



# Subway Stations Overview

June 22, 2022



# Agenda

1. Introductions
2. Project Connect Overview
3. Subway Overview
4. Subway Stations Overview
5. Next Steps and Adjourn





# Welcome and Introductions

# Introduction: Speakers

Our speakers will turn on their cameras and introduce themselves.





# Project Connect Overview



# Overall Program Cost Considerations



## COST BASIS ASSUMPTIONS

Original cost estimates (2019-2020) were based on 5% design and peer transit system comparison data

2022: costs have increased significantly (up to 70%-80%), due to the following drivers:



Right-of-way and real estate prices (Austin market)



Inflation, labor shortage, and anticipated supply chain barriers



Program scope changes as a result of community input and technical requirements (e.g. Tunnel length increase from 1.5 to 4 miles)



## NEXT STEPS

- Project phasing will be necessary to implement the program within available funding sources.
- Community input will be essential to defining project scope, phasing and next steps.

**Tax increment rate will not be increased to cover ongoing program costs**





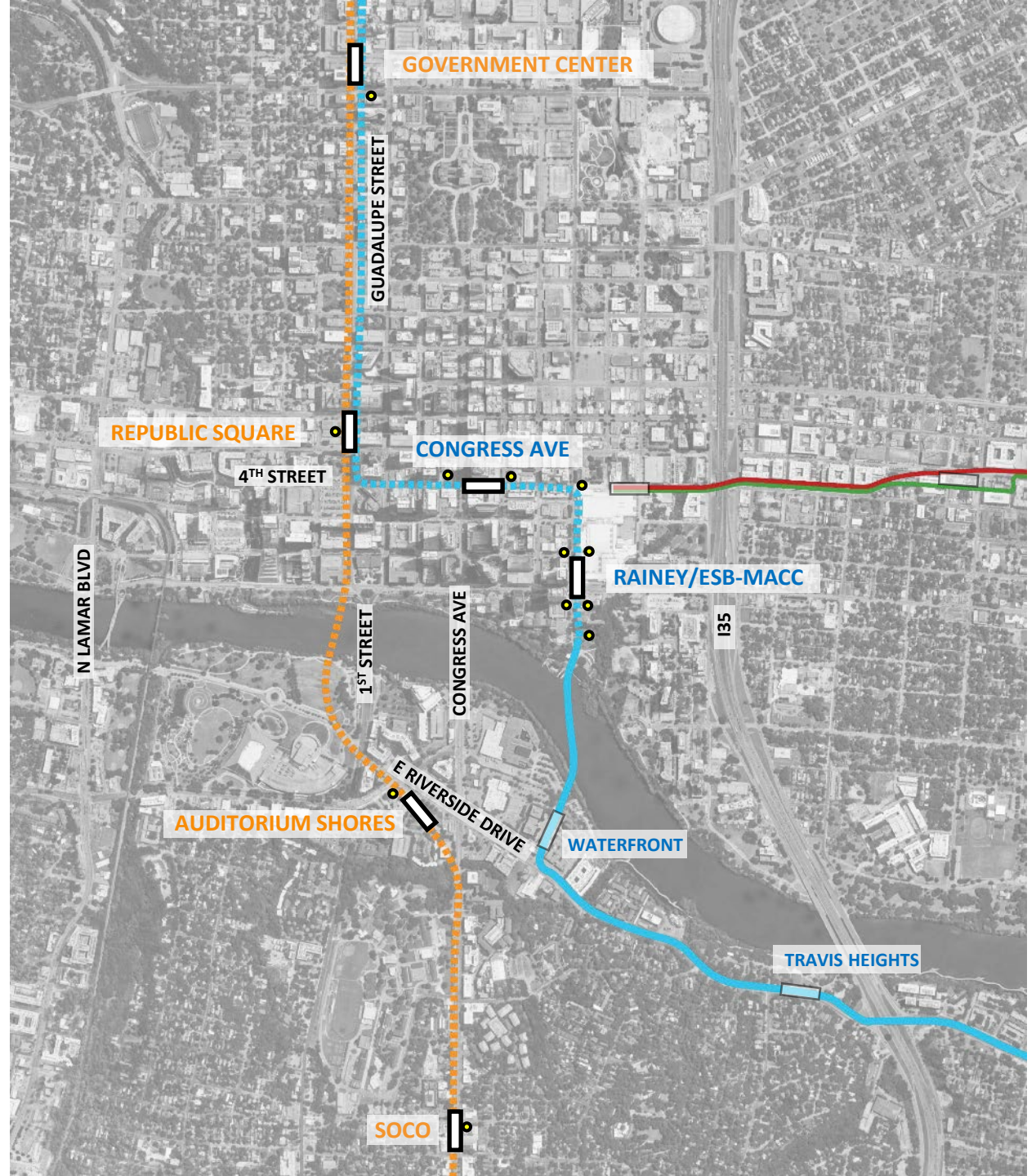
# Subway Overview



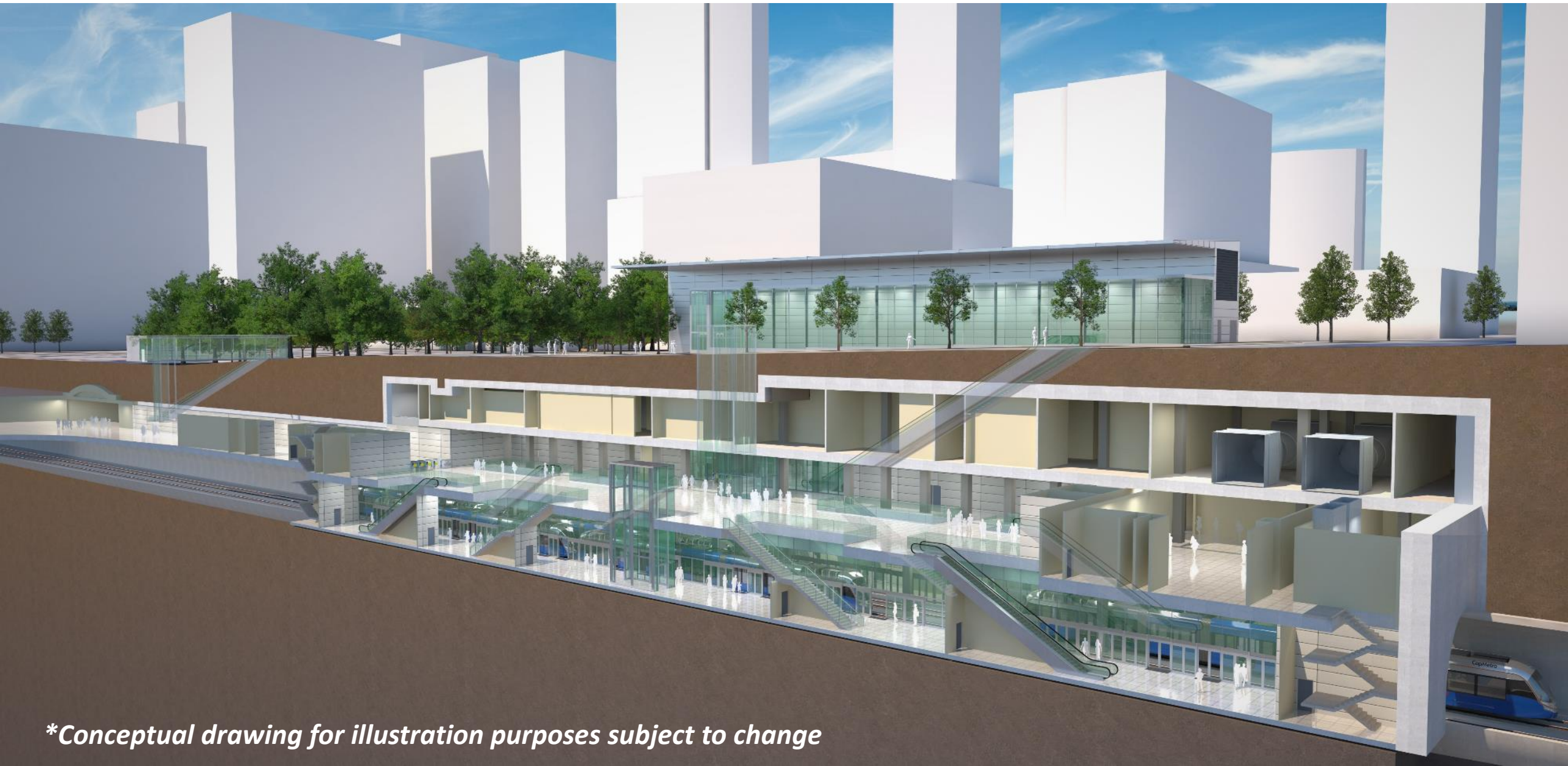


# Subway Extents / Underground Stations

 UNDERGROUND STATION  
 AT GRADE STATION



# Example of Underground Station: Cross-Section



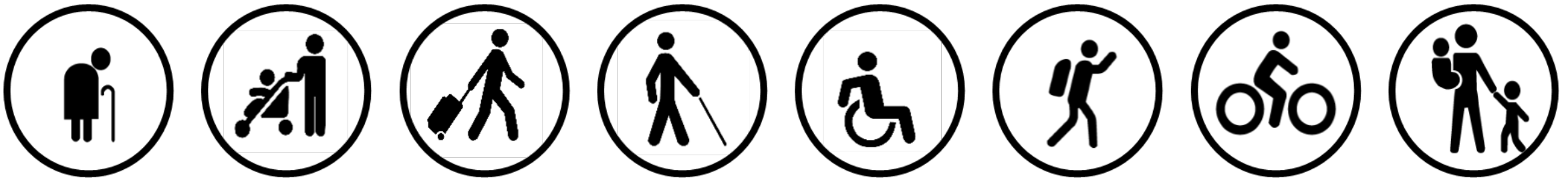
*\*Conceptual drawing for illustration purposes subject to change*

