



DATE: July 12, 2021

TO: Transportation Authority of Marin Administration, Projects & Planning
Executive Committee

FROM: Anne Richman, Executive Director *Anne Richman*
Derek McGill, Director of Planning

SUBJECT: Update on US 101 Part Time Transit Lane Feasibility Study (Discussion)
Agenda Item No. 6

RECOMMENDATION

The Administration, Projects and Planning (APP) Executive Committee receives an update on the draft Marin County US 101 Part Time Transit Lane Feasibility study (formerly referred to as bus-on-shoulder lanes).

BACKGROUND

In June 2019, the TAM board authorized the Executive Director to enter into agreements with Caltrans to accept a \$308,000 planning grant to conduct the Marin County US 101 Part Time Transit Lane Feasibility Study and provide a local match (in-kind staff time funded by city/county fee) in the amount of \$42,000. Part-Time Transit Lanes, sometimes known as bus-on-shoulder, is a concept that has seen successfully implemented in various parts of the US, as well as piloted in California. During peak hours, public transit buses are allowed to operate on the shoulder of the highways to bypass areas of traffic congestion. Due to the part time operation and use allowed specifically for transit vehicles, Caltrans refers to bus-on-shoulder operations as part time transit lanes. This operational exception can significantly improve travel times for transit, improve transit reliability and make transit a more attractive travel option.

On April 23, 2020, the TAM Board approved a contract with Kimley-Horn to prepare the Marin County US 101 Part Time Transit Lane Feasibility Study, in the amount not to exceed \$308,000. This study would assess the feasibility of this approach on US 101 in Northern Marin County. Study area limits are approximately between Mission Avenue in San Rafael and San Marin Avenue in Novato.

DISCUSSION/ANALYSIS

Since contract award, TAM staff has formed a technical advisory committee (TAC) comprised of staff from local transit operators, local jurisdictions, Caltrans District 4 and headquarters, Metropolitan Transportation Commission (MTC), and California Highway Patrol (CHP), to help guide the development of the Feasibility Study. This TAC has supported the development and review of the Feasibility Study.

The Feasibility Study assesses the existing conditions in the corridor, and the development of a concept design and operational plan, as well as the capital costs and benefits associated with the concept. The Feasibility Study also assesses how Part Time Transit Lanes would interact and relate to other capital investments underway and planned for the corridor. The attached presentation presents the findings of the draft Feasibility Study and outlines the steps for finalizing the Study.

FISCAL IMPACTS

Not applicable at this time. The development of the Feasibility Study is funded with a Caltrans planning grant with committed local match that has already been approved by the TAM Board. Additional funding will be required to support the continued development of this concept including environmental review and subsequent design and operational phases of any Part Time Transit Lanes in the corridor.

NEXT STEPS

Staff will present the findings of the draft feasibility study to local transit operators boards and committees. Based on input received, staff will develop and present the final Feasibility Study for the TAM Board's approval.

ATTACHMENTS

Attachment A – Staff Presentation



US 101 Part-time Transit Lane Feasibility Study

TAM Board of Commissioners Meeting

July 22, 2021

Kimley-Horn
9 of 108

Agenda

- Project Overview and Process
- Pilot Project Description
- User Benefits
- Highway Systems Plan
- Project Next Steps

US 101 Part-time Transit Lane Feasibility Study

Project Overview and Process

Project Objectives

- Reduce transit travel times
- Improve transit competitiveness with automobiles
- Equitably serve low-income communities
- Reduce transit operation costs in the corridor
- Increase corridor person throughput and decrease VMT
- Determine cost effectiveness in terms of transit travel time benefits achieved, transit ridership and capital costs
- Maintain or improve CHP's enforcement ability on US 101
- Maintain or improve safe operations in the corridor



Study Purpose

- Assess the feasibility of part-time transit lanes (PTTL) on US-101 in northern Marin County
 - Determine geometric suitability
 - Develop concept plans and evaluate travel benefits
 - Determine next steps for implementation
 - Assess relationship to other ongoing US-101 projects
 - Educate the public about PTTL and receive input
 - Coordinate with CHP, Caltrans, County of Marin, Golden Gate Transit, Marin Transit, MTC, and City of Novato to help procure a successful project

