

*Mobility. Environment. Community. Economy. Technology*



I-710 Corridor Project EIR/EIS

*metro.net*

# Technical Studies Key Findings Briefing

presented to the

## Project Committee

January 31, 2012



# Technical Studies Briefing Agenda

1. Project Purpose and Need
2. Alternatives Recap
3. CEQA and NEPA Process Review
4. Technical Studies Key Findings
  - a) Traffic
  - b) Water
  - c) Noise
  - d) Visual Impact Assessment
  - e) Air Quality & Health Risk Assessment
5. Next Steps

# Project Purpose and Need

- Improve air quality and public health
- Improve traffic safety
- Provide a modern design for the I-710
- Address projected traffic volume increase
- Address projected growth in population, employment and economic activity related to goods movement

# Project Alternatives Review

## No Build Improvements

- Planned and Committed Projects in 2008 RTIP
- Enhanced Goods Movement by Rail
- Clean Trucks Program
- Expanded Night Gate Ops at Ports
- I-710 Pavement Rehabilitation
- Traffic Signal Coordination

## TSM/TDM and ITS

- Ramp Metering
- Improved Arterial Signage
- Peak Period Parking Restrictions
- Increased Transit Service
- Upgraded Traffic Signals (ITS)

## Arterial System Improvements

- Signal Timing Improvements
- Local Arterial Intersection Improvements at 42 Locations

## I-710 Widening

- Widen the I-710 up to 10 Lanes
- Modernize Geometric Design of the Local I-710 Interchanges

