

US 50 / Ponderosa Road Interchange Improvements



Project Website: <https://www.eldoradocounty.ca.gov/Land-Use/County-Projects/Road-Transportation-Projects/U.S.-50Ponderosa-Rd.So.-Shingle-Rd.-Interchange-Improvement>

Public Meeting
March 19, 2025



Agenda

Introductions

Project History and Background

Current Status

Environmental

Project Features

Traffic Analysis and Operations

Roundabouts

Next Steps



Introductions



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County of El Dorado



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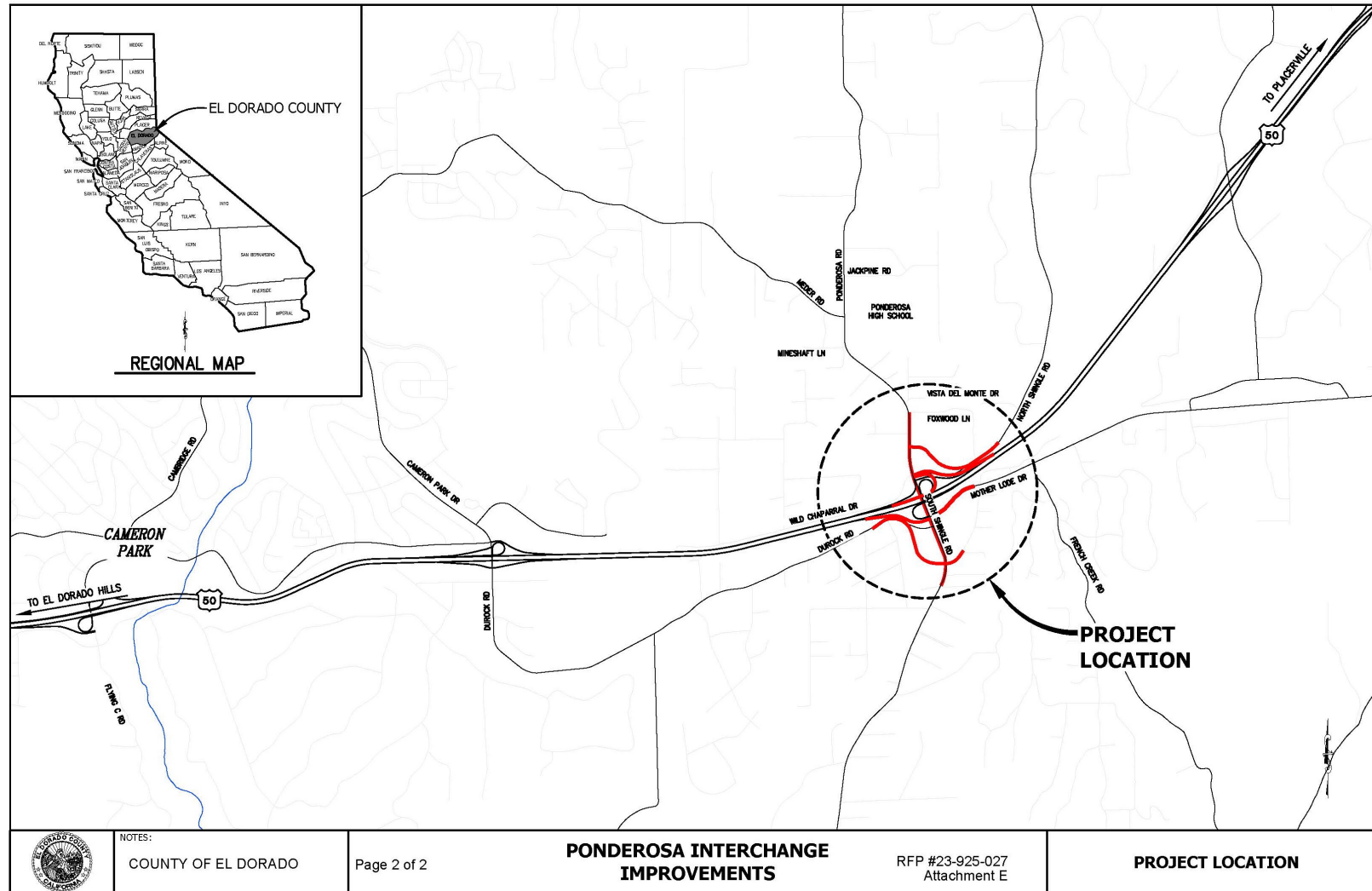


David Stanek
Traffic Consultant
Fehr & Peers



Project History and Background

Project Vicinity Map



Project History and Background

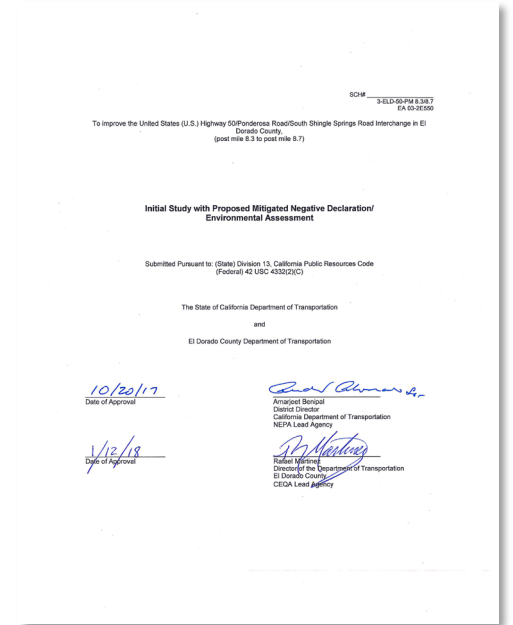
Purpose and Need Statement

Need:

- Increased local and interregional travel has deteriorated traffic within the interchange
- The eastbound off-ramp currently experience LOS E conditions in the PM peak hour
- Several of the local road intersections within the interchange operate at LOS D
- Intersections and ramps are forecasted to operate at LOS F by 2035
- The existing facility does not provide adequate bicycle and pedestrian access
- The facility is not Americans with Disabilities Act (ADA) compliant and is not consistent with the El Dorado County Bicycle Master Plan

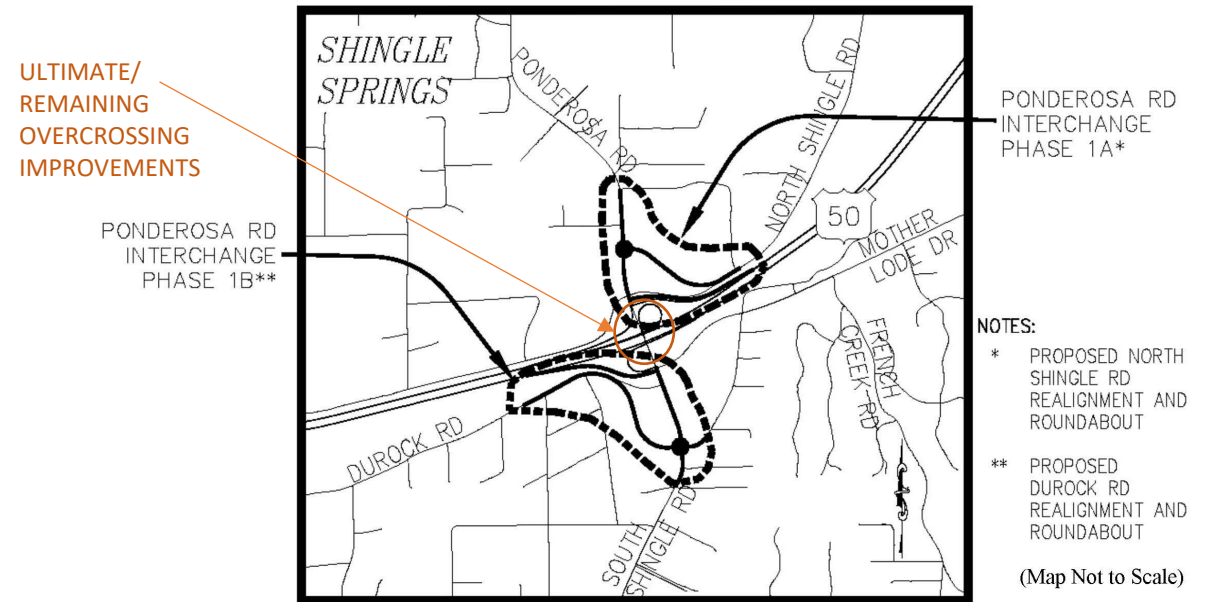
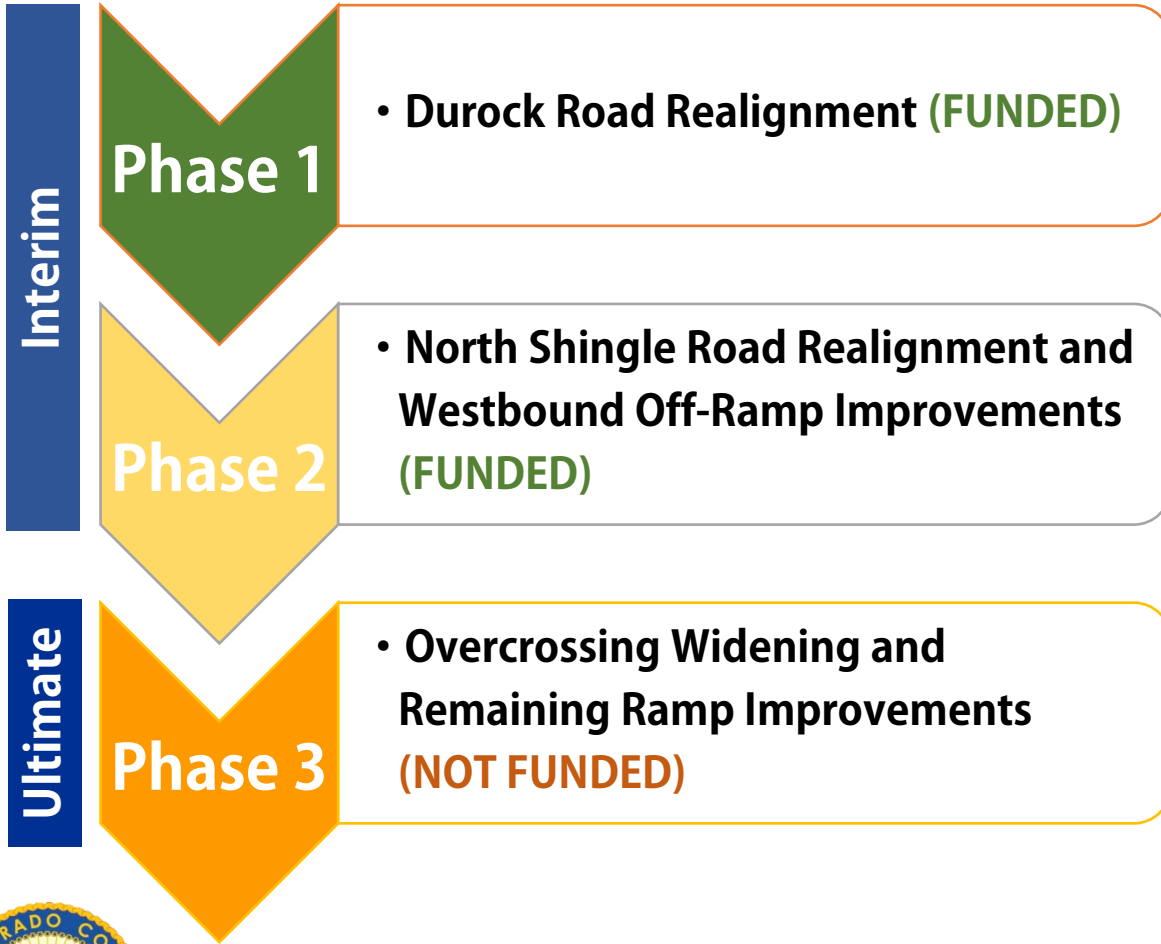
Purpose:

- The project will:
 - improve existing conditions for the ramp intersections and local roadway intersections adjacent to the interchange,
 - maintain acceptable LOS on US-50 and at existing access points to and from US-50 through the design year,
 - improve multimodal mobility within and through the interchange, and
 - enhance safety and operational improvements.



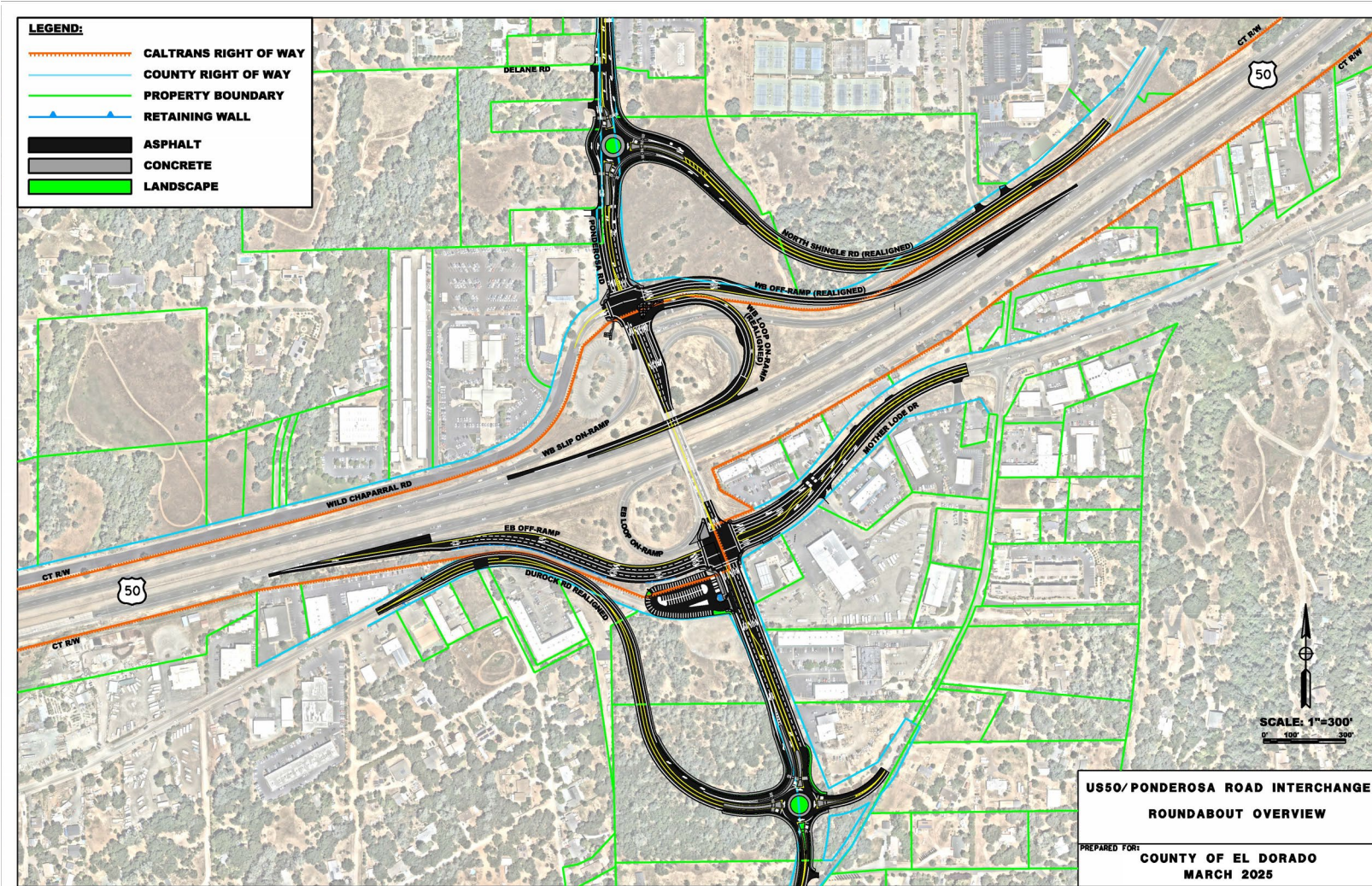
Project History and Background

Project Phasing



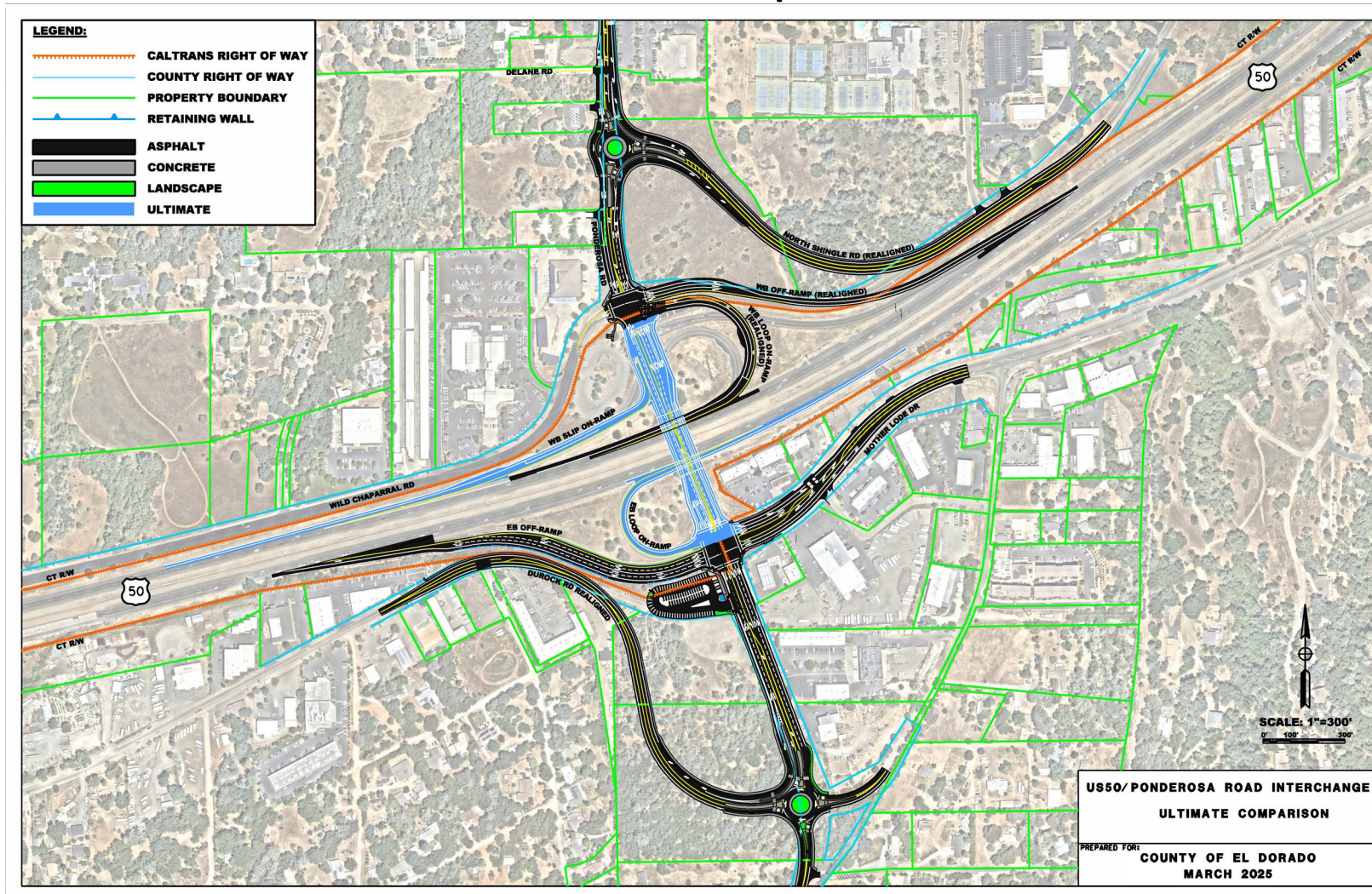
Project History and Background

Interim Phase Improvements



Project History and Background

Ultimate Phase Improvements



Project History and Background

Preliminary Engineering

- Alternatives Analysis & Workshops - 2008
- Technical & Environmental Studies, Reports & Coordination – 2008 thru 2020