Study Process

- Existing Conditions Report
- Concept Plan
- Pilot Operations Plan
- Corridor Evaluation Report
- Highway Systems Plan/Feasibility Study
- Engagement Activities
 - 2 Rounds of Outreach
 - 4 TAC Meetings
 - Leadership Team Meeting
 - Caltrans Meetings

Outreach Activities (Round 1)

- Project Website
- Informational Video (nearly 1,000 views)
- Survey (238 responses)
- All Materials in English and Spanish
- Spreading the Word
 - Press Release
 - Social Media
 - E-Blast
 - TAM Newsletter
 - Postcard
 - On-Board Poster

Working TOGETHER for a BETTER US 101
Trabajando JUNTOS para una MEJOR US 101

MARIN COUNTY 101

Would you like to ride a bus that passes by traffic in its own lane?
¿Te gustaría tomar un autobús que pasa el tráfico en su propio carril?

The Transportation Authority of Marin (TAM) is exploring where it is possible and beneficial to convert the US 101 freeway shoulder between Novato and San Rafael to a part-time transit lane for buses. Goals include shortening commute times for bus riders and making bus service more reliable.

La Autoridad de Transporte de Marin (TAM) está explorando dónde es posible y beneficioso convertir el hombro de la autopista US 101 entre Novato y San Rafael en un carril de tránsito de tiempo parcial para autobuses. Los objetivos incluyen reducir los tiempos de viaje diario para los pasajeros de autobuses y hacer que el servicio de autobús sea más confiable.

Share your ideas and comments! Visit the link below | ¡Comparte tus ideas y comentarios! Visite el enlace de abajo
www.tam.ca.gov/pttl

