

# Link Union Station (Link US) Project



**Construction Network Presentation**

**April 21, 2021**



# Link Union Station Overview


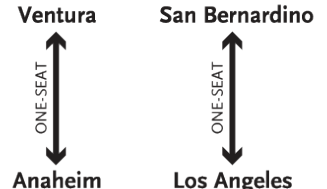







**Scott McConnell**  
**Executive Officer, Program  
Management and Regional Rail**

# The Link to Southern California

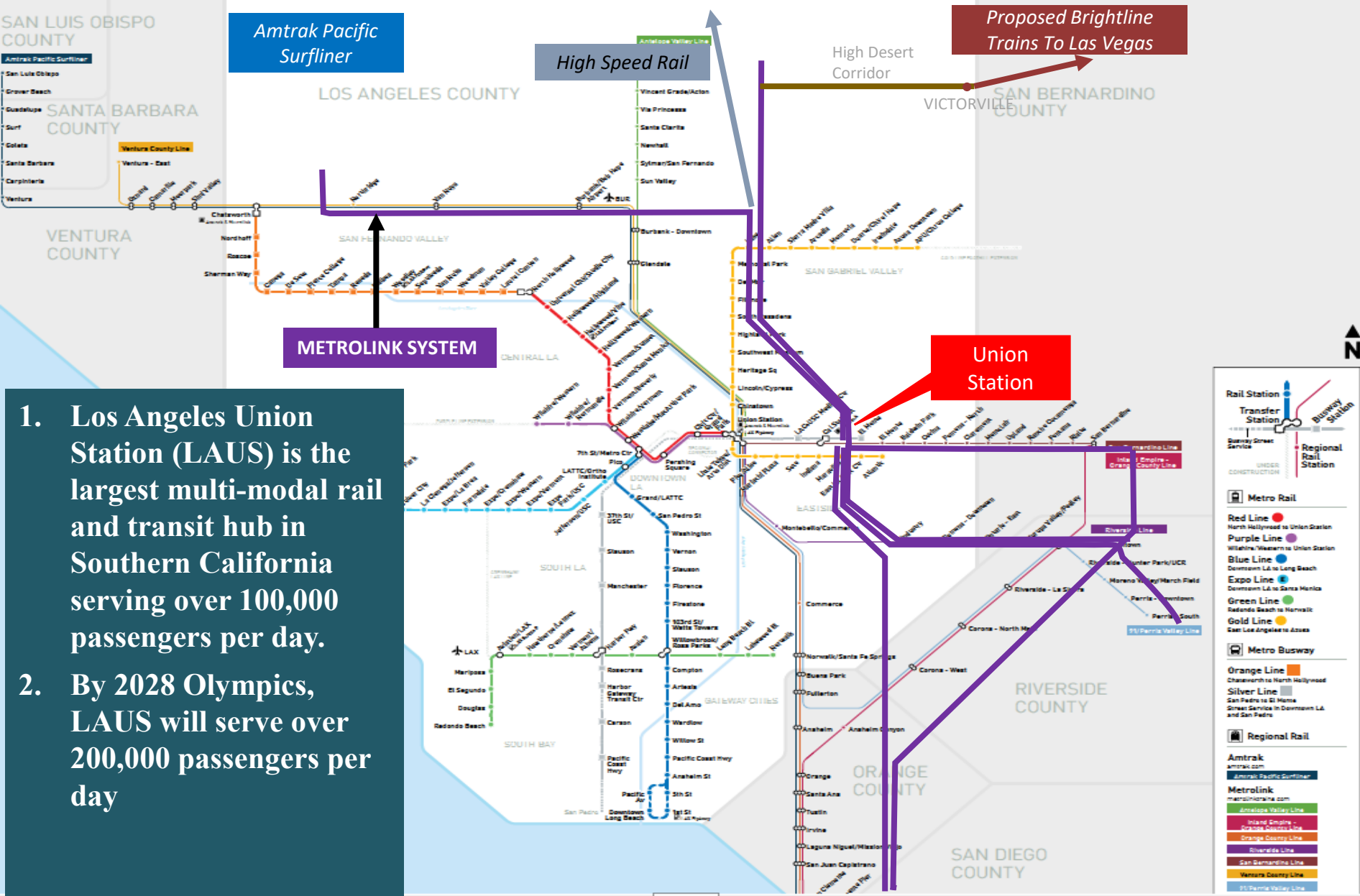


# Link US Project Benefits

## What will Link US Provide?

<p><b>IMPROVE INTRASTATE, INTERCITY &amp; LOCAL TRANSIT CONNECTIVITY</b></p>	<p><b>IMPROVE REGIONAL CONNECTIVITY</b></p>	<p><b>INCREASE RAIL SERVICE CAPACITY</b></p>	<p><b>REDUCE TRAIN IDLING TIMES</b></p>	<p><b>FUTURE DEVELOPMENT</b></p>
 <p>High-speed rail; Metrolink, Amtrak, Metro Rail; Metro and municipal bus systems; ridesharing</p>	 <p>One-seat rides to key destinations in Southern California</p>	 <p>Accommodate future demand</p>	 <p>Shorter wait times; fuel savings and emissions reductions per train</p>	 <p>Opportunity for transit-oriented development</p>
<p><b>GENERATE NEW JOBS</b></p>	<p><b>IMPROVE PEDESTRIAN ACCESS</b></p>	<p><b>ENHANCE PASSENGER EXPERIENCE</b></p>	<p><b>IMPROVE US-101 &amp; LOCAL ROADWAYS</b></p>	
 <p>Estimated 4,500 temporary jobs per year over five-year period; 200+ permanent jobs</p>	 <p>Enhanced mobility options and safety features</p>	 <p>New concourse, retail and other amenities, and new expanded platforms</p>	 <p>Updated design and enhanced safety</p>	

# Metro Regional Rail focus on Network Integration



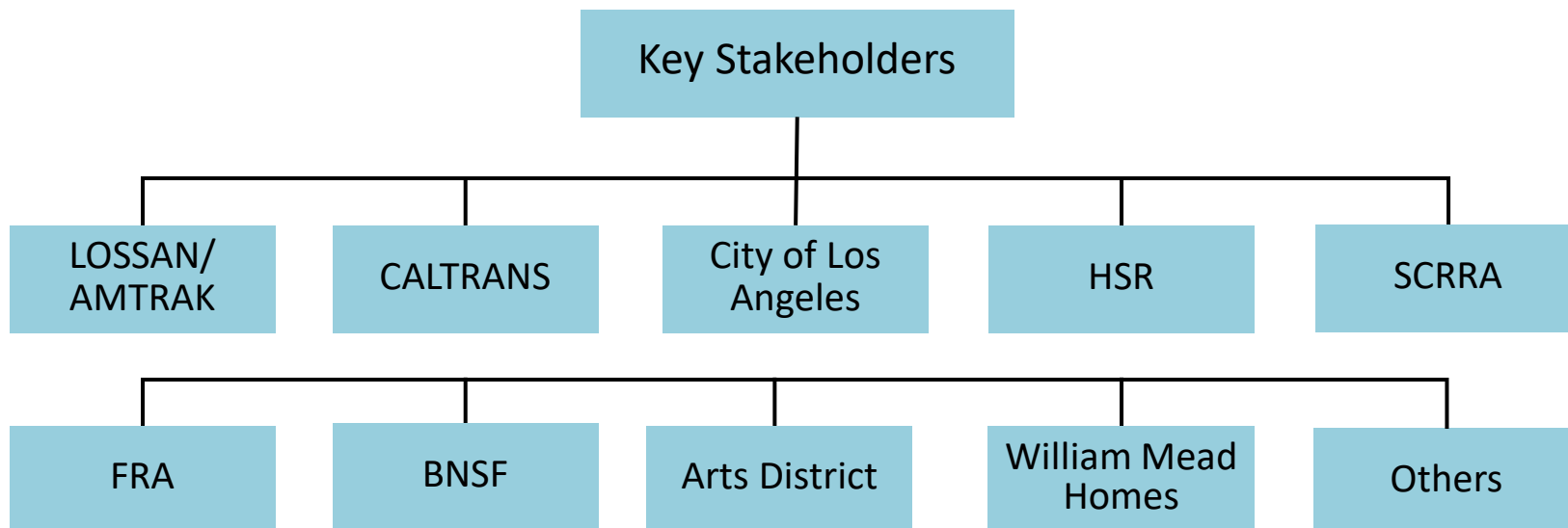
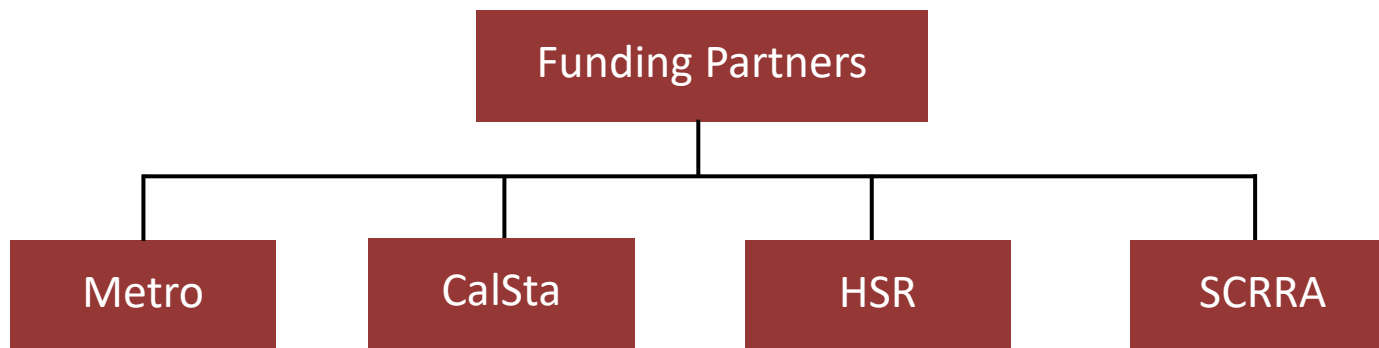
1. Los Angeles Union Station (LAUS) is the largest multi-modal rail and transit hub in Southern California serving over 100,000 passengers per day.
2. By 2028 Olympics, LAUS will serve over 200,000 passengers per day