CEQA IS/MND

- Approved in February 2020

Project Study Report/Project Report

- Approved in November 2022
- Evaluated three (3) alternatives
- Costs ranged from \$23 million - \$34 million







Project History and Background

PSR Design Elements

- Alternatives Considered but Rejected
 - Wild Chaparral Realignment (Alternative 2)
 - Environmental Impacts, ROW Impacts, Operational Concerns, Park-n-Ride Access
 - Roundabout Alternatives at Ramps
 - *Refined thru Further Studies (Traffic Studies, ICE)
 - Environmental Impacts, ROW Impacts, Operational Concerns/ Multi-Lane Roundabouts & Peak Hour Impacts
- Avoidance Minimization Goals
 - Refine Design Features to avoid/minimize Environmental & ROW Impacts
- Operational & Safety Goals
 - Improve Traffic (LOS, etc.) Operation through peak hours
 - Improve operation and safety for all transportation users (including vehicles, bicycles, pedestrians)
 - Long-term Considerations (Interim & Ultimate Configurations)
 - Continuity with Surroundings



Current Status

- ☒ >>  Environmental Technical Studies
- ☒ >>  Traffic Operations and Analysis
- ☐ >>  Preliminary Engineering Design (30%)
- ☐ >>  Environmental Document



Environmental

- Environmental Technical Studies
 - Started in 2008, updated in 2015, and approved in 2025 by Caltrans
 - Community Impact Assessment Addendum
 - Hazardous Waste Initial Site Assessment Addendum
 - Natural Environment Study Amendment
 - Historic Property Survey Report/Archaeological Survey Report – On-going consultation with the Shingle Springs Band of Miwok Indians
 - Section 7 Consultation/Biological Opinion Update
 - Air Quality Technical Report Addendum
 - Noise Study Report Addendum
 - Visual Impact Assessment Update

U.S. 50/PONDEROSA ROAD/SOUTH SHINGLE SPRINGS ROAD INTERCHANGE IMPROVEMENTS PROJECT

EL DORADO COUNTY, CALIFORNIA
DISTRICT 3 – ELD – 50 (PM 8.3/8.7)
EA 03-2E550

Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment with Finding of No Significant Impact



Prepared by the State of California Department of Transportation and El Dorado County Department of Transportation

The environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327.



January 2018



Environmental

- Environmental Clearance – On-going
 - CEQA - Complete
 - Technical Studies Approved by Caltrans January 2025
 - CEQA IS/MND Adopted by the County in March 2020 (Build Alternative 1)
 - **Available for Public Review on County Website**
 - NEPA - Underway
 - Technical Studies Approved by Caltrans January 2025
 - Currently preparing the NEPA Environmental Assessment
 - Anticipated NEPA approval July 2025