## Freight Corridor

- Separate Four-Lane Freight Corridor

### Alternative 1

#### No Build Improvements



### Alternative 5A



#### I-710 Widening

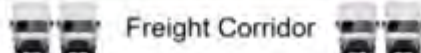
Modernize I-710 Geometrics

Arterial System Improvements

TSM/TDM & ITS

No Build Improvements

### Alternative 6A



#### I-710 Widening



Modernize I-710 Geometrics

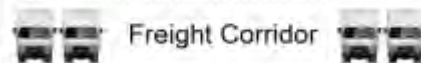
Arterial System Improvements

TSM/TDM & ITS

No Build Improvements

### Alternative 6B

Zero Emissions  Automated Guidance 



#### I-710 Widening

Modernize I-710 Geometrics



Arterial System Improvements

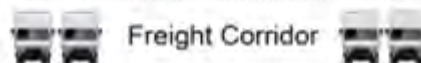
TSM/TDM & ITS

No Build Improvements

### Alternative 6C

 Tolling Feature

Zero Emissions  Automated Guidance 



#### I-710 Widening

Modernize I-710 Geometrics

Arterial System Improvements

TSM/TDM & ITS

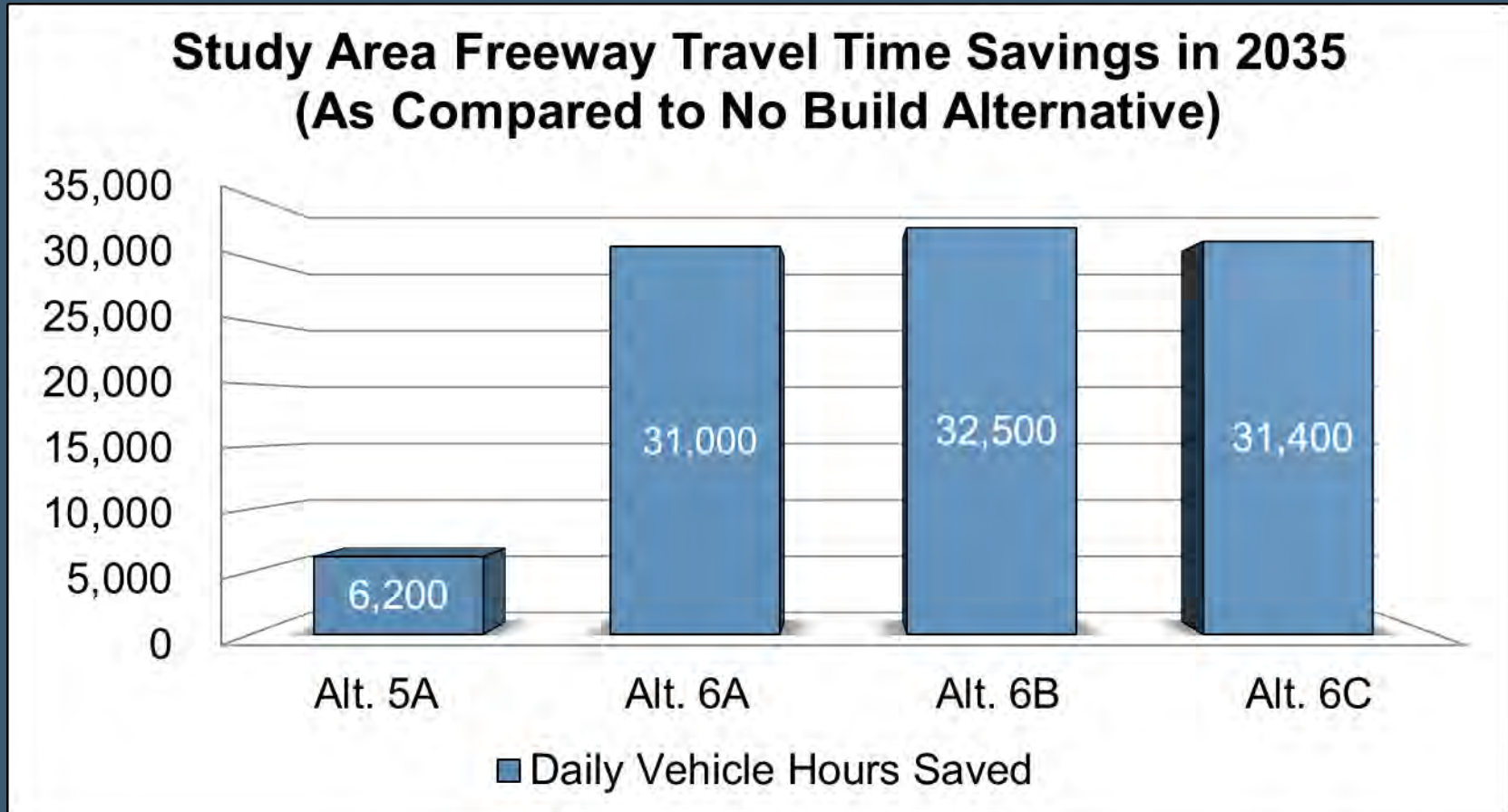
No Build Improvements

# CEQA & NEPA Review

- Environmental Impact Report (CEQA) & Environmental Impact Statement (NEPA) required
- Provide comparative analysis of all project alternatives' impacts on the environment based on technical studies results
- Evaluate and recommend mitigation measures
- Inform public and decision makers on how all alternatives address the project purpose and need

