit signal phase



Source: NACTO

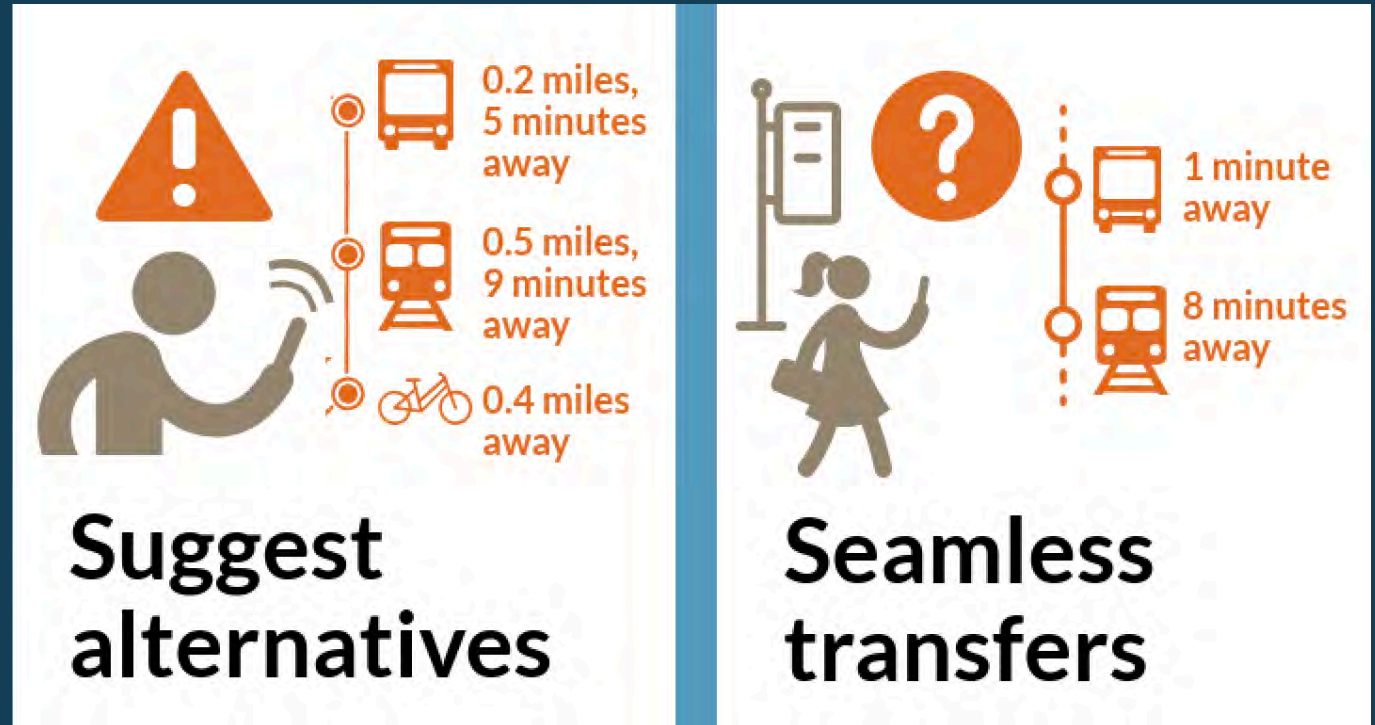
West Valley City, UT
installed queue jumps at 13 intersections and
saw bus travel times decrease by 13-22%

Discussion – Other Operations and Technology Improvements

What other improvements are of interest to you?

Examples:

- Real-time information
- Fare collection and all door boarding
- Route realignment



The image contains two panels illustrating transit improvements. The left panel, titled 'Suggest alternatives', shows a person with a smartphone receiving a warning icon and a list of three alternative routes: a bus (0.2 miles, 5 minutes away), a train (0.5 miles, 9 minutes away), and a bicycle (0.4 miles away). The right panel, titled 'Seamless transfers', shows a person at a station with a question mark icon and a list of two alternative routes: a bus (1 minute away) and a train (8 minutes away).

Suggest alternatives

Seamless transfers

Policy and Other Actions

Related steps to take that can improve speed and reliability.

Transit Priority Policies and Enforcement

1. WHY implement transit priority policies and enforcement measures?

- Policies provide guidance and standardized framework for implementation
- Enforcement to encourage change in travel behaviors and discourage violators

2. WHERE are policies most needed and when is enforcement needed?

- Set priorities for capital programming and project funding
- Provide mechanism for implementing changes to infrastructure and ROW

3. HOW do jurisdictions develop appropriate policies?

- Extensive stakeholder engagement
- Clear information
- Coordination between enforcement agencies, local jurisdictions, transit agencies
- Technology integration and staff training



Transit-Only Lane Enforcement

| Cost | Coordination |
|---------|--------------|
| \$-\$\$ | Moderate |

What is it?