Project Features



Bicycle & Pedestrian Facilities



Park and Ride Lots



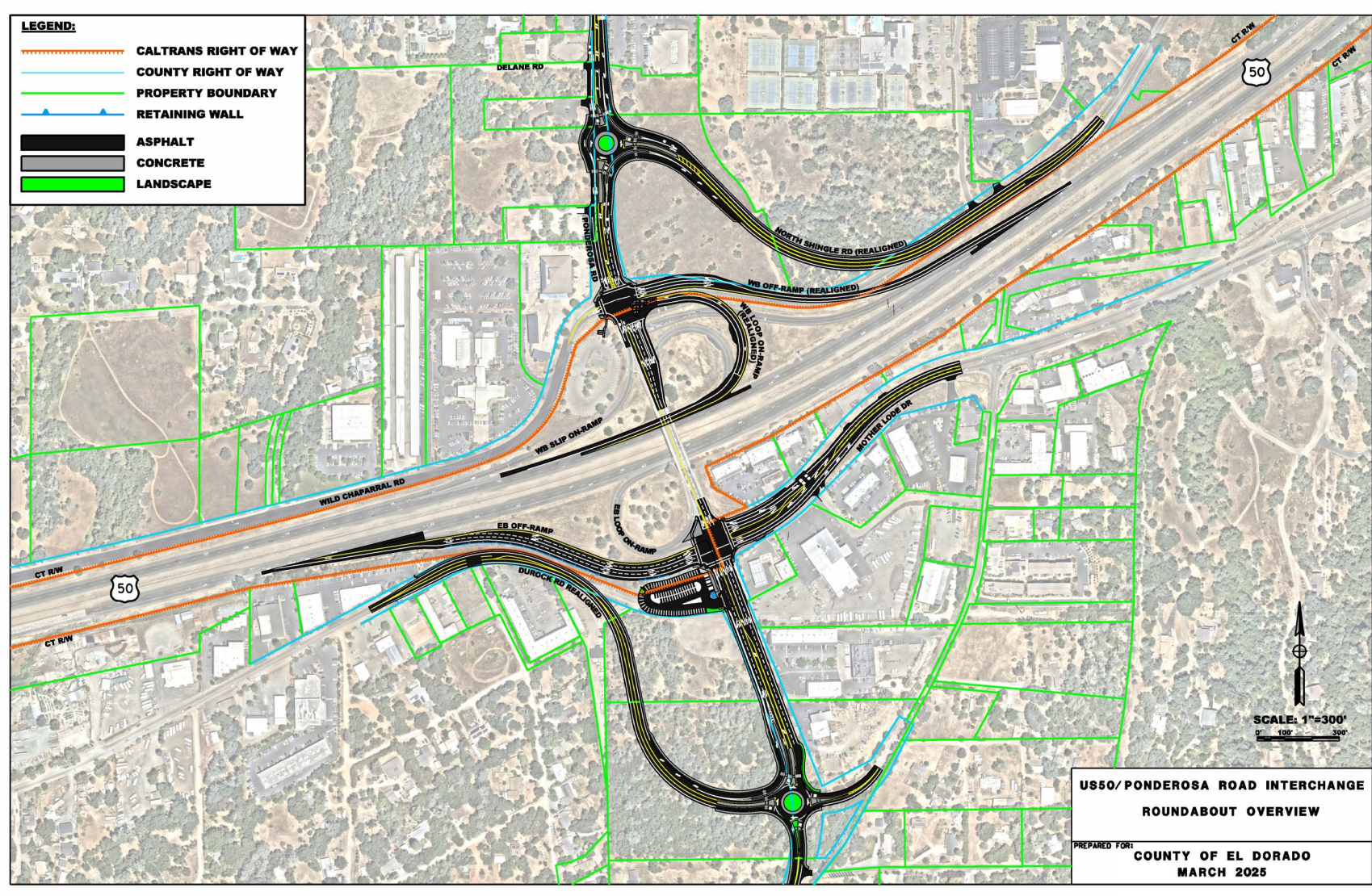
Traffic Operations & Analysis



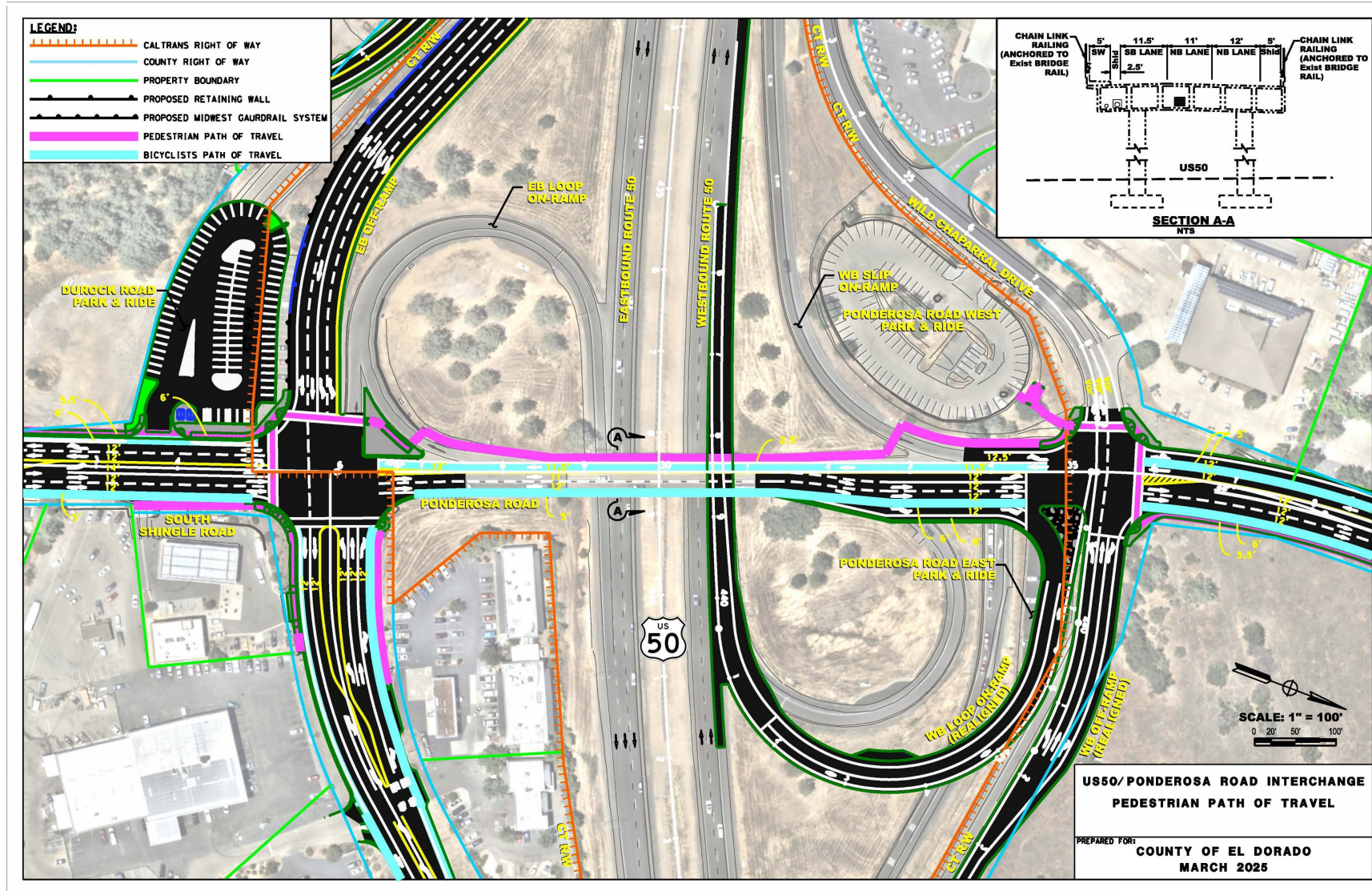
Roundabouts



Project Features - Overview



Project Features– Bicycle & Pedestrian Facilities



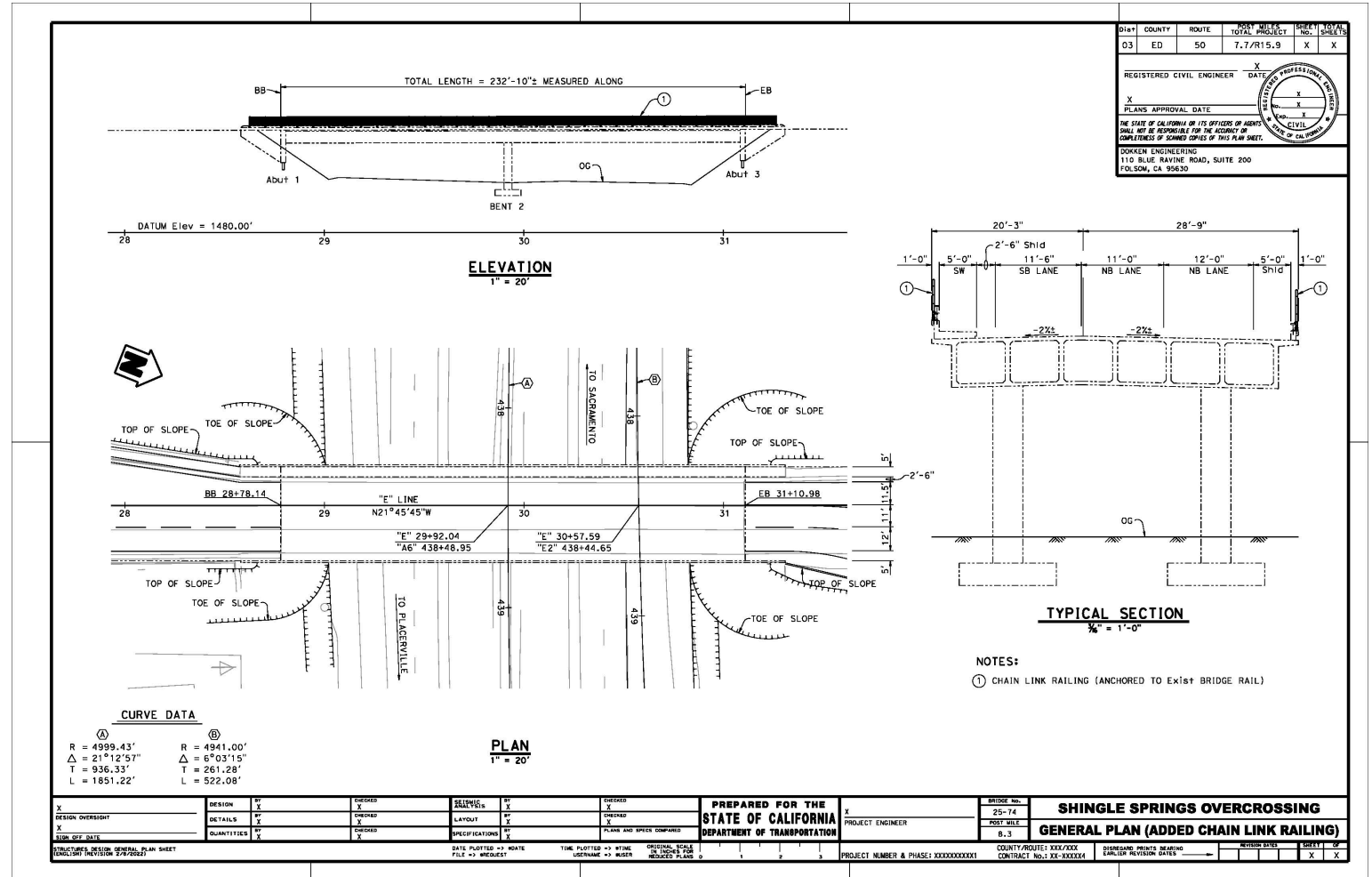
Project Features– Bicycle & Pedestrian Facilities



US 50/Ponderosa Road Interchange Improvements

Project Features - Overcrossing

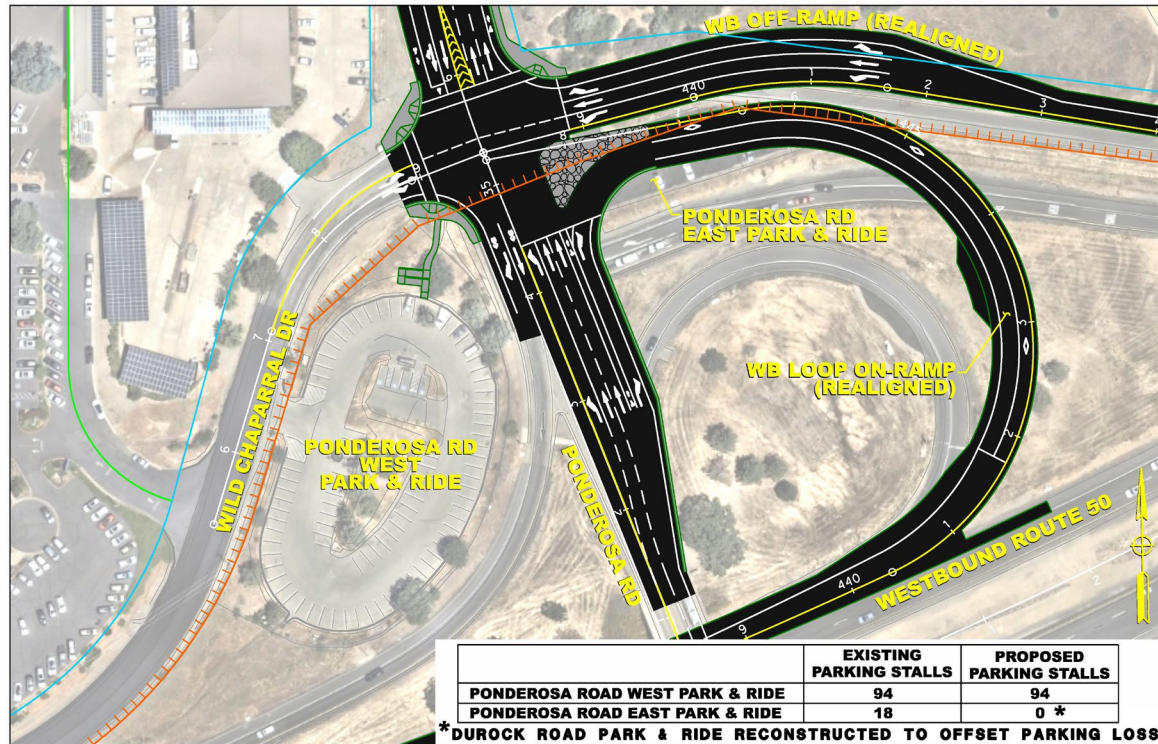
Interim Improvements – Bicycle and Pedestrian Facilities