# Accessibility and Universal Design

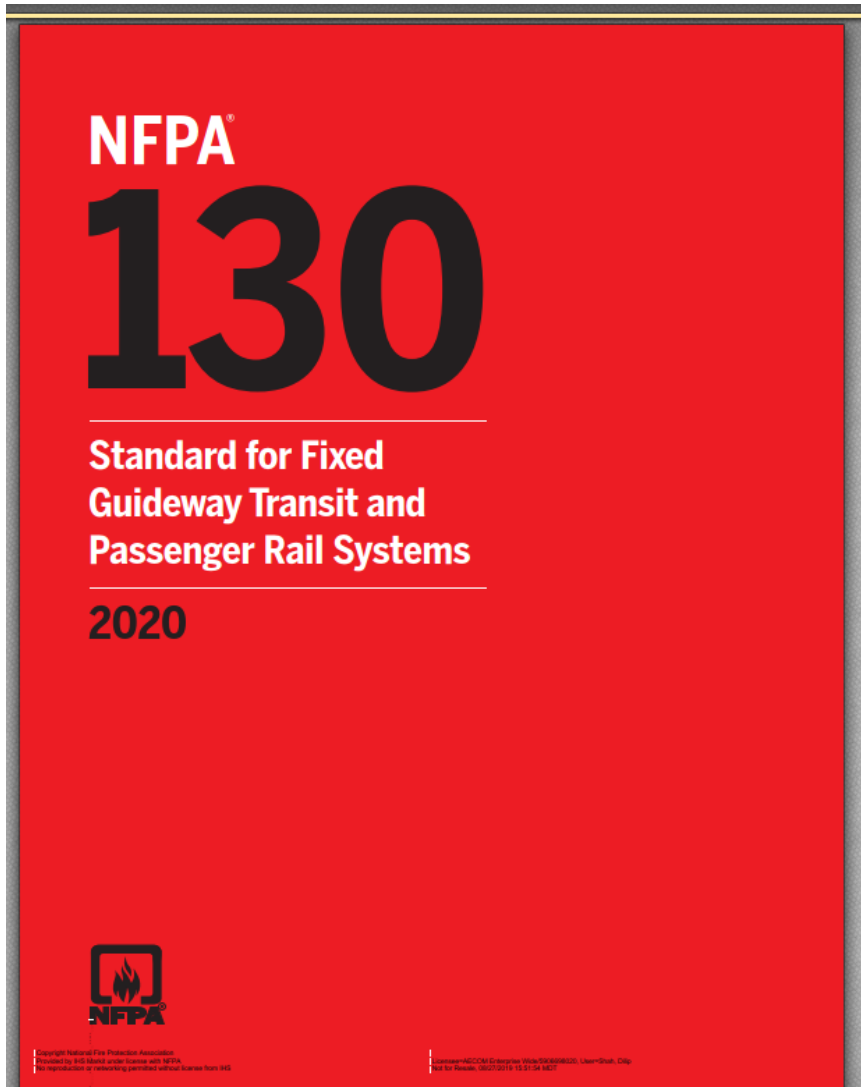
- Facilities will incorporate accessibility features - ramps, audible announcements, securement systems, level-boarding rail platforms
- Be intentional about design
- Seek community input from People With Disabilities
- Design responsive scope



User Centered Design



# Fire Life Safety



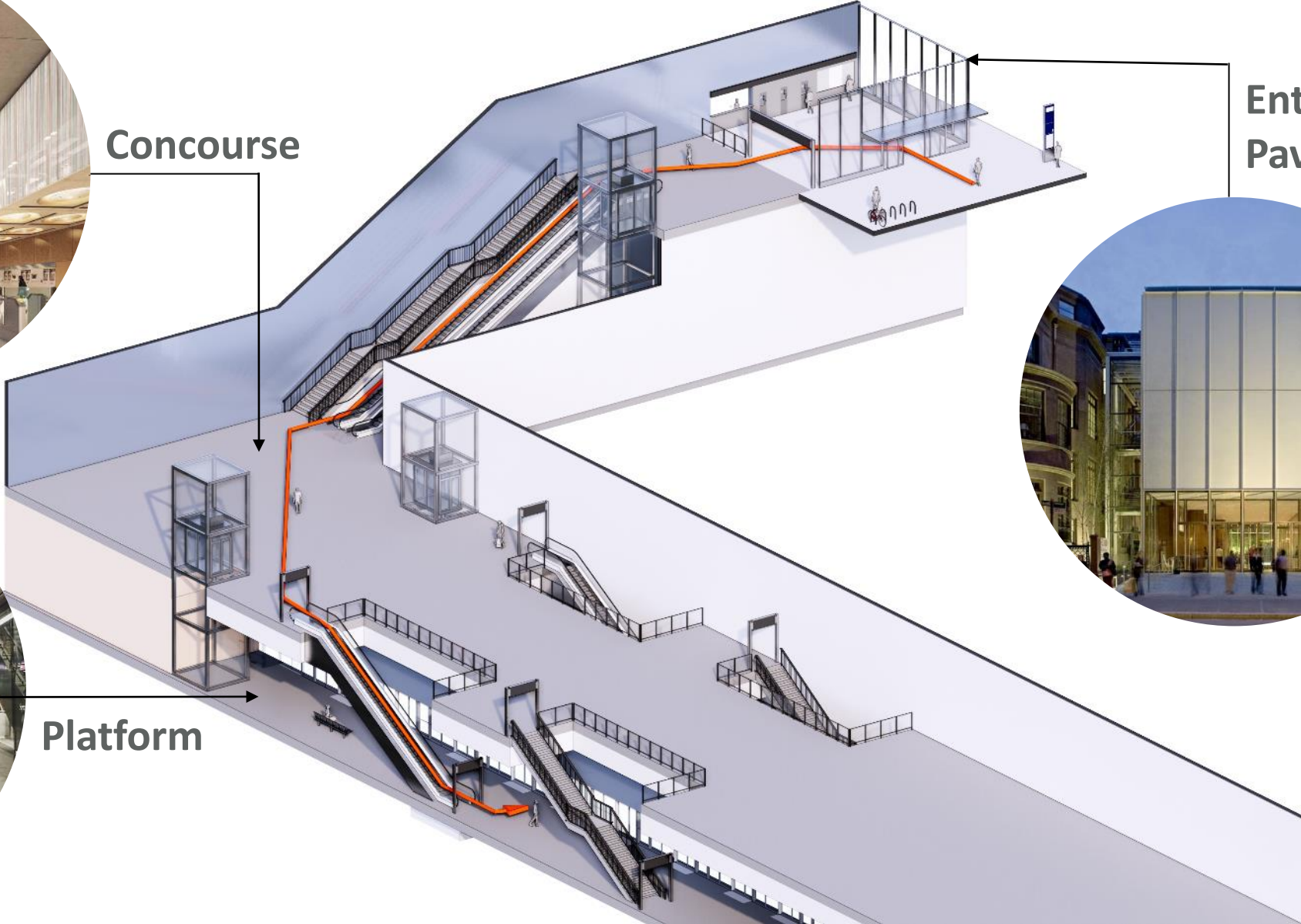
Offers the latest provisions:

- For underground, at-grade, and elevated fixed guideway transit and passenger rail systems
  - ✓ *Including stations, trainways, emergency ventilation systems, vehicles, emergency procedures, and communication and control systems.*
- *Collaboration and coordination with:*
  - ✓ *City Of Austin*
    - *ATD, AFD, APD, EMS*
    - *Utility agencies*
    - *Community/Neighborhood Stakeholders*

# Station Zones



Concourse

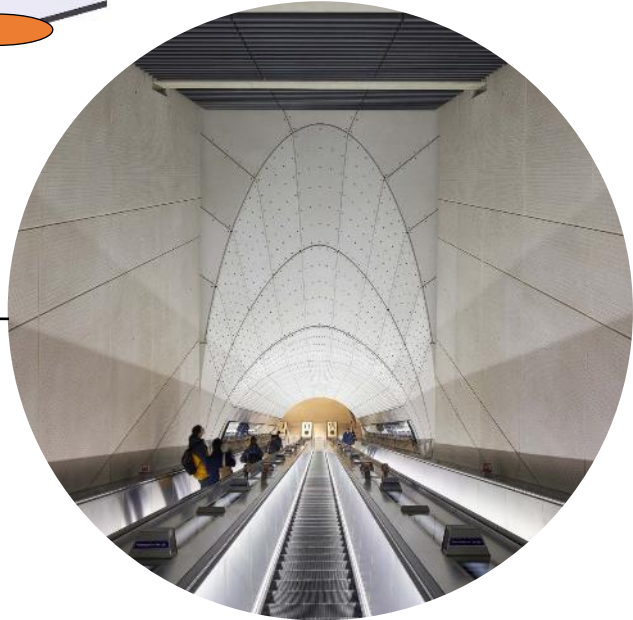
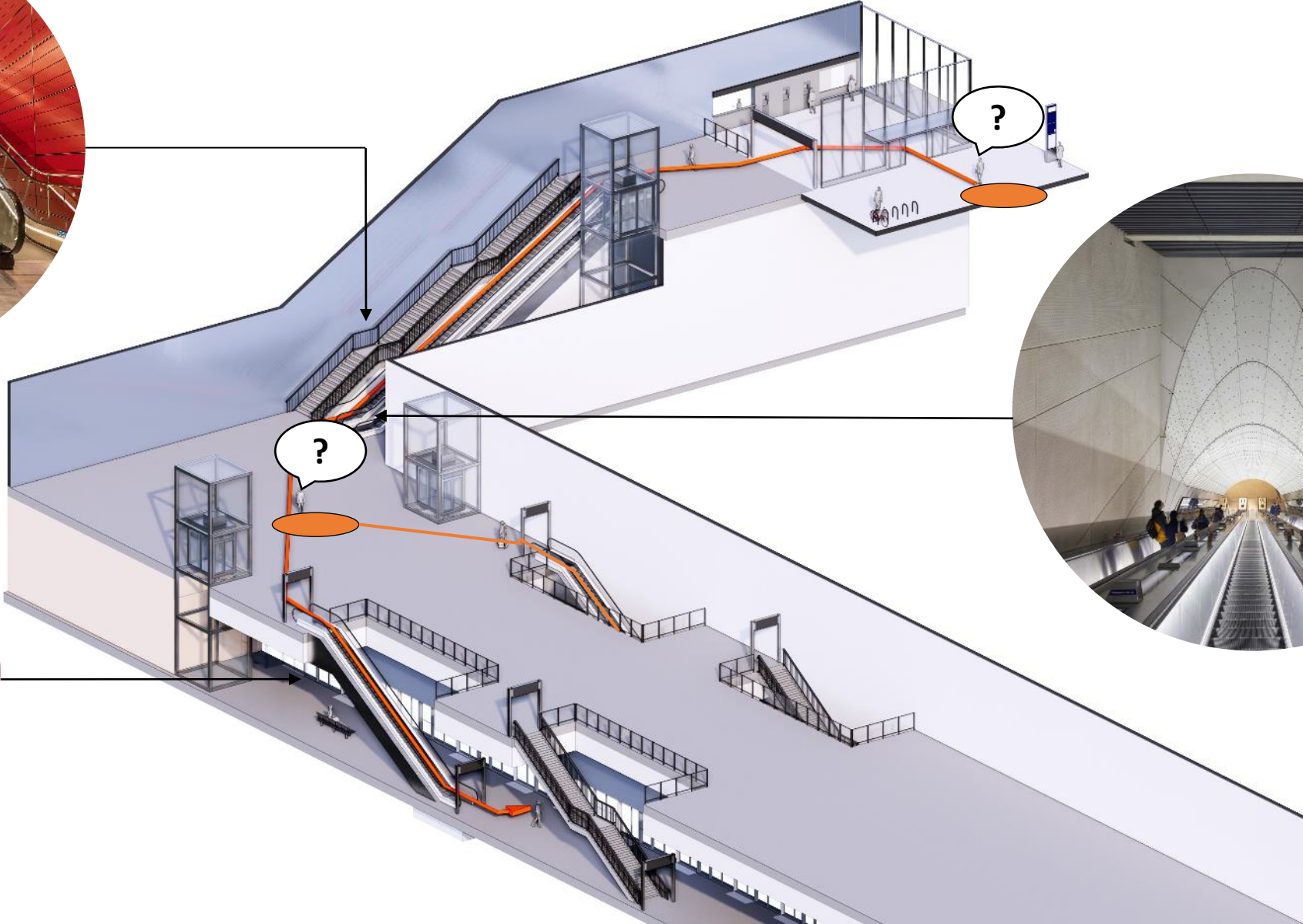