# Traffic Studies Key Findings

# Finding: Freeway Travel Time Savings

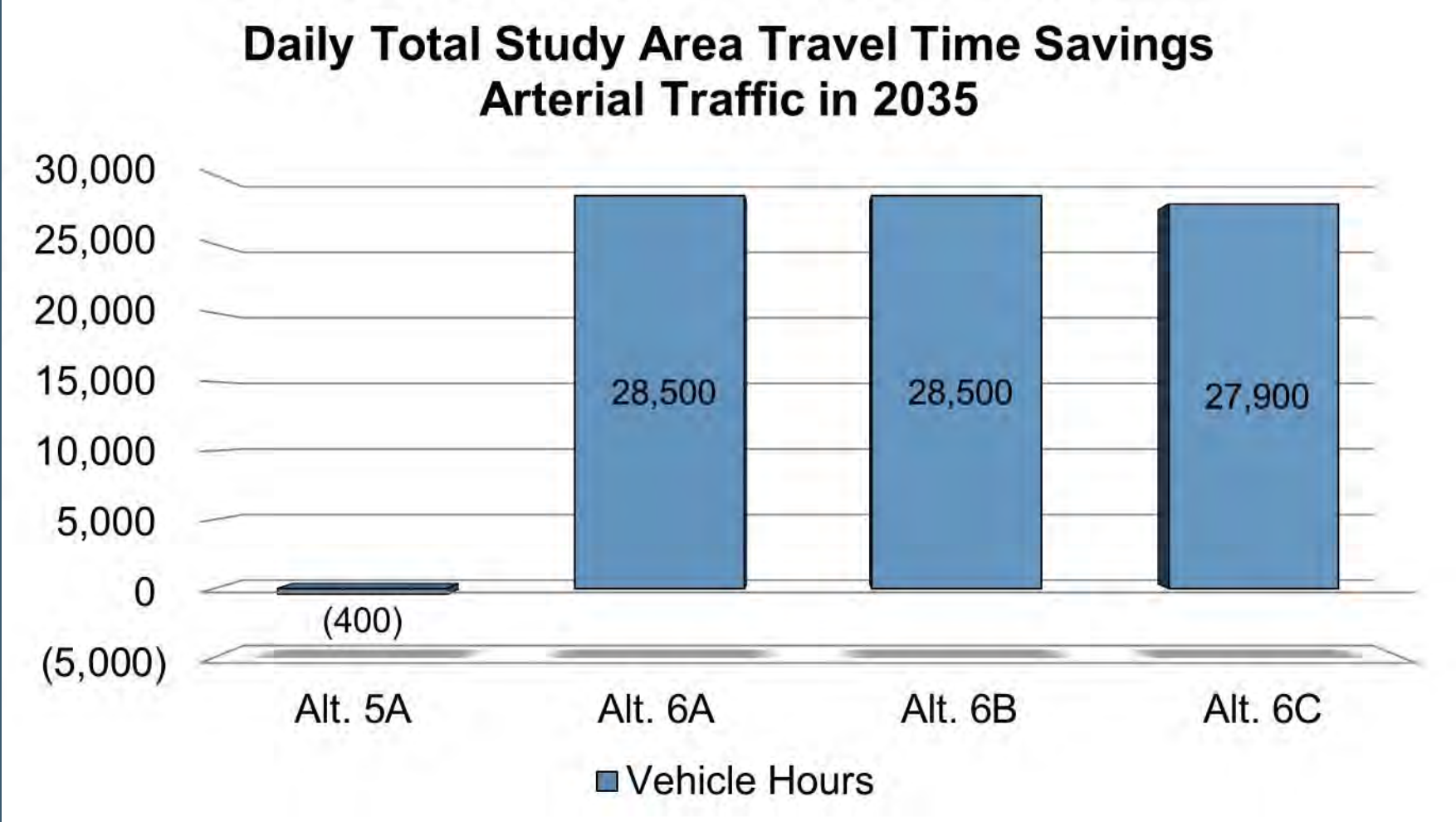


# Freeway Operations Key Findings

- Travel time savings realized on freeway with all Build Alternatives
- Measurable improvement in general purpose lanes flow and level of service with Build Alternatives
- Freight corridor alternatives shift truck traffic out of general purpose lanes
- Geometric improvements and separation of trucks and cars reduces accident rate



# Study Area Arterial Travel Time Savings



# Arterials & Intersections Key Findings

- Travel time savings on arterials with Freight Corridor build alternatives (Alt 6A/B/C)
- Project build alternatives shift truck traffic to I-710
- Project build alternatives have an impact and increase delay at 20 intersections
- Mitigation measures improve all but four intersections to the No Build condition or better

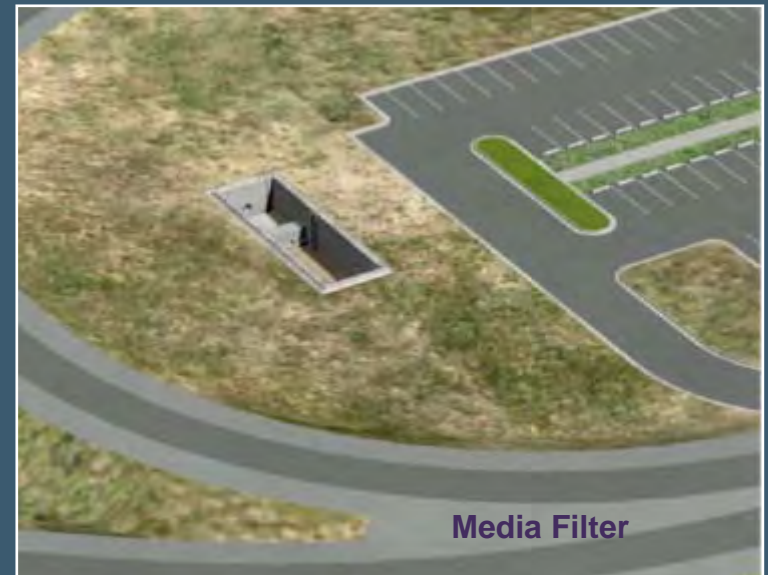
# Potential Arterial Traffic Mitigation Measures

- Build Alternatives include improvements to 42 intersections
- In addition to these intersection improvements, mitigation is proposed to improve intersections to the No Build condition or better
- Developed with input from staff of local cities
- Typical Mitigation Measures Include
  - Add new and extra left and right turn lanes
  - Add through lanes
  - Restripe lanes
  - Widen selected arterials
  - Remove on-street parking in selected areas

