FTIP ID# (required): LA9918955 TCWG Consideration Date: August 26, 2025 **Project Description** (clearly describe project) The Los Angeles County Metropolitan Transportation Authority (Metro), in cooperation with the California Department of Transportation (Caltrans) and the South Bay Cities Council of Governments (SBCCOG). proposes to improve freeway operations and safety along both directions of Interstate 405 (I-405) from Wilmington Avenue (Postmile [PM] 9.6) to Main Street (PM 12.6) in the City of Carson (City), Los Angeles County (County), California. The regional location and project vicinity is shown in Attachment 1, and the Project Study Area is shown in Attachment 2. See Attachment 3 for comprehensive descriptions of proposed Project Build Alternatives 2 and 3. The areas where auxiliary lanes, Complete Streets, and TSM/TDM Improvements would occur under proposed Project Build Alternatives are identified in Attachment 4. The I-405 freeway layout under Build Alternative 2 is provided as Attachment 5. **Type of Project** (use Table 1 on instruction sheet) Change to existing state highway Narrative Location/Route & Postmiles: County Los Angeles Interstate 405 from Wilmington Avenue to Main Street Improvements (PM 9.6/12.6) Caltrans Projects - EA# 359400 Lead Agency: California Department of Transportation **Contact Person** Phone# Fax# **Email** Andrew Yoon, P.E. (213) 266-6892 (213) 897-1634 andrew.yoon@dot.ca.gov PM2.5 ✓ PM10 ✓ Hot Spot Pollutant of Concern (check one or both) Federal Action for which Project-Level PM Conformity is Needed (check appropriate box) Categorical EA or **FONSI** or PS&E or Exclusion Other **Draft EIS** Final EIS Construction (NEPA) Scheduled Date of Federal Action: April 2027 **NEPA Assignment – Project Type** (check appropriate box) Section 326 - Categorical Section 327 - Non-Exempt Exemption **Categorical Exemption Current Programming Dates** (as appropriate) **ROW** CON PE/Environmental **ENG** October 2023 April 2027 December 2027 December 2028 Start June 2028 End April 2027 December 2028 December 2030

# Project Purpose and Need (Summary): (attach additional sheets as necessary)

The purpose of the Interstate 405 from Wilmington Avenue to Main Street Improvements Project (Project) is to:

- Improve traffic time reliability and safety along I-405 between Wilmington Avenue and Main Street for all users in the corridor by improving freeway operations.
- Provide equitable, accessible, and sustainable travel options to the regional transportation system
  through improvements to safety, mobility, accessibility, and connectivity for bicyclists and
  pedestrians at local interchanges along I-405 between Wilmington Avenue and Main Street.
- Promote economic connectivity within the City of Carson for existing and planned retail and commercial uses and improve accessibility for goods movement.

The need of the Project is to improve traffic operations and safety for vehicle traffic and to provide additional access and connectivity for pedestrians and bicyclists at local interchanges throughout the Project corridor.

### **Operations**

Several freeway mainline segments as well as freeway/ramp junctions within the I-405 corridor between Wilmington Avenue and Main Street show heavy congestion due to weaving movements during peak periods. Nonstandard interchange spacing and turbulence at the ramp entrances and exits further contribute to operational deficiencies.

### Safety and Connectivity

Traffic collision data collected from Caltrans from Caltrans Traffic Accident Surveillance and Analysis (TASAS) – Transportation System Network (TSN) for a 3-year period from April 1, 2020, to March 31, 2023, reveals that rearend and sideswipe collisions are predominant on the northbound (NB) and southbound (SB) I-405 mainline, accounting for approximately 75 percent of all collision types, which is indicative of congested conditions due to nonstandard weaving distances between interchange on- and off- ramps.

There is a lack of connectivity for pedestrians and bicyclists at local interchanges along the I-405 between Wilmington Avenue and Main Street, including on pedestrian paths along Main Street, and on bicycle paths along Main Street, Avalon Boulevard, Carson Street, and Wilmington Avenue. Some of these routes do not have sidewalks, curb ramps, and crosswalks compliant with the Americans with Disabilities Act (ADA). System continuity and ADA-compliant routes are needed in these areas to improve the effectiveness and safety of multimodal travel at the local interchanges within the Project Study Area.

### **Regional Goods Movement**

Key commercial and retail uses located along the I-405 corridor within the City include the South Bay Pavilion Mall and surrounding retail plaza, and the Kia, Honda, Nissan, and Toyota car dealerships. Industrial uses are located primarily along the I-405 corridor at Main Street and Wilmington Avenue, approximately 5 miles north of the Ports of Los Angeles and Long Beach. In addition, planned retail areas, such as The District at South Bay located south of Del Amo Boulevard and north of East 213th Street, would include light industrial uses and the Carson Country Mart, a community commercial use area within the district.

Based on vehicle classification counts collected on local roadways adjacent to I-405 in 2023, truck traffic along local roadways range between 2 and 24 percent of daily traffic. On Wilmington Avenue, truck traffic accounts for 16 to 24 percent of daily traffic, reflecting over 2,500 daily truck trips. Based on the 2022 Caltrans Traffic Census Program, the average annual daily truck percentage along I-405 between Interstate 710 and Interstate 110 ranges from 3 to 5 percent.

As a result, improvements to existing ramp storage and weave zone operations along the freeway at ramp entrances and exits are needed to provide improved connections to these key commercial and retail areas, in addition to supporting regional goods movement along the I-405 corridor.

### **Surrounding Land Use/Traffic Generators** (especially effect on diesel traffic)

Land uses within and surrounding the majority of the Project Study Area consist primarily of single-family and multifamily residential, commercial, recreational, light and heavy industrial, and public land uses. Portions of the Dominguez Channel are also located within the Project Study Area. In addition, major industrial land uses are located outside of the immediate Project vicinity throughout the Carson and Wilmington areas.

