



CITY OF
**PALO
ALTO**

Rail Committee Meeting

Quiet Zone Project
Churchill Avenue, Meadow Drive, & Charleston Road



AGENDA

- **Purpose**
- **Background**
- **Technical Reviews**
- **Recommendation**
- **Next Steps**

Purpose

Purpose of the Study



- Implementation of Quiet Zone in Palo Alto along Caltrain Corridor
- Determine necessary modifications to meet requirements for creating a Quiet Zone(s)

Background

- Palo Alto Avenue Quiet Zone project is moving separately and independent of this QZ project at Churchill, Meadow and Charleston
- Procured the services of the consultant to conduct study and develop an implementation plan
 - Quiet Zone Analysis and conduct review of existing conditions
 - Determine the various options/improvements required
 - Seek review through FRA and CPUC for their acceptance
 - Community Outreach
 - Develop Implementation Plan

Technical Review

- Quiet Zone Analysis based on existing conditions
- Developed various options that may meet minimum criteria for implementing Quiet Zones
- Prepared Technical Memorandum based on the existing conditions

Recommended Options

Option 1

Upgrade all crossings with Quad Gate System

- Churchill Avenue
- Meadow Drive
- Charleston Road

**STAFF RECOMMENDED
OPTION**

Option 2

Upgrade minimum subset to gain approval (any two crossings with Quad Gate System)

- Churchill Avenue and Meadow Drive
- Meadow Drive and Charleston Road
- Churchill Avenue and Charleston Road

Option 3

Alternative Safety measures

- Reprofilng
- Sight visibility enhancement
- Signalization upgrades

Option 4

Wayside Horns at all locations

This options does not implement a Quiet Zone but may reduce noise levels in the community

May consider as an interim measure until quiet zone is implemented

Next Steps

Refined to incorporate feedback from stakeholders

- Develop preliminary concepts
- Conduct Diagnostic Meeting
- Conduct Community Outreach
- Refine Conceptual Plans
- Seek Rail Committee & City Council Approval

Summary of Recommendations & Next Steps



Rail Committee review the initial study findings and provide directions to staff in proceeding with development of conceptual plans for implementation of Quiet Zone along this corridor

Staff will work with consultant in developing conceptual plans, conduct diagnostic meeting to gain acceptance of the proposed quiet zone implementation.



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City of Palo Alto

Quiet Zone Study

June 18, 2024

Kimley»Horn





Overview

1. Quiet Zone Basics
2. Palo Alto Quiet Zone Study Overview
3. Quiet Zone Process
4. Walkthrough of Work To-Date

Why do trains sound their horns?

- Railroads are regulated by the Federal Railroad Administration (FRA)
- Train horns are required by the FRA
- Decibel level requirements for horns
- Advance notice (20 seconds)



What is a Quiet Zone?

- A Quiet Zone exists where a train horn does *not* need to sound
- The crossings need to be upgraded to be safer without horns than they are in current state with horns.
- Achieved via:
 - Supplemental Safety Measures (SSM) at every crossing; or
 - Proposed design's Quiet Zone Risk Index (QZRI) qualifying for Quiet Zone



Most crossings, as they exist today, would not meet the safety thresholds to implement a Quiet Zone.



Quiet Zone Study The Process

PHASE I Study (CURRENT)

- Agency Coordination
- Conceptual Design / Safety Analysis
- Public Outreach
- Final Report

PHASE II Implementation (FUTURE)

- Permitting (CPUC, Caltrain)
- Final Design
- Funding
- Construction
- FRA Certification

Stakeholder Coordination

Stakeholder organizations met at each crossing and discussed proposed improvements

Stakeholders involved:

- City of Palo Alto
- Kimley-Horn
- Caltrain
- CPUC
- FRA
- UPRR



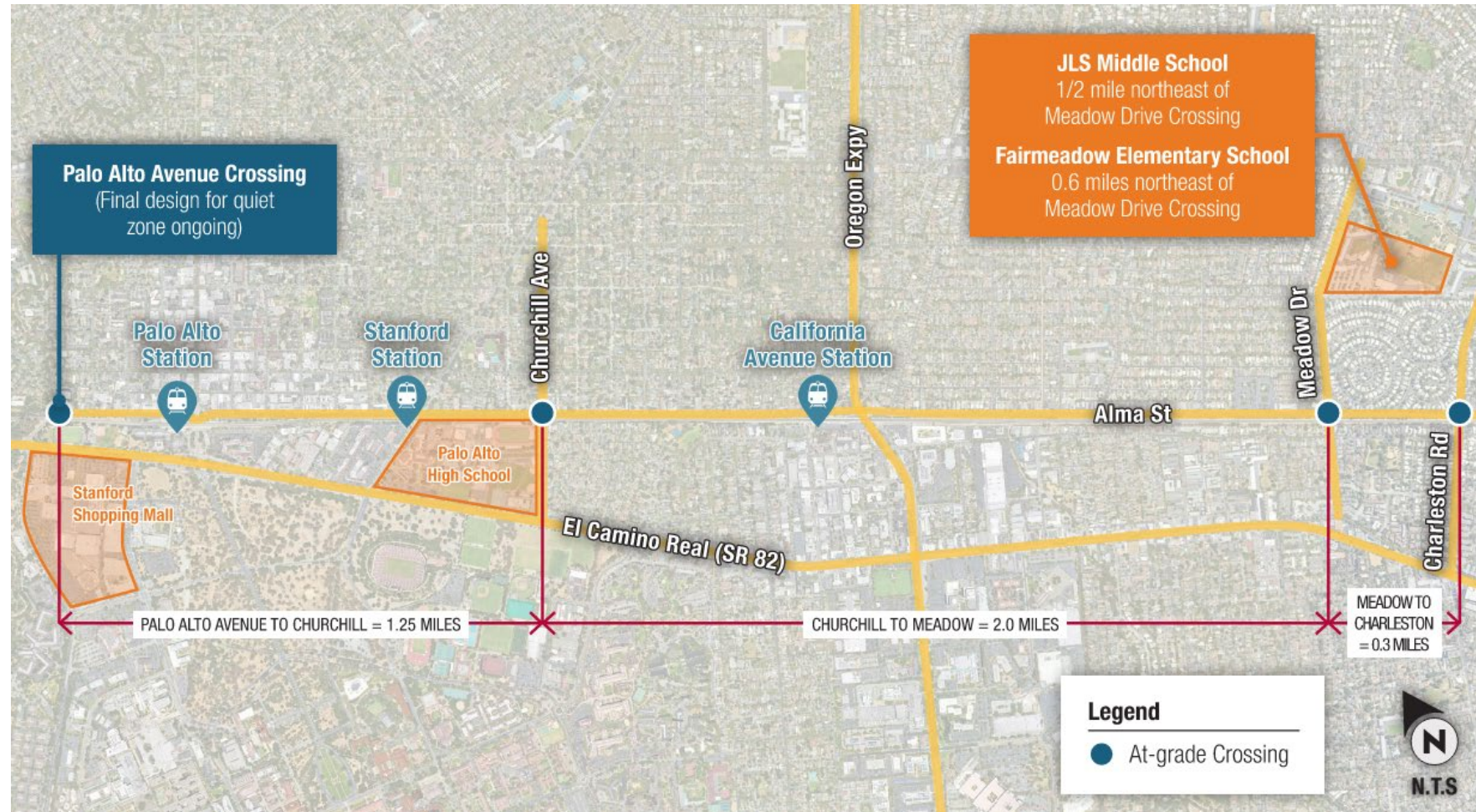
Quiet Zone Study Area

Palo Alto Study Area

- Churchill Drive
- E Meadow Drive
- Charleston Road

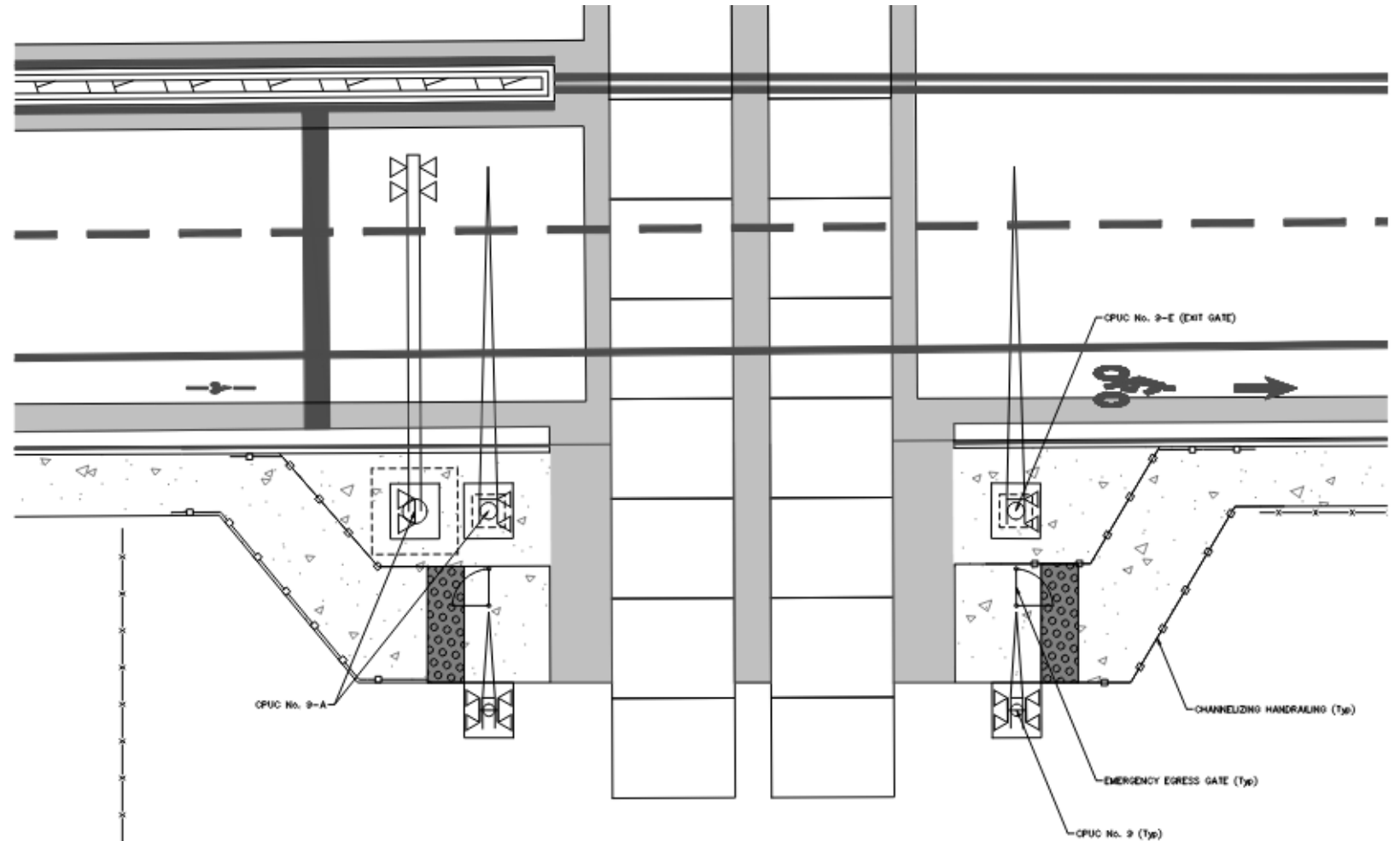
Additional Crossings In City

- Palo Alto Avenue



Conceptual Design

- Each crossing will be redesigned to meet specific safety criteria





DESIGN FOCUS AREAS

Safety Improvements

- Four-quadrant gates
- Raised medians
- Sidewalk realignment
- Refreshed roadway striping and updated signage