Entrance Pavilion

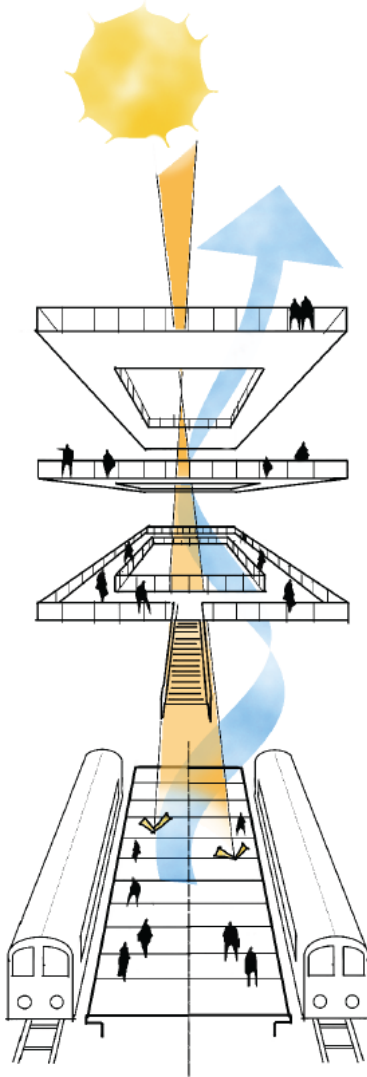


Platform

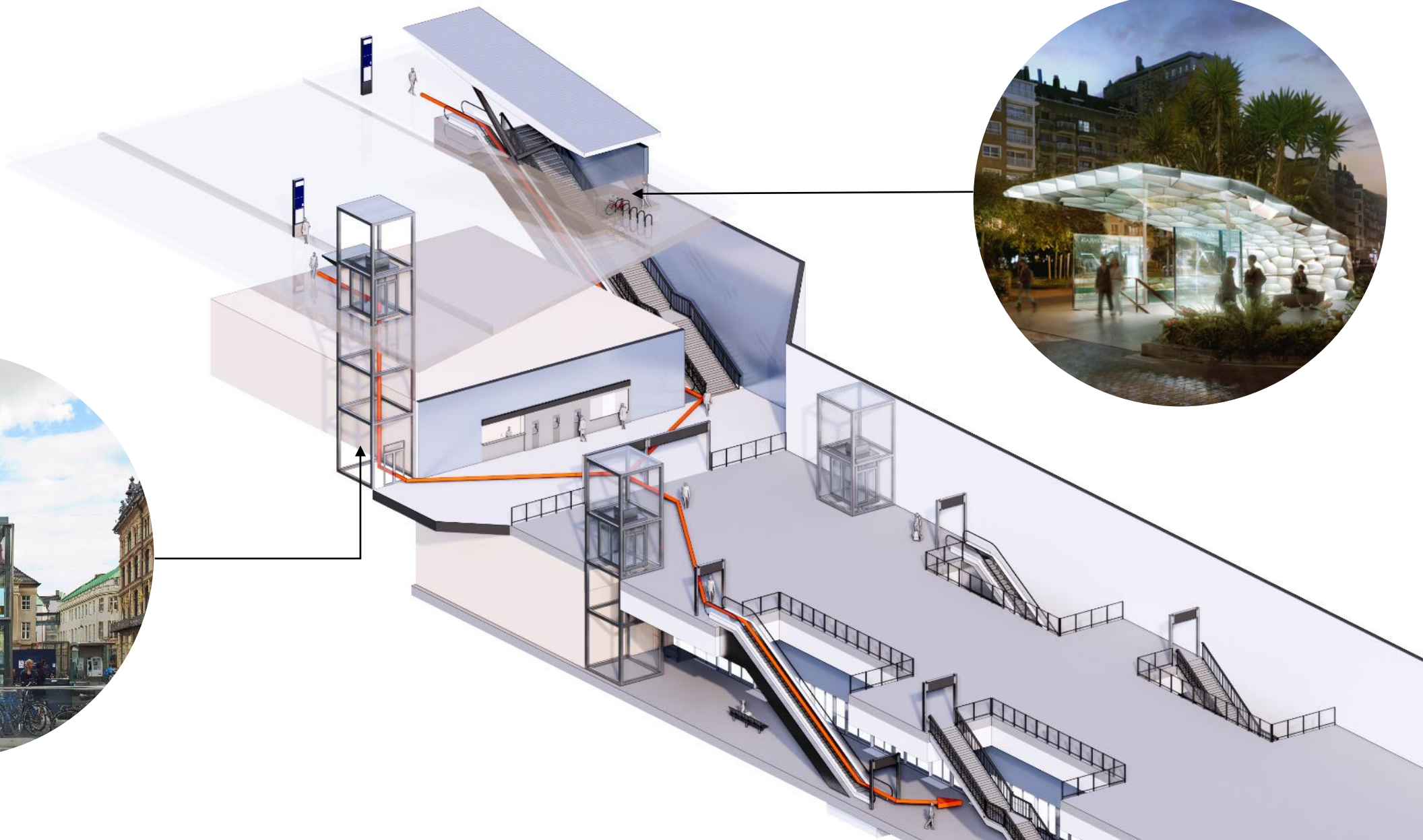
# Intuitive Wayfinding



# Natural Light as Wayfinding

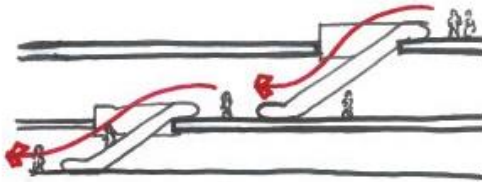


# Urban Realm Integration - Entrances scaled to their context

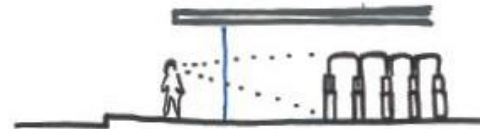




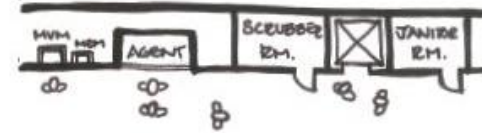
# Station Design Principles



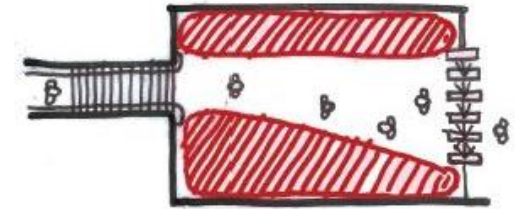
Seamless path of travel



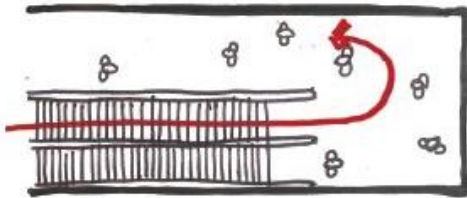
High visible entries



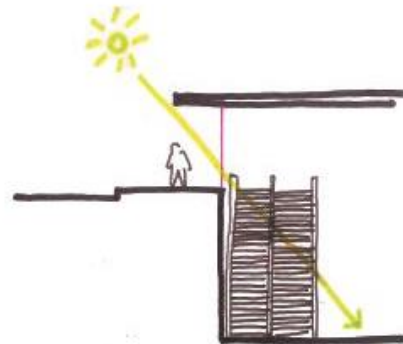
Clearly organized passenger information



Minimal blind spots



No dead-ends

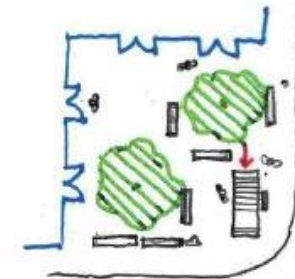


Daylight below grade



Bus Walk MetroBike Rental

Inter-modal integration



Enhanced urban realm



# Subway Station Amenities



Customer Service Booth



Retail and Vending Machines



Water Coolers



Wayfinding



Digital Info Kiosks



Bike and Scooter Rental



Bike and Scooter Parking



Bike Pumps and Repair



Weather, News and Other Information



Public Restrooms



Benches and Leaning Bar



Working Counters and USB Charging



Emergency Intercom

# Tunnel Construction Methods

Tunnel Boring Machine (TBM)