# Water Studies Key Findings

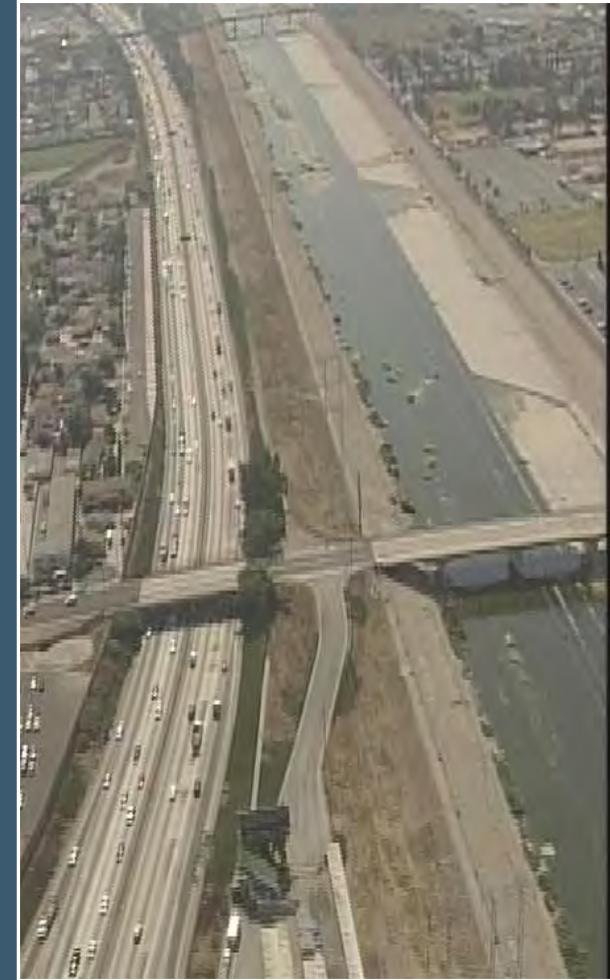
# Water Quality Key Findings

- Alts 6A/B/C with freight corridor have greater impact to storm water runoff
- All Build Alternatives incorporate water treatment systems
- Water quality systems treat approximately 87% of the project area



# LA River Key Findings

- Build Alternatives require
  - New and widened bridges
  - River levee modifications and flood control property
  - Electrical transmission tower relocation into river for Alt 6A/B/C
- Designs mitigate impact to water flow
- No Significant Risk to Floodplain



# Noise Studies Key Findings

# Noise Analysis Key Findings

## Construction

- Construction noise may occasionally dominate immediate area around construction
- No adverse noise impacts anticipated by complying with Caltrans' standards and local noise ordinances

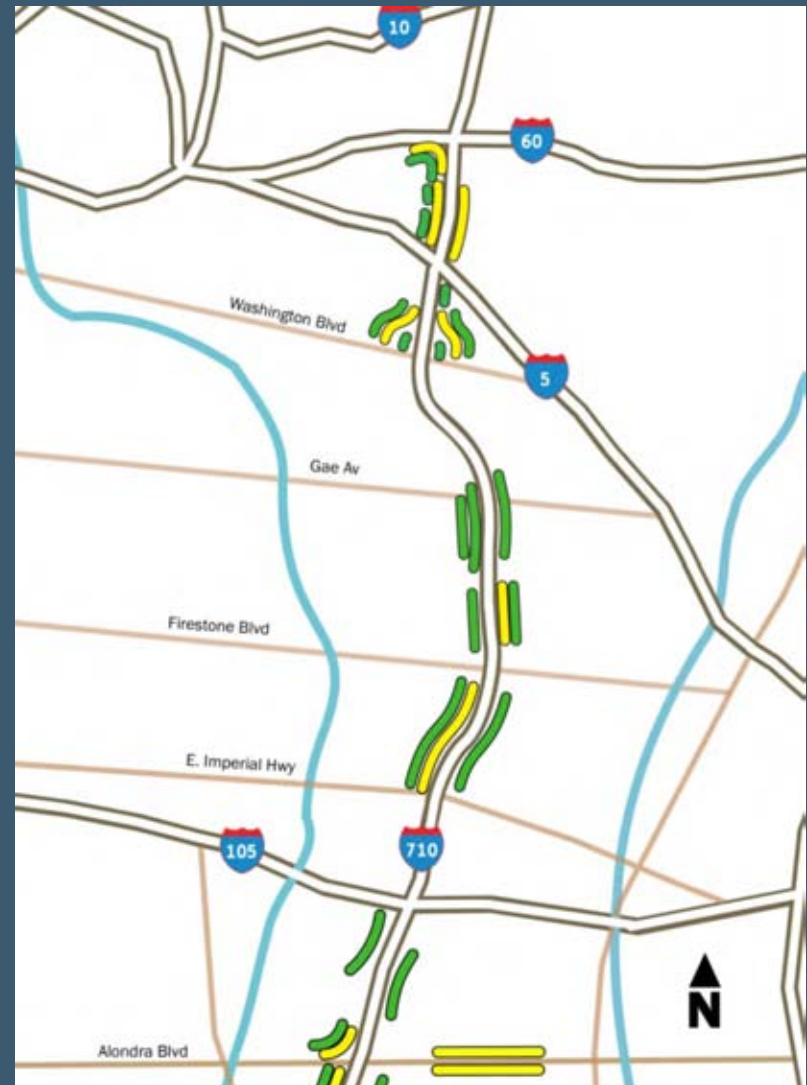


# Noise Assessment Key Findings

## Permanent Traffic Noise Impacts

- All impacted residential areas within the project limits have been considered for noise abatement
- Noise barriers are the practical solutions for I-710
  - Soundwalls proposed for mainline and freight corridor alternatives