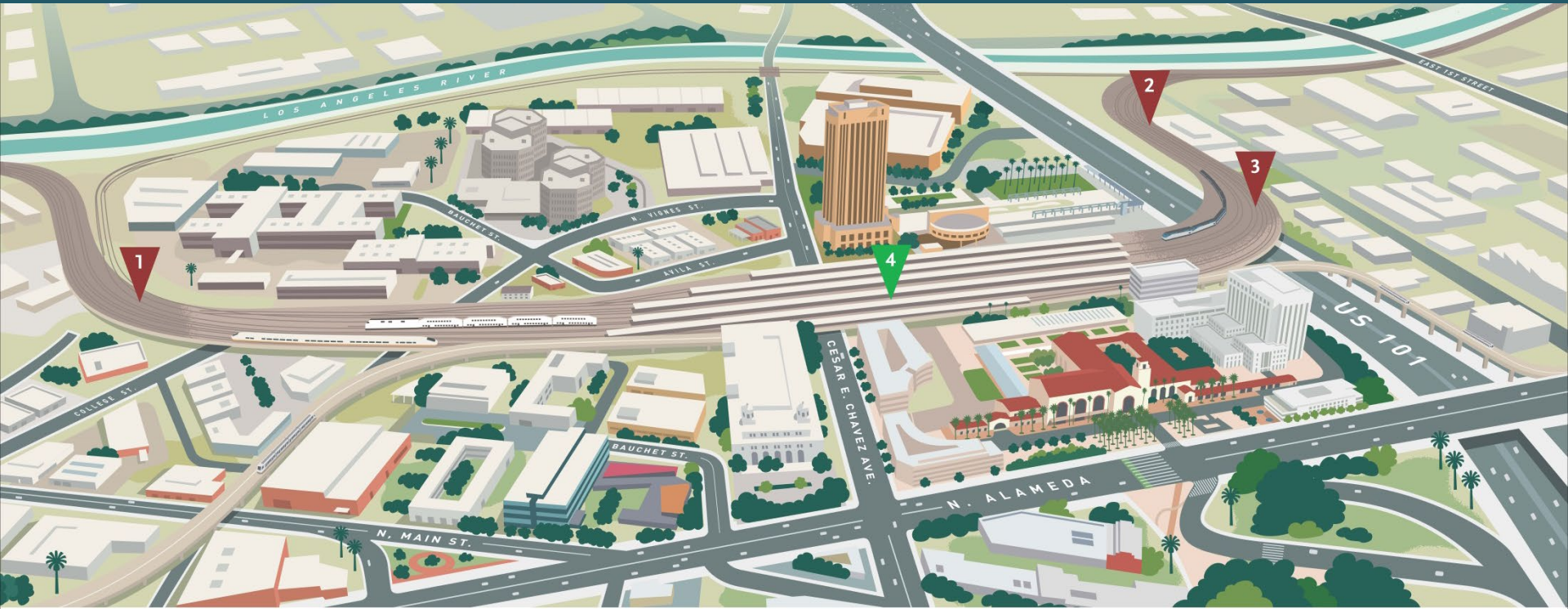
# Los Angeles Union Station Today

Built in 1939 | Largest model hub in Southern California

# Link US Funding Partners & Stakeholders



# Link US – Two Phases, A and B



## Phase A - Funded

## Phase B - Not Funded

### SEGMENT 1 – THROAT AREA

### SEGMENT 2 – COMMERCIAL & CENTER ST

### SEGMENT 3 – VIADUCT & RUN-THROUGH

### SEGMENT 4 – RAIL YARD/CONCOURSE AREA

1. Rail signal, communications and track work
2. Utility relocation

1. Property acquisition
2. Utility relocation
3. Street and ATP improvements

1. Viaduct structure over US-101 (full width) and south of US-101 to 1st Street.
2. Two run-through tracks from Union Station Platform 4 to mainline tracks
3. Signal and communication

1. Raising of the rail yard, including new platforms and tracks, new stairs, escalators and elevators, and new bridges over Cesar Chavez Avenue and Vignes Street.
2. Proposed modified expanded passageway, including including East and West Plazas
3. Add remaining run-through tracks and new lead track in the throat



# Link US Funding Plan (Phase A funded)

Funding Source	Amount (\$ in millions)
State Proposition 1A/High Speed Rail Bonds	\$423.335
State Transit Intercity Rail Capital Program (TIRCP)	\$337.571
State Transportation Improvement Program (STIP)	\$60.820
Measure R	\$51.672
SCRRA JPA Contribution (Non-Metro)	\$40.000
Other HSR Funds	\$18.726
Measure M	\$13.274
LOSSAN/Amtrak	\$5.000
<b>Total</b>	<b>\$950.398</b>

*“Our partnership with Metro is key to implementing high-speed rail improvements in Southern California... The partnership has reached several major milestones over the last year, including completing a Memorandum of Understanding in September 2019 and **the Authority’s Board of Directors approving the Link US Funding Plan in April 2020.** This vital step establishes the **Authority’s commitment to provide an additional \$423 million in Proposition 1A bookend funds** toward construction of Phase A at an estimated cost of \$950 million.”* – Page 76 of Revised Draft HSR 2020 Business Plan

# Link US Project Phase A

Preliminary Rendered Concept of Two run-through track operation on Platform 4



# LINK UNION STATION PHASE A KEY ELEMENTS



**Area 1 - Throat (North of the Station)**

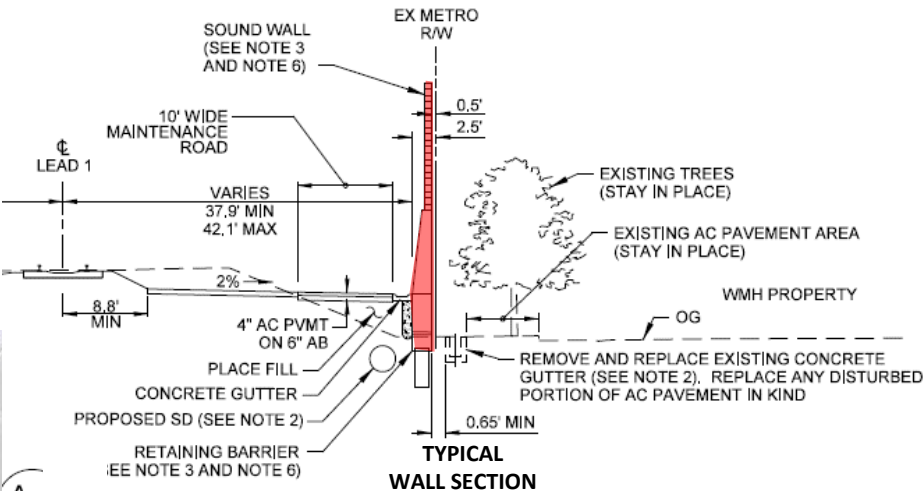
**Area 2 - Station Area & Platform Modifications**

**Area 3 - US-101 Viaduct Freeway Improvements & Commercial Street ATP**

**Area 4 - Run-through Tracks West Bank Tie-In & Bridge over Amtrak Lead**

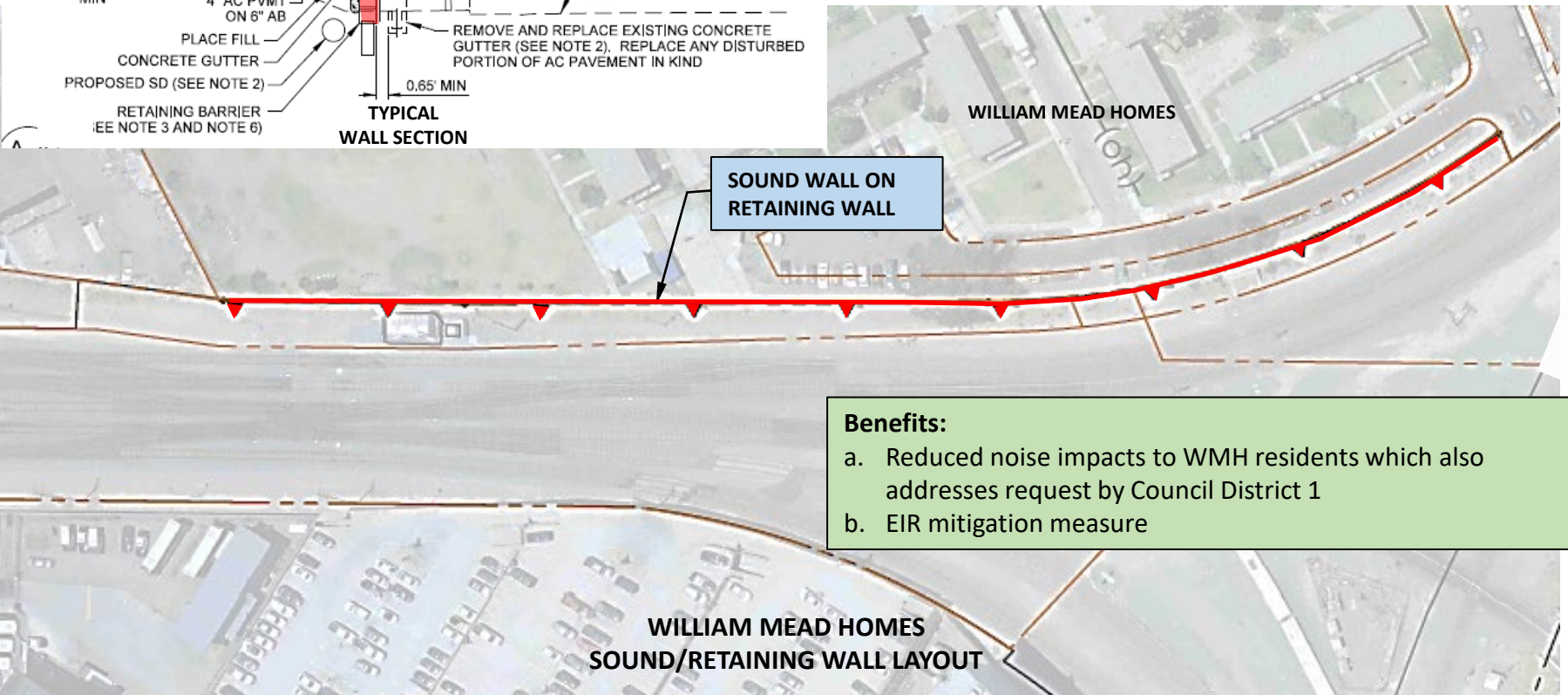
# LINK US PHASE A PROJECT

## Area 1 - William Mead Homes Sound Wall on Retaining Wall



### CMGC/CMGCSS Collaboration Opportunities:

- How to minimize impacts to WMH residents
- Determination of most efficient wall type
- Potential early construction package



### Benefits:

- Reduced noise impacts to WMH residents which also addresses request by Council District 1
- EIR mitigation measure