## Opening Year: Build and No Build AADT, % and # trucks, truck AADT of proposed facility

Opening Year 2030 No Build Alternative 1, Build Alternative 2, and Build Alternative 3				
	Total	Truck	Truck	
I-405 Freeway Segment (Northbound + Southbound)	AADT	AADT	Percent	
Northwest of Main St On/Off Ramps	254,810	9,460	3.7%	
Main St On/Off Ramps to Avalon Blvd On/Off Ramps	270,500	10,680	3.9%	
Avalon Blvd On/Off Ramps to Carson St On/Off Ramps	267,190	10,610	4.0%	
Carson St On/Off Ramps to Wilmington Ave On/Off Ramps	279,570	10,970	3.9%	
East of Wilmington On/Off Ramps	315,080	16,830	5.3%	
Source: Fehr & Peers, 2025				

While Annual Average Daily Traffic (AADT) volumes, truck AADT volumes, and fleet mix are not anticipated change from the proposed Project improvements under Alternative 2 during Opening Year 2030, operational improvements proposed under Alternative 2 would result in reductions in vehicle hours of delay at 3 percent and 10 percent during the AM and PM peak periods, respectively, when compared to No-Build (Alternative 1) for Opening Year 2030.

Operational improvements under Alternative 3 are considered negligible when compared to No-Build (Alternative 1) during Opening Year 2030.

# RTP Horizon Year / Design Year: Build and No Build AADT, % and # trucks, truck AADT of proposed facility

Horizon Year 2050 No Build Alternative 1, Build Alternative 2, and Build Alternative 3			
I-405 Freeway Segment (Northbound + Southbound)	Total AADT	Truck AADT	Truck Percent
Northwest of Main St On/Off Ramps	282,290	11,020	3.9%
Main St On/Off Ramps to Avalon Blvd On/Off Ramps	298,290	12,260	4.1%
Avalon Blvd On/Off Ramps to Carson St On/Off Ramps	294,990	12,190	4.1%
Carson St On/Off Ramps to Wilmington Ave On/Off Ramps	308,350	12,590	4.1%
East of Wilmington On/Off Ramps	344,100	18,490	5.4%
Source: Fehr & Peers, 2025			

While AADT volumes, truck AADT volumes, and fleet mix are not anticipated to change from the proposed Project improvements under Alternative 2 during Horizon Year 2050, operational improvements would result in reductions in vehicle hours of delay at 1 percent and 11 percent during the AM and PM peak periods, respectively, when compared to No-Build (Alternative 1) during Horizon Year 2050.

Operational improvements under Alternative 3, would result in a reduction in vehicle hours of delay of 3 percent during the PM peak period, but these improvements in delay during AM peak period would be considered negligible under Alternative 3 when compared to No-Build (Alternative 1) during Horizon Year 2050.

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

Not Applicable

RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

Not Applicable

## Describe potential traffic redistribution effects of congestion relief (impact on other facilities)

The installation of proposed auxiliary lanes and Complete Streets improvements are not expected to have any traffic redistribution effects; however, the installation of auxiliary lanes within the I-405 project limits is anticipated to result in improved density along two mainline segments and improved LOS at two intersections as indicated in **Attachment 6**, when compared to No Build Alternative 1. Notably, the proposed auxiliary lanes on northbound I-405 between Carson Street and Avalon Boulevard aim to improve operational efficiency by improving safety by providing additional space to accelerate or decelerate on or off the freeway.

During Opening Year 2030, operational improvements under Alternative 2 are projected to reduce vehicle hours of delay by 3 percent in the AM peak period and 10 percent in the PM peak period compared to No-Build (Alternative 1). Under Build Alternative 3, operational improvements compared to No-Build (Alternative 1) are expected to be negligible.

During Horizon Year 2050, operational improvements under Alternative 2 are expected to reduce vehicle hours of delay by 1 percent in the AM peak period and 11 percent in the PM peak period compared to No-Build (Alternative 1). Under Alternative 3, a 3 percent reduction in delay is projected during the PM peak period, while AM peak period improvements are expected to be negligible compared to No-Build (Alternative 1).

**Attachment 6** provides a summary of traffic operational performance comparison between Project alternatives demonstrating the operational benefits anticipated from proposed improvements under Opening Year (2030) and Design Year (2050) conditions.

### Comments/Explanation/Details (attach additional sheets as necessary)

The proposed Project is located within a nonattainment area for federal  $PM_{2.5}$  standards and a maintenance area for the federal  $PM_{10}$  standards. Therefore, per 40 Code of Federal Regulations (CFR) Part 93 hot-spot analyses are required for transportation conformity purposes. However, the United States Environmental Protection Agency (USEPA) does not require hot-spot analyses, qualitative or quantitative, for projects that are not listed in section 93.123(b)(1) as an air quality concern.

According to 40 CFR Part 93.123(b)(1), the following are Projects of Air Quality Concern (POAQC):

- (i) New or expanded highway projects that have a significant number of or increase in diesel vehicles;
- (ii) Projects affecting intersections that are at Level of Service (LOS) D, E, or F with a significant number of diesel vehicles, or those that will change to LOS D, E, or F because of increased traffic volumes from a substantial number of diesel vehicles related to the project;
- (iii) New bus and rail terminals and transfer points that have a substantial number of diesel vehicles congregating at a single location;
- (iv) Expanded bus and rail terminals and transfer points that substantially increase the number of diesel vehicles congregating at a single location; and
- (v) Projects in or affecting locations, areas, or categories of sites identified in the applicable PM<sub>2.5</sub> and PM<sub>10</sub> implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

The proposed Project does not qualify as a POAQC because of the following reasons:

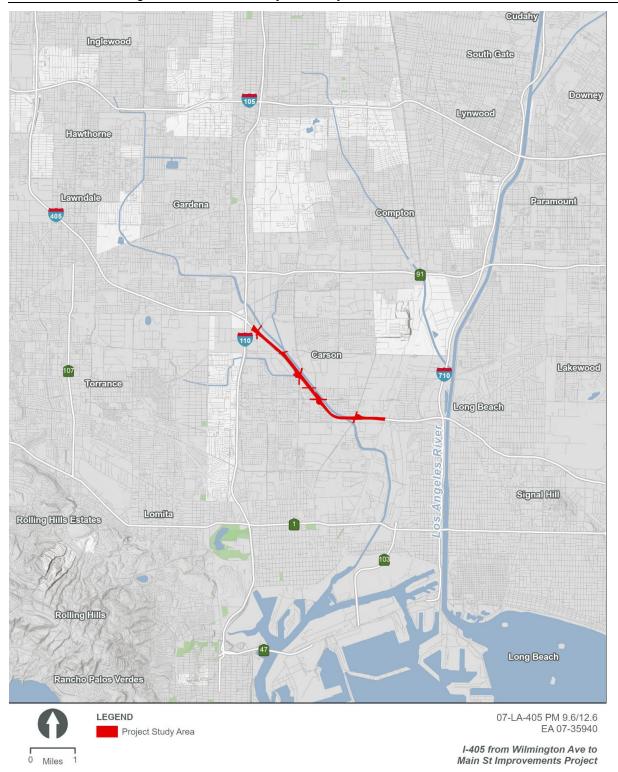
- The proposed Project under the Build Alternatives (Alternatives 2 and 3) would not result in construction of a new or expanded highway system that would have a significant number of or significant increase in diesel vehicles. As such, the proposed Project under the Build Alternatives would not be considered a POAQC under this criterion.
- The proposed Project under the Build Alternatives is not a new highway project. No material change
  in Annual Average Daily Traffic (AADT) volumes or truck volumes are anticipated to occur under the
  Build conditions when compared to the No-Build condition. Therefore, the proposed Project would
  not result in a substantial increase in the number of diesel vehicles and would not be considered
  POAQC under this criterion.
- As detailed in Attachment 6 (Summary of Operational Traffic Conditions), the auxiliary lanes and/or Complete Streets improvements proposed under the Build Alternatives are expected to improve travel flow under the Build conditions when compared to the No-Build condition. As such, the proposed Project under the Build Alternatives would not be considered a POAQC under this criterion.
- The proposed Project would not include new bus facilities, rail terminals, or transfer points. In addition, the proposed Project would not include expanded bus facilities, rail terminals, or transfer points.
- Moreover, the Project would not be expected to introduce significant volumes of diesel truck traffic in the Project Study Area, which could result in localized particulate matter hot-spots

The discussion provided above indicates that the proposed Project under the proposed Build Alternatives would not be considered a POAQC, as defined by 40 CFR 93.123(b)(1).

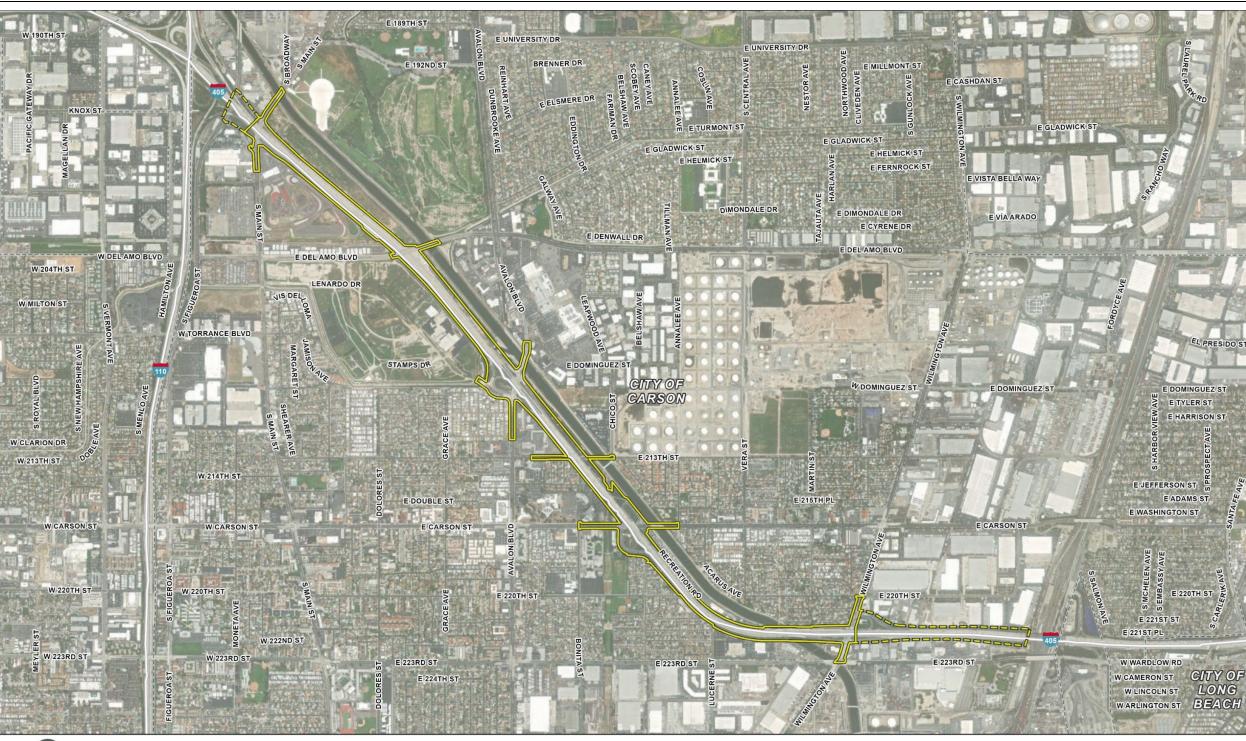
## Attachments:

- 1 Regional Location and Project Vicinity
- 2 Project Study Area
- 3 Descriptions of Proposed Project Build Alternatives
- 4 Proposed Auxiliary Lanes, Complete Streets, and TSM/TDM Improvement Areas
- 5 I-405 Freeway Layout Under Alternative 2
- 6 Summary of Operational Traffic Conditions

# ATTACHMENT 1: Regional Location and Project Vicinity



**Regional Location and Project Vicinity** 





Project Study Area
Temporary Signage Areas
City Boundary

07-LA-405 PM 9.6/12.6 EA 07-35940

I-405 from Wilmington Ave to Main St Improvements Project ATTACHMENT 3: Proposed Auxiliary Lanes, Complete Streets, and TSM/TDM Improvement Areas

# **Alternative 2 – Auxiliary Lanes and Complete Streets**

Under Alternative 2, two auxiliary lanes on northbound (NB) Interstate 405 (I-405) and two auxiliary lanes on southbound (SB) I-405 would be provided at the following locations:

## • Along NB I-405:

- Between the Wilmington Avenue NB on-ramp and the Carson Street NB loop offramp
- o Between the Carson Street NB on-ramp and the Avalon Boulevard NB off-ramp

# Along SB I-405:

- o Between the Avalon Boulevard SB on-ramp and the Carson Street SB loop off-ramp
- o Between the Carson Street SB on-ramp and the Wilmington Avenue SB off-ramp

The proposed auxiliary lanes under Alternative 2 would require the widening of pavement, realignment of on- and off-ramps, and the construction of retaining walls and noise barriers at the following locations:

# • Along NB I-405:

- Between the Wilmington Avenue NB on-ramp and the Carson Street NB off-ramp, which would require widening of the I-405 bridge over the Dominguez Channel and Carson Street
- Between the Carson Street NB on-ramp and Avalon NB off-ramp would require the widening of the I-405 bridge over 213th Street.

# Along SB I-405:

- Between the Avalon SB on-ramp and the Carson Street SB off-ramp which would require the widening of the I-405 bridge over Carson Street and 213th Street
- Between the Carson Street SB on-ramp and the Wilmington Avenue I-405 SB offramp, which would require widening of the I-405 bridge over the Dominguez Channel

Additionally, under Alternative 2, the proposed I-405 from Wilmington Avenue to Main Street Improvements Project (Project) would implement Complete Streets elements as well as Transportation System Management (TSM) and Transportation Demand Management (TDM) Alternatives, where feasible, throughout the Project Study Area.

Under Alternative 2, the proposed Project would evaluate the following locations to implement Complete Streets elements:

- I-405 and Main Street Intersection
- I-405 and Avalon Boulevard Intersection
- I-405 and Carson Street Intersection
- I-405 and Wilmington Avenue Intersection
- 213th Street under I-405

Complete Streets elements for the Project would include the following improvements to promote equitable and sustainable multi-modal travel options:

Project Summary for Interagency Consultation

ATTACHMENT 3: Proposed Auxiliary Lanes, Complete Streets, and TSM/TDM Improvement Areas

- Upgrading existing sidewalks and crosswalks to be Americans with Disabilities Act (ADA) compliant
- Improving existing pedestrian routes by constructing sidewalks in locations that do not currently have sidewalks
- Improving existing bicycle facilities by connecting City of Carson bikeways that have gaps within State right-of-way or providing new bikeways along local roadways
- Improving lighting under bridges for pedestrian and bicycle crossings
- Providing enhanced pedestrian and bicycle crossings by restriping existing crosswalks to high visibility crosswalk and eliminating free-right turns where feasible
- Support future transit and multi-modal trail connections within the area

The following TSM and TDM strategies are proposed to increase efficiency along the existing corridor and local roadway facilities without increasing the number of through lanes:

- Freeway management system strategy focuses on improving traffic management, traffic surveillance, safety, and signage to improve motorist wayfinding. Proposed elements include updated closed circuit television systems (CCTV), implementation of fixed CCTV cameras at ramp termini, ramp metering upgrades at study interchanges, improvements to ramp metering control systems, and additional vehicle detection devices.
- Arterial system strategy focuses on improving traffic flow on the arterials adjacent to freeways with specialized treatment in addition to intersection enhancements and optimizations. Proposed elements include signal enhancements and optimizations at ramp termini and signal controller and equipment upgrades.
- Intelligent Transportation Systems (ITS) strategy focuses on improving information gathering and dissemination, traffic management, and communication to help travelers navigate the transportation system. Proposed elements include changeable message signs upgrade, traffic monitoring stations upgrade, and completion/relocation of communication lines.

Right-of-way (ROW) acquisitions are anticipated at the Dominguez Channel Bridge. Temporary construction easements (TCE) are anticipated to be required along portions of NB and SB I-405. Additionally, under Alternative 2, the proposed Project would require the modification or replacement of existing on-site drainage systems, including drainage inlets, storm drains, cross culverts, dikes, ditches, channels, and overside drains.

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ATTACHMENT 3: Proposed Auxiliary Lanes, Complete Streets, and TSM/TDM Improvement Areas

# Alternative 3 – Transportation System Management/Transportation Demand Management Alternatives

Under Alternative 3, the proposed Project would construct and implement the same Complete Streets elements and TSM and TDM strategies as Alternative 2, where feasible, throughout the Project Study Area.

No permanent ROW acquisitions are anticipated under Alternative 3. However, TCEs may be required to facilitate construction of some Complete Streets elements and TSM and TDM strategies.