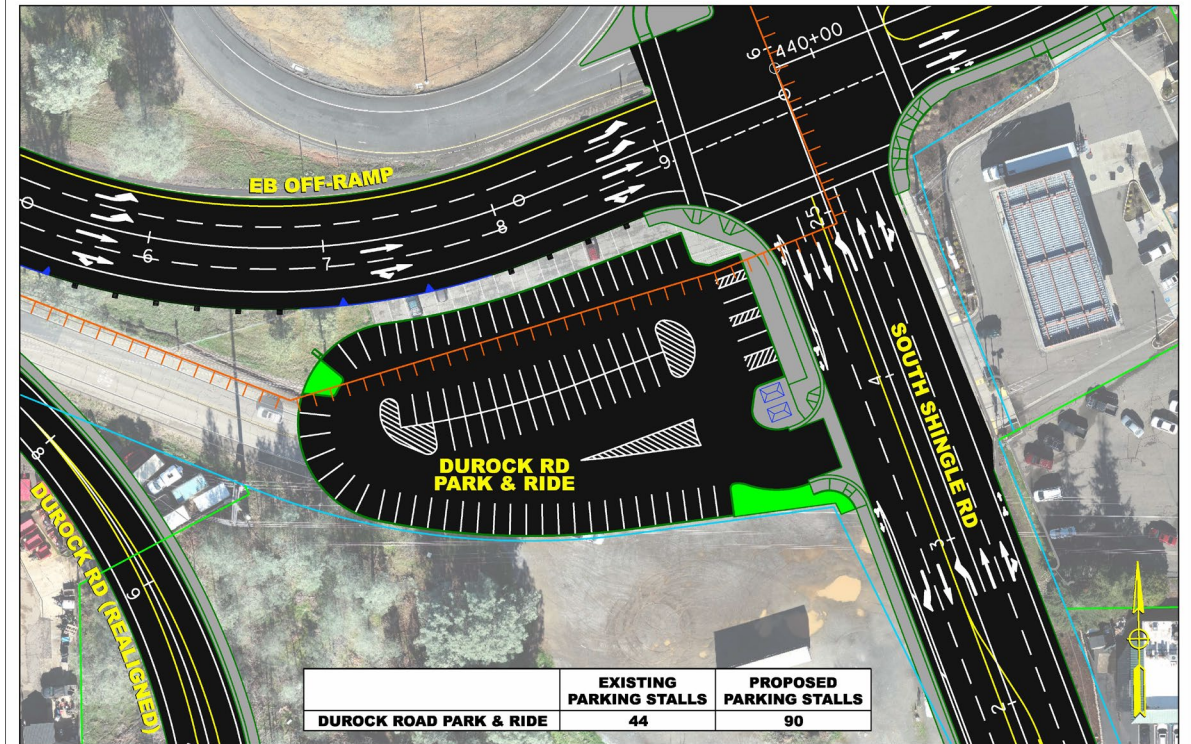
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Project Features– Park & Ride Lots



Ponderosa West Park and Ride Lot

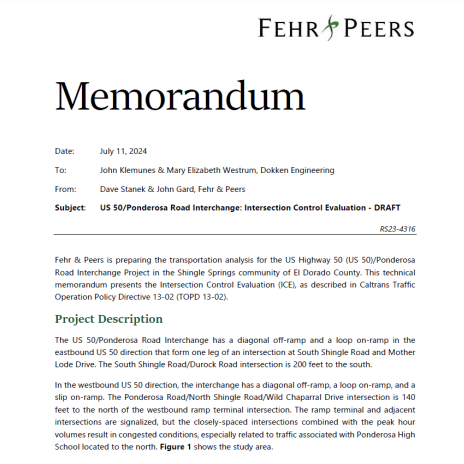
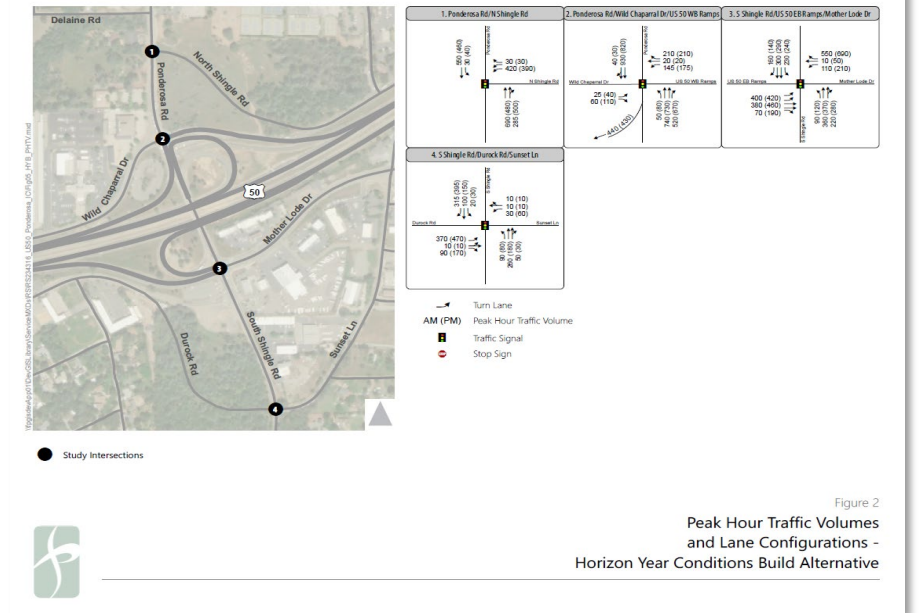


Durock Road Park and Ride Lot



Traffic Analysis and Operations

- Intersection Control Evaluation (ICE)
 - Required Study Update
 - Existing & Proposed Volumes (including Peak Hour)
 - Consideration of Vehicles, Bicycles, Pedestrians
 - Signalized & Roundabout Alternatives Considered
 - Interim & Ultimate Volumes Analyzed
- Roundabouts (RAB) at Roads
 - Best Performing (operation, safety, etc.)
 - Ideal Geometry & Configuration
 - Continuity with Surroundings (i.e. pedestrian safety, bicycles, etc.)

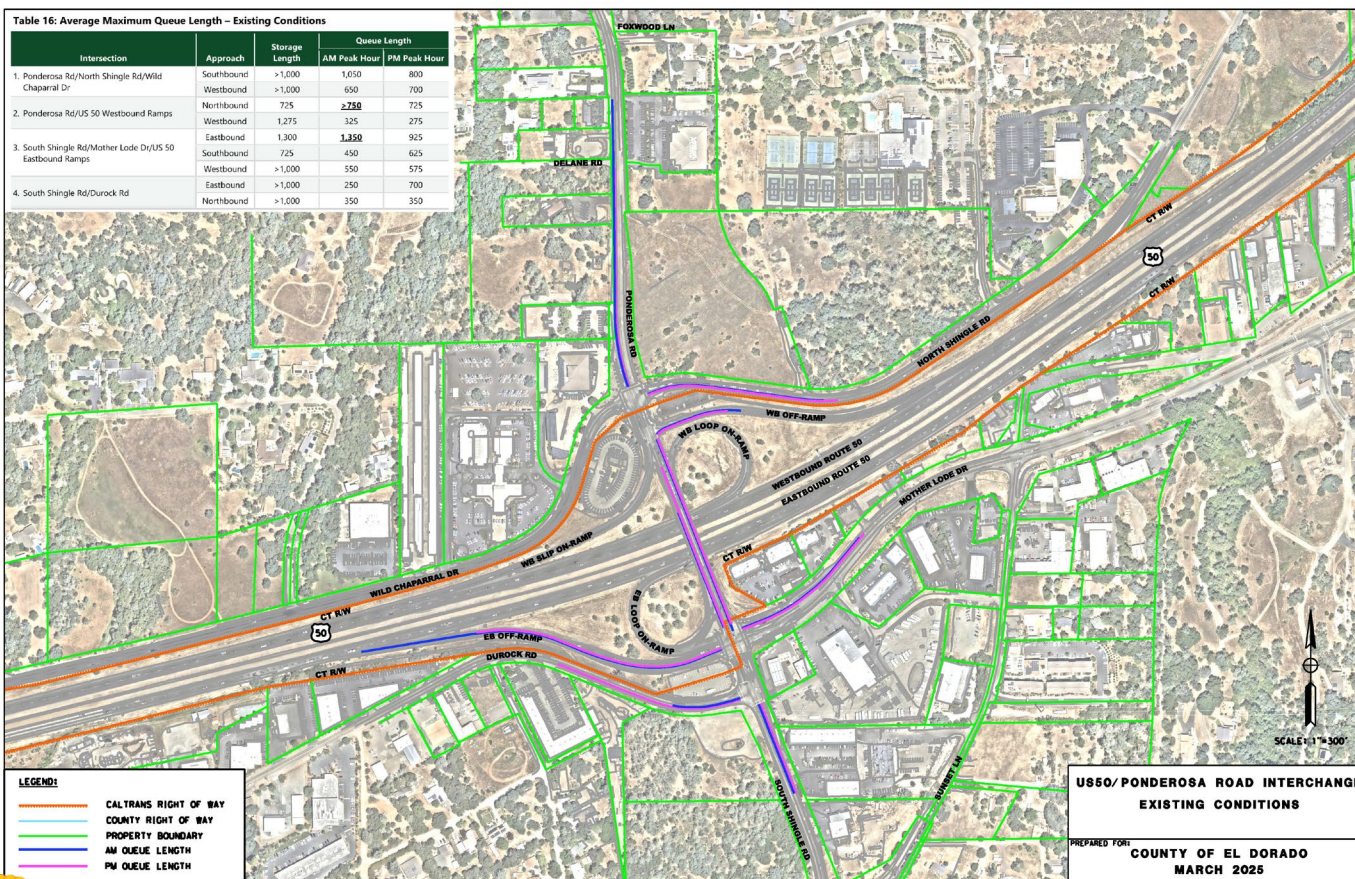


Traffic Analysis and Operations

Existing Conditions

Table 16: Average Maximum Queue Length – Existing Conditions

| Intersection | Approach | Storage Length | Queue Length AM Peak Hour | Queue Length PM Peak Hour |
|--|------------|----------------|---------------------------|---------------------------|
| 1. Ponderosa Rd/North Shingle Rd/Wild Chaparral Dr | Southbound | >1,000 | 1,050 | 800 |
| | Westbound | >1,000 | 650 | 700 |
| 2. Ponderosa Rd/US 50 Westbound Ramps | Northbound | 725 | 2,750 | 725 |
| | Eastbound | 1,275 | 325 | 275 |
| 3. South Shingle Rd/Mother Lode Dr/US 50 Eastbound Ramps | Southbound | 1,300 | 1,350 | 925 |
| | Westbound | 725 | 450 | 625 |
| 4. South Shingle Rd/Durock Rd | Eastbound | >1,000 | 550 | 575 |
| | Northbound | >1,000 | 250 | 700 |