# NOISE MITIGATION - SOUND WALL

Area 1 - Looking Southwest from Bolero Lane/Bloom Street



**Existing Conditions**

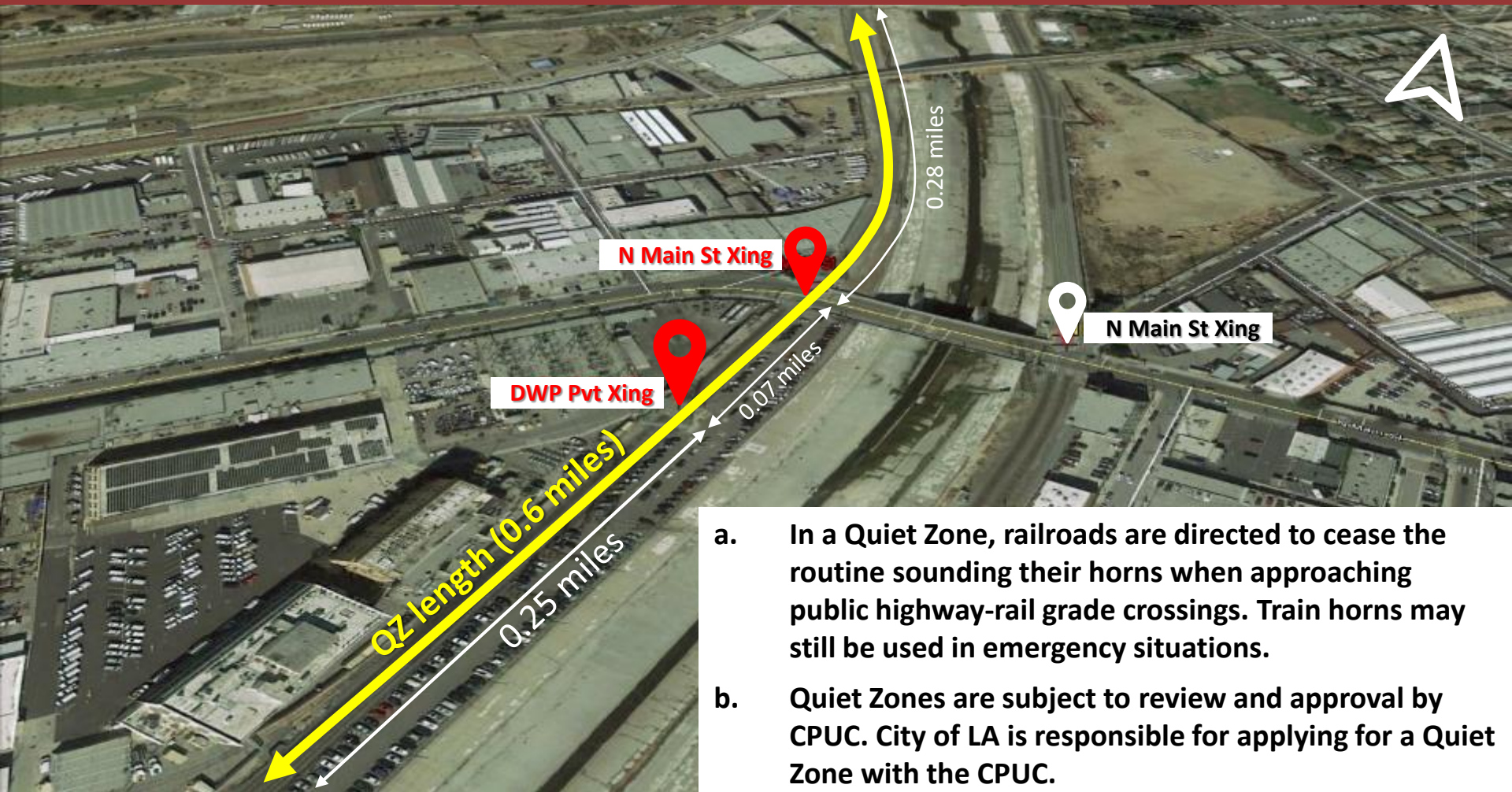


**Proposed Project - Vegetation (Vines)  
on Sound Wall and Retaining Wall**

*Conceptual Rendering*

# PROPOSED LIMITS OF QUIET ZONE ON THE WEST BANK

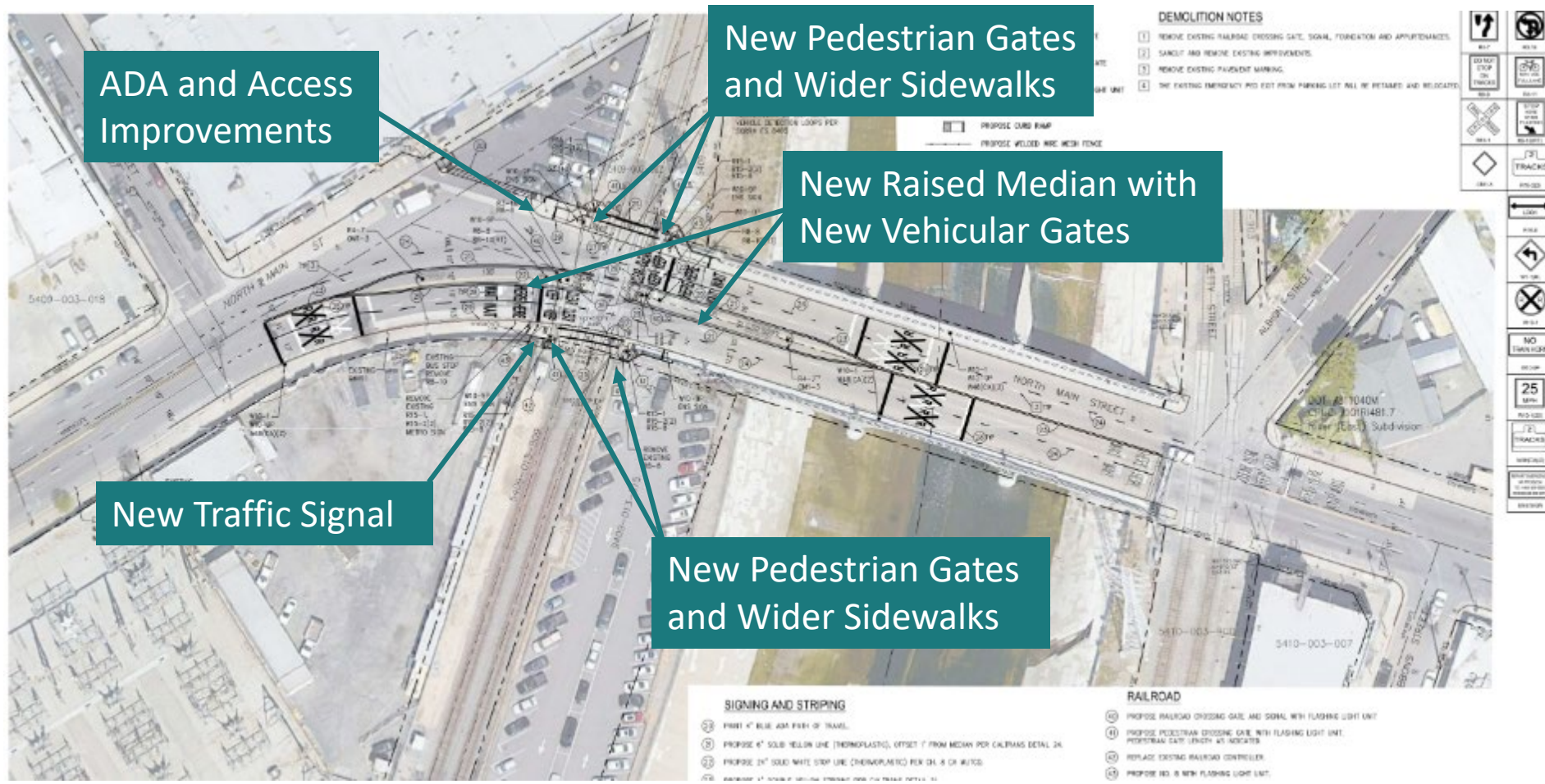
## Area 1 - Quiet Zone Ready Improvements at N. Main Street Railroad Grade Crossing



- In a Quiet Zone, railroads are directed to cease the routine sounding their horns when approaching public highway-rail grade crossings. Train horns may still be used in emergency situations.
- Quiet Zones are subject to review and approval by CPUC. City of LA is responsible for applying for a Quiet Zone with the CPUC.