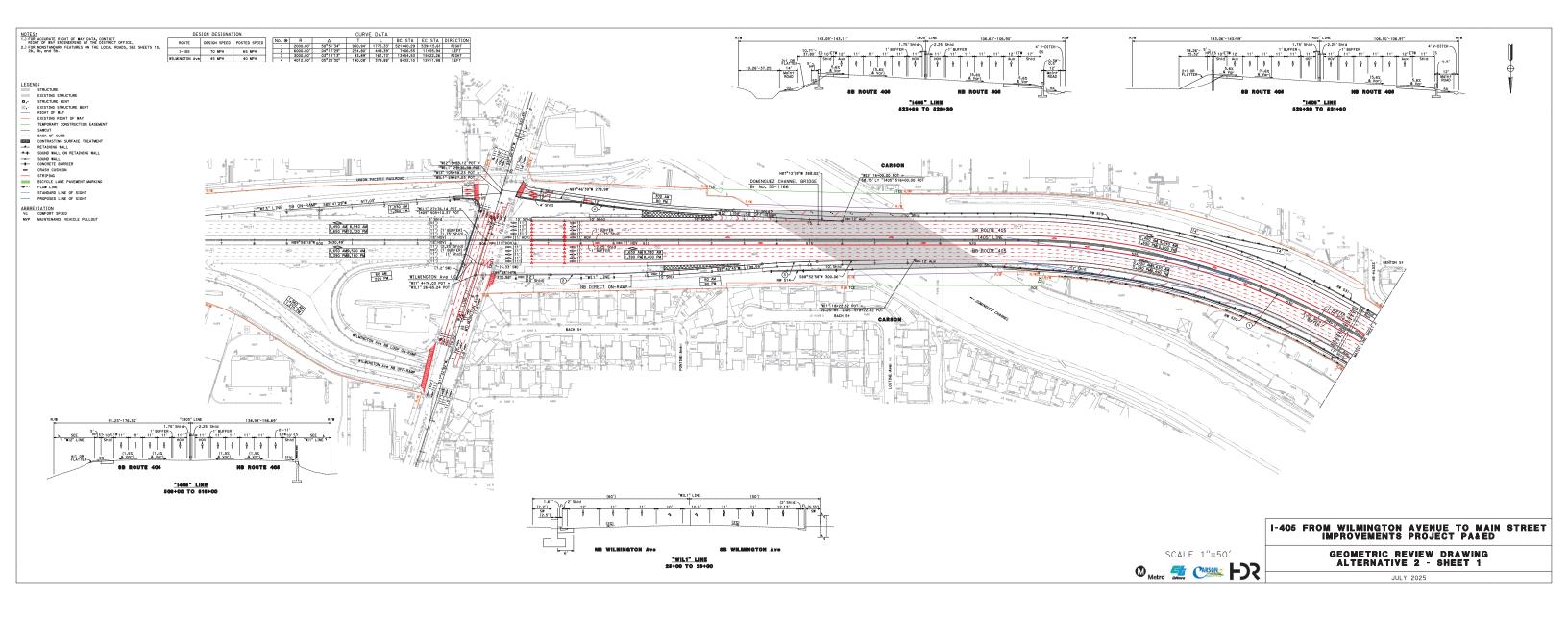
ATTACHMENT 4: Proposed Auxiliary Lanes, Complete Streets, and TSM/TDM Improvement Areas



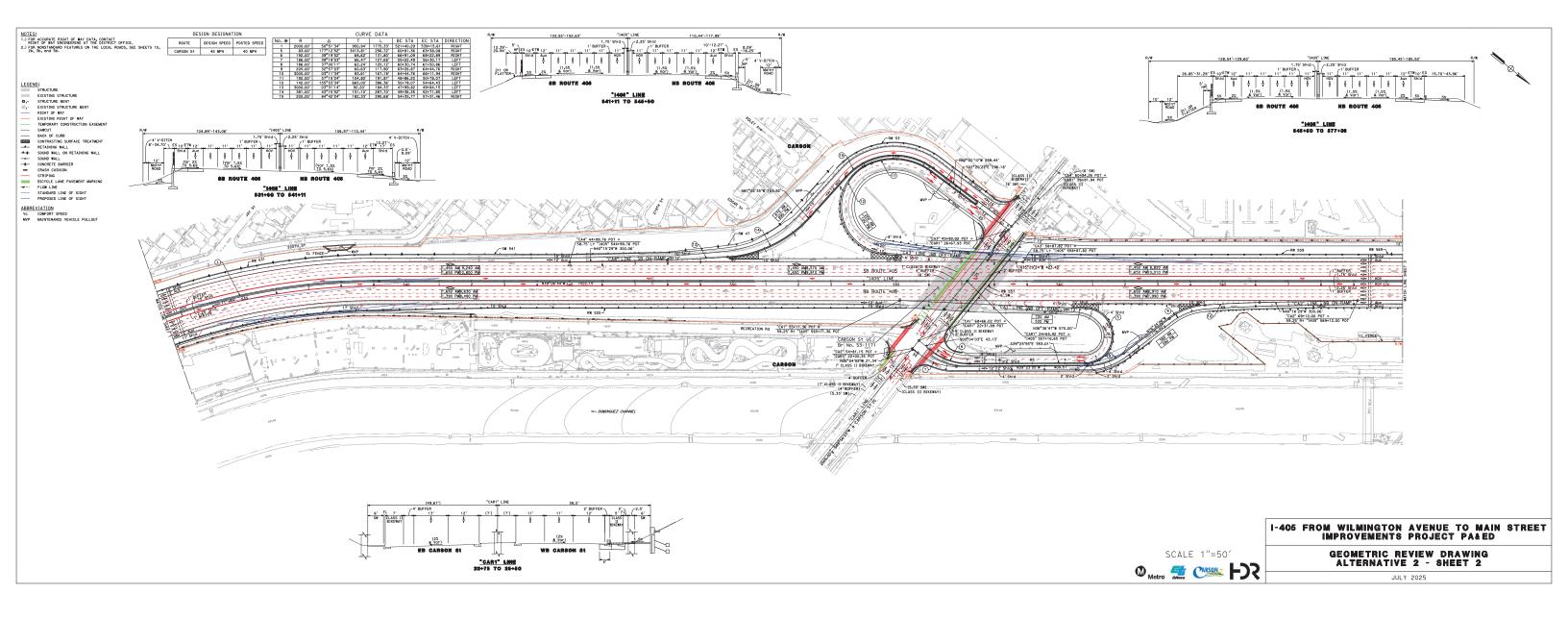
## Notes:

- 1. Alternative 2 would include auxiliary lanes, Complete Streets, and TSM/TDM Improvements
- 2. Alternative 3 would include Complete Streets, and TSM/TDM Improvements

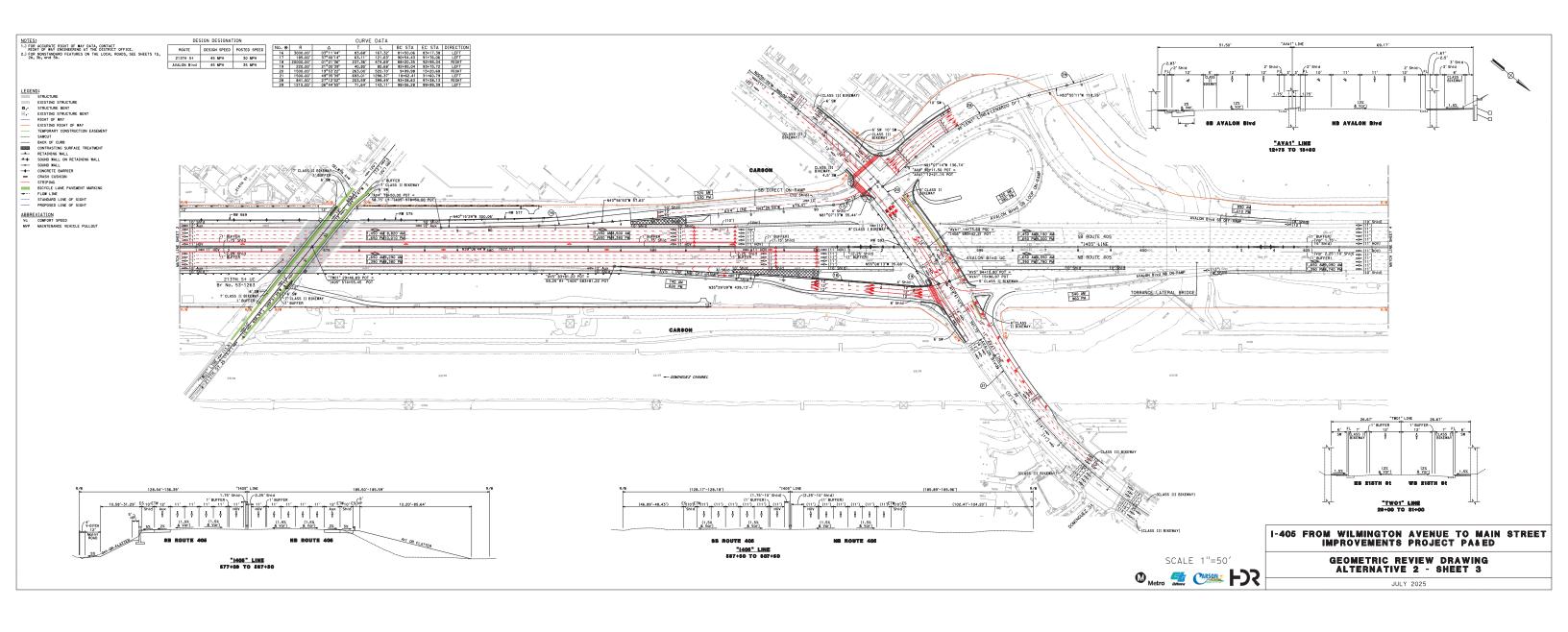
# ATTACHMENT 5: - I-405 Freeway Layout Under Alternative 2



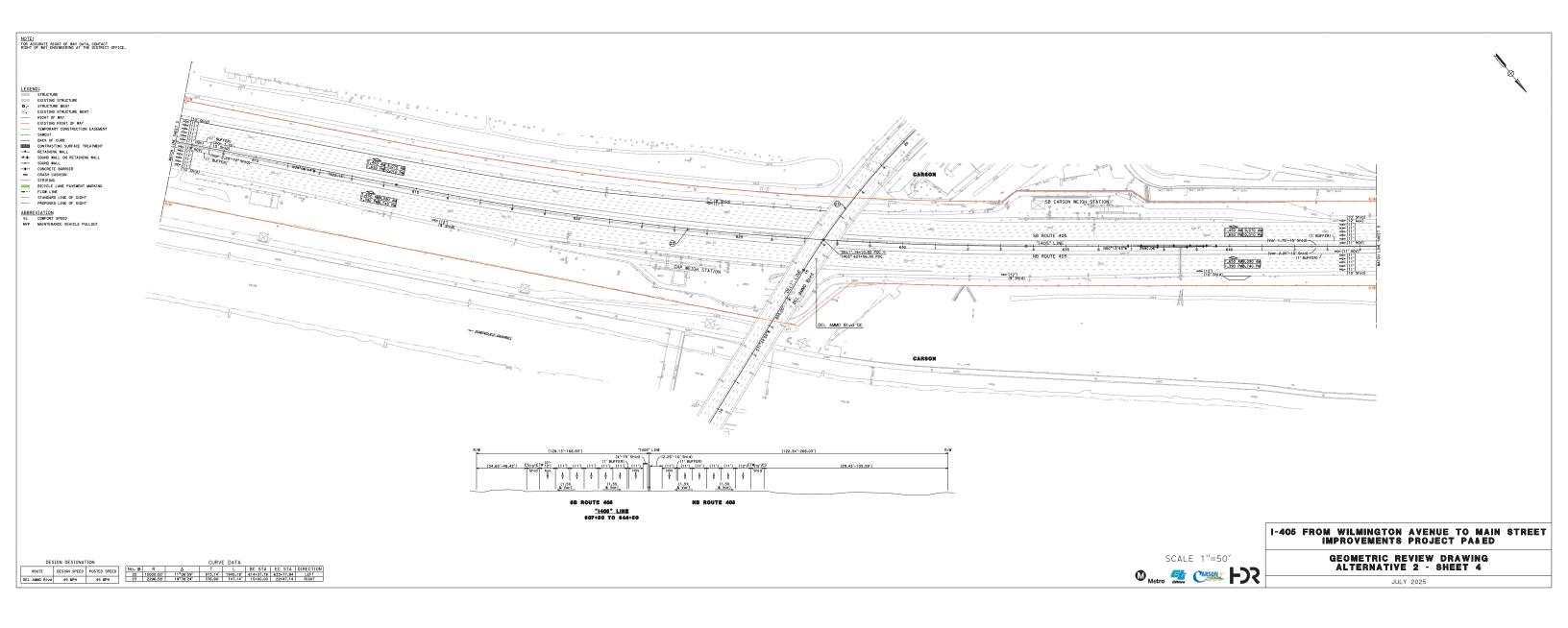
# ATTACHMENT 5: I-405 Freeway Layout Under Alternative 2