Vehicles illegally parked or stopped within a dedicated transit lane have their license plate captured by a video camera on a passing bus and the registered owner receives a citation in the mail.

What are the Benefits

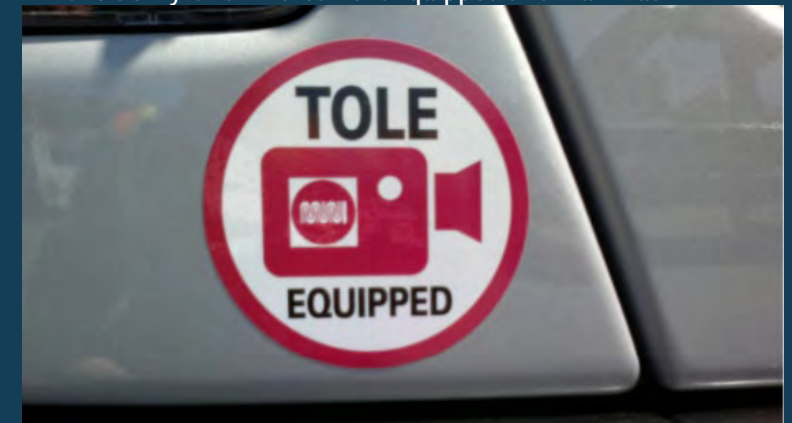
- Encourages motorist behavior change and reduction in repeat violators

Considerations

- Authorizing detection and enforcement systems and programs under state law
- Staff training and capacity to review captured violations
- Maintenance and emergency response challenges across jurisdictional boundaries

SFMTA
1-2% of people who received a TOLE citation received another citation during a 3-month period

Transit Only lane Enforcement Equipped on a Muni Bus



Source: SFMTA

SB 288 – CEQA Exemptions for Transportation Related Projects

Sept 28, 2020

Exemptions from CEQA review requirements expanded to projects that:

- Institute or increase new bus rapid transit, bus, or light rail services on public rail or highway ROW
- Designate and convert general purpose lanes, high-occupancy toll lanes, high-occupancy vehicle lanes, or highway shoulders
- Improve customer information and wayfinding or include pedestrian and bicycle facilities
- ZE vehicle fueling or charging facilities
- Reduce minimum parking requirements
- Projects over \$100K require equity analysis and community engagement



Jurisdictional Control

What controls how the ROW is used?

- Roadway table and street classification
- Special designations (modal priority) and thresholds
- (Complete) Street design guidelines
- Transit design guidelines



Land Use and Transportation Demand Management

- Residential and employment zoning
- Transit supportive density and affordability
- Parking policy and traffic operations



Local funding agreements

Peer Lessons Learned

Project Identification and Prioritization

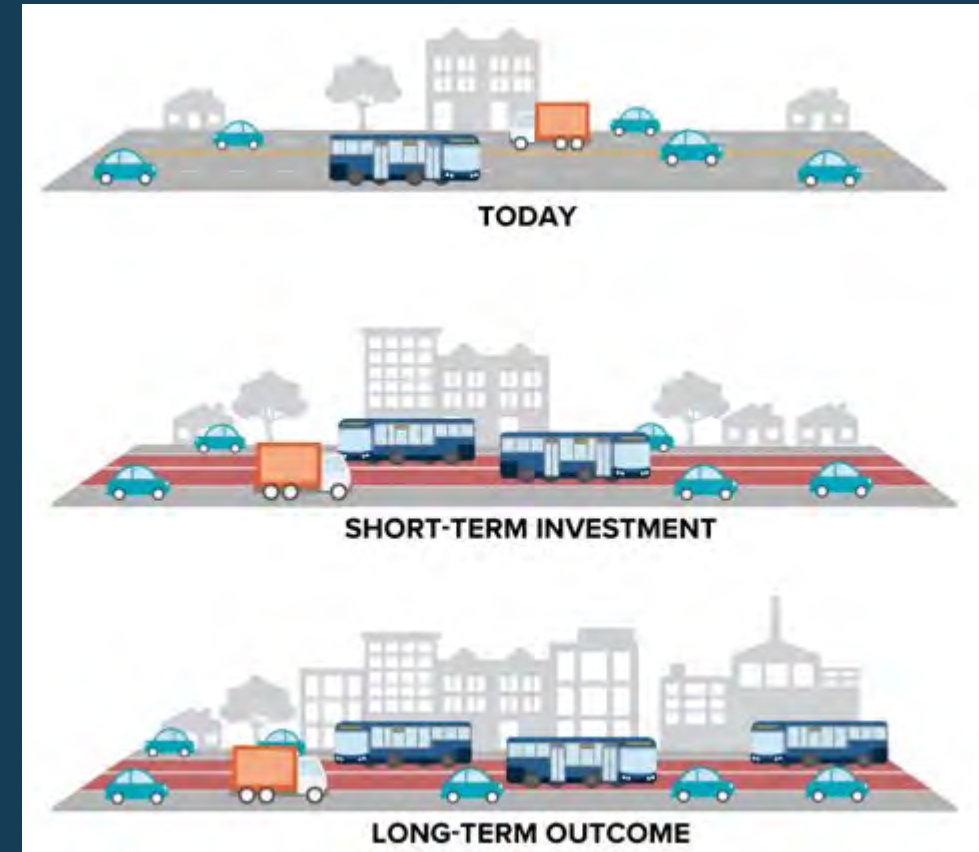
- **Strong leadership from the top** – setting transit as a priority at the top levels of government
- **Adopt a regional network plan long**-range plan that allows you to take advantage when funding opportunities arise
- **Identify KPIs and appropriate metrics** to identify priority corridors and hotspots
- **Incorporate equity and climate impacts** within capital project planning and prioritization
- **Scalable solutions** applicable across geographies and jurisdictions
- **Foster a sense of ownership**, competency and capacity with stakeholders
- **Identify complementary treatments** and/or projects promoting complete streets, station access and connectivity