Mining

Cut and Cover



# Construction Methods and Station Typology



Mining

Cut and Cover





# Subway Stations - Orange Line North

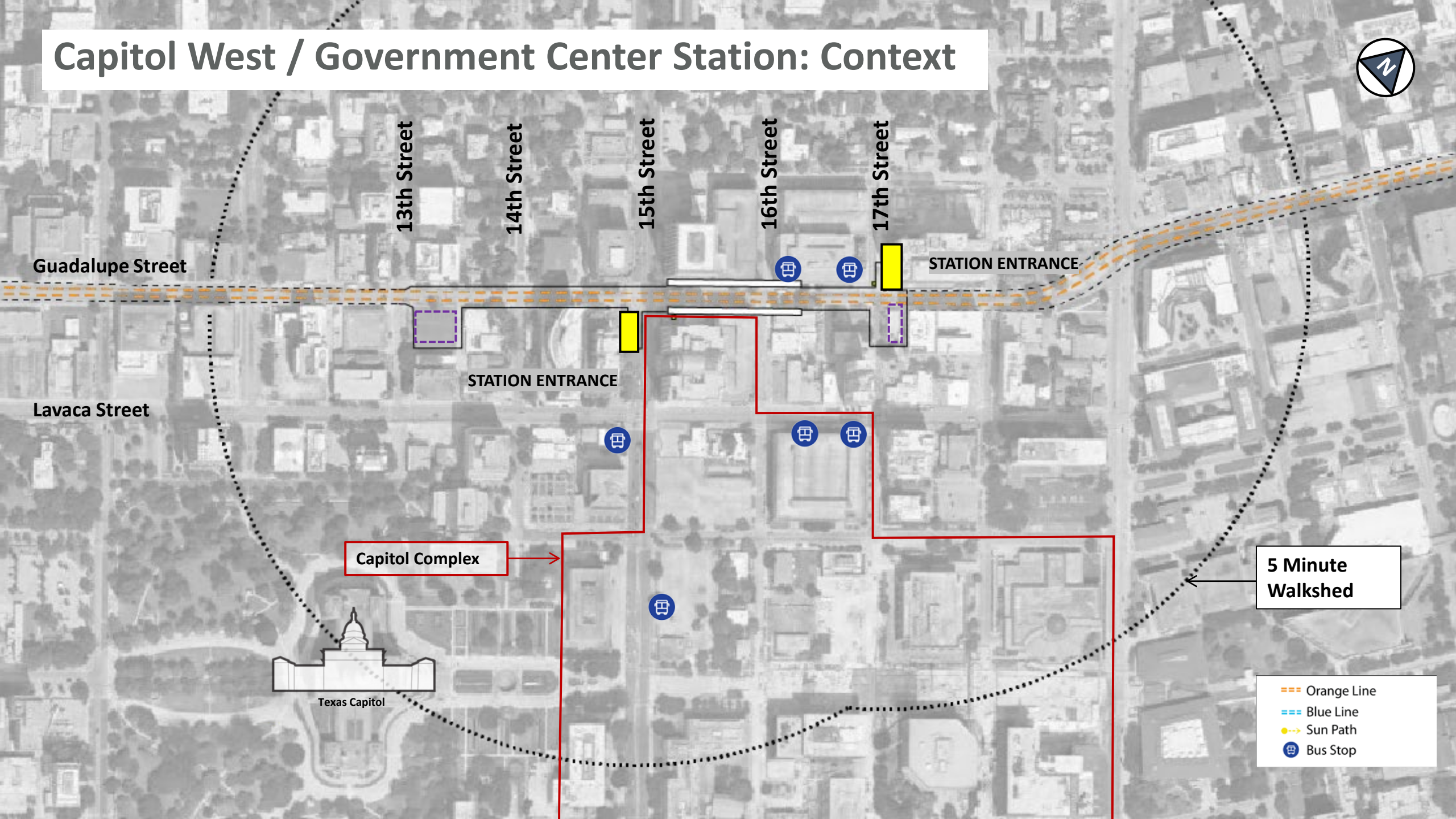




# Capitol West / Government Center Station



# Capitol West / Government Center Station: Context



Guadalupe Street

13th Street

14th Street

15th Street

16th Street

17th Street

Lavaca Street

STATION ENTRANCE

STATION ENTRANCE

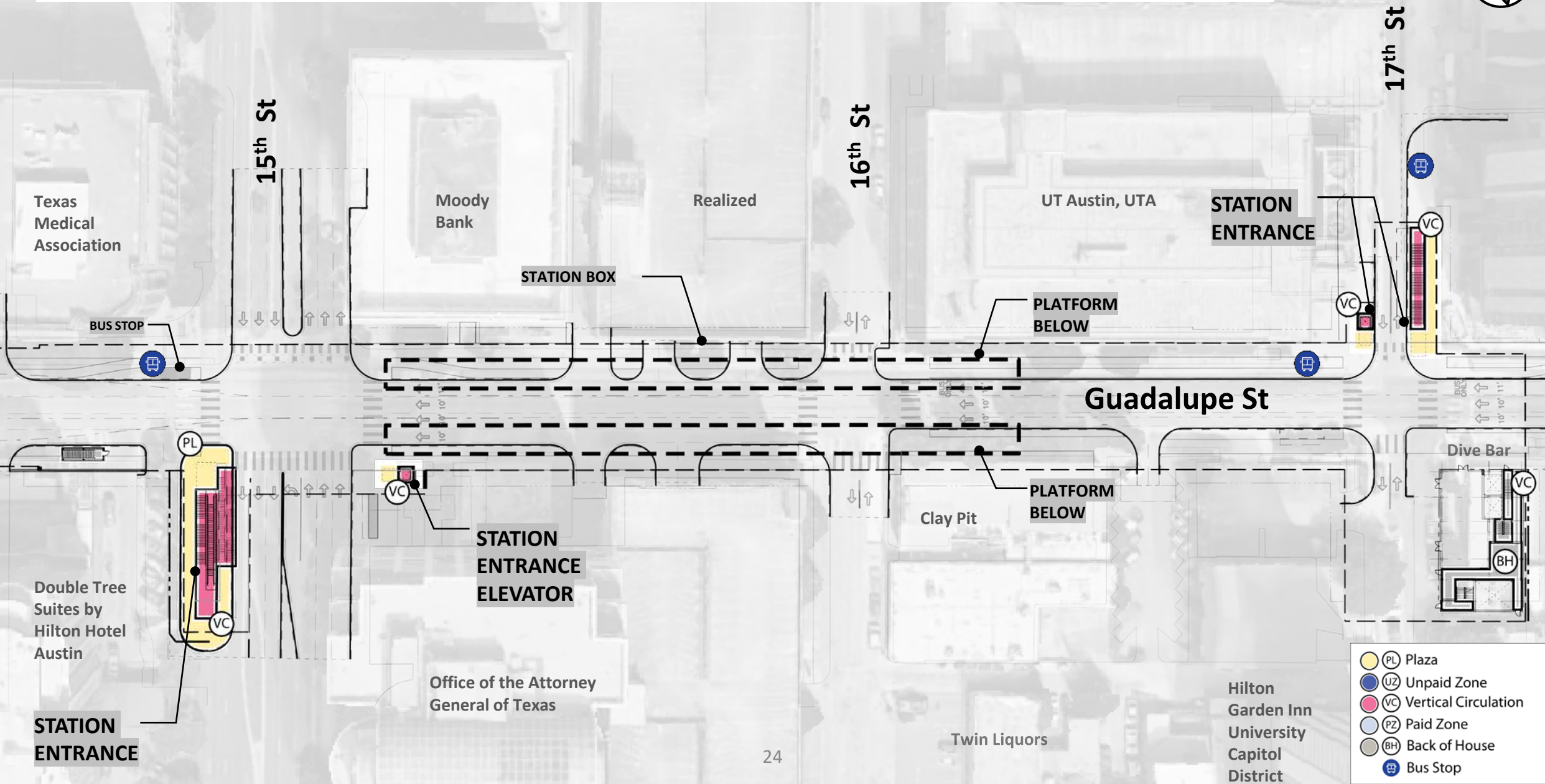
Capitol Complex

Texas Capitol

5 Minute Walkshed

- Orange Line
- Blue Line
- Sun Path
- Bus Stop

# Capitol West / Government Center Station – Street Level Plan



Texas Medical Association

15th St

Moody Bank

Realized

16th St

UT Austin, UTA

STATION ENTRANCE

17th St

STATION BOX

PLATFORM BELOW

Guadalupe St

Double Tree Suites by Hilton Hotel Austin

STATION ENTRANCE ELEVATOR

PLATFORM BELOW

Dive Bar

STATION ENTRANCE

Office of the Attorney General of Texas

Clay Pit

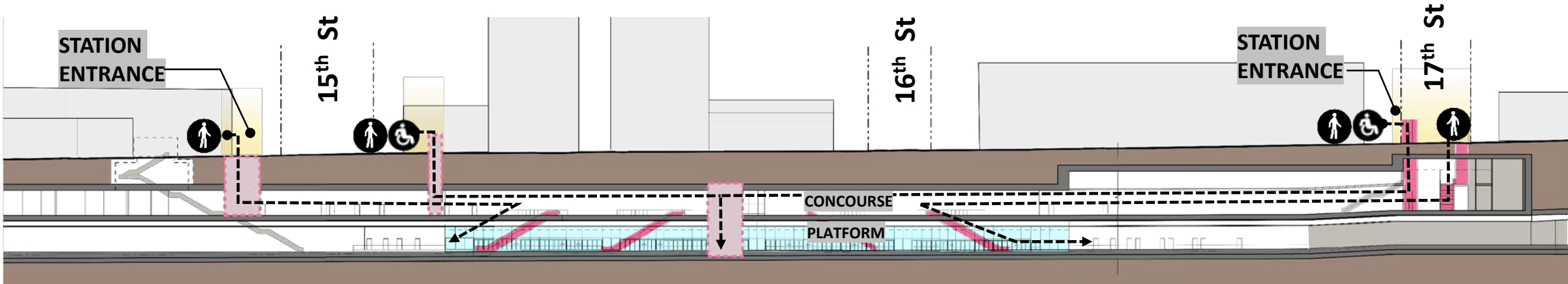
Twin Liquors

Hilton Garden Inn University Capitol District

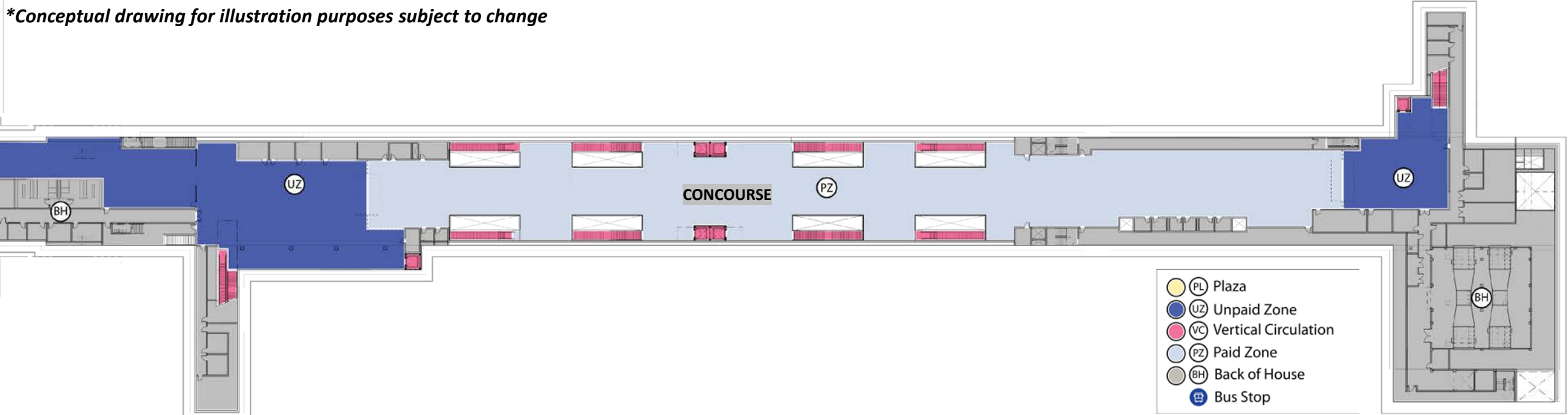
- PL Plaza
- UZ Unpaid Zone
- VC Vertical Circulation
- PZ Paid Zone
- BH Back of House
- ⊞ Bus Stop