# Preliminary Soundwall Locations



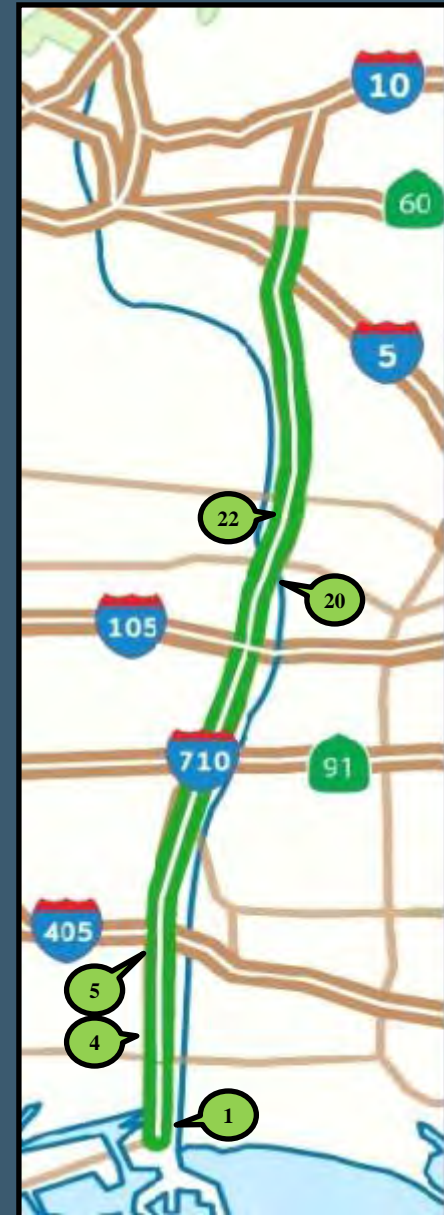
# Example of Noise Barriers



# Visual Impact Assessment Key Findings

# Visual Impact Key Findings

- 31 Key Views along the corridor analyzed with existing, base and enhanced conditions
- Short-term negative construction visual impacts
- Alternatives 6A/B/C create most substantial impacts primarily in Long Beach and South Gate due to elevated freight corridor





# Key View 1 – Existing Condition



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*Cesar Chavez Park – Long Beach – Looking NW toward I-710*