# PROPOSED SAFETY IMPROVEMENTS AT N. MAIN STREET

## Area 1 - Quiet Zone Ready Improvements

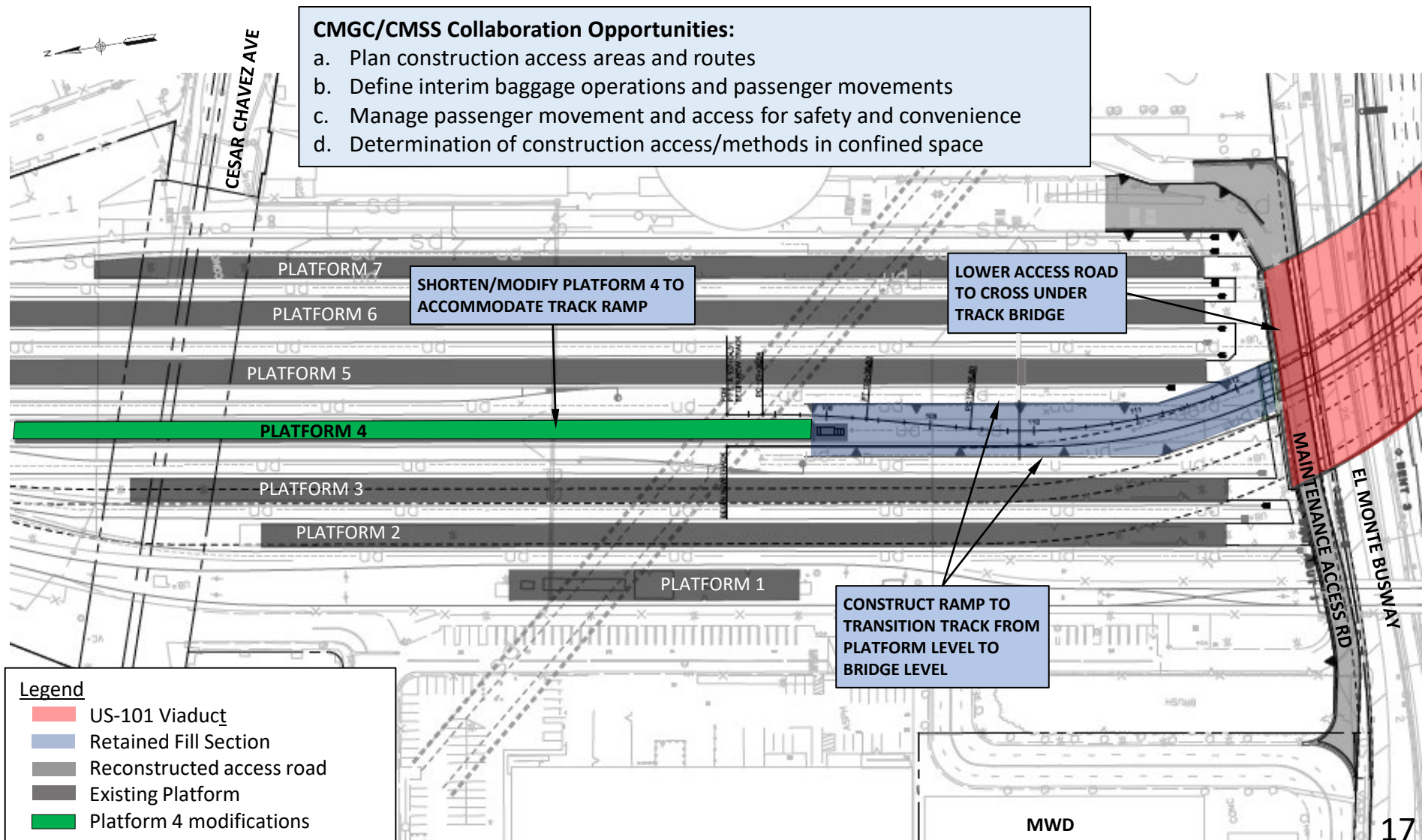


# LINK US PHASE A PROJECT

## Area 2 Station - Project Elements

### CMGC/CMSS Collaboration Opportunities:

- Plan construction access areas and routes
- Define interim baggage operations and passenger movements
- Manage passenger movement and access for safety and convenience
- Determination of construction access/methods in confined space



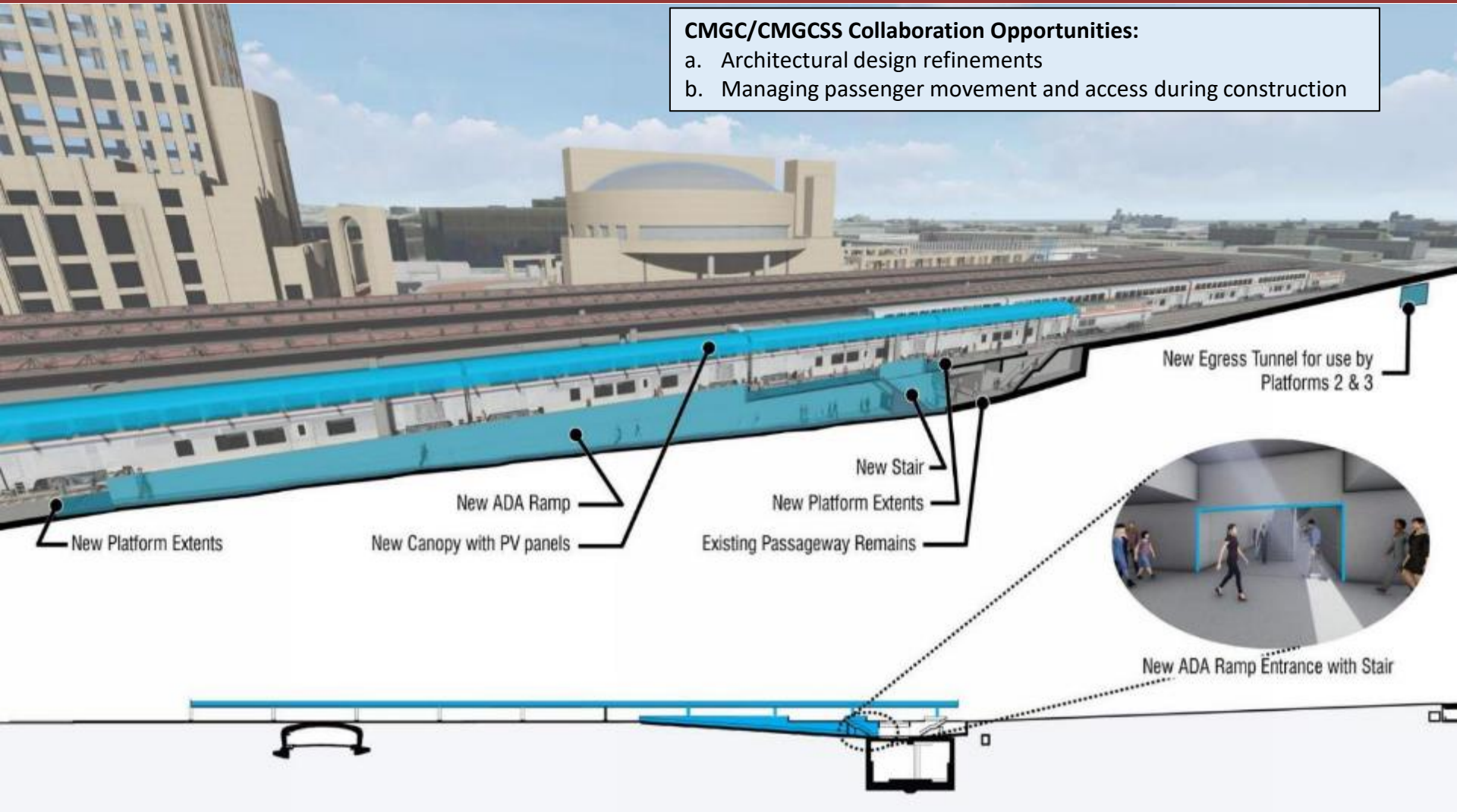


# LINK US PHASE A PROJECT

## Area 2 Station – Platform 4 Modifications

### CMGC/CMGCSS Collaboration Opportunities:

- a. Architectural design refinements
- b. Managing passenger movement and access during construction



# LINK US PHASE A PROJECT

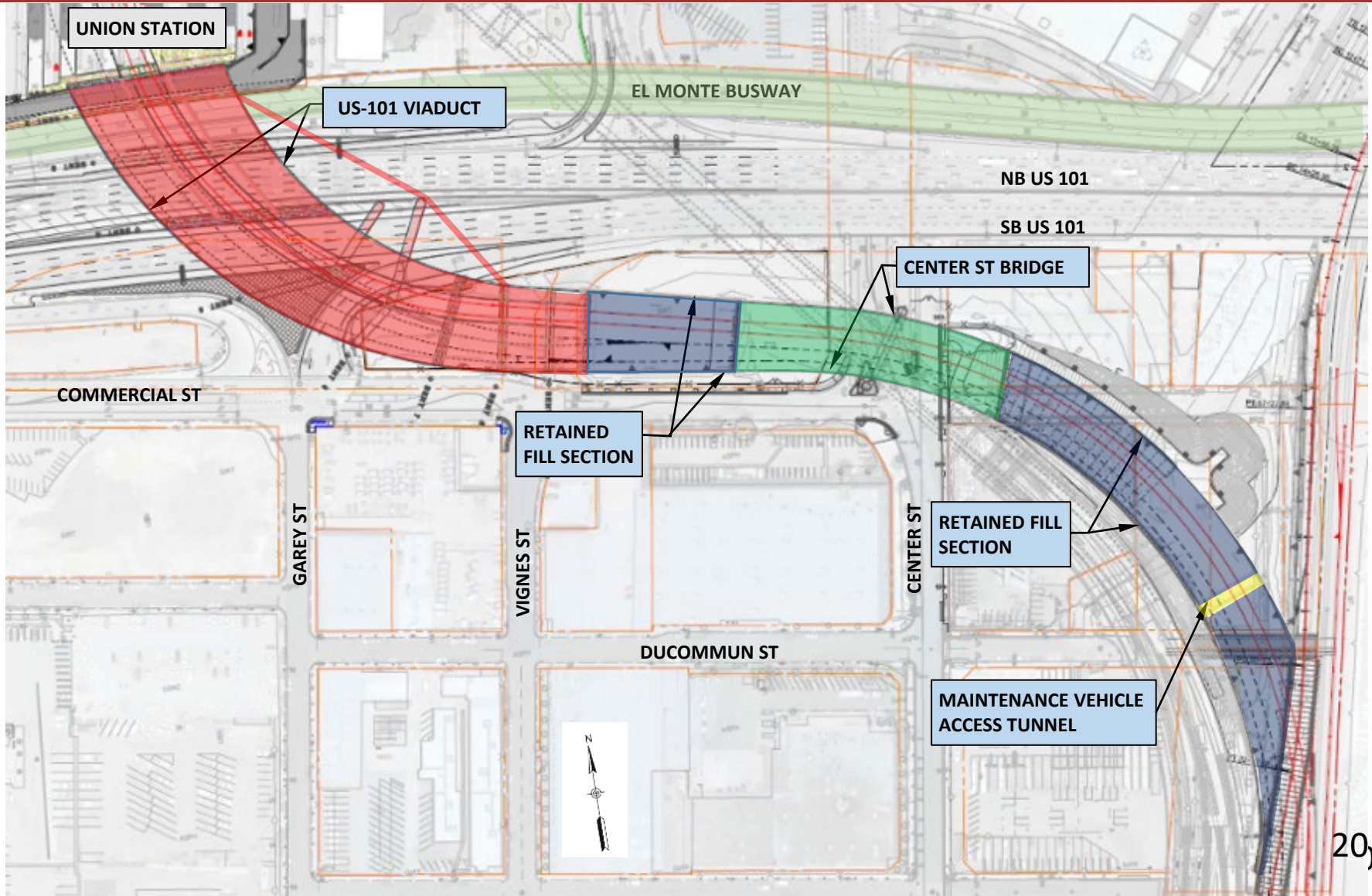
## Area 2 Station – Platform 4 Modifications