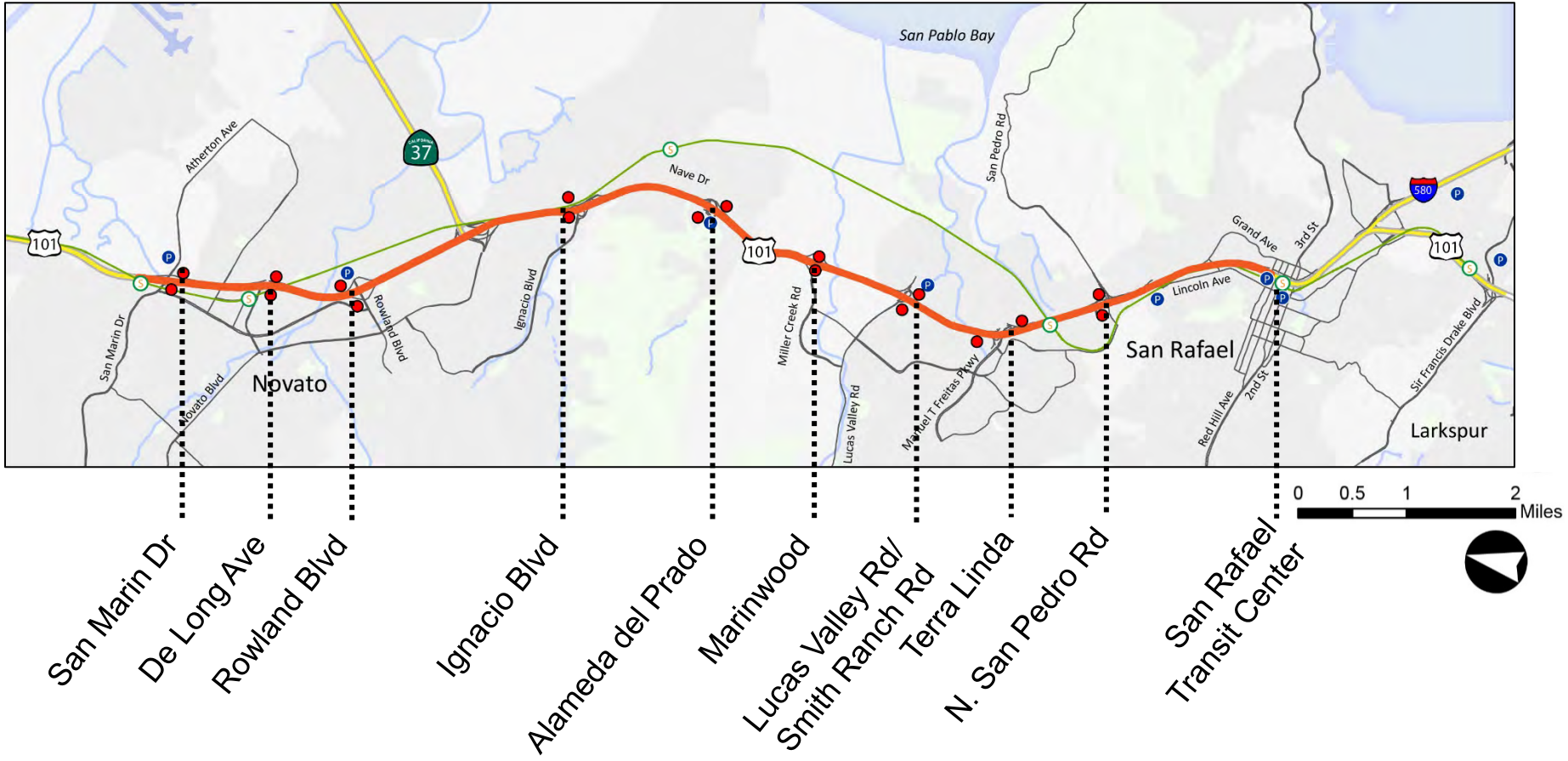
Outreach Survey Results

- “Travel time is too long” is #1 reason don't take transit to commute (27%)
- “Faster trip times” is #1 requested improvement among existing riders (25%)
- General support for the PTTL project and belief the project will help reduce commute times
- Concerns around auto use of shoulder, emergency vehicle access, minimal benefit to autos