# Key View 1 – Proposed Condition

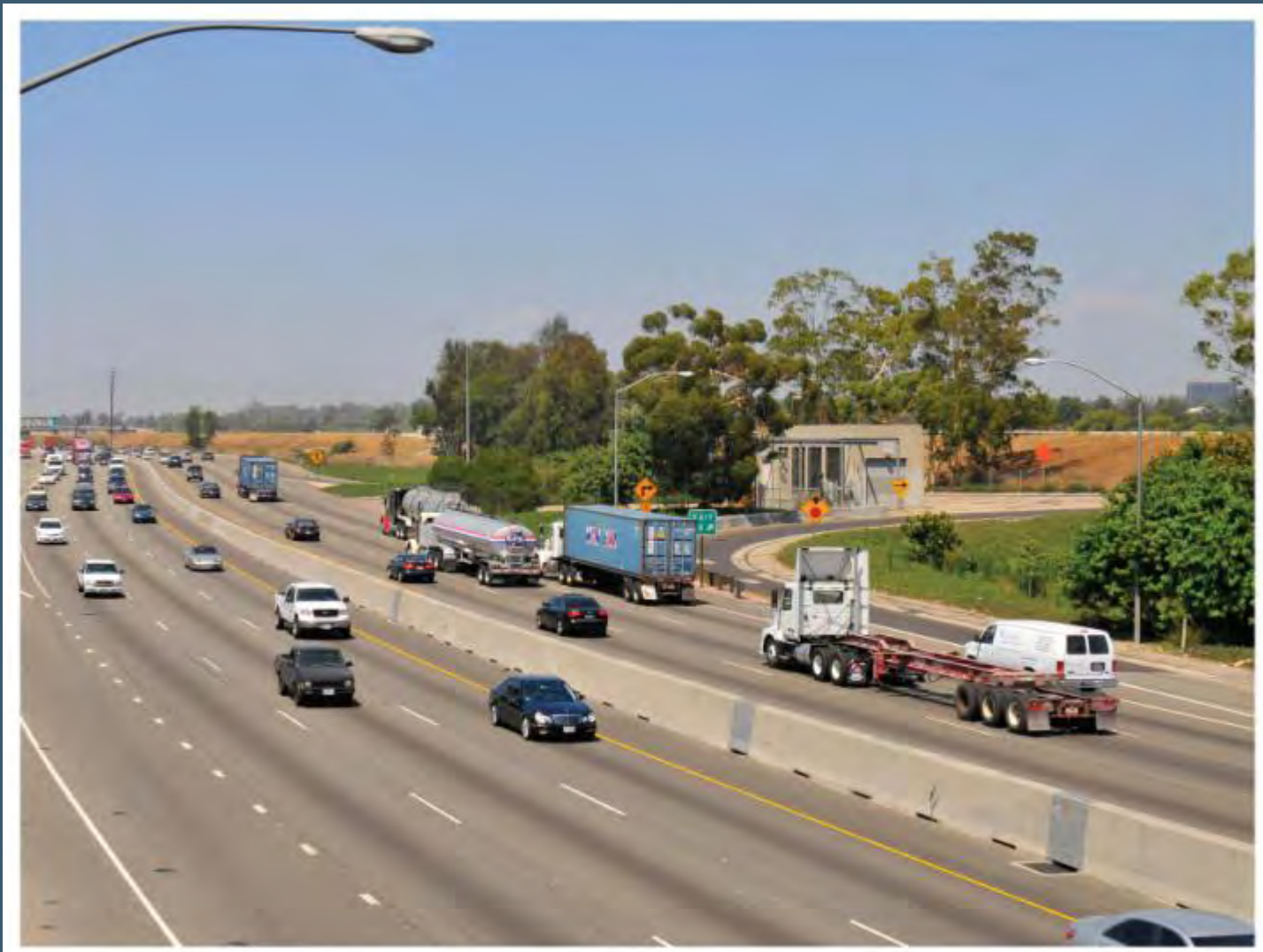


**Metro**

*Cesar Chavez Park – Long Beach – Looking NW toward I-710*



# Key View 4 – Existing Condition



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*From Willow St. Bridge – Long Beach – Looking NB at I-710*



# Key View 4 – Base Condition



**Metro**

*From Willow St. Bridge – Long Beach – Looking NB at I-710*

# Key View 4 – Enhanced Condition



**Metro**

*From Willow St. Bridge – Long Beach – Looking NB at I-710*

# Key View 5 – Existing Condition





# Key View 5 – Base Condition



# Key View 5 – Enhanced Condition



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*Gale Avenue North of Wardlow– Long Beach  
Looking East at I-710*

# Key View 20 – Existing Condition



# Key View 20 – Base Condition





# Key View 20 – Enhanced Condition





# Key View 22 – Existing Condition



# Key View 22 – Base Condition



# Key View 22 – Enhanced Condition



# Air Quality and Health Risk Assessment Key Findings

# Review of AQ/HRA Analyses

## Typical EIR/EIS

- ✓ Carbon Monoxide (CO) quantitative assessment and local “hotspot” dispersion modeling of CO concentrations for conformity analysis
- ✓ PM2.5/PM10 (particulate matter/dust) qualitative assessment for conformity analysis
- ✓ Diesel Exhaust qualitative assessment (identify sensitive receptors)
- ✓ Mobile Source Air Toxics (MSAT) qualitative assessment
- ✓ Construction impacts (identify standard emission/dust control measures)

## I-710 EIR/EIS

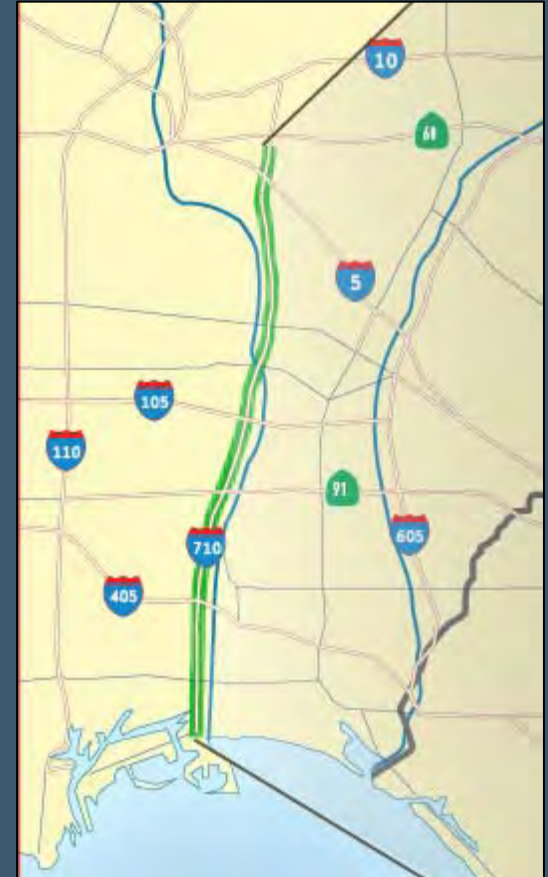
- ✓ Greenhouse Gases quantitative assessment
- ✓ Construction emissions quantification (total project)
- ✓ Full dispersion modeling of ambient concentrations of criteria pollutants near the I-710
- ✓ Full dispersion modeling health risk assessment for six Priority MSATs near the I-710
- ✓ Qualitative Ultrafine Particulate incremental impact analysis
- ✓ Qualitative PM2.5 Mortality incremental impact analysis