**PROPOSED PLATFORM 4 IMPROVEMENTS WITH NEW CANOPY**

# LINK US PHASE A PROJECT

## Area 3 – Run-through Track Structure South of Union Station



# LINK US PHASE A PROJECT

## Area 3 – US 101 Viaduct and Freeway Modifications

### CMGC/CMSS Collaboration Opportunities:

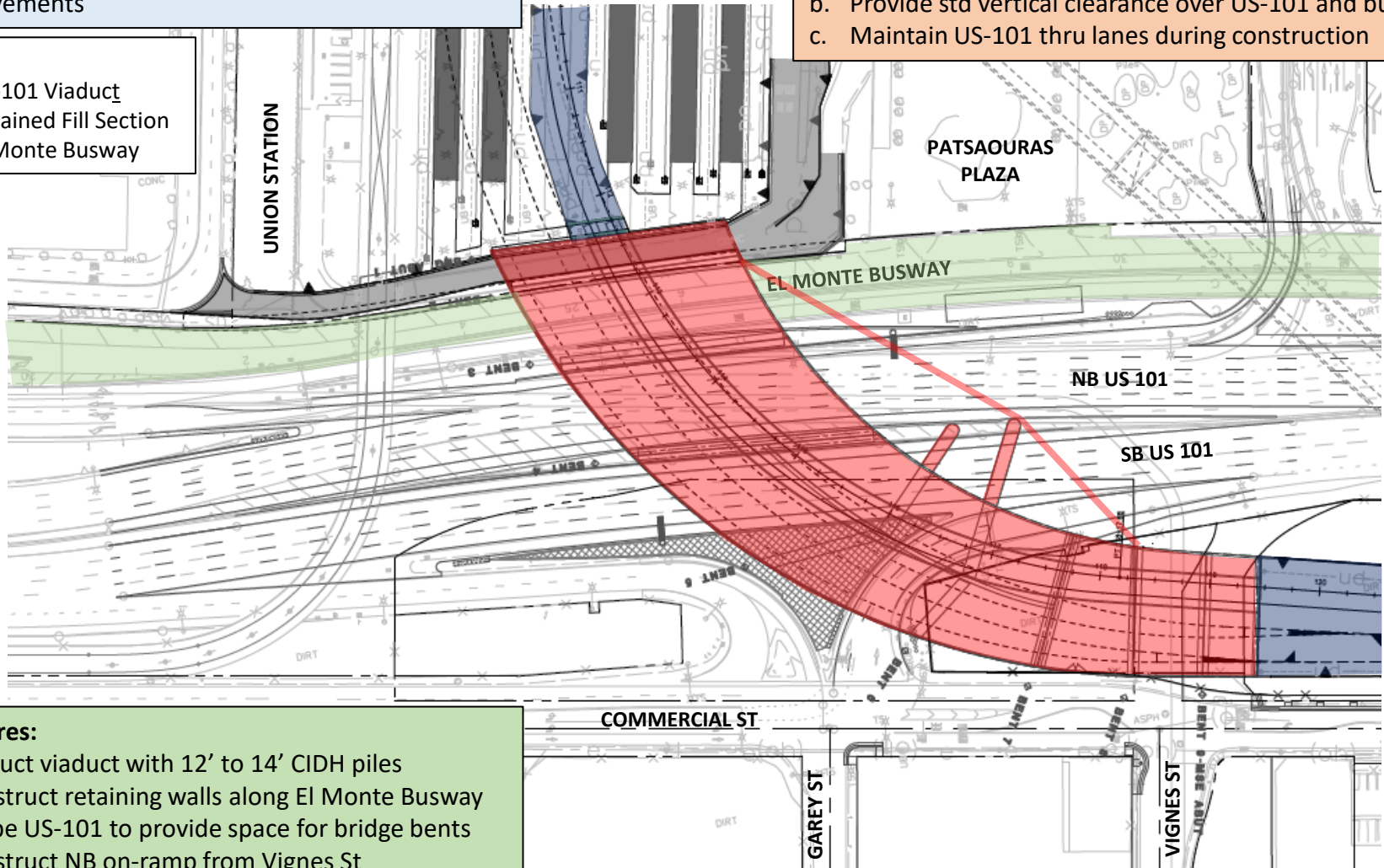
- a. Construction staging of the bridge and freeway improvements

### Key Constraints:

- a. Preserve SB on-ramp geometry
- b. Provide std vertical clearance over US-101 and busway
- c. Maintain US-101 thru lanes during construction

### Legend

- US-101 Viaduct
- Retained Fill Section
- El Monte Busway



### Key Features:

- a. Construct viaduct with 12' to 14' CIDH piles
- b. Reconstruct retaining walls along El Monte Busway
- c. Restripe US-101 to provide space for bridge bents
- d. Reconstruct NB on-ramp from Vignes St

# LINK US PHASE A PROJECT

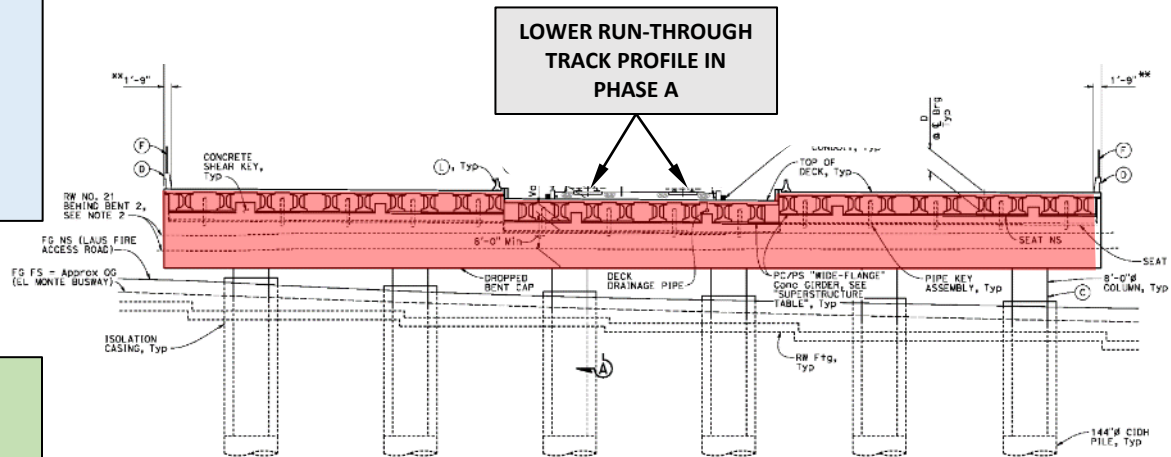
## Area 3 – US 101 Viaduct

### CMGC/CMSS Collaboration Opportunities:

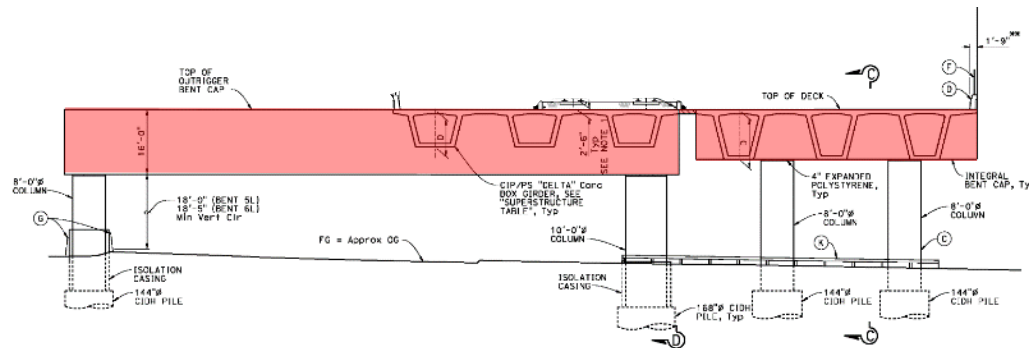
- Construct Spans 1 through 3 to be raised in the future
- Freeway closure schedule for falsework and girder erection

### Key Features:

- Spans 1-3 & 7-9 precast
- Spans 4-6 are CIP delta box
- Bents 5 & 6 are outriggers over SB US-101
- Portion of Phase A deck profile lower than ultimate



TYPICAL SECTION ALONG BENT 2



TYPICAL SECTION ALONG BENTS 6R AND 6L

# APPROACH TO FULL LANE CLOSURE FOR CONSTRUCTION OF RUN-THROUGH TRACK BRIDGE

Area 3 – Requires Joint Approval by Caltrans & LADOT

## Proposed Closure

- a. **Full Closure on Weekends**
- b. **Maximum Closure Duration: From Friday 10 PM to Monday 5 AM**
- c. **Up to 5 Weekend Closures in NB US-101 and 5 Weekend Closures in SB US-101**
- d. **Only 1 direction of US-101 will be closed on a particular weekend**
- e. **Utilize approved TMP Data Sheet to complete a Major TMP for Caltrans/LADOT Approval**

# APPROACH TO FULL LANE CLOSURE FOR CONSTRUCTION OF RUN-THROUGH TRACK BRIDGE

## Area 3 – Recommended Closure Limits

### 1. Northbound Closure

I-10 WB from I-5 NB/I-10 WB interchange to Alameda Street

US 101 NB from I-5 NB/SR 60 WB interchange to Alameda Street

- Spread WB I-10 traffic to SB I-5 and SB I-710
- Protect neighborhoods West of US 101



### 2. Southbound Closure

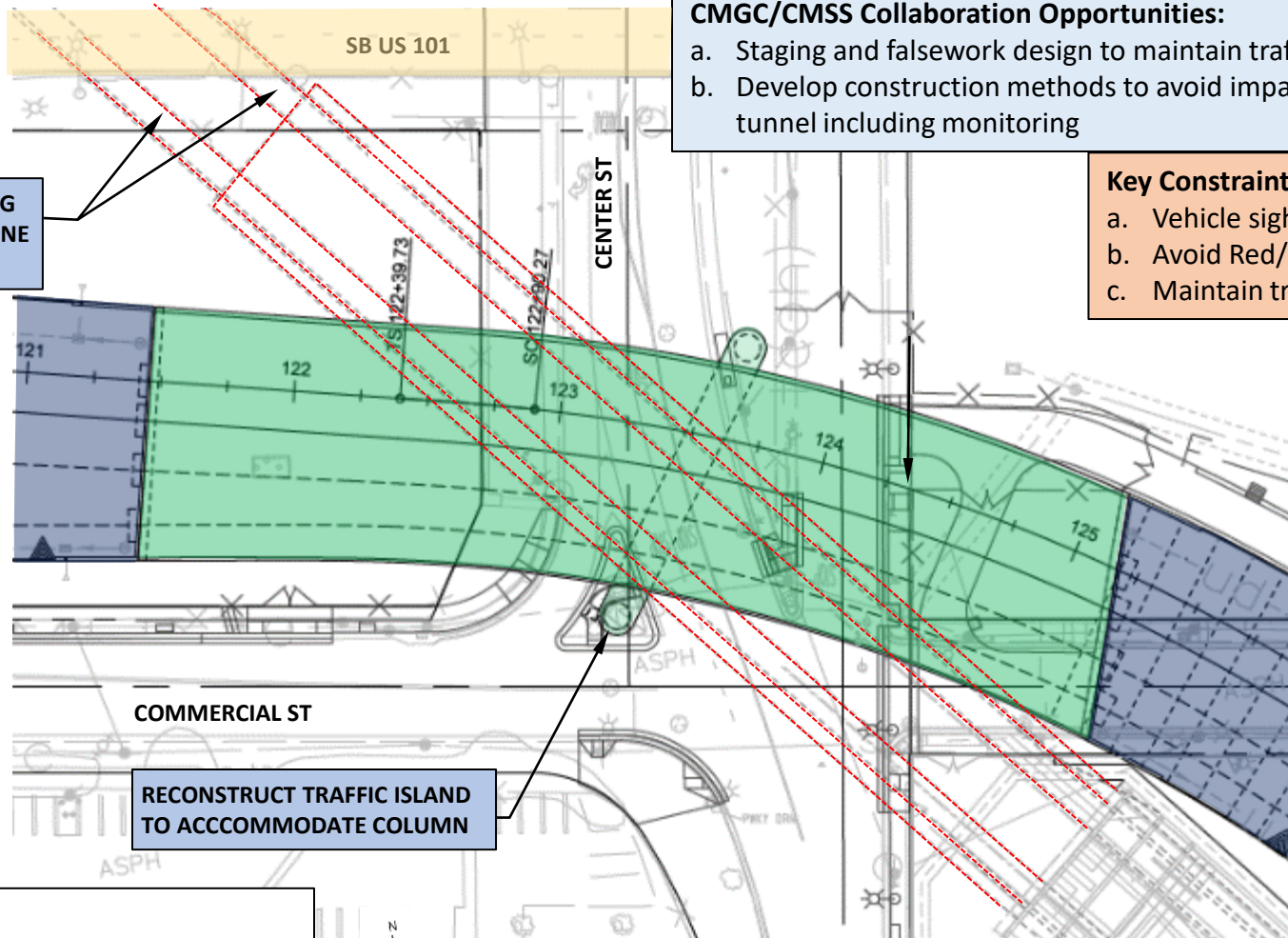
US 101 SB from Broadway to Mission Street