# Capitol West / Government Center Station – Concourse Level and Section



*\*Conceptual drawing for illustration purposes subject to change*

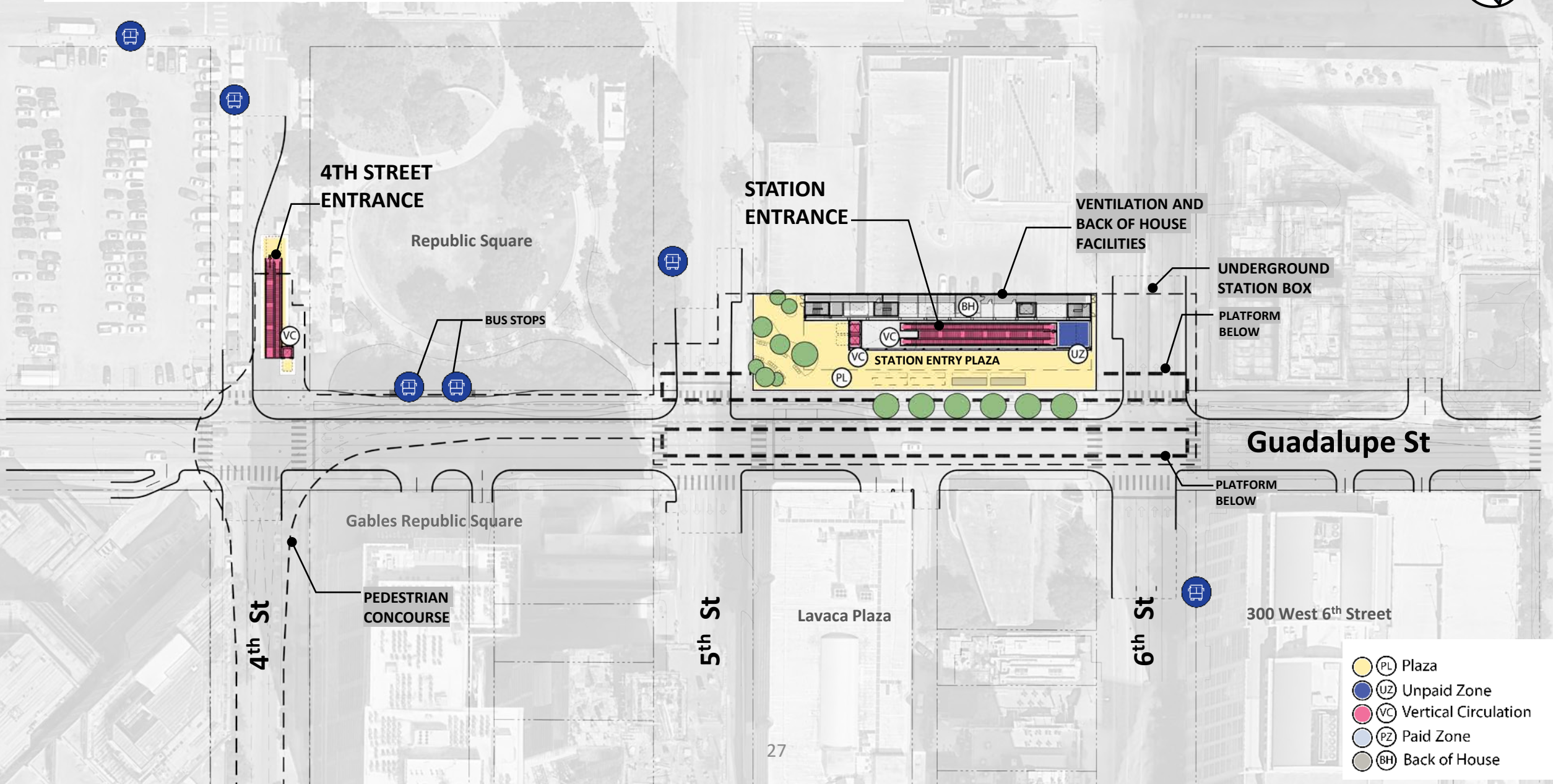




# Republic Square Station



# Republic Square Station – Street Level Plan



4TH STREET  
ENTRANCE

Republic Square

BUS STOPS

STATION  
ENTRANCE

VENTILATION AND  
BACK OF HOUSE  
FACILITIES

UNDERGROUND  
STATION BOX

PLATFORM  
BELOW

STATION ENTRY PLAZA

Guadalupe St

PLATFORM  
BELOW

Gables Republic Square

PEDESTRIAN  
CONCOURSE

Lavaca Plaza

300 West 6th Street

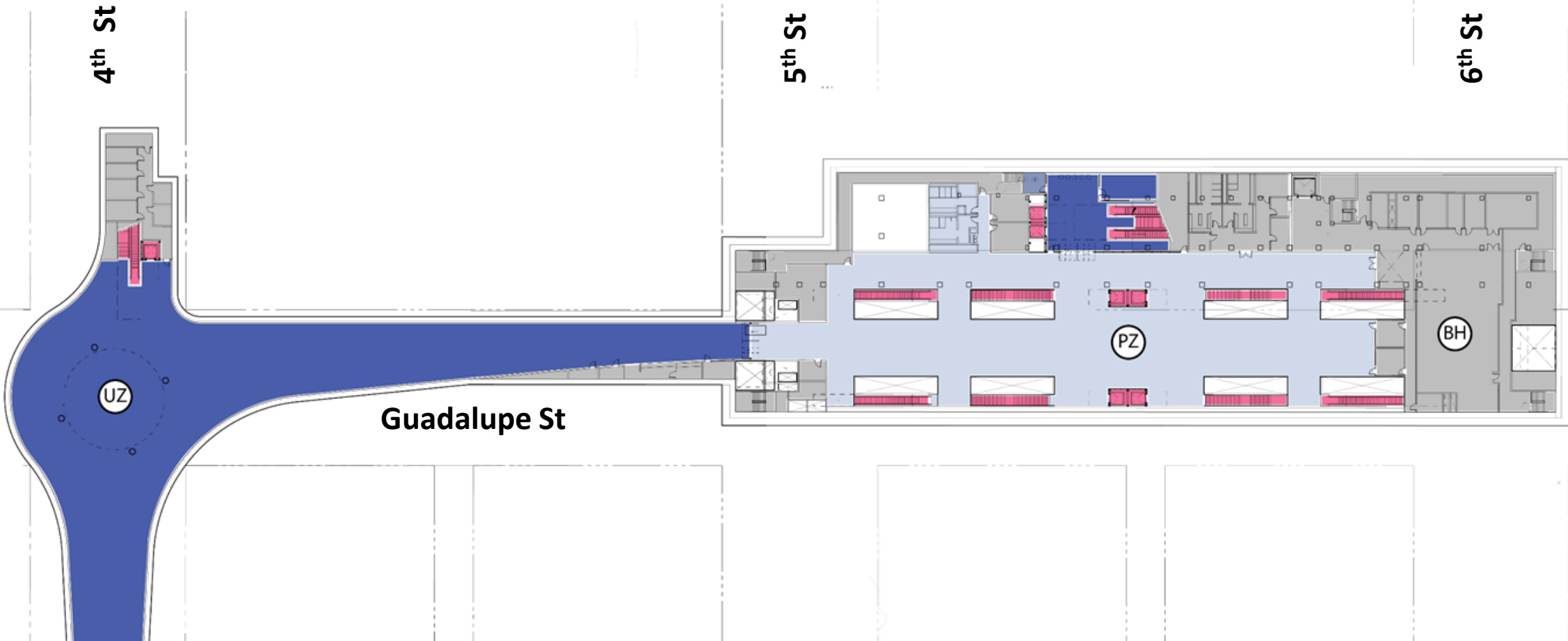
4th St

5th St

6th St

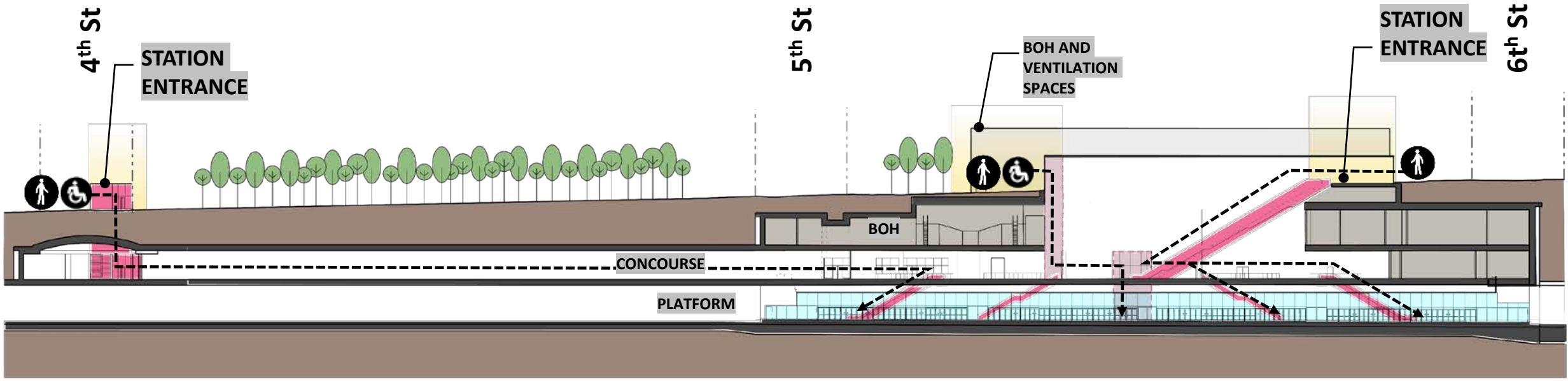
- PL Plaza
- UZ Unpaid Zone
- VC Vertical Circulation
- PZ Paid Zone
- BH Back of House

# Republic Square Station – Concourse Plan



- PL Plaza
- UZ Unpaid Zone
- VC Vertical Circulation
- PZ Paid Zone
- BH Back of House
- Bus Stop

# Republic Square Station - Section



*\*Conceptual drawing for illustration purposes subject to change*

- (PL) Plaza
- (UZ) Unpaid Zone
- (VC) Vertical Circulation
- (PZ) Paid Zone
- (BH) Back of House
- (BS) Bus Stop