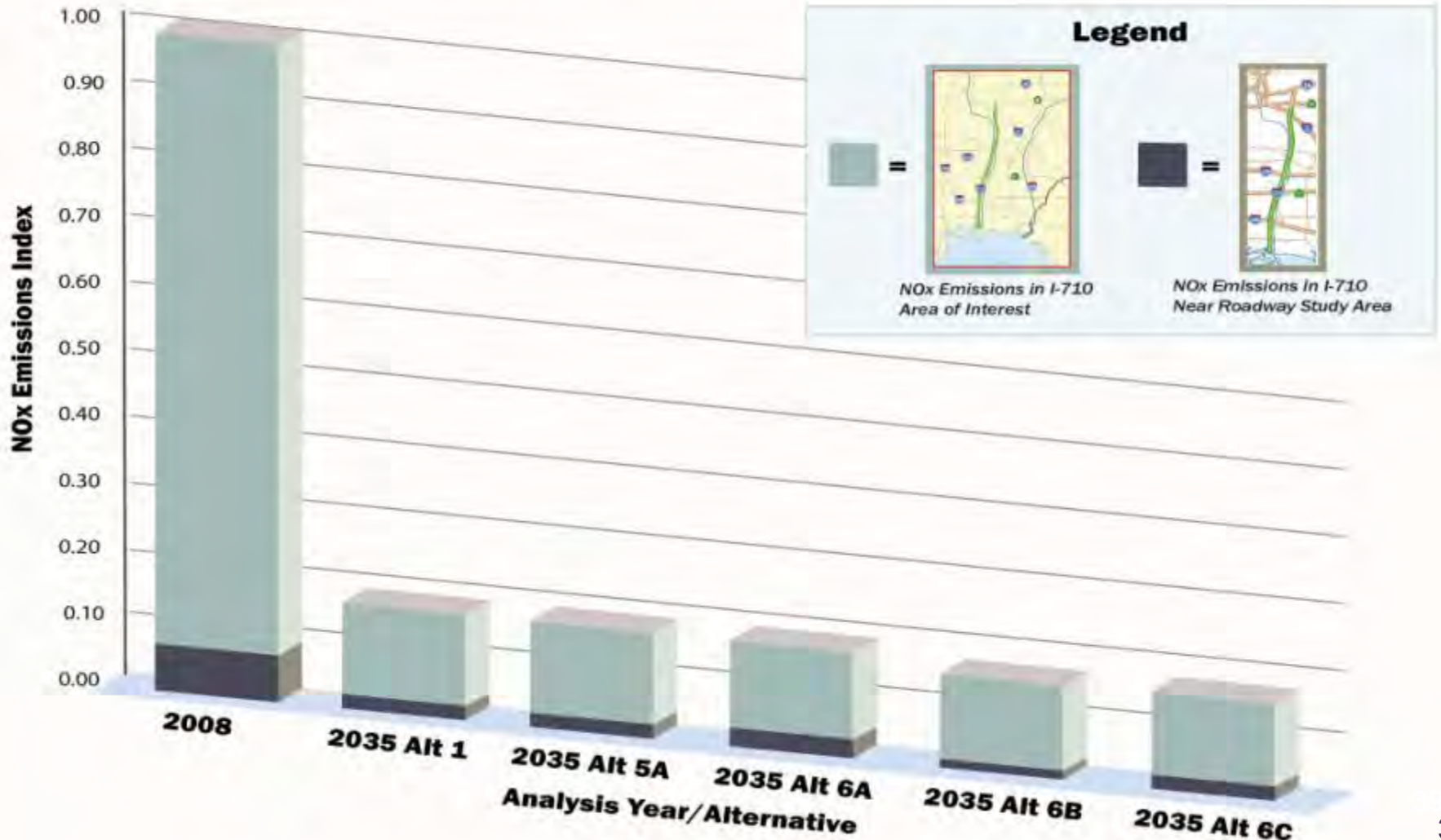
# I-710 Area of Interest Key Findings

- AQ/HR emissions generally ↓ in 2035 (all alternatives) compared to 2008
- AQ/HR emissions generally ↓ for the Build Alternatives compared to the 2035 No-Build Alternative (particularly away from the I-710)
- Impacts vary among locations along the I-710