Study Area

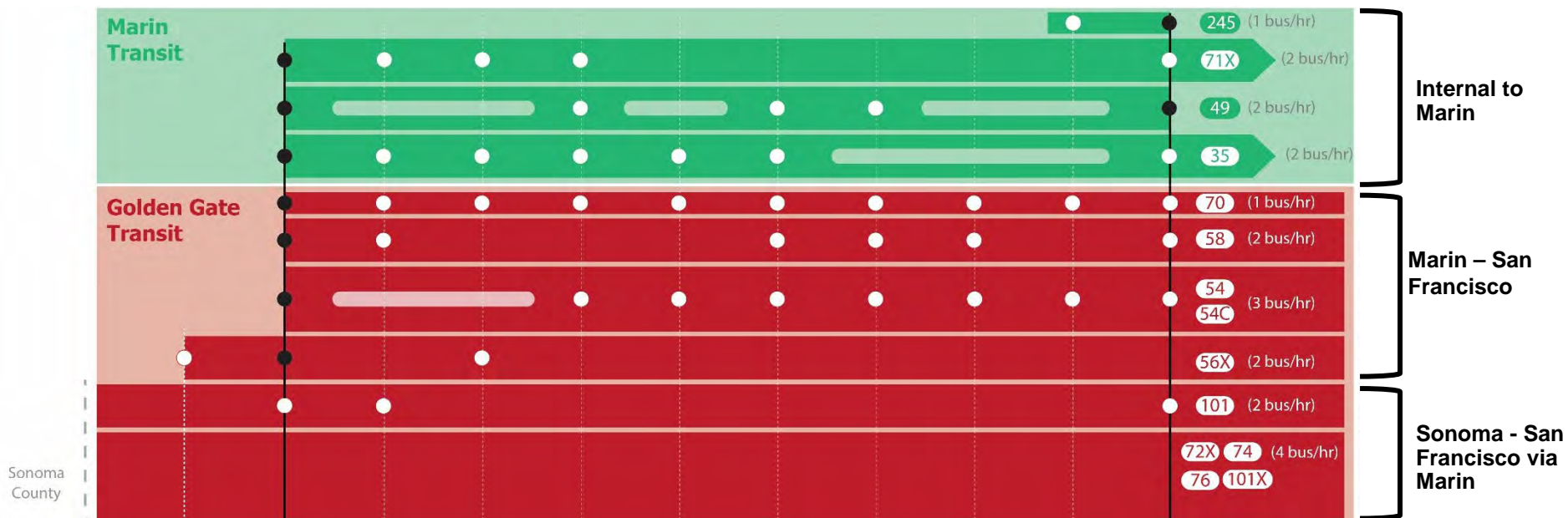
Legend

- US 101 Study Corridor
- Freeways
- Arterials
- SMART Rail Corridor
- SMART Station
- Park-and-Ride
- In-line bus stop



Existing Transit Service

- 350 transit bus trips in study corridor
- 22 buses traveling in peak direction in peak hour