- Serve SB US 101 trips destined for Downtown
- Protect Little Tokyo



# LINK US PHASE A PROJECT

## Area 3 – Center Street Bridge



- CMGC/CMSS Collaboration Opportunities:**
- a. Staging and falsework design to maintain traffic operations
  - b. Develop construction methods to avoid impacts to the Red Line tunnel including monitoring

- Key Constraints:**
- a. Vehicle sight distance
  - b. Avoid Red/Purple Line Tunnel
  - c. Maintain traffic during construction

**Legend**

- Center St Bridge
- Retained Fill Section
- Limits of existing tunnel

- Key Features:**
- a. Outrigger bent cap to span tunnel and preserve sight distance
  - b. Column and abutment foundations to avoid Red/Purple Line tunnel



# LINK US PHASE A PROJECT

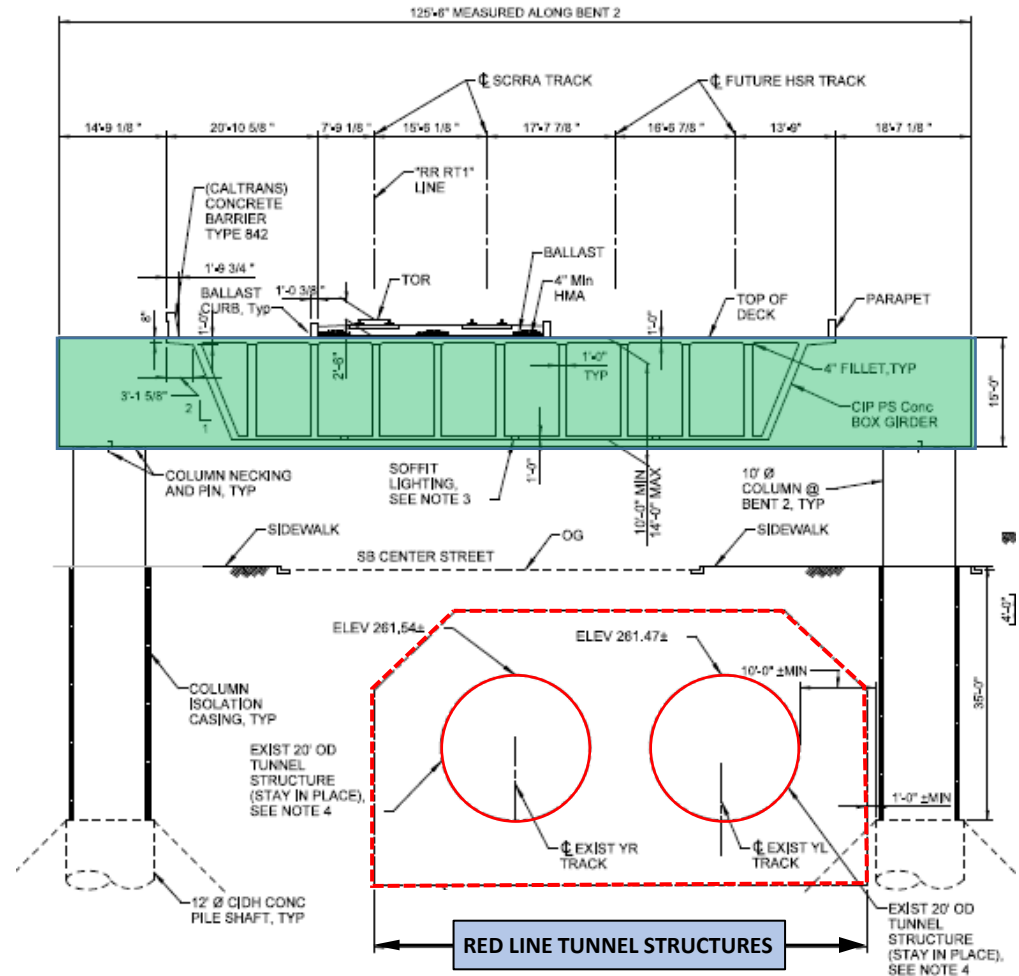
## Area 3 – Center Street Bridge

### Key Constraints:

- Vehicle sight distance
- Vertical clearance under bridge
- Avoid Red/Purple Line Tunnel below
- Maintain traffic during construction

### Key Features:

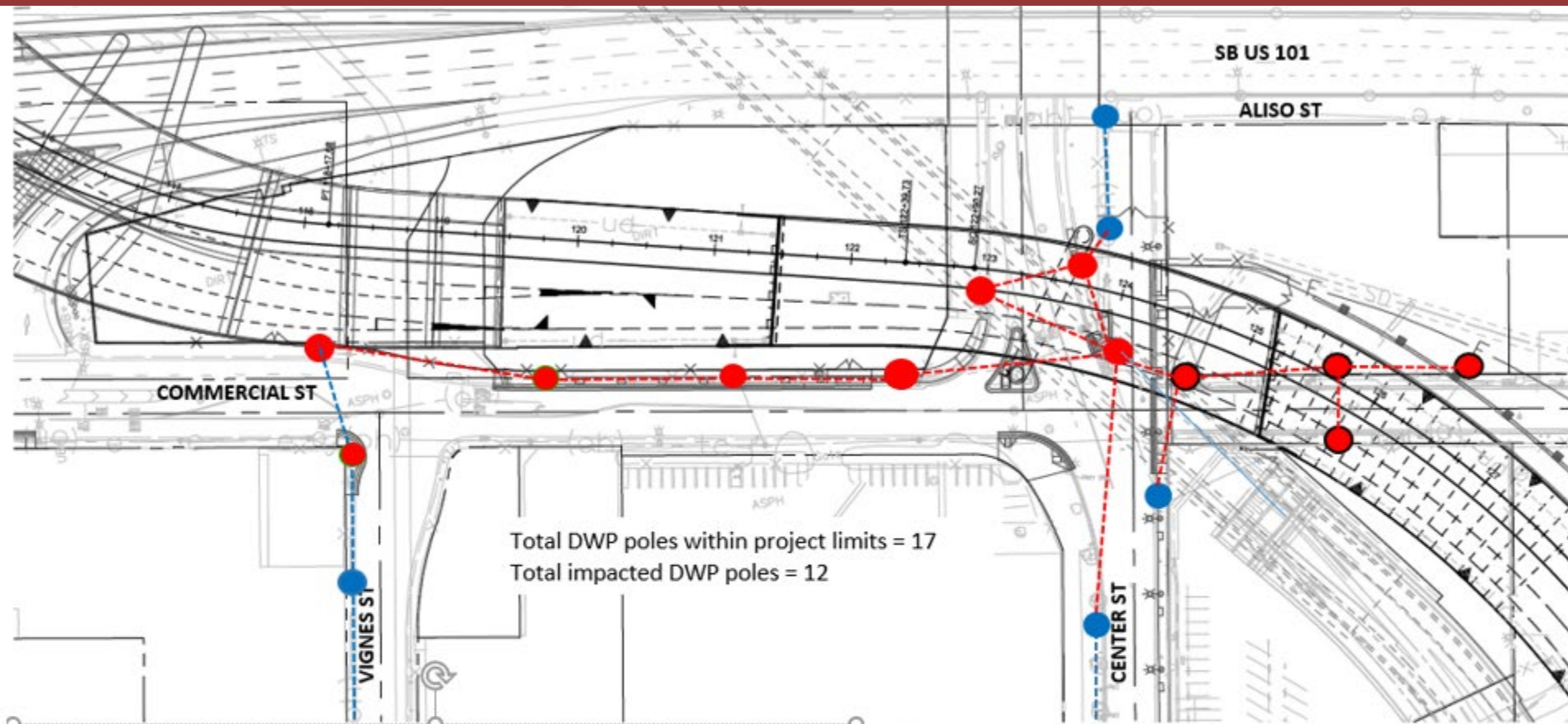
- Outrigger bent cap to span tunnel and preserve sight distance
- Column and abutment foundations to avoid Red/Purple Line tunnel
- Columns located to preserve vehicle sight distance



TYPICAL SECTION

# LINK US PHASE A PROJECT

## Area 3 – Existing LADWP Power Lines & Poles in Conflict with Project



### Legend

- Existing power poles not impacted (5)
- Existing power poles in conflict (5)
- Existing power poles supporting lines no longer needed (4)
- Existing overhead power lines not impacted
- Existing overhead lines in conflict

- Conflicts to be mitigated through relocation strategy of underground relocations to be designed and constructed by LADWP
- Spare conduit in existing duct bank to be utilized for undergrounding along Commercial Street between Vignes and Center

# LINK US PHASE A PROJECT

## Area 3 - Third Party Utility Relocations and Service Modifications

### ***LADWP Power***

- Undergrounding of existing overhead lines along Commercial and Center Streets into existing and new duct bank

### ***Southern California Gas***

- Relocation of impacted 8" gas line along Commercial Street

### ***AT&T***

- Removal of existing telecom line along Commercial Street and restoration of service to Amay's Bakery property

### ***Wilcon/Crown Castle, Frontier, and SCE Telecom***

- Relocation of impacted telecom lines along Commercial and Center Streets into joint duct bank

### ***LADWP Water***

- Removal of existing 8" lines along Commercial Street and construction of new service lines to Amay's Bakery and Metro Division 20 properties from Aliso Street