Example speed and reliability hotspot analysis visualization

Project Development & Construction Coordination

- Where possible, **alleviate the burden of proof and mitigation** for local stakeholders and partners
- **Don't be afraid of the details** to break down barriers through data sharing, conflict identification and resolution
- **Develop design and procurement standards** to expedite reviews, funding, procurement, and implementation.
- **Align schedules** of transit priority with implementation of complementary infrastructure and land use changes
- **Capitalize on pilot project opportunities** and jurisdictional willingness/ability to implement to demonstrate success
- **Build the business case** and user confidence to continue investment and preserve ROW, where possible
- **Capitalize on decreased auto traffic** to pilot bus lane and transit priority during the pandemic



Example evolution of transit priority treatments and land uses

Getting Communities On Board: Explaining the Benefits

- Education and storytelling of potential benefits
- Amplify messages of success
- Innovate outreach strategies that meet potential riders where they are

Transit priority projects benefit the entire transportation system and everyone who travels through it.

A bus-only lane in downtown saves the bus time and keeps it running on schedule...



...which means the bus saves time along the entire route. People outside of downtown benefit from an on-time departure, too.



As transit travel times become more competitive with driving, more people take the bus, relieving traffic congestion across the network.



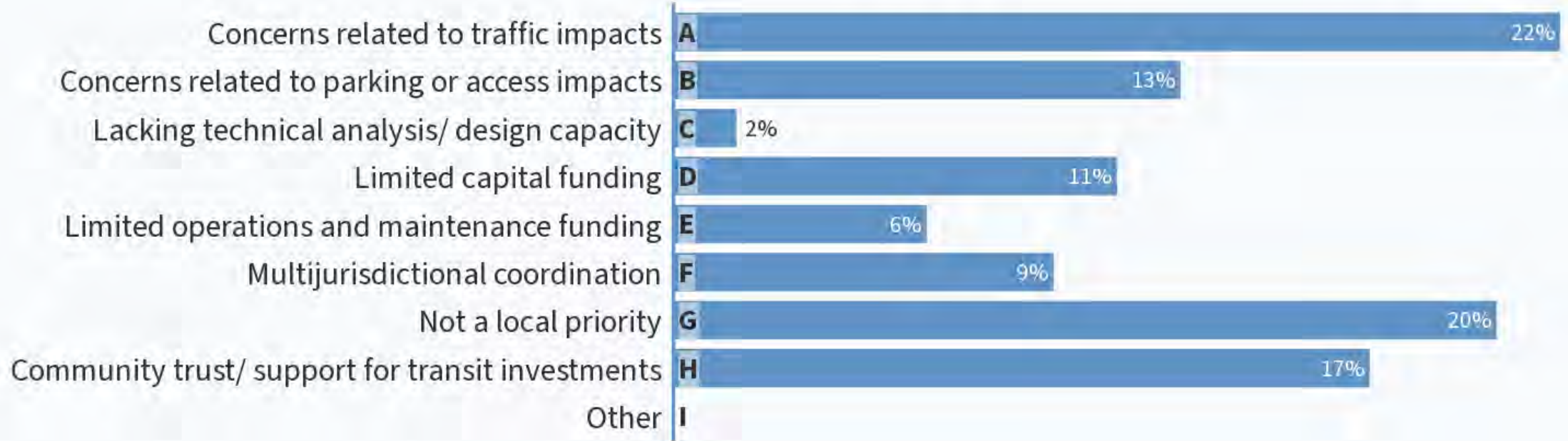
What are the most important challenges to overcome for implementing treatments in your community?