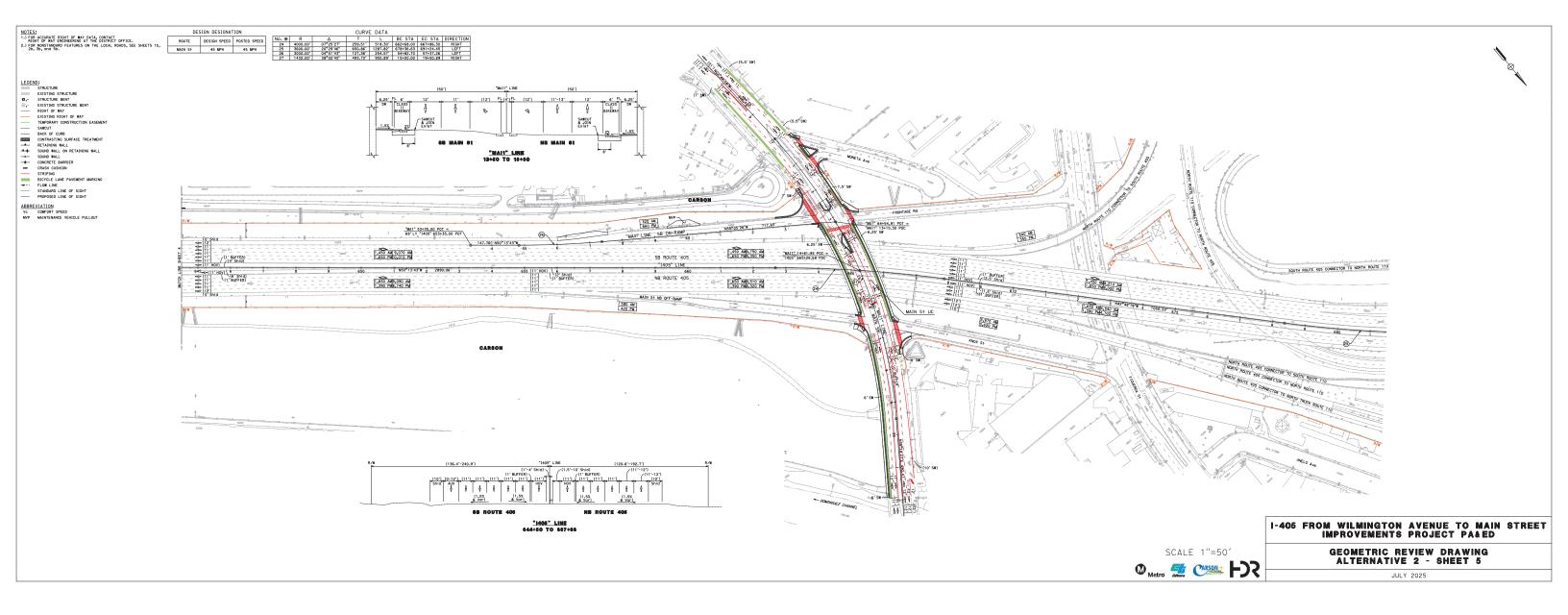
# ATTACHMENT 5: - I-405 Freeway Layout Under Alternative 2



# ATTACHMENT 5: - I-405 Freeway Layout Under Alternative 2



# ATTACHMENT 5: – I-405 Freeway Layout Under Alternative 2



## ATTACHMENT 6: Summary of Operational Traffic Conditions

This Attachment provides the findings of the traffic operations analysis. A summary of the traffic operational performance comparison between project alternatives is presented in **Table 6-1** through **Table 6-4**, demonstrating the operational benefits anticipated from proposed improvements under Opening Year (2030) and Design Year (2050) conditions.

# **Opening Year (2030) Summary**

Table 6-1: Opening Year (2030) Traffic Performance Metrics – AM Peak Period

Performar	nce Metric	No-Build Alternative 1	Alternative 2	Alternative 3
Freeway Segment Peak Direction Peak Hour Density and LOS	NB I-405 Wilmington Ave On-ramp to Carson St Off-ramp	49 / F <sup>1</sup>	31 / D	49 / F
	NB I-405 Carson St On-ramp to Avalon Blvd Off-ramp	49 / F <sup>2</sup>	43 / E	49 / F
Freeway Segment Off-Peak Direction Peak Hour Density and LOS	SB I-405 Avalon Blvd On-ramp to Carson St Off-ramp	47 / F <sup>2</sup>	38 / E	47 / F
	SB I-405 Carson St On-ramp to Wilmington Ave Off-ramp	87 / F <sup>1</sup>	82 / F	87 / F
Number of Study Intersections	Peak Hour LOS D or Better	13	13	13
	Peak Hour LOS E or F	1	1	1
Peak Period Average Delay Per Vehicle Change (seconds)		-	-5 (-3%)	0 (0%)
Peak Period Average Speed Change (mph)		-	0 (0%)	0 (0%)
Peak Period Total Delay Change (hours)		-	-147 (-3%)	-16 (0%)

### Note:

Source: HDR Inc, 2025.