***All third-party utility relocations to be designed and constructed by third party owners ahead of project construction***

# LINK US PHASE A PROJECT

## Area 3 – Proposed Active Transportation Improvements



**Note:**

Per agreement with City of LA, active transportation is limited to Class IV bike lanes only with bollards and associated restriping (no R/W takes included)

**View from Southeast Corner of Commercial/Garey Intersection**

# LINK US PHASE A PROJECT

## Area 4 - BNSF Yard – Project Elements

### CMGC/CMSS Collaboration Opportunities:

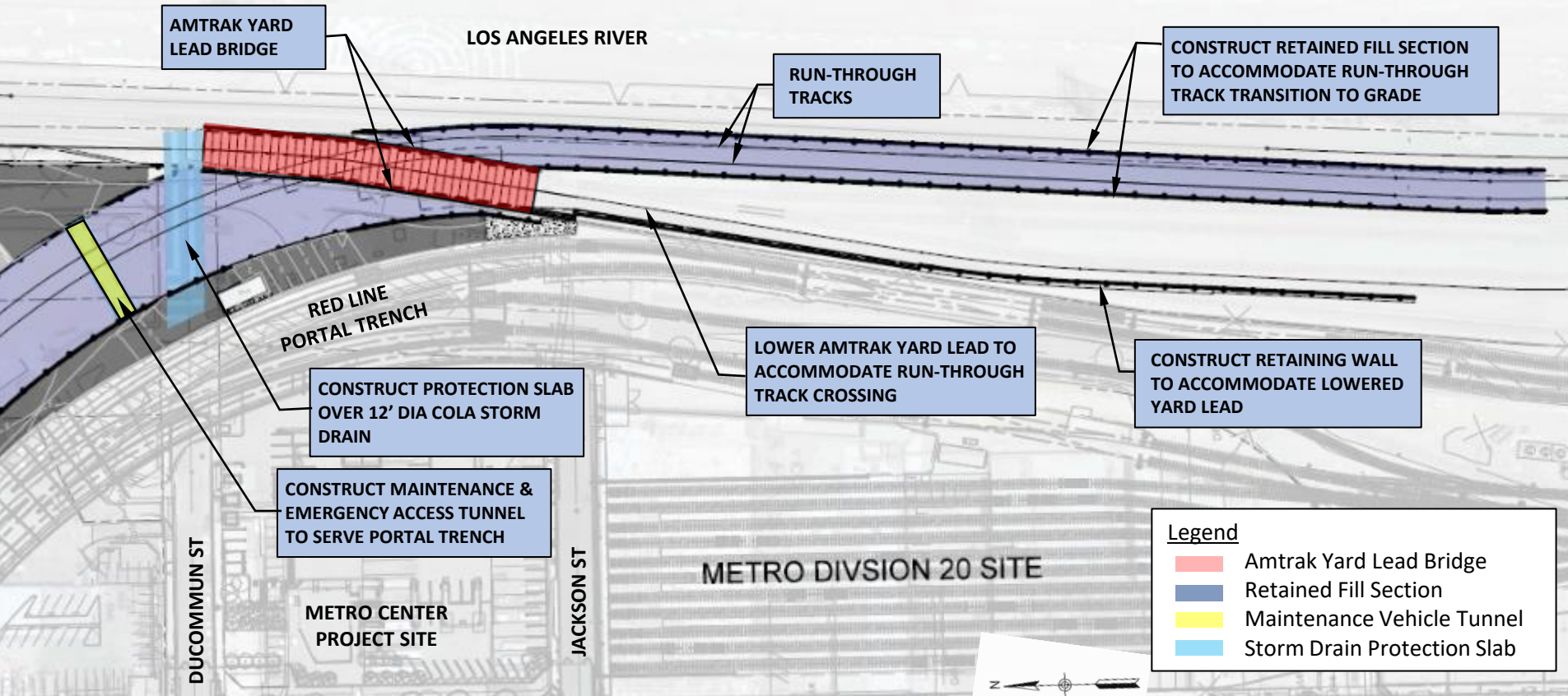
- a. Construction methods and abutment design to maintain track operation
- b. Optimize lightweight fill retaining walls and slab bridge protection structure

### Key Features:

- a. Lightweight fill retaining walls
- b. Box fire/maintenance access tunnel
- c. Protection slab over storm drain
- d. Lowered Amtrak yard lead

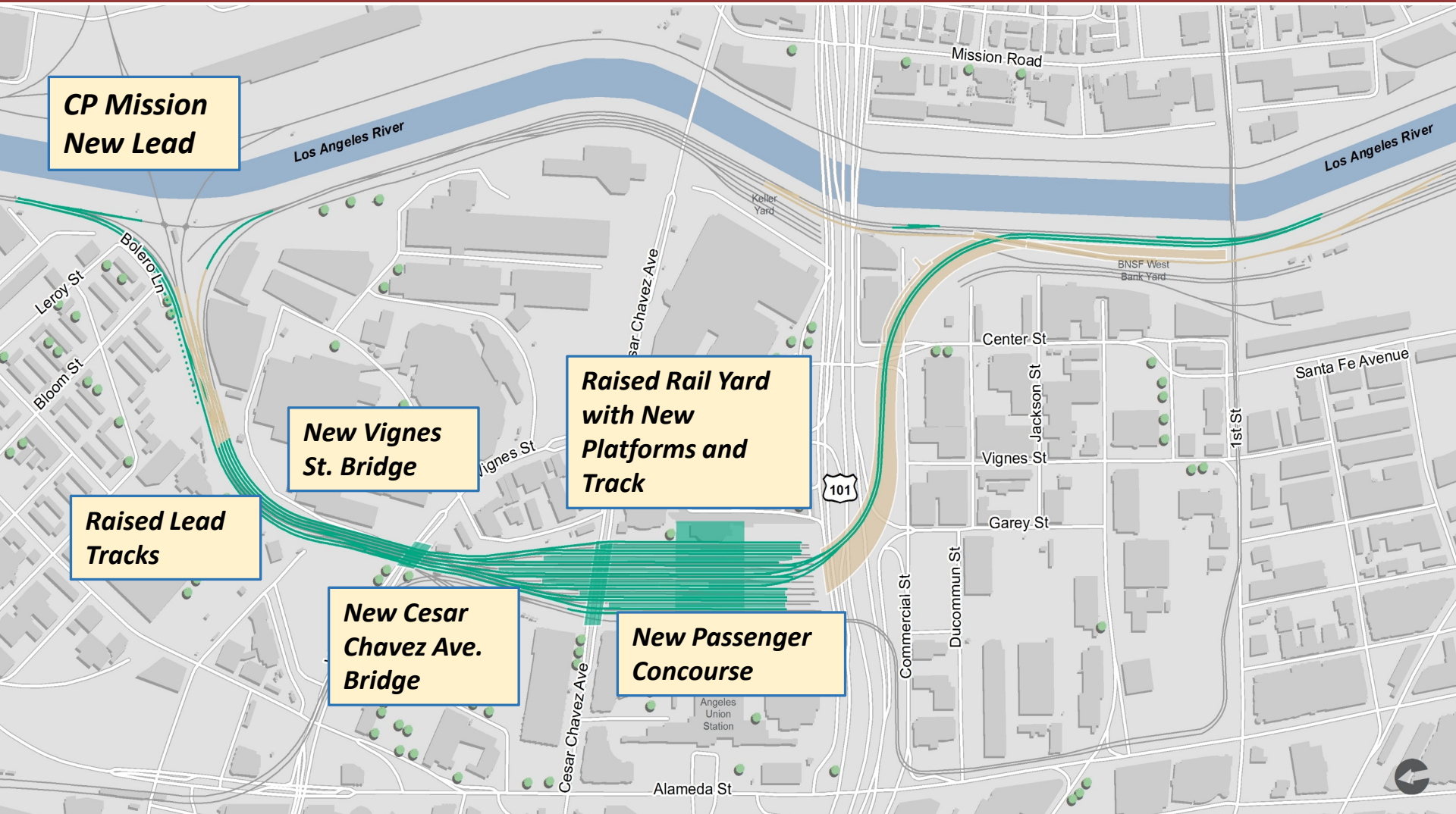
### Key Constraints:

- a. Red Line portal trench
- b. 12' dia COLA storm drain
- c. Need to maintain Amtrak yard lead
- d. Track clearance under First St Bridge



# Link Union Station Phase B Elements

NOT FUNDED for Final Design and Construction

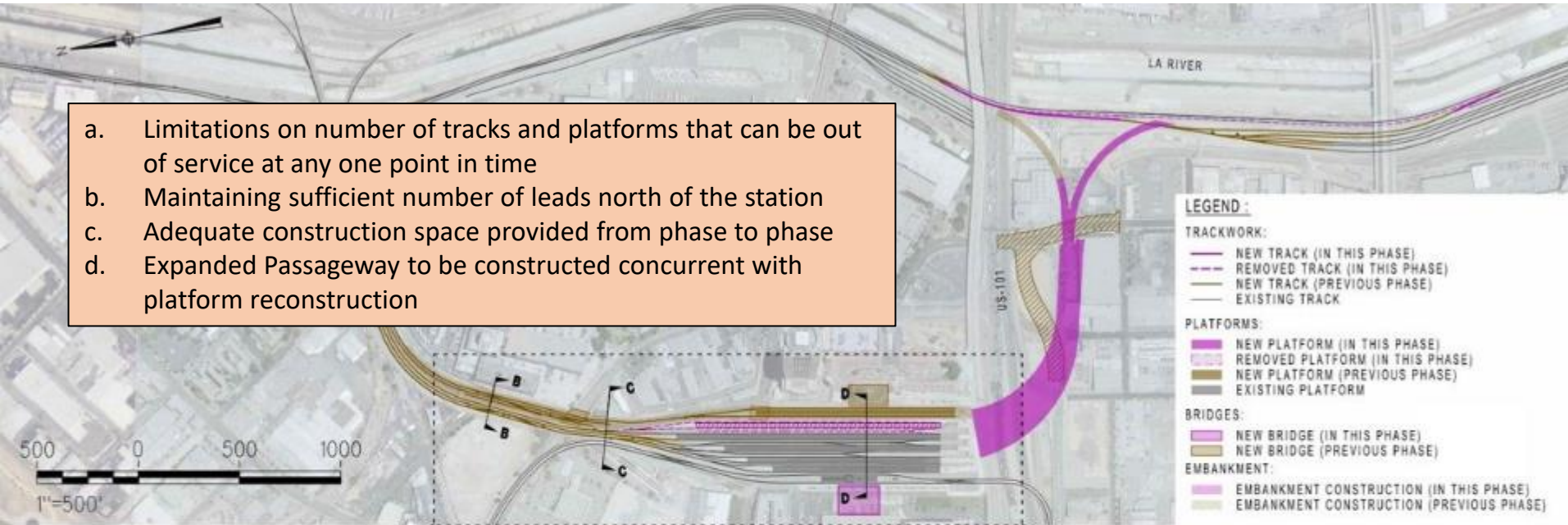


Accommodates the future HSR run-through tracks as part of Phase B

# Phase B Construction Phasing

## Example Construction Schematic

- a. Limitations on number of tracks and platforms that can be out of service at any one point in time
- b. Maintaining sufficient number of leads north of the station
- c. Adequate construction space provided from phase to phase
- d. Expanded Passageway to be constructed concurrent with platform reconstruction