Westbound North Shingle Road (left) approaching Ponderosa Road and northbound Ponderosa Road approaching the US 50 WB Ramps (right) during the AM Peak Hour

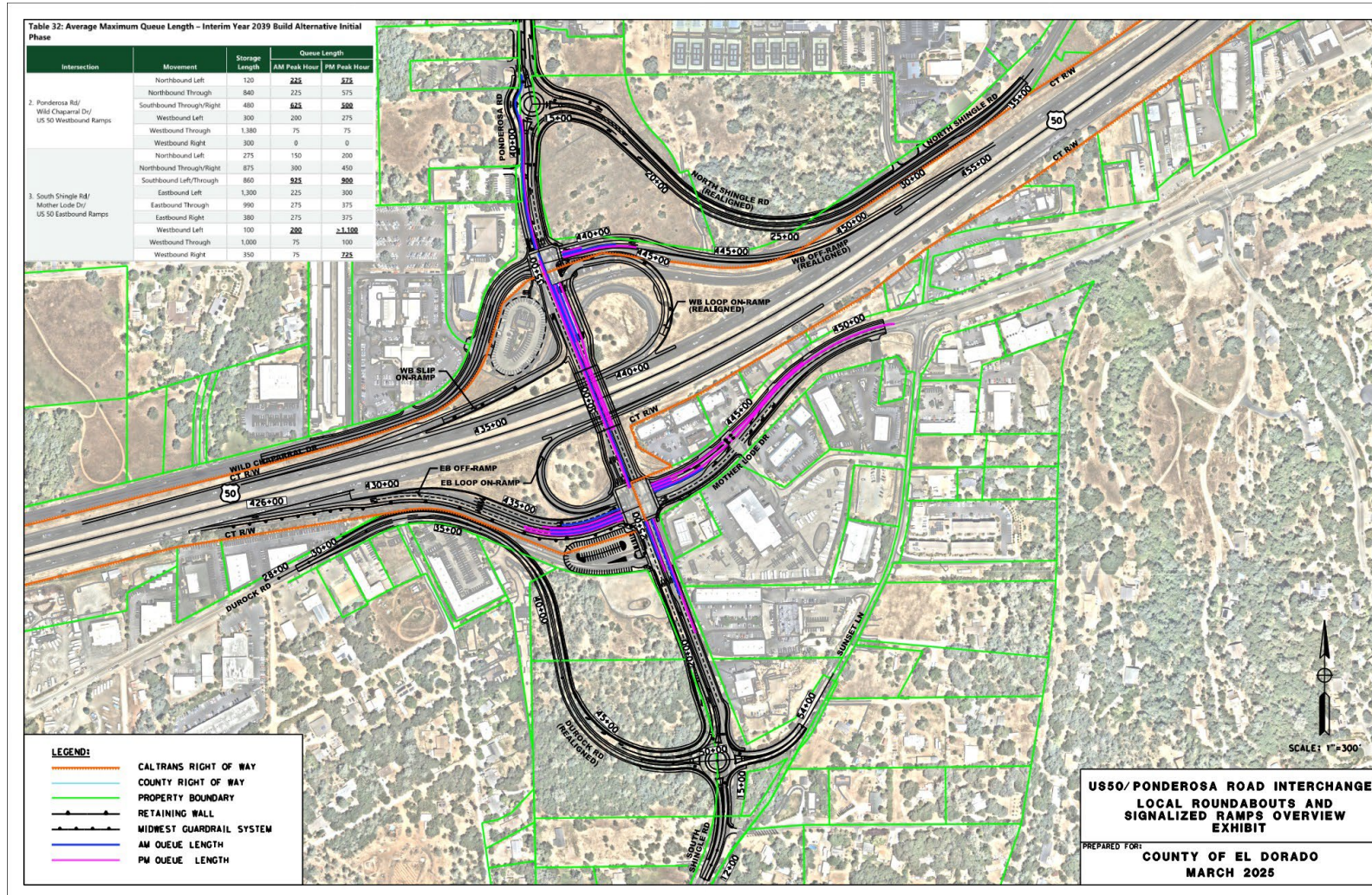


Eastbound US 50 at South Shingle Road Off-ramp at 8:15 AM



Traffic Analysis and Operations

Roundabout Design – Interim Improvements



Traffic Analysis and Operations

- Traffic Corridor Modeling

AM Travel Time – Eastbound US 50 Off-Ramp to Northbound Ponderosa Road/Deelane Road

| Existing (2024) | Baseline |
|-------------------------------|------------------------------|
| Opening Year (2029, No Build) | +160% increase from baseline |
| Opening Year (2029, Build) | -56% decrease from baseline |

PM Travel Time – Southbound Ponderosa Road/Deelane Road to South Shingle Road/Sunset Ln

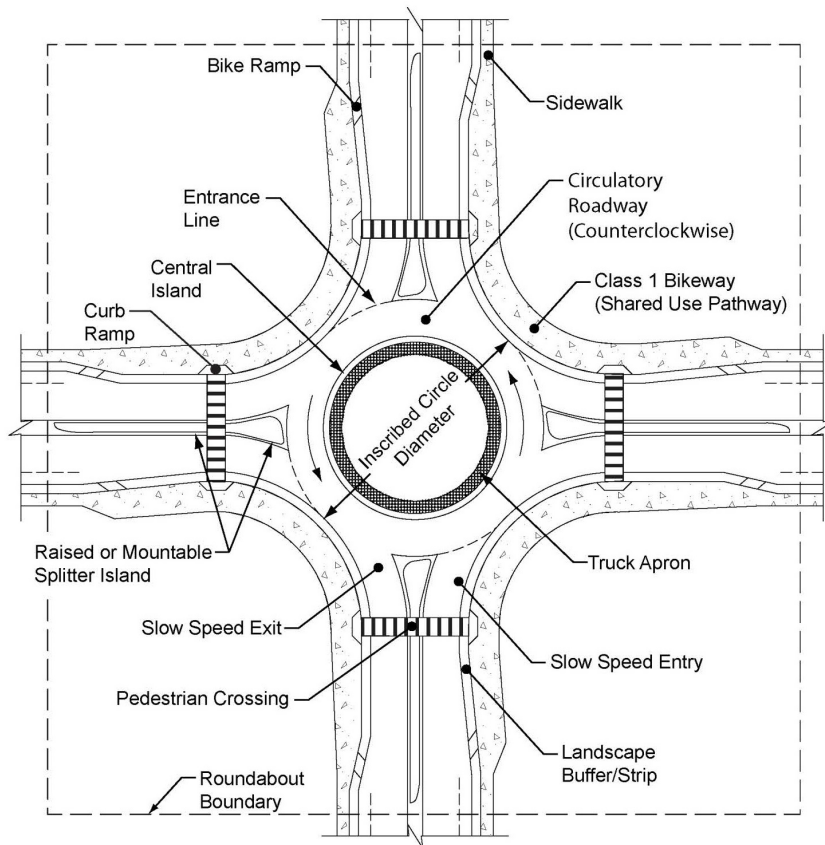
| Existing (2024) | Baseline |
|-------------------------------|-----------------------------|
| Opening Year (2029, No Build) | +44% increase from baseline |
| Opening Year (2029, Build) | -54% decrease from baseline |



Project Features – Roundabouts

What is a Roundabout?

Figure 405.10
Roundabout Geometric Elements



NOTE:

This figure is provided to only show nomenclature and is not to be used for design details.

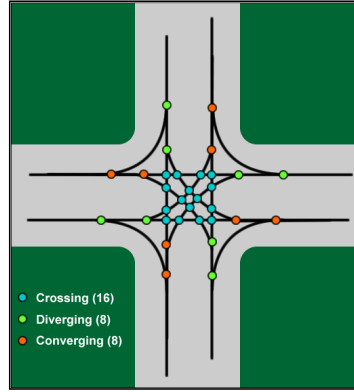
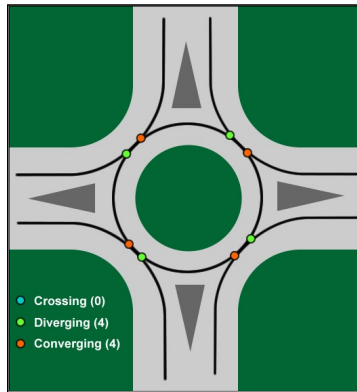


Project Features – Roundabouts

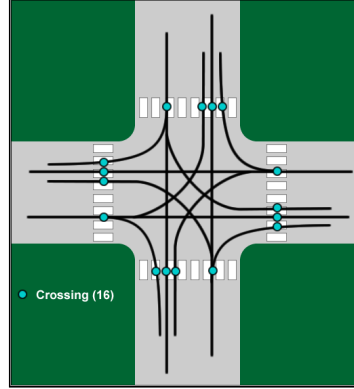
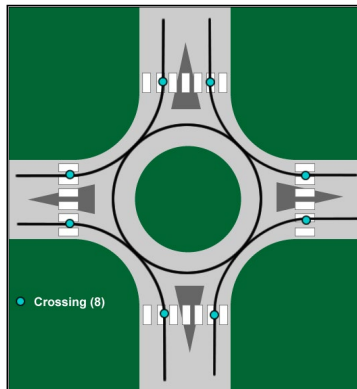
Benefits of Roundabouts

