BUS ON SHOULDER

FREQUENTLY ASKED QUESTIONS

1. What is Bus on Shoulder?

The three-year part-time Transit Only Lane Demonstration Project allows for South Bay *Rapid* buses (Route 225), operated by specially trained drivers and equipped with innovative technology, to perform Bus on Shoulder (BOS) operations along I-805 and SR 94 between Downtown San Diego and National City. South Bay *Rapid* buses can operate on freeway shoulders during heavy traffic congestion, helping bus drivers to bypass slow traffic.

2. What is the project timeline?

The demonstration period is anticipated to start summer 2022 and will operate for three years. Once completed, the project team will assess the project, review key data and feedback from riders, commuters, bus drivers, and other stakeholders.

Legend:
- Bus on Outside Shoulder
- Bus on Inside Shoulder
- Auxilliary Lane
- South Bay *Rapid* Route
- Ramp Transit Bypass

3. What will commuters see when they drive in the BOS project area?

Drivers and passengers will see "MTS BUSES ONLY" pavement markings as well as "BUS LANE VIOLATION" freeway signs, and during periods of traffic could see buses merging in and out of the shoulder. At select freeway ramps, drivers will be alerted by "Bus Merging" stop lights and may need to wait up to 15 seconds to allow the bus to pass safely through the shoulder at the bottom of the freeway ramp entrance.

4. How does this project help SANDAG and Caltrans meet our state and regional transportation goals?

The project aligns closely with the California Transportation Plan 2050, the Climate Action Plan for Transportation Infrastructure (CAPTI), and SANDAG's 2021 Regional Plan, which will modernize the San Diego region's transportation system, so it is accessible for everyone, safer, and more sustainable. These strategies reimagine how our region will grow and how people will get around. BOS will help connect users, transportation service providers, and smart infrastructure for seamless multimodal travel.

SANDAG | Caltrans | MTS | U.S. Department of Transportation Federal Transit Administration

5. When did construction begin and what improvements were made?
In fall 2020, construction crews began making modifications to freeway ramps and shoulders on I-805 and SR 94. Crews installed new regulatory signs, driver information blank-out signs, and connected vehicle technology at ramps and interchanges. Crews also repaved sections of the shoulders and added striping and pavement markings along the route on I-805 and SR 94. Construction was completed in spring 2022.

6. When can buses operate on the freeway shoulder?
BOS operations will be limited to weekdays from 5 to 9 a.m. in the northbound I-805 and westbound SR 94 directions, and from 3 to 7 p.m. only on the eastbound SR 94 to southbound I-805 connector. Bus drivers can only enter the shoulder if travel lanes are operating under 35 miles per hour (mph) and will not exceed a maximum speed of 35 mph. No shoulder operations will take place when the pavement is wet or during inclement weather.

7. How do bus drivers decide when to enter the shoulder? What if there is debris or a stopped vehicle in the shoulder?
Bus operators have received specialized training on the technology used on the South Bay *Rapid* buses and in the surrounding infrastructure. Their training helps them determine when traffic and roadway conditions are safe to enter the shoulder or re-enter the general purpose lanes as needed. Other Bus on Shoulder programs, without the advanced technology this pilot project uses, have been operating safely in other cities for many years.

Caltrans is dedicated to ensuring the freeway shoulders remain clear of debris for South Bay *Rapid* use. However, in the event the shoulder becomes obstructed, buses using the shoulder will re-enter general purpose lanes. The on-board technology will alert drivers to any upcoming obstacles, law enforcement or emergency vehicles, or stalled or stopped vehicles in the shoulder.

8. Is it okay for other buses or vehicles to drive on the shoulder?
Driving on shoulders is only permitted for South Bay *Rapid* buses, with specially trained drivers during the three-year demonstration period, and emergency vehicles. South Bay *Rapid* buses are equipped with the driver assistance technology necessary to safely navigate between the freeway lanes and the shoulders. Drivers who drive in shoulders may be subject to bus lane violation fees which are a minimum of $401.