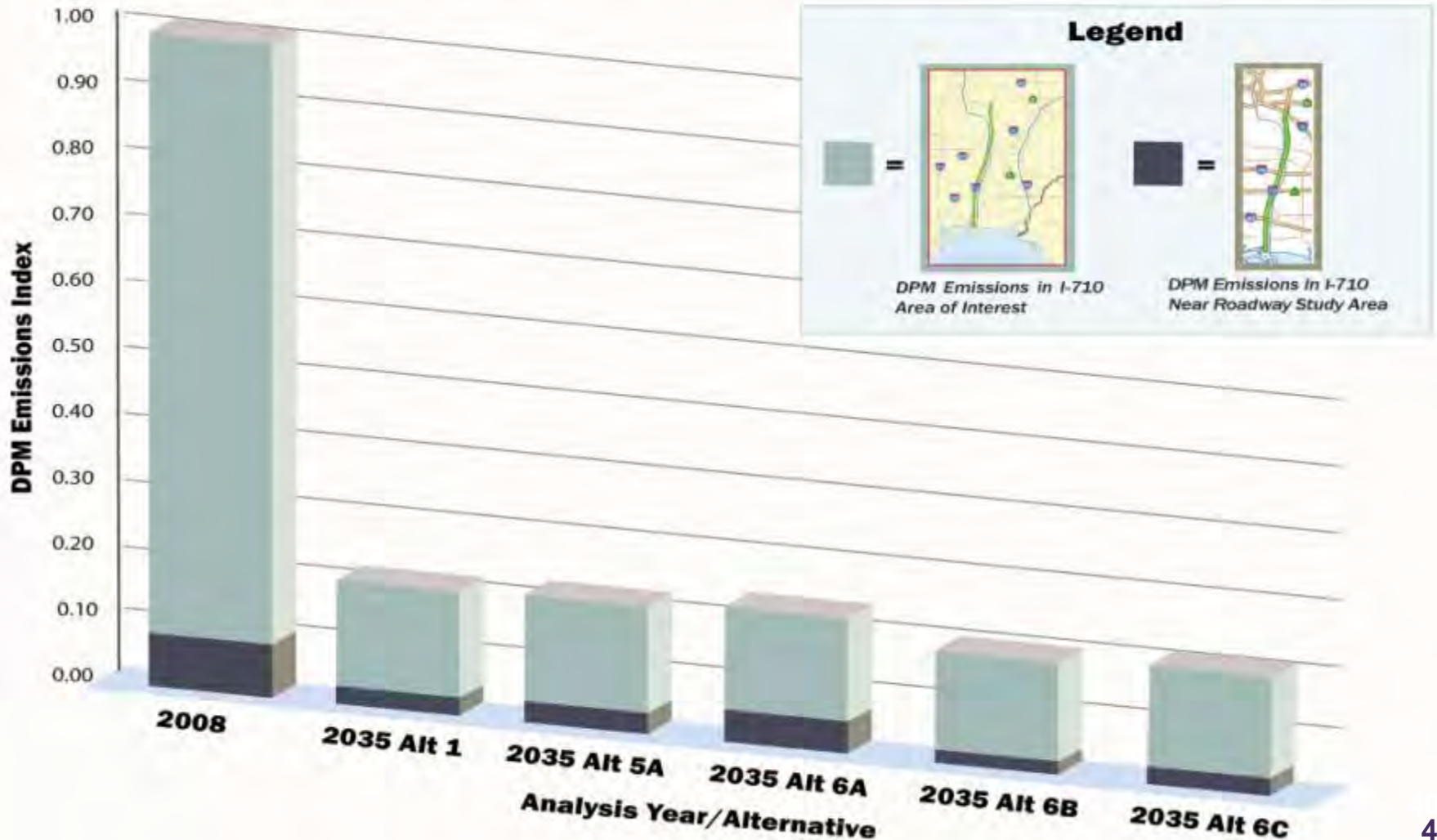
# NO<sub>x</sub> Emissions Changes

**Relative Comparison of Project Alternatives to 2008 Baseline NO<sub>x</sub> Emissions**



# Diesel Particulate Matter (DPM) Changes

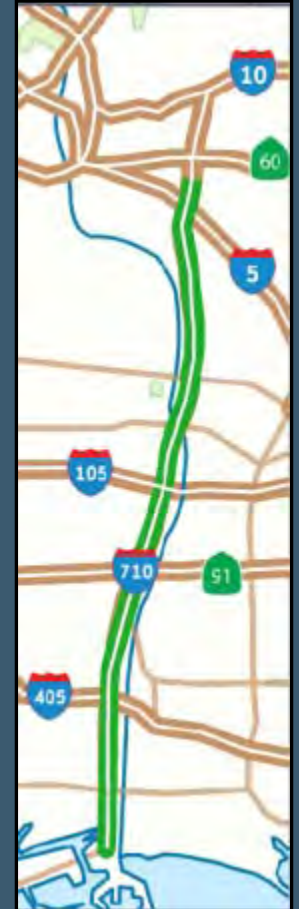
**Relative Comparison of Project Alternatives to 2008 Baseline DPM Emissions**





# Near-Roadway (I-710 AERMOD) Key Findings

- Compared to 2008
  - Health risks and NO<sub>2</sub> ↓
  - Exhaust particulate matter ↓
- Compared to 2035 No-Build (Alt 1)
  - Alts 6B & 6C: cancer risk less than Alt 1
  - Alts 5A & 6A: cancer risk greater than Alt 1
  - Some near-freeway (less than 300m) concentration impacts
  - Alternatives 6B and 6C generally have lowest impacts
  - Potential impacts at the north end of the I-710



# I-710 EIR/EIS Next Steps

- Incorporate technical studies results into Draft EIR/EIS to provide comparative analysis of all project alternatives
- Finish the Draft EIR/EIS
- Circulate for public review
- Hold public hearings and workshops
- Identify and select Preferred Alternative
- Complete the Final EIR/EIS