Section 2: Benefits of Roundabouts

Fewer Vehicle to Vehicle Conflict Points



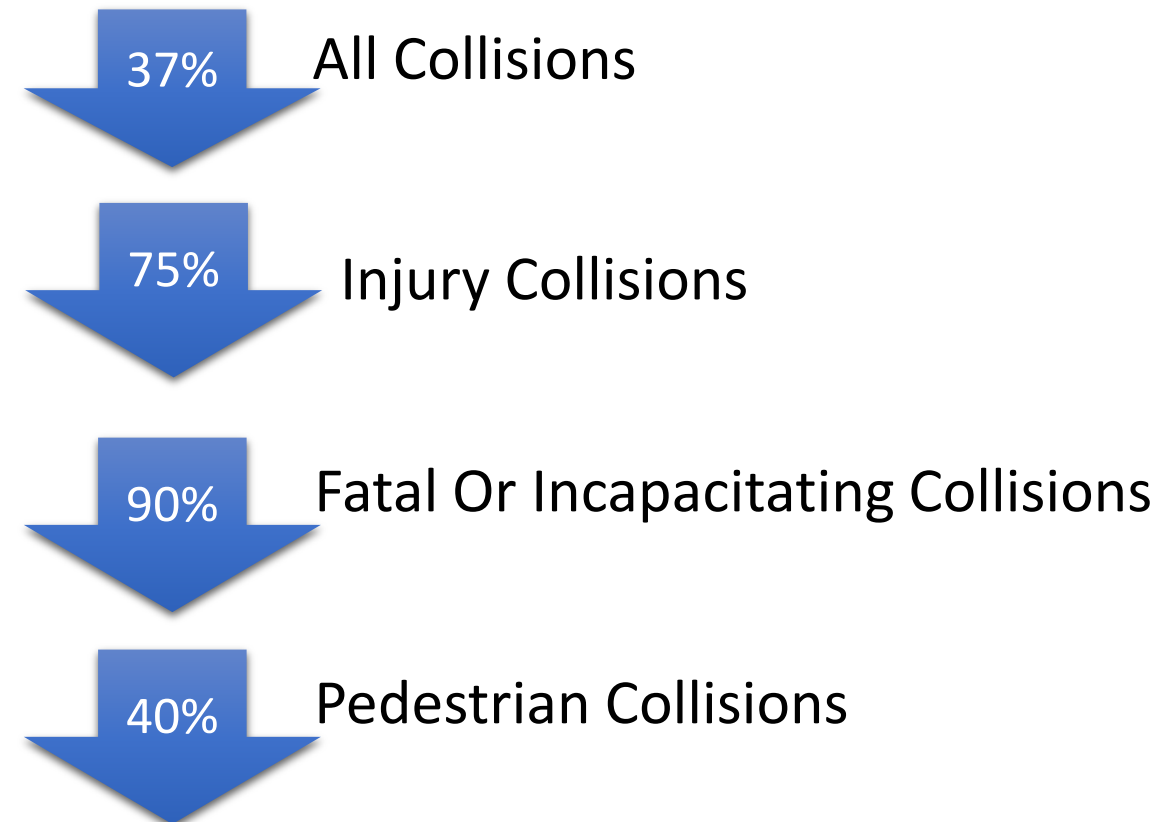
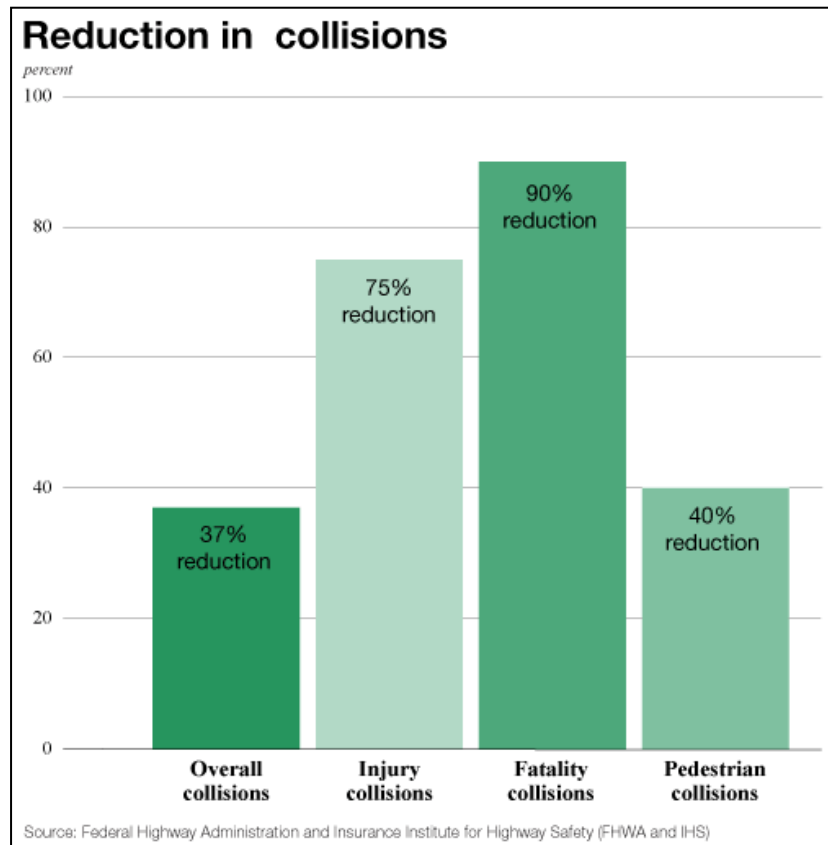
Fewer Vehicle to Pedestrian Conflict Points



Project Features – Roundabouts

Study Results – FHWA & Insurance Institute for Highway Safety (IIHS)

Conversion of a typical stop-controlled or signalized intersection to roundabout reduces crashes.



Project Features – Roundabouts

Key Takeaways

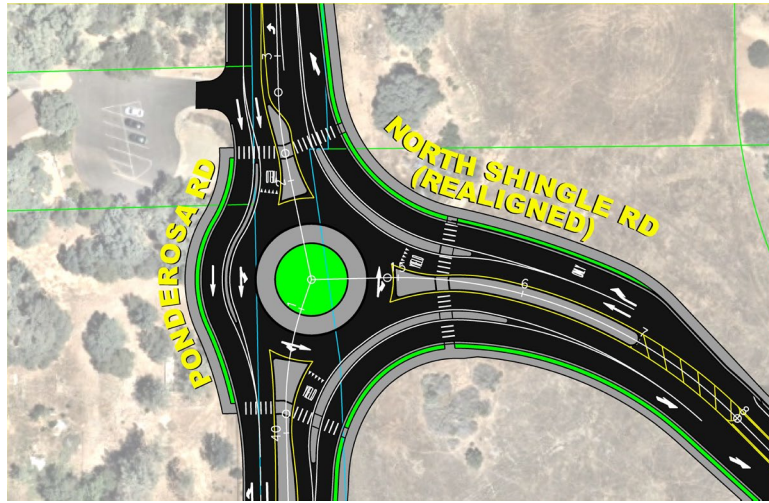
Conclusion

Key Takeaways

- When applied in appropriate settings and intersections, Roundabouts improve traffic flow, enhance safety, and offer environmental benefits.
- Proper design is crucial to achieving these benefits; engineers play a vital role in making roundabouts effective.
- California is embracing roundabouts as part of its effort to reduce traffic fatalities, improve congestion, and meet sustainability goals.
- **Improve LOS**
- **Reduce Vehicle Conflicts**
- **Reduce Pedestrian Conflicts**
- **Improve Air Quality**
- **Reduce Noise Levels**
- **Reduced Long-Term Maintenance**

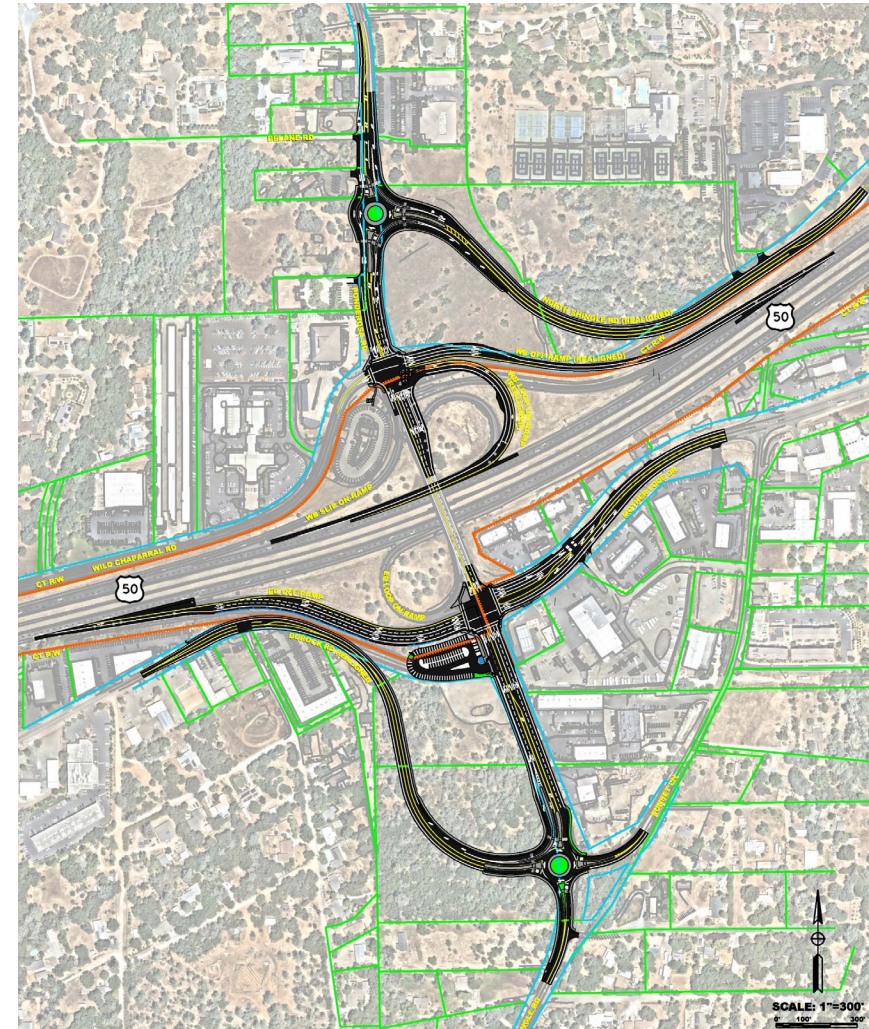
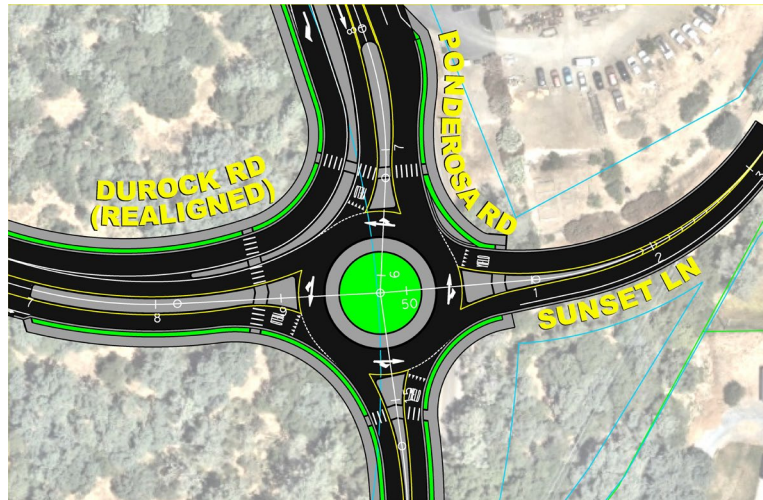