# Phase B Construction Phasing

## Passenger Circulation Through Construction

### Passenger Circulation Through Construction



- Maintain access to platforms
- Managing crowding and congestion
- Maintain ADA accessibility
- Provide Signage for convenient Wayfinding



# LINK US PHASE B- New West Plaza



**Passenger & Retail Amenities to support a World Class Rail & Transit Terminal Station**

# Link US Phase B New Platforms & Passenger Concourse

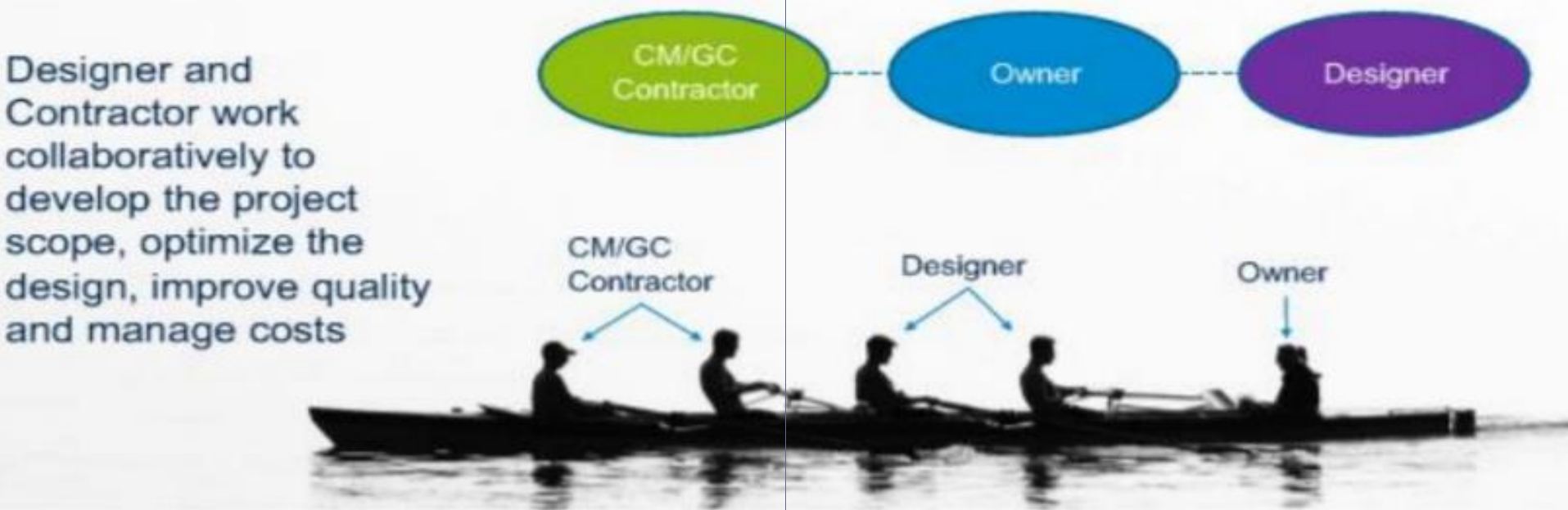


**New Platforms and Passenger Concourse by raising of entire rail yard from the Vignes Bridge up to 15 feet at Los Angeles Union Station**



**Concept Rendering – subject to change**

# Phase A - CMGC Project Delivery Approach



**The Link US Project will use a CMGC project delivery approach using an integrated project management support services. The CMGC Support Services role is to facilitate the collaboration and partnership between Metro, CMGC and Designer/Engineer to design and construct to budget and schedule.**

# CMGC Project Delivery

Assemble a Team to Deliver a Successful Project.

- Stakeholders
- Designer
- CMGC Contractor
- CMGC Support Services
- Metro

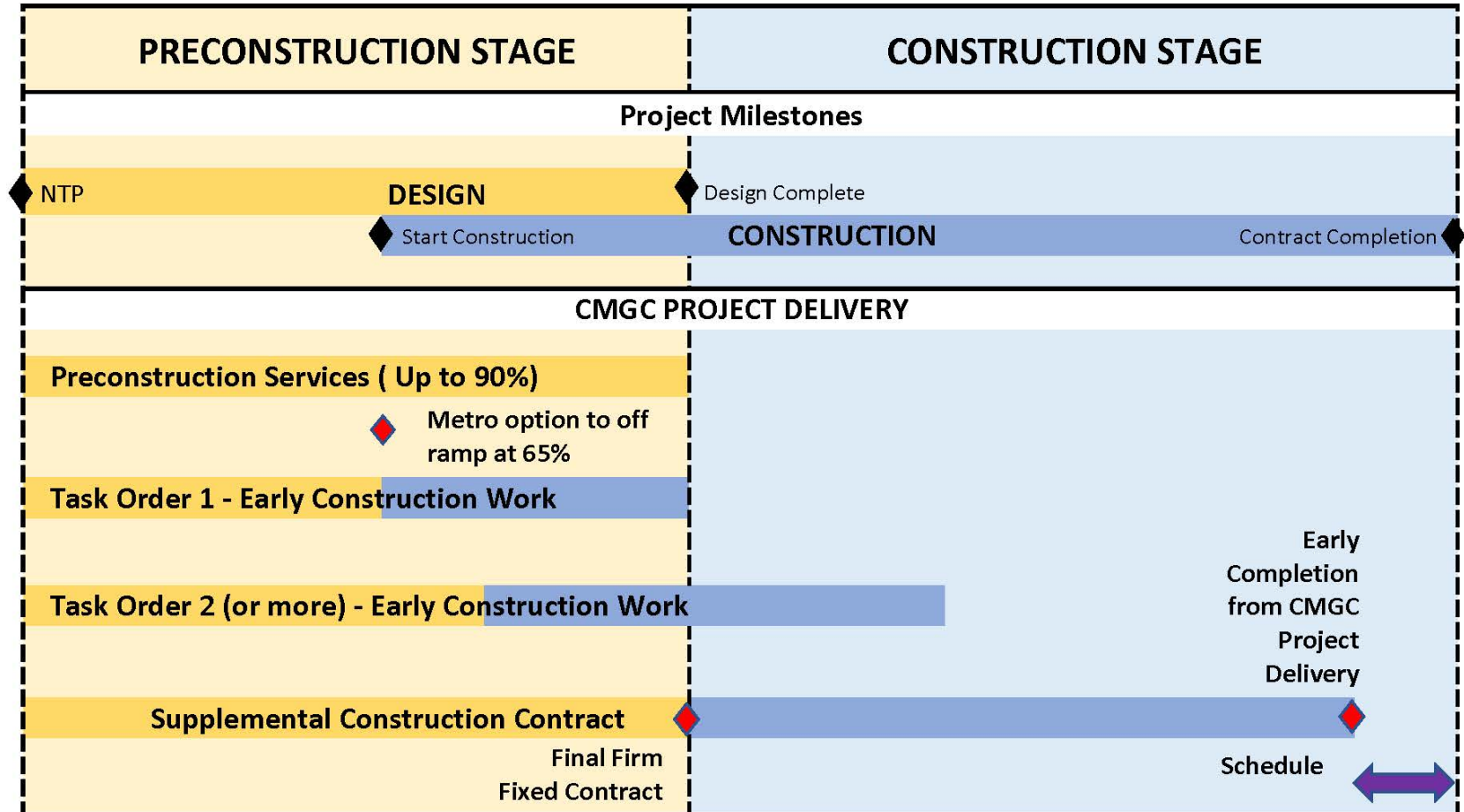


# CMGC Project Delivery – Phase A

Jan 2022

Jan 2024

Dec 2027



# Preliminary Program Schedule – Phase A

Subject to Change

LINK US PROGRAM SCHEDULE	2022				2023				2024				2025				2026				2027																		
	Q1		Q2		Q3		Q4		Q1		Q2		Q3		Q4		Q1		Q2		Q3		Q4																
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D															
<b>Phase A Design:</b>																																							
<b>EARLY CONSTRUCTION - US-101 BRIDGE &amp; HIGHWAY</b>																																							
A&E/CMGC VALUE ENGINEERING																																							
65% US-101 EARLY BRIDGE & HIGHWAY DESIGN																																							
95% & 100% US-101 EARLY BRIDGE & HWY DESIGN																																							
PROCUREMENT OF EARLY CONSTRUCTION																																							
EARLY CONSTR. US-101 FOUNDATIONS & HWY.																																							
<b>MAIN CONSTRUCTION</b>																																							
35% A&E/CMGC VALUE ENGINEERING																																							
65% DESIGN																																							
65% A&E/CMGC VALUE ENGINEERING																																							
95% & 100% DESIGN																																							
FIXED PRICE, PROCUREMENT & BOARD APPROVAL																																							
MAIN CONSTRUCTION																																							
CM SUPPORT SERVICES (Pre-Construction)																																							
CM SUPPORT SERVICES (During Construction)																																							
<b>Phase B Design:</b>																																							
CMGC SUPPORT SERVICES																																							
A&E/CMGC VALUE ENGINEERING																																							
35% DESIGN (65% TRACK)																																							

# CMGC Procurement Overview – Phase A

Dates Subject to Change

March 26, 2021  
INDUSTRY EVENT

April 26, 2021  
RELEASE CMGC RFP

May/June 2021  
RELEASE CMGC  
Support Service  
RFP

December 2021/January 2022  
Board award of CMGC & CMGC  
Support Service

August 2021  
CMGC Support  
Services RFP Due

# Procurement Overview

Vendor/Contract Management Points of Contact for this Procurement:

**Fred Origel, Director, V/CM**

(323) 903-4111 [OrigelF@metro.net](mailto:OrigelF@metro.net)

**Noelle Santos, Sr. Contract Administrator, V/CM**

(213) 922-3647 [Santosn@metro.net](mailto:Santosn@metro.net)

\*During the proposal period, only contact the personnel listed above  
with the exception of DEOD, Ethics, and Metro Pre-Qual Dept.



# QUESTIONS?



Concept Rendering – subject to change