- Concerns related to traffic impacts **A**
- Concerns related to parking or access impacts **B**
- Lacking technical analysis/ design capacity **C**
- Limited capital funding **D**
- Limited operations and maintenance funding **E**
- Multijurisdictional coordination **F**
- Not a local priority **G**
- Community trust/ support for transit investments **H**
- Other **I**

Respond at pollev.com/cambridgesys310

Text **CAMBRIDGESYS310** to **22333** once to join, then **A, B, C, D, E...**

What are the most important challenges to overcome for implementing treatments in your community?



Coming Up

Existing Conditions: What We Are Reviewing

Document Sources

- *Long range transportation plans*
- *Short range transportation plans*
- *Service plans*
- *Transit plans*
- *Regional transportation plans*
- *Active transportation plans*
- *Climate plans*

Data Sources

- *Demographics – race, ethnicity, population density*
- *Land Use and Development*
- *Trip Origins & Destinations*
- *Location-Based Services Data*
- *Transit, Roadway, Bicycle, and Pedestrian Features*
 - *BRT, bus lanes, multimodal network*
- *Transit Ridership and Demand Data*
- *Traffic Data*
- *Workplace, Workforce, Building Occupancy*
- *Equity, Climate, and Environment*

Existing Conditions: Source Materials

Los Angeles

- *Metro's Recovery Task Force Final Report*
- *LADOT Strategic Plan Update 2021-2023*
- *Metro NextGen Bus Plan*
- *Metro's Long Range Transportation Plan*
- *Metro's Bus Rapid Transit Vision and Principles Study*
- *LA Metro Transit-to-Parks Strategic Plan*
- *LADOT Mobility Plan 2035*
- *Metro Active Transportation Strategic Plan*
- *LA County Climate Action Plan (mention other related plans within LA County)*
- *Metro First/last Mile Strategic Plan*
- *Metro's Bus Rapid Transit and Street Design Improvement Study*
- *SGVCOG Transit Feasibility Study FAQ Sheet*

Orange

- *OCTA OCBus360*
- *OCTA Active Report (ATP)*
- *OC Transit Vision*
- *OCTA 2018 Long Range Transportation Plan*

Riverside

- *RCTC Long Range Transportation Study*
- *Riverside County Climate Action Plan*
- *Western Riverside County Active Transportation Plan*
- *CVAG regional synchronization documentation*

Imperial

- *Imperial County Active Transportation Plan*
- *Imperial Climate Action Plan*
- *El Centro signal synchronization documentation*

San Bernardino

- *San Bernardino Pedestrian Points of Interest Plan*
- *System-wide Transit Corridor Plan for the San Bernardino Valley*
- *Omnitrans Strategic Plan*
- *San Bernardino Greenhouse Gas Reduction Plan*
- *San Bernardino County Long Range Transit Plan*

Ventura

- *VCTC Intercity Five-Year Service Plan*
- *VCTC Short Range Transit Plan*
- *VCTC FY2021 Transit Needs Assessment*
- *Ventura County Climate Protection Report*
- *TSP on Oxnard Blvd documentation*

Existing Conditions: What We Are Finding

- **Plan Review Snapshot**
 - **Strategic and Long-Range Mobility Plans** have been the most fruitful for planned TPLs and goals related to TP
 - LA Metro's Bus Rapid Transit Vision and Principles Study provides a methodology for selecting BRT corridors
 - **In Active Transportation Plans**, TPLs are mentioned in the context of ensuring bus and bike facilities are appropriately designed for safety
 - **The Climate Action Plans** do not explicitly mention TPLs but the goals of the plans are consistent with the goals of transit priority planning

- **Existing and Planned RTL corridors**
 - **Imperial County:** More research needed, plans reviewed did not include relevant information about TP
 - **Los Angeles County:** LA Metro and Culver City Bus have existing BRT / "BRT Lite" or "Mobility lanes," LA Metro has plans for 9 more BRT corridors, LADOT commits to building bus lanes in partnership with Metro
 - **Orange County:** Identified Transit Opportunity Corridors (Rapid or BRT), Studying Freeway BRT on I-5 and SR-55
 - **Riverside County:** 3 BRT projects identified in their LRTP, aligning with SCAG's HQTAs. 1 Rapid (TSP) in place
 - **San Bernardino County:** Has the sbX BRT and second line planned, plans focus on improving transit overall
 - **Ventura County:** Plans focus on improving service but do not mention TPL explicitly

Next Steps



Before TAC #2

- Individual follow-up meetings
- Committee briefings
- Finalize Best Practices Review
- Review of Existing Conditions
- Model Sensitivity Testing

TAC Meeting #2

- January 25, 2022 | 10:00–11:30am
- Preliminary Agenda
 - Review existing conditions and future forecasts
 - Discuss screening goals, criteria, methodology
 - Discuss preliminary screening universe