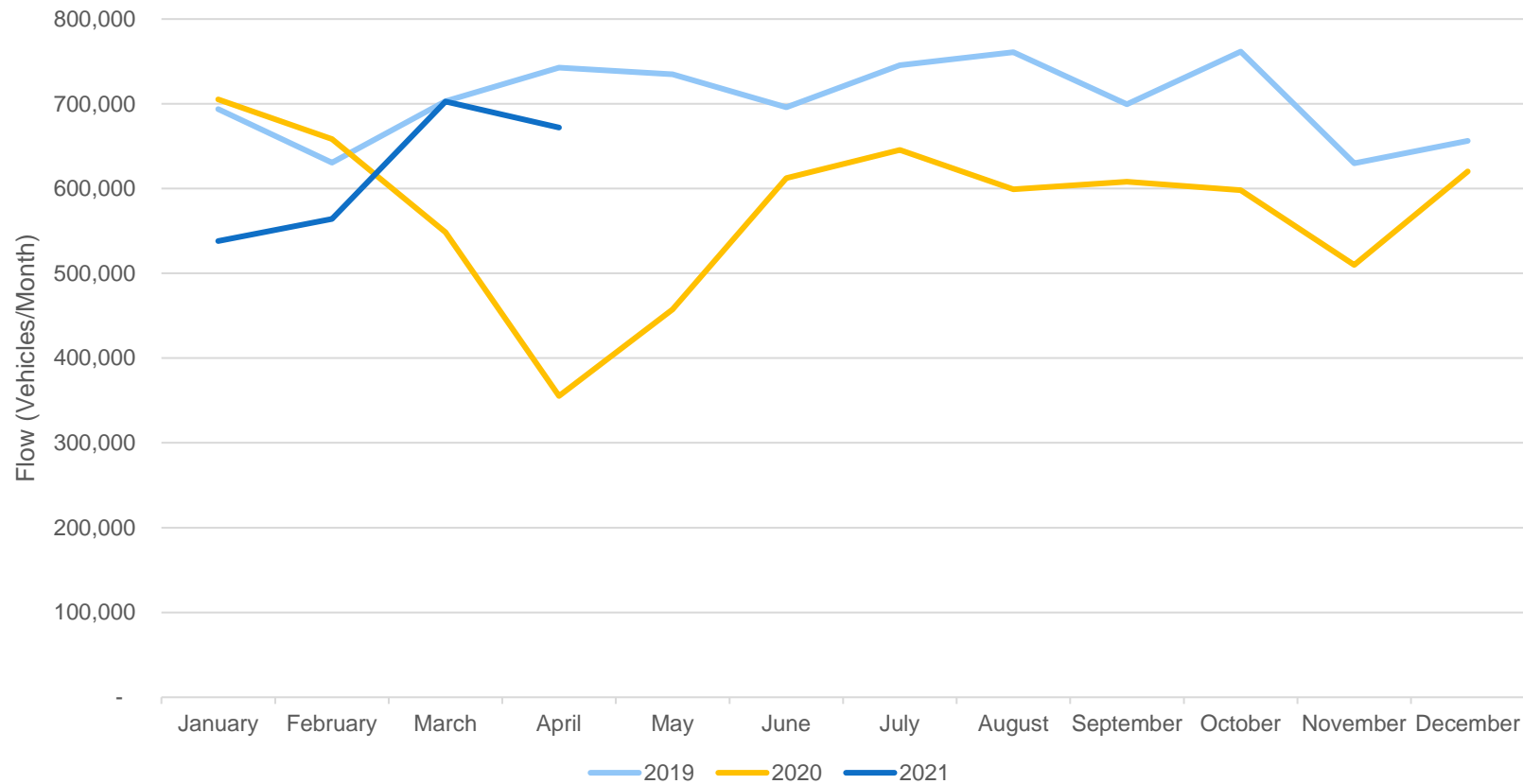


Existing Congestion

- Southbound Direction
 - Average AM delay of over 16 minutes
 - Minimal recurring PM delay
 - Congestion extends from roughly North San Pedro Road to De Long Avenue
- Northbound Direction
 - Minimal recurring AM delay
 - Average PM delay of up to 3 minutes, but generally not recurring

COVID Implications

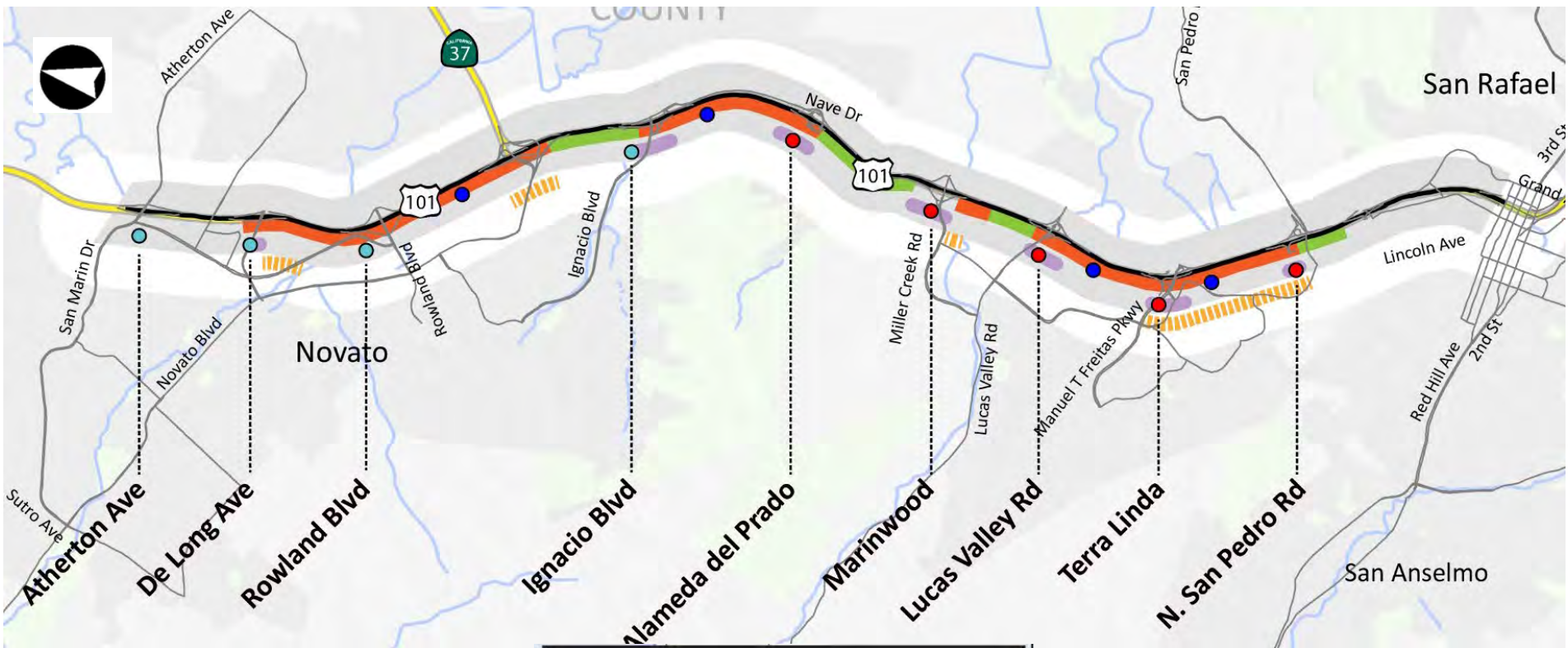
Southbound AM Weekday Traffic on US 101 at Mission Avenue (San Rafael)