Project Features – Roundabouts



North Shingle
Road/Ponderosa
Road
Intersection

Durock
Road/South
Shingle Road
Intersection



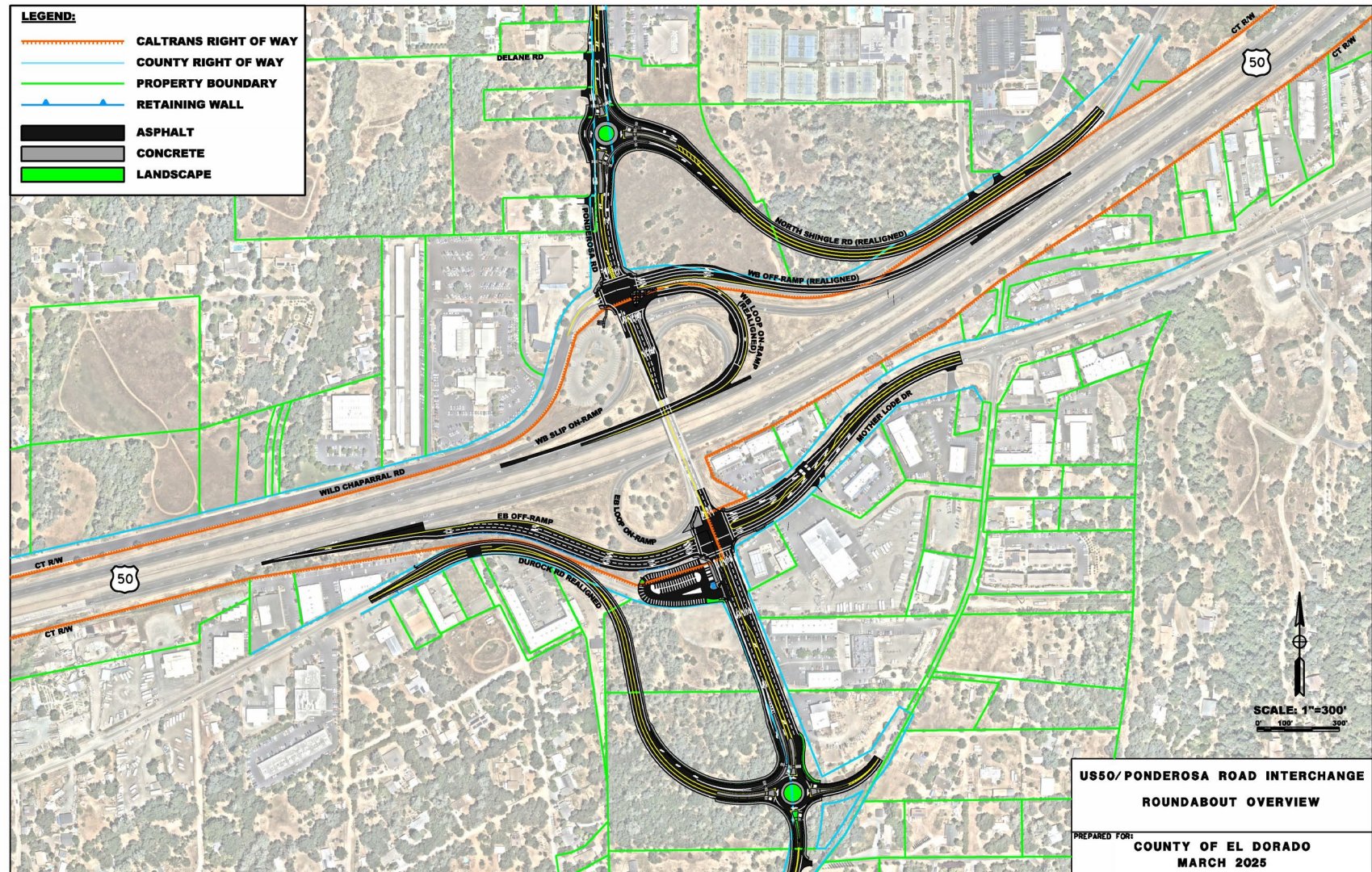
Project Features – Roundabouts

Community Beautification Committee

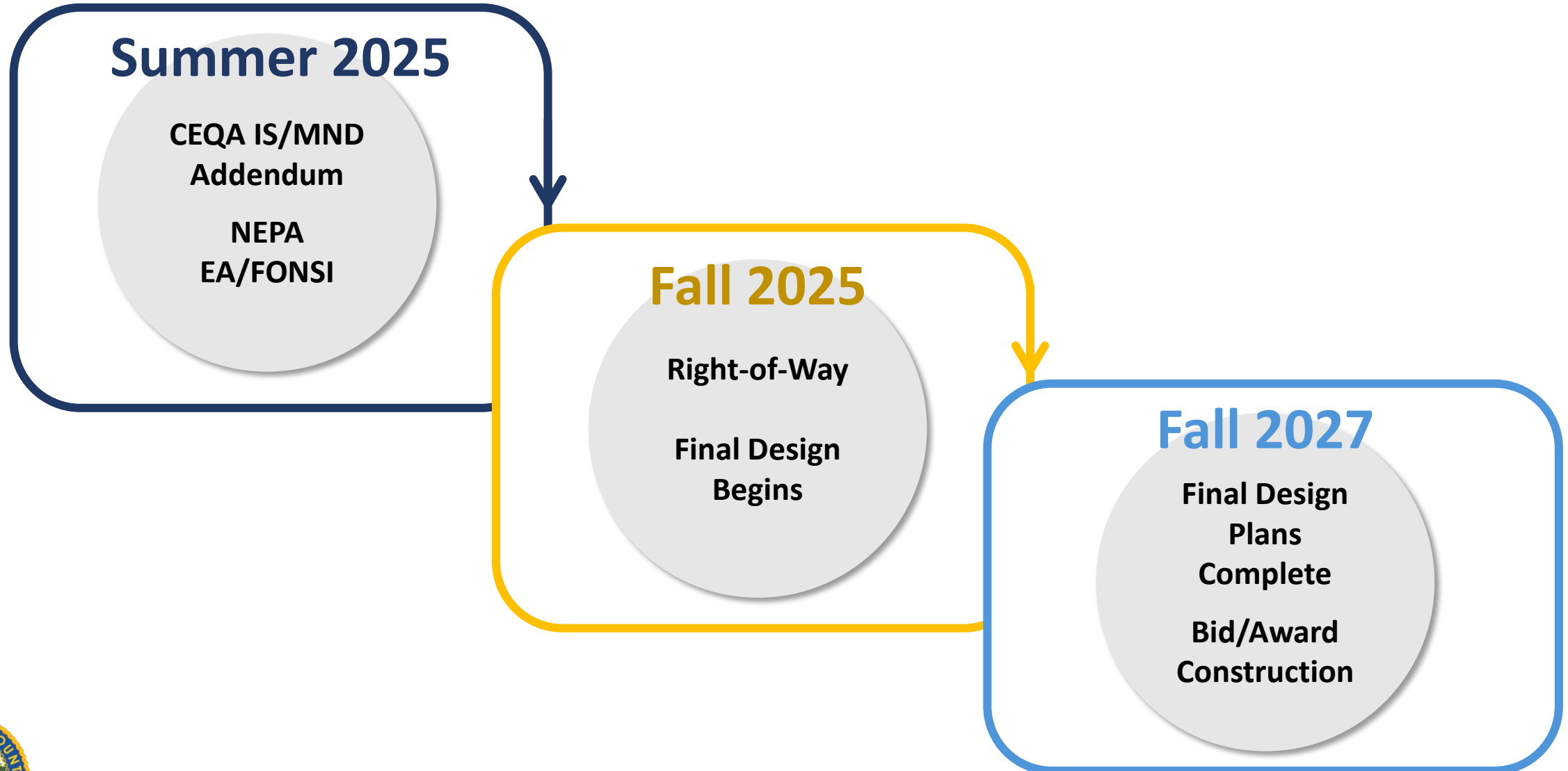


US 50/Ponderosa Road Interchange Improvements

Project Overview



Next Steps



Thank You!

Comments or Questions?

Online Form: [Comment Form](#)

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Questions?



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