# Q&A

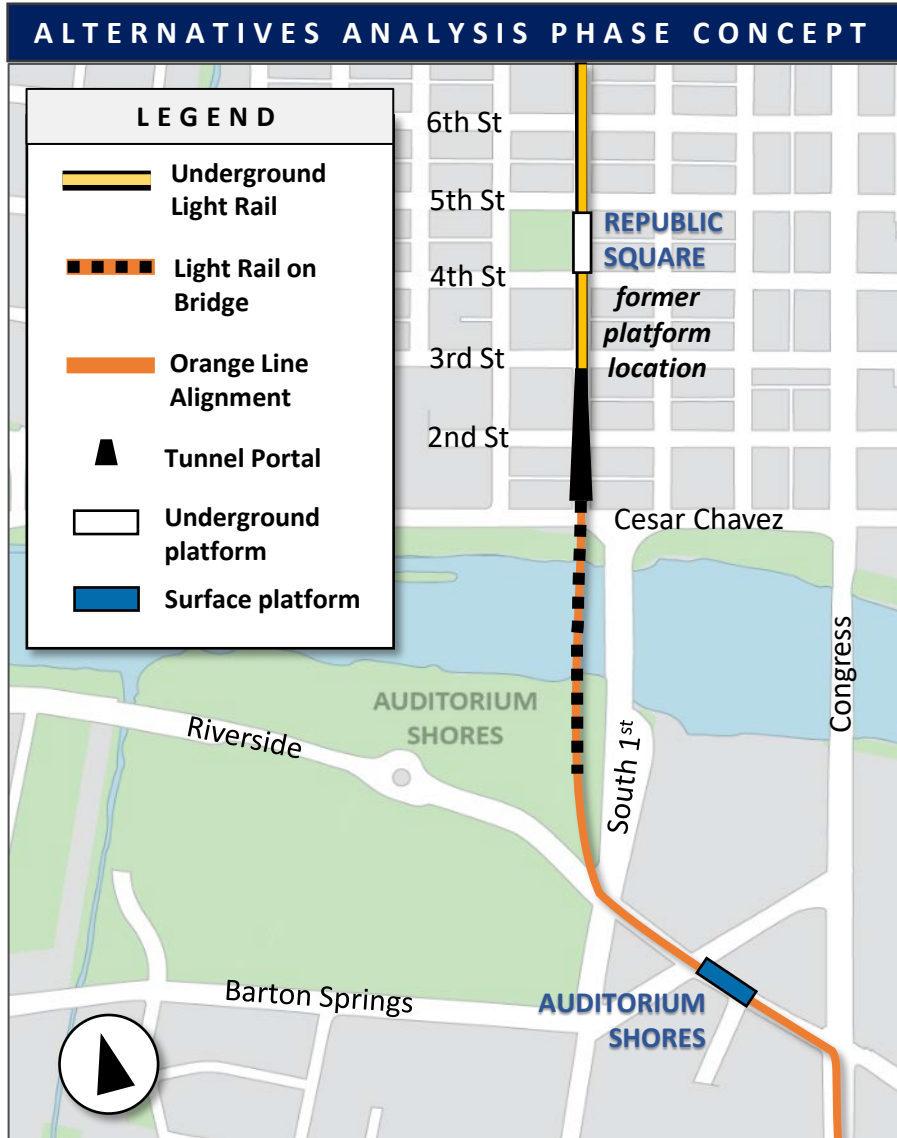




## Subway Stations – Orange Line South



# Where we left off at 15%: Analysis Determined Orange Line Bridge over Lake Not Feasible

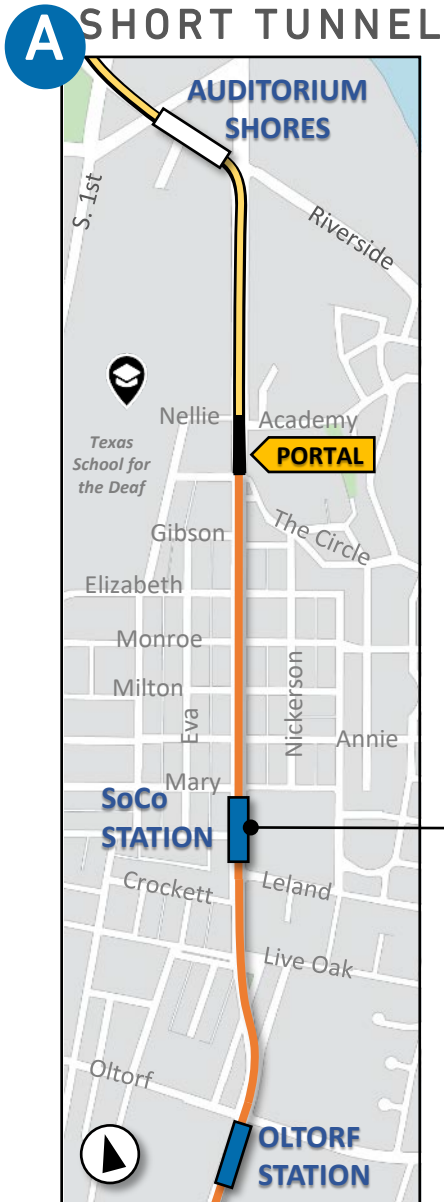


- Vertical climb in short distance is unfavorable
- Street conflicts: 2<sup>nd</sup> Street would need to be closed to traffic
- Utility conflicts between Lady Bird Lake and 3<sup>rd</sup> Street such as:
  - Water and wastewater mains
  - Storm sewer
  - Electrical vaults that support the high-rise towers
- Auditorium Shores FEMA Flood zone risk

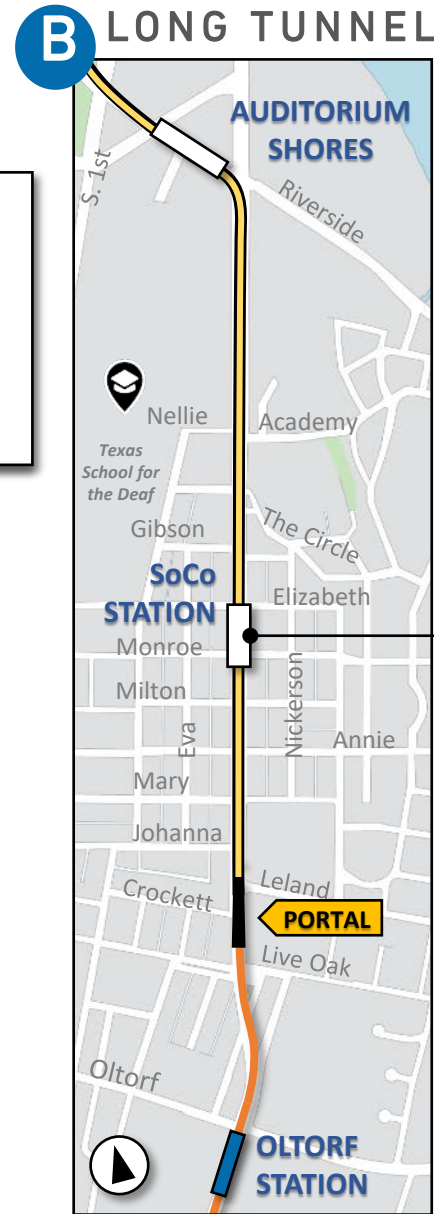
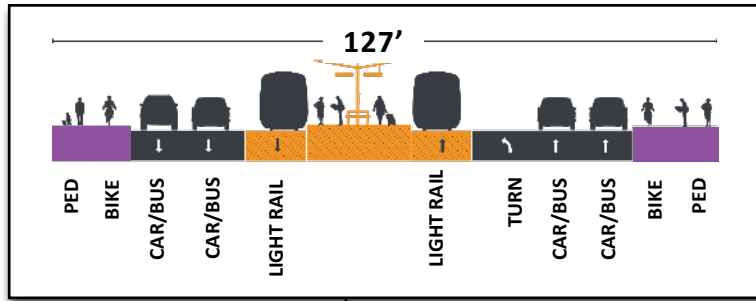




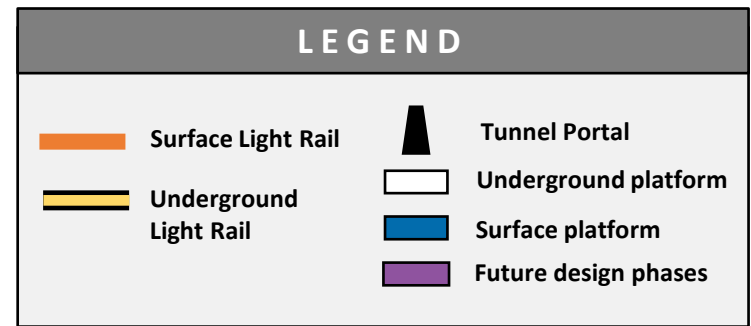
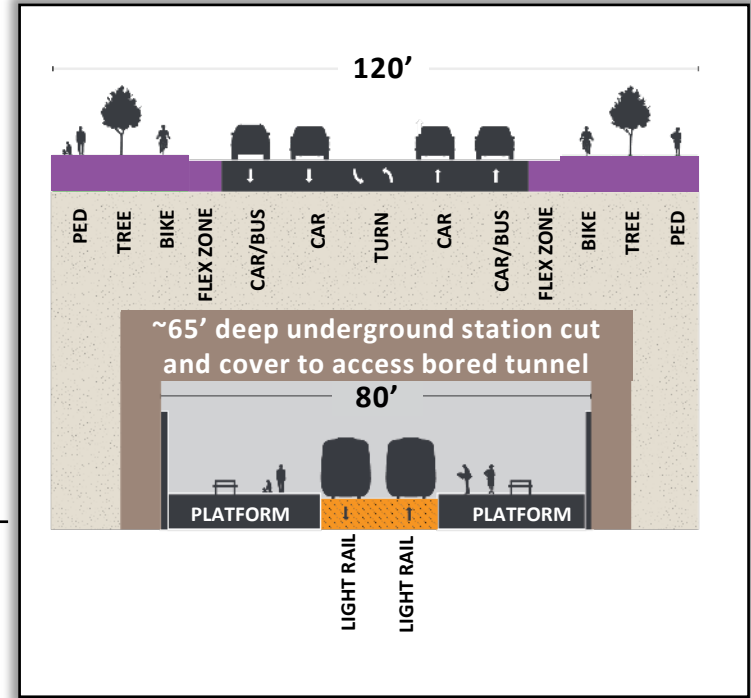
# Where we left off at 15%: Short Tunnel or Long Tunnel?