9. Can law enforcement or drivers who need to pull over still use the shoulder?
Yes. Shoulders will always remain available for law enforcement, emergencies, and incident management. Buses using the shoulder will re-enter general purpose lanes when drivers are alerted to upcoming enforcement or emergency vehicles, stalled or stopped vehicles, or other obstructions in the shoulder.
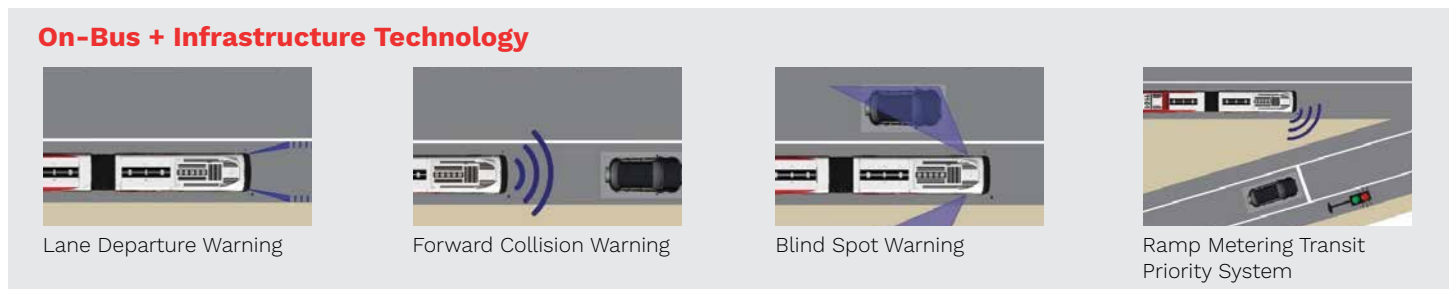
10. What safety measures are in place for the BOS project?
Safety is our first priority! Strategic planning, innovative technology, and extensive driver training ensure that South Bay *Rapid* buses will be able to safely operate on specific segments of the freeway shoulder. The buses are equipped with driver assistance technology and receive alerts from the bus sensors and connected vehicle technology on the ramps.

Commuters will also play a role in everyone's safety by remembering to NEVER follow the bus into the shoulder, follow directions on new freeway signs and pavement markings, and remain alert for on-ramp "Bus Merging" stop lights. Similar Bus on Shoulder projects have operated safely in many other cities with buses traveling at controlled speeds in the shoulder, while bypassing slower or stand-still traffic.

11. What type of technology will be used on the buses and roads?

This project is the San Diego region's first use of transit vehicle-to-infrastructure technology. Sensors embedded on these buses provide audio and visual alerts to the drivers regarding lane position and potential conflicts between the *Rapid* buses, other vehicles, or obstructions along the corridor and shoulder. Freeway on-ramp stop lights alert drivers of "Bus Merging" and give the bus up to 15 seconds to pass safely.

On-Bus + Infrastructure Technology

Lane Departure Warning

Forward Collision Warning

Blind Spot Warning

Ramp Metering Transit Priority System

12. What happens after the demonstration period is over?

After the project's three-year demonstration period, the freeway shoulders will be restored to prior condition and buses will no longer operate on the shoulders along this route. Detailed performance monitoring will document on-time performance data, travel speeds, technology use, enforcement issues, and rider/driver perceptions of the service. Participating agencies will use this data when planning future projects that include vehicle-to-infrastructure technology.
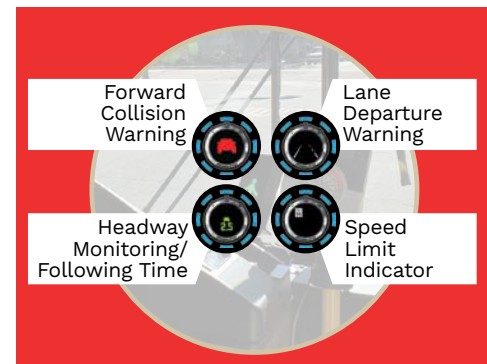
13. Will similar BOS projects be implemented in San Diego County?

The three-year demonstration period will provide valuable data and feedback from riders, commuters, bus drivers, and other stakeholders in the community. These factors will help guide discussions about potential policy considerations to support future bus on shoulder operations in San Diego County and throughout the state.

14. How much does the project cost and how is it funded?

The project is funded by the Federal Transit Administration and *TransNet*, a regional voter approved half-cent sales tax for local transportation projects administered by SANDAG. The overall cost for the three-year project is approximately $30.9 million. The budget includes $17 million for new South Bay *Rapid* buses, costs for the vehicle-to-infrastructure technology, highway modifications, construction, and support costs for planning and design engineering.

15. What agencies are involved with the project?

The project is a partnership among San Diego Association of Governments (SANDAG), California Department of Transportation District 11 (Caltrans), San Diego Metropolitan Transit System (MTS), Federal Transit Administration (FTA), and the U.S. Department of Transportation Federal Highway Administration (FHWA).

16. Where can I get more information on the project?

There are multiple ways to receive project information:

> **VISIT** BusOnShoulder.SANDAG.org or BusOnShoulder.SANDAG.org/espanol
> and click the link to sign up for email notifications

> **FOLLOW** SANDAG, Caltrans and MTS on social media

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