 $\% = percent; \ I-405 = Interstate \ 405; \ LOS = Level \ of \ Service; \ mph = miles \ per \ hour; \ NB = northbound; \ SB = southbound; \ SB =$ 

<sup>1.</sup> Density was calculated by averaging the merge, basic, and diverge segments.

<sup>2.</sup> Density was calculated by averaging the merge and diverge segments.

ATTACHMENT 6: Summary of Operational Traffic Conditions

Table 6-2: Opening Year (2030) Traffic Performance Metrics – PM Peak Period

Performance Metric		No-Build Alternative 1	Alternative 2	Alternative 3
Freeway Segment Peak Direction Peak Hour Density and LOS	SB I-405 Avalon Blvd On-ramp to Carson St Off-ramp	104 / F <sup>1</sup>	81 / F	104 / F
	SB I-405 Carson St On-ramp to Wilmington Ave Off-ramp	102 / F <sup>2</sup>	89 / F	102 / F
Freeway Segment Off-Peak Direction Peak Hour Density and LOS	NB I-405 Wilmington Ave On-ramp to Carson St Off-ramp	29 / C <sup>2</sup>	25 / C	29 / C
	NB I-405 Carson St On-ramp to Avalon Blvd Off-ramp	29 / C <sup>1</sup>	26 / C	29 / C
Number of Study Intersections	Peak Hour LOS D or Better	11	13	11
	Peak Hour LOS E or F	3	1	3
Peak Period Average Delay Per Vehicle Change (seconds)		-	-36 (-9%)	-2 (0%)
Peak Period Average Speed Change (mph)		-	2 (6%)	0 (0%)
Peak Period Total Delay Change (hours)		-	-1,107 (-10%)	-41 (0%)

### Note:

Source: HDR Inc, 2025.

%=percent; I-405=Interstate 405; LOS=Level of Service; mph=miles per hour; NB=northbound; SB=southbound

<sup>1.</sup> Density was calculated by averaging the merge and diverge segments.

<sup>2.</sup> Density was calculated by averaging the merge, basic, and diverge segments.

# Design Year (2050) Summary

Table 6-3: Design Year (2050) Traffic Performance Metrics – AM Peak Period

Performance Metric		No-Build Alternative 1	Alternative 2	Alternative 3
Freeway Segment Peak Direction Peak Hour Density and LOS	NB I-405 Wilmington Ave On-ramp to Carson St Off-ramp	73 / F <sup>1</sup>	66 / F	73 / F
	NB I-405 Carson St On-ramp to Avalon Blvd Off-ramp	75 / F <sup>2</sup>	71 / F	75 / F
Freeway Segment Off-Peak Direction Peak Hour Density and LOS	SB I-405 Avalon Blvd On-ramp to Carson St Off-ramp	76 / F <sup>2</sup>	68 / F	76 / F
	SB I-405 Carson St On-ramp to Wilmington Ave Off-ramp	86 / F <sup>1</sup>	77 / F	86 / F
Number of Study Intersections	Peak Hour LOS D or Better	13	13	13
	Peak Hour LOS E or F	1	1	1
Peak Period Average Delay Per Vehicle Change (seconds)		-	3 (0%)	1 (0%)
Peak Period Average Speed Change (mph)		-	0 (0%)	0 (0%)
Peak Period Total Delay Change (hours)		-	101 (0%)	30 (0%)

### Note:

Source: HDR Inc, 2025.

%=percent; I-405=Interstate 405; LOS=Level of Service; mph=miles per hour; NB=northbound; SB=southbound

<sup>1.</sup> Density was calculated by averaging the merge, basic, and diverge segments.

<sup>2.</sup> Density was calculated by averaging the merge and diverge segments.

ATTACHMENT 6: Summary of Operational Traffic Conditions

Table 6-4: Design Year (2050) Traffic Performance Metrics – PM Peak Period

Performance Metric		No-Build Alternative 1	Alternative 2	Alternative 3
Freeway Segment Peak Direction Peak Hour Density and LOS	SB I-405 Avalon Blvd On-ramp to Carson St Off-ramp	105 / F <sup>1</sup>	79 / F	105 / F
	SB I-405 Carson St On-ramp to Wilmington Ave Off-ramp	103 / F <sup>2</sup>	88 / F	103 / F
Freeway Segment Off-Peak Direction Peak Hour Density and LOS	NB I-405 Wilmington Ave On-ramp to Carson St Off-ramp	50 / F <sup>2</sup>	27 / C	50 / F
	NB I-405 Carson St On-ramp to Avalon Blvd Off-ramp	52 / F <sup>1</sup>	29 / D	52 / F
Number of Study Intersections	Peak Hour LOS D or Better	11	13	11
	Peak Hour LOS E or F	3	1	3
Peak Period Average Delay Per Vehicle Change (seconds)		-	-43 (-10%)	-7 (-2%)
Peak Period Average Speed Change (mph)		-	1 (7%)	0 (0%)
Peak Period Total Delay Change (hours)		-	-1,379 (-11%)	-220 (-2%)

### Note:

Source: HDR Inc, 2025.

 $\% = percent; I-405 = Interstate \ 405; \ LOS = Level \ of \ Service; \ mph = miles \ per \ hour; \ NB = northbound; \ SB = southbound; \ SB = so$ 

<sup>1.</sup> Density was calculated by averaging the merge and diverge segments.

<sup>2.</sup> Density was calculated by averaging the merge, basic, and diverge segments.