US 101 Part-time Transit Lane Feasibility Study

Pilot Project Description

Concept Summary



Legend

Auxiliary Lane	Proposed CHP Pullout
Ramp/Bus Bypass	Bus Bypass on U.S. 101
Proposed PTTL	Bus Stop on Ramp
Restriping	
Freeways	
Arterials	

Operational Scenarios

- Speeds drop below 35 mph
 - Typical in AM peak period
- Buses can go up to 15 mph above traffic, not to exceed 35 mph
- Buses yield to any enforcement, construction, maintenance, incidents, or weather occupying or affecting shoulder
- Express buses may benefit during peak of the peak by using PTTL instead of congested HOV

Capital Improvements Summary

- Limited shoulder widening in some segments through restriping or limited widening within ROW
- Static signage and markings
- CHP Enforcement Areas
- Drop inlet grate modifications
- Re-paving
- *Does not modify in-line station locations or access*
- Total cost of improvements (2021\$): \$6 - \$7M



Operating Costs and Savings

- Ongoing PTTL operating costs include:
 - Operator training
 - PTTL maintenance (debris removal)
 - Freeway Service Patrol
 - Enforcement
- Reduced travel times could provide \$100k - \$200k annually in savings for transit operators
 - Savings from improved on-time performance, additional service, or reduced costs from operations
 - Savings could be larger in the future as operating costs continue to escalate

US 101 Part-time Transit Lane Feasibility Study

User Benefits

Ridership and VMT Benefits

- 6 - 8% increase in southbound ridership from reduction in average travel times for local buses
- Reduction of 196,000 – 265,000 annual VMT
 - Very conservative estimate based on only in-corridor trip length and only including AM peak benefits
- Doesn't account for anticipated congestion growth in corridor

Array of Benefits

- Environment
 - VMT and GHG reductions can serve as mitigation to climate change impacts
- Transit Operations
 - Opportunity to make schedules more efficient and for operator to provide more service for the same cost
 - Regional bus services may also benefit by using PTTL during peak of the peak
- Users
 - Improved reliability
 - Local bus making all stops becomes competitive with auto
- Opportunity to serve as a key component of post-COVID transit recovery strategies
 - Consistent with MTC Blue Ribbon Task Force identification of transit priority treatments to spur transit recovery

Equity Benefits

- PTTL have the potential to provide greater proportional benefits to services with a higher propensity of use by historically disadvantaged communities

Characteristic	Internal to Marin (MT 35, 49, 71X, 245)	Marin – San Francisco (GGT 38, 54, 54C, 56X, 58, 70)	Sonoma – SF, via Marin (GGT 72X, 74, 76, 101, 101X)	Marin County General Population
Minority %	80%	32%	31%	29%
Household Income <\$50K	46%	19%	22%	20%
Language other than English spoken at home	45%	9%	15%	23%
Daily average travel time savings for routes (minutes)	68.9	38.1	19.4	-