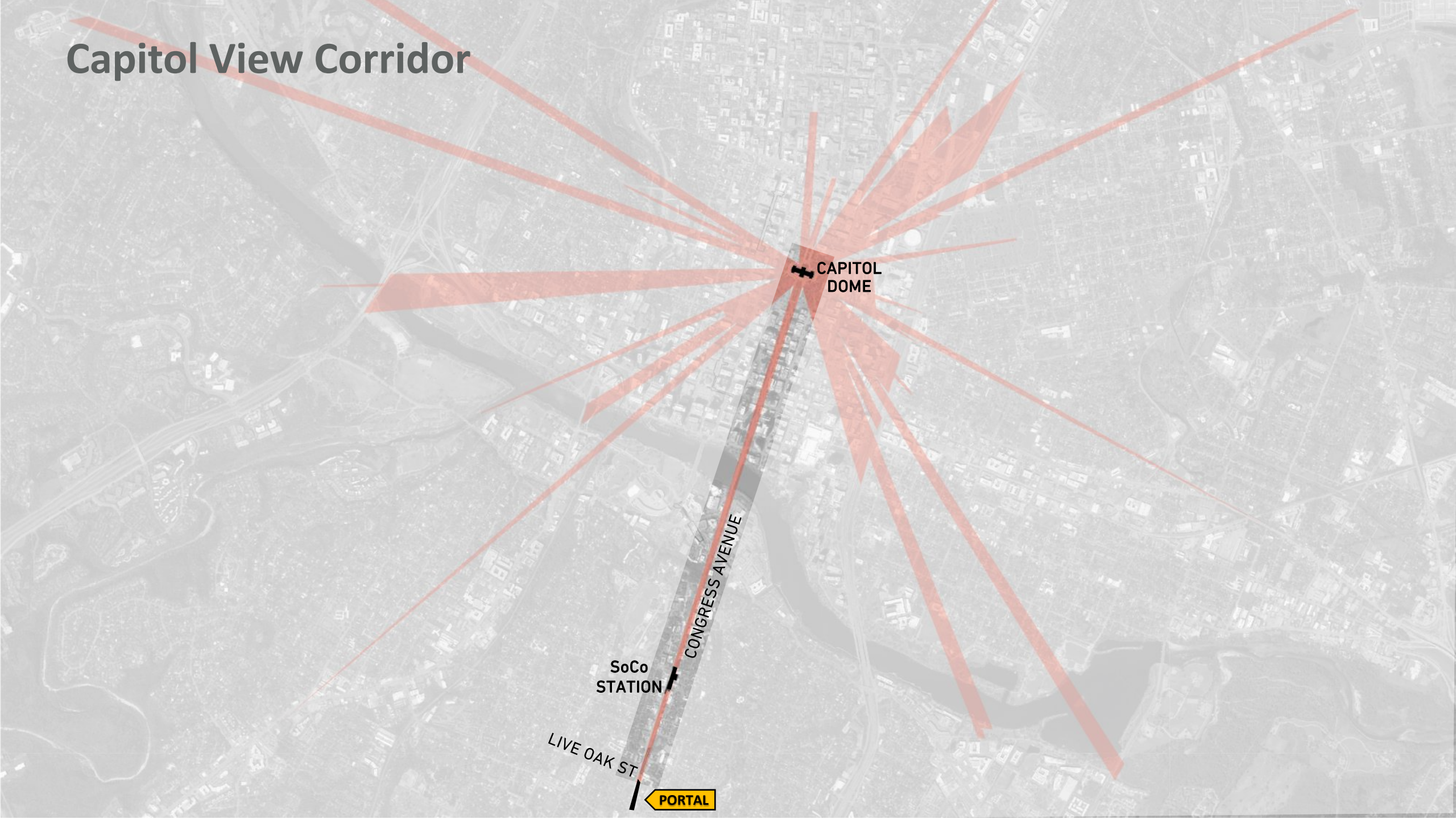
Surface Station at Leland - Mary



Underground Station (exact siting TBD)



# Capitol View Corridor



CAPITOL DOME

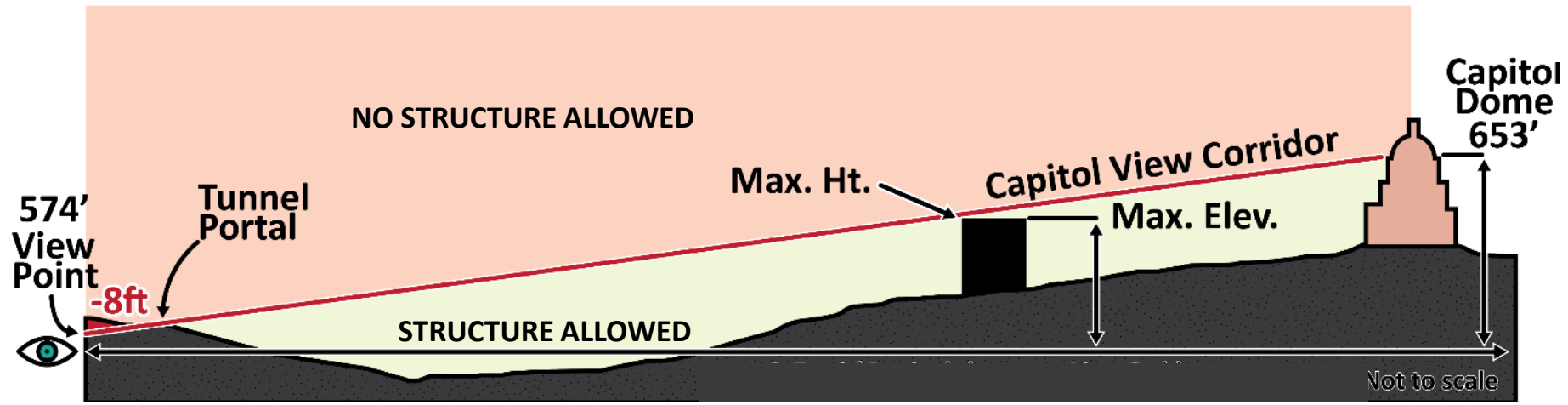
CONGRESS AVENUE

SoCo STATION

LIVE OAK ST

PORTAL







# How the Capitol View Corridor impacts tunnel length



- The Capitol View Corridor extends to Live Oak.
- To comply with state law, the first location the train can surface is south of that viewpoint (Live Oak St.).
- Tunnel extended 900 feet from previous long tunnel option.

LONG TUNNEL WITH PORTAL SOUTH OF LIVE

**LEGEND**

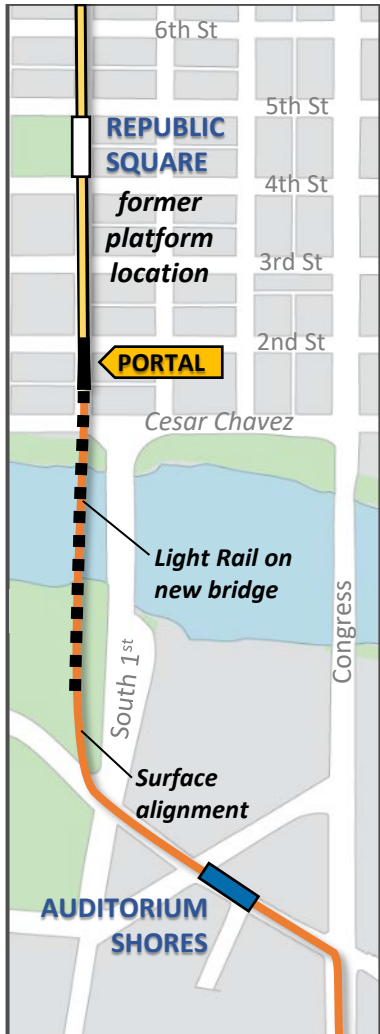
 Surface Light Rail	 Tunnel Portal
 Underground Light Rail	 Underground platform
	 Surface platform
	 Future design phases



# Orange Line South Tunnel Design Progression

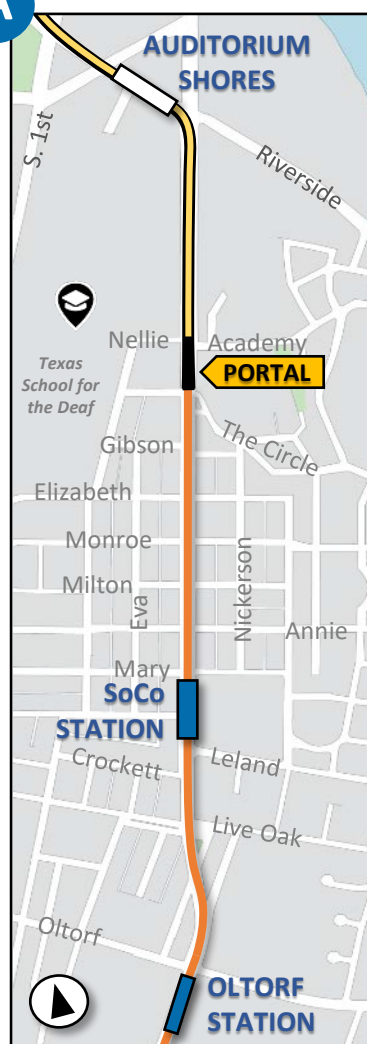
## PRE-15% DESIGN

BRIDGE OVER LAKE  
(LRT AT-GRADE ON So. CONGRESS)