DESIGN FOCUS AREAS

Safety Improvements

- Four-quadrant gates

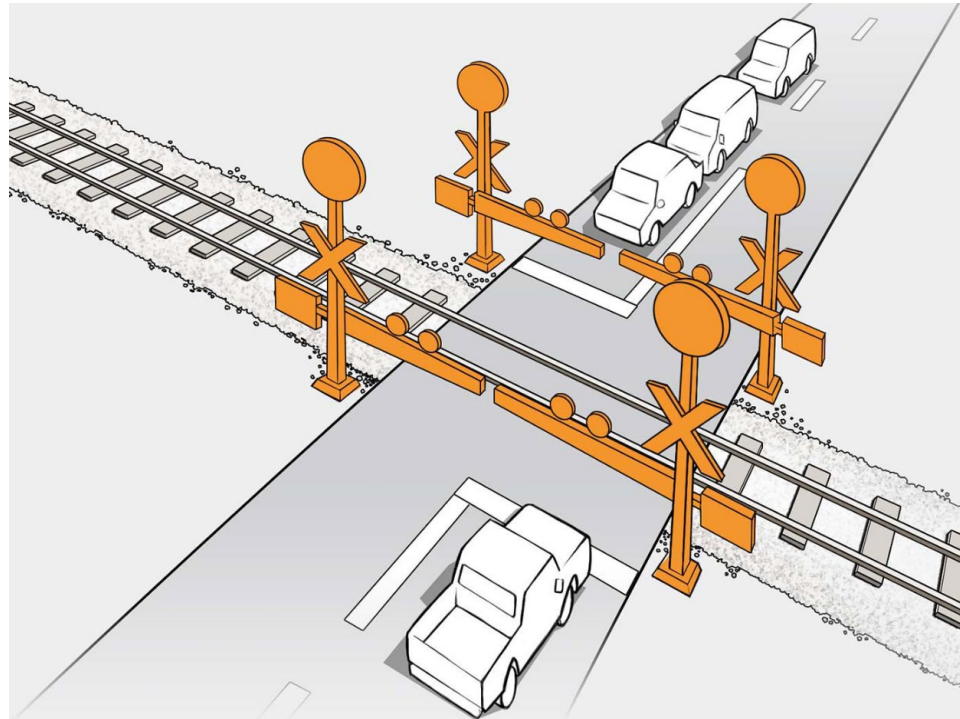


Image: <https://hsr.ca.gov/about/safety/quad-gates/>

DESIGN FOCUS AREAS

Safety Improvements

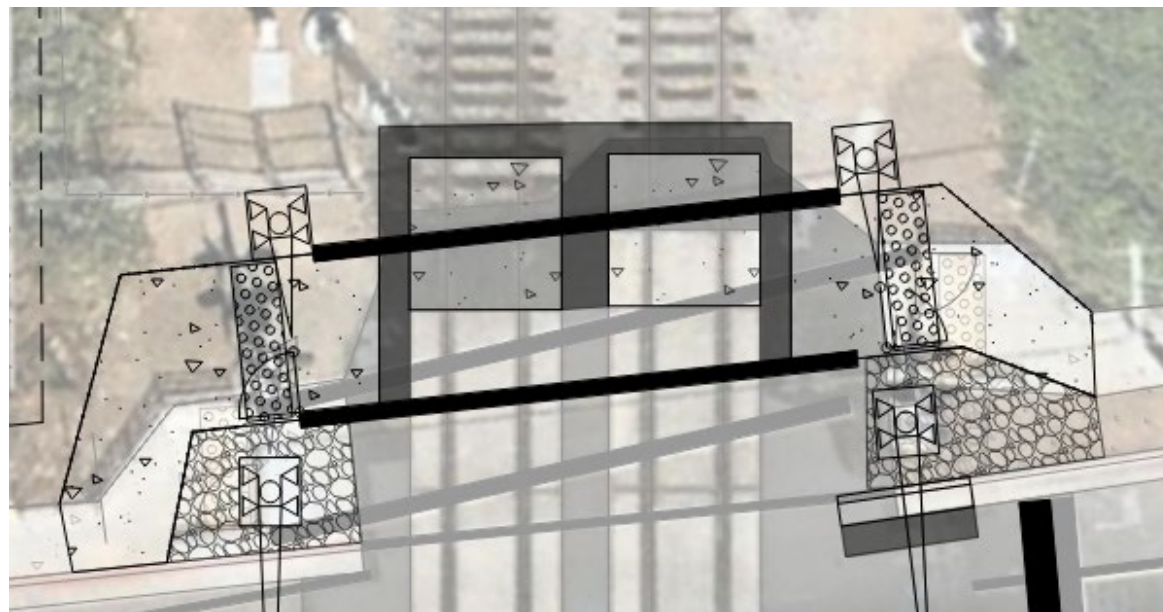
- Raised medians



DESIGN FOCUS AREAS

Safety Improvements

- Sidewalk realignment



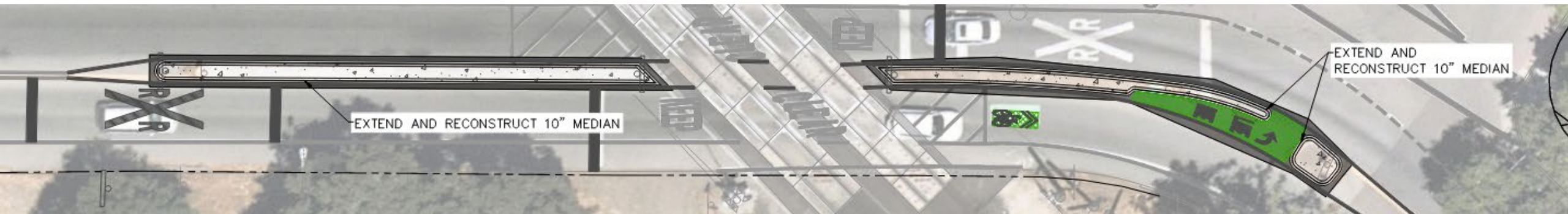
DESIGN FOCUS AREAS
Safety
Improvements

- Refreshed roadway striping and updated signage



Final Design – Palo Alto Ave / Alma St

- Elongated medians near the railroad tracks to meet FRA standards
- Refreshed striping and signage to meet federal standards





Final Report

- Brings together all steps taken in this process
- Documents recommendations for the City



FUTURE Implementation

- Permitting (CPUC, Caltrain)
- Final Design
- Funding
- Construction



Kimley»»Horn

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Questions?

KEY PERSONNEL

CITY OF PALO ALTO

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KIMLEY-HORN

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BRENT OGDEN, P.E., P.T.O.E. (GRADE CROSSING EXPERT)
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TAYLOR BROWN, EIT