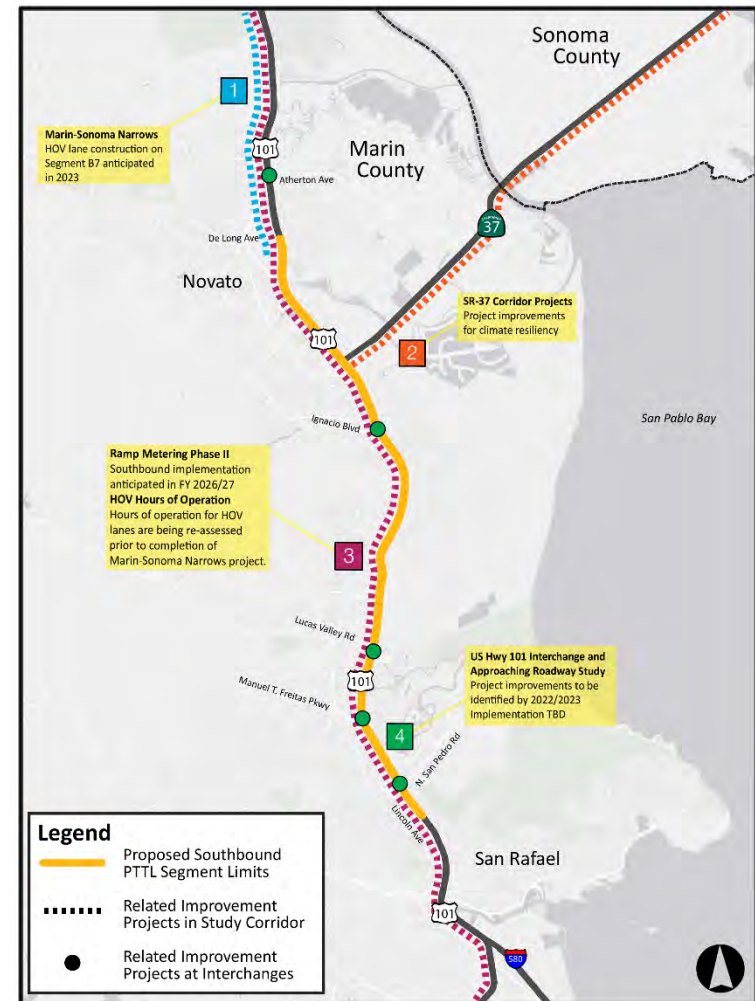
Source: MTC On-board surveys, 2017-2018; U.S. Census Factfinder, 2019

US 101 Part-time Transit Lane Feasibility Study

Highway Systems Plan and Feasibility Study

Coordination with Planned Improvements

- Key projects happening in the study area
 - Marin-Sonoma Narrows
 - HOV Hours of Operations
 - Ramp Metering Phases I and II
 - Highway 101 Interchange and Approaching Roadway Study
 - SR-37 Corridor Projects



Systems Plan

- Several projects **improve inter-regional trip flow**, mainline operations for autos, and transit operations
- **PTTL is a critical component to enhance transit efficiency and desirability**, particularly for intra-regional travel and as a post-COVID transit recovery strategy
- **PTTL provides equity benefits** as part of comprehensive suite of corridor improvements
- Piloting PTTL will allow for assessment of benefits and trade-offs and understanding, if it is maintained, **how to best integrate with related corridor projects and maximize the existing system**

Project Next Steps

Current Phase Next Steps

- Release Draft Feasibility Study
- Public Outreach Activities
- Continued Coordination with Local Agency Partners
- Board Presentations
 - GGBHTD, Marin Transit, TAM

Subsequent Phase Efforts

- Identify grant programs and other funding sources
- Implementation process and approach driven by feedback received from stakeholder agencies
 - Prepare detailed safety analysis and performance monitoring plan
- Determine Caltrans and environmental clearance process (may be able to leverage SB288), advance design, and refine capital cost estimates
- Develop Concept of Operations and refine operating costs
- Monitor San Diego I-805 implementation to stay abreast of lessons learned

Legal/Statute Coordination

- California Vehicle Code does not allow for enforcement of PTTL for public transit buses only
- Monitor active legislation
 - Assembly Bill (No. 476) is at the California Legislature and may be considered next year
 - Would establish a statewide pilot program for PTTL implementations
- Align with future Caltrans design guidance on PTTL

Q&A