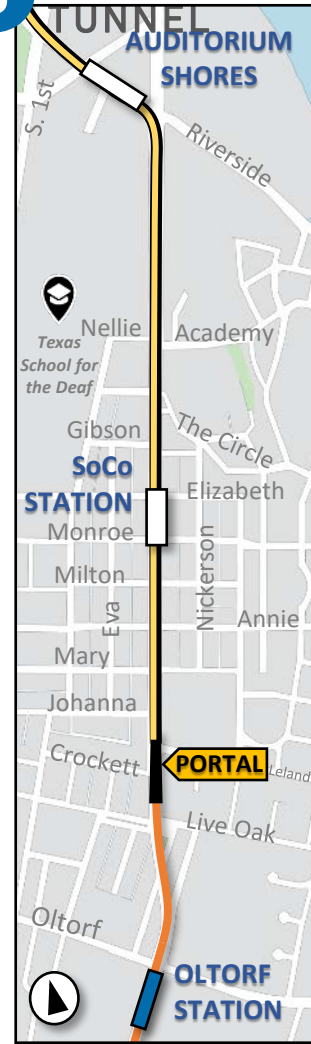


## 15% DESIGN

### A SHORT TUNNEL

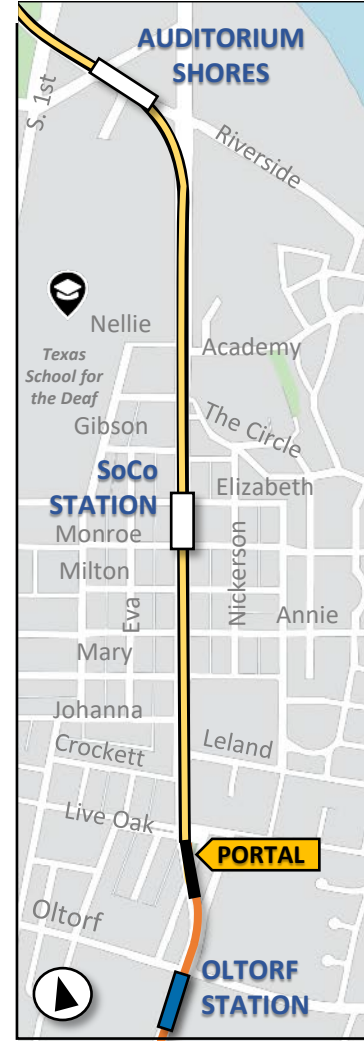


### B LONG TUNNEL



## DRAFT 30% DESIGN

### EXTENDED TUNNEL



### LEGEND

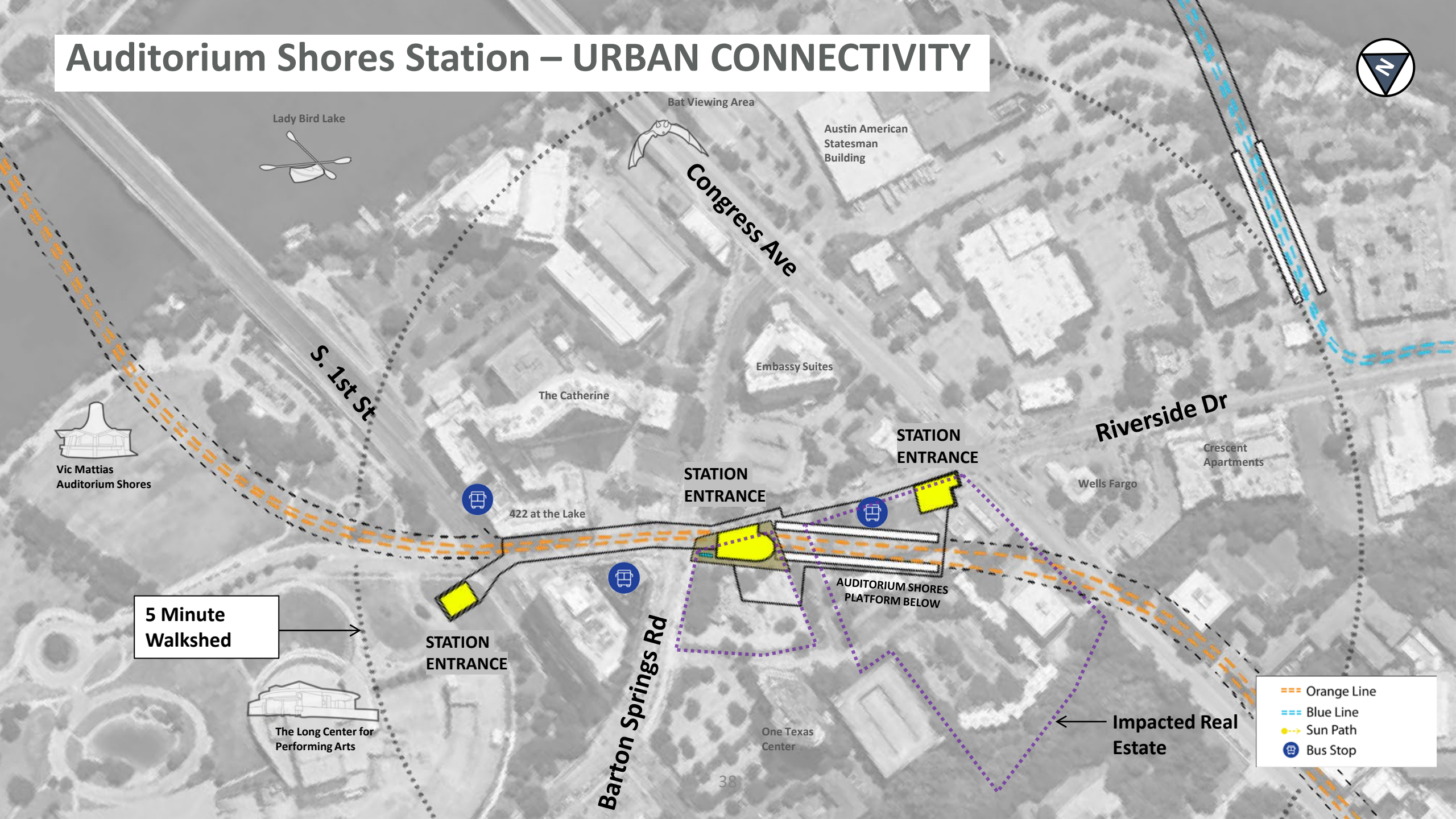
- Surface Light Rail
- Underground Light Rail
- Tunnel Portal
- Underground platform
- Surface platform



# Auditorium Shores Station



# Auditorium Shores Station – URBAN CONNECTIVITY



Lady Bird Lake



Bat Viewing Area



Austin American Statesman Building

Congress Ave

Embassy Suites

The Catherine

S. 1st St



Vic Mattias Auditorium Shores

STATION ENTRANCE

Riverside Dr

Crescent Apartments

Wells Fargo

STATION ENTRANCE



422 at the Lake



AUDITORIUM SHORES PLATFORM BELOW

5 Minute Walkshed

STATION ENTRANCE

Barton Springs Rd



The Long Center for Performing Arts

One Texas Center

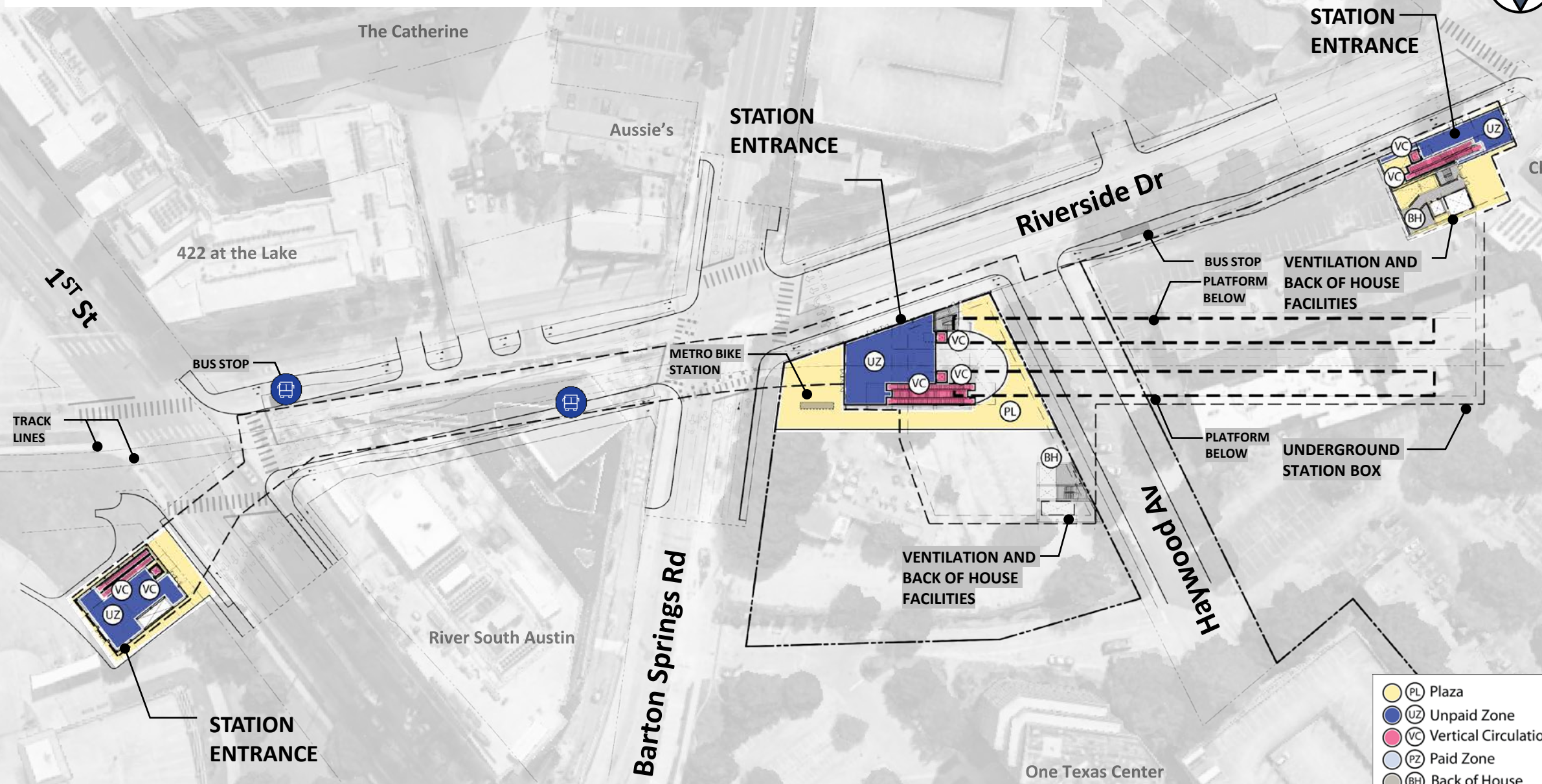
38

Impacted Real Estate

- Orange Line
- Blue Line
- Sun Path
- Bus Stop

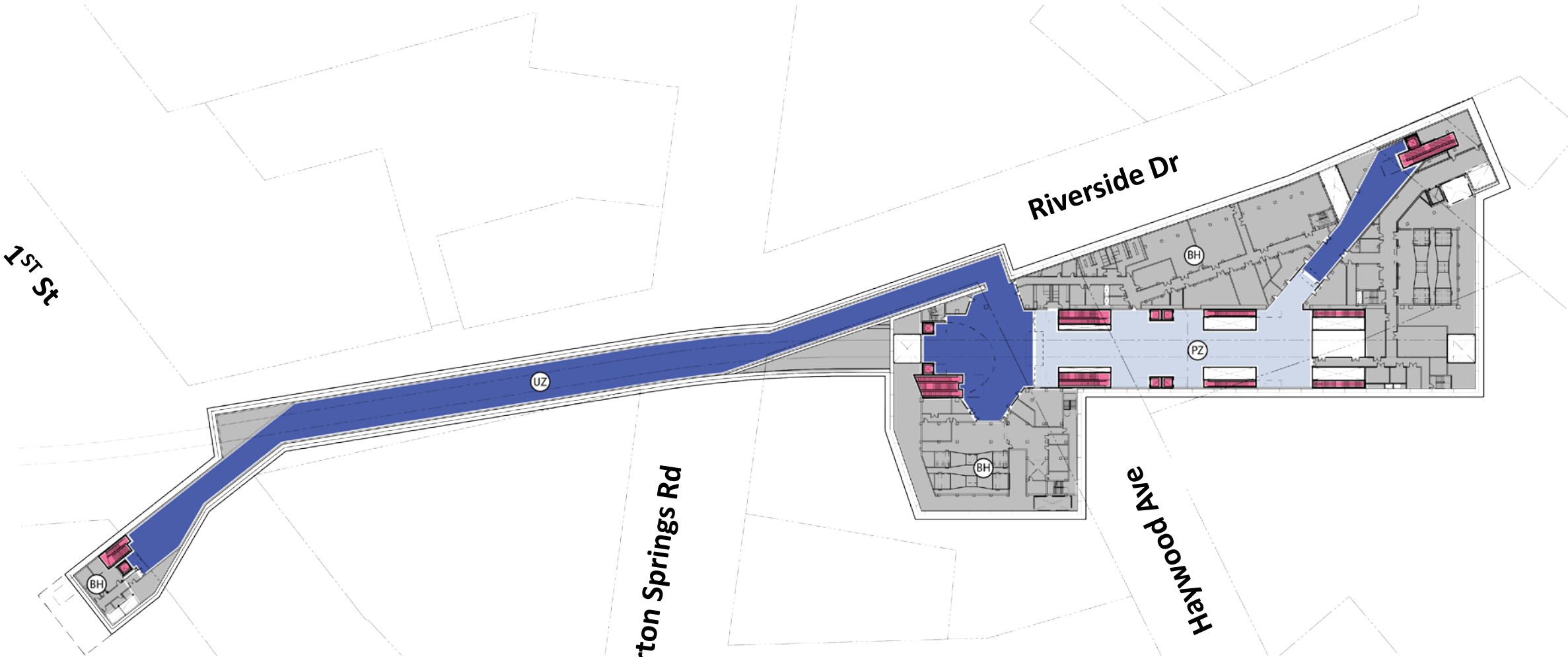
# Auditorium Shores Station Base Option - Street Level

Austin Trust Company



- (PL) Plaza
- (UZ) Unpaid Zone
- (VC) Vertical Circulation
- (PZ) Paid Zone
- (BH) Back of House
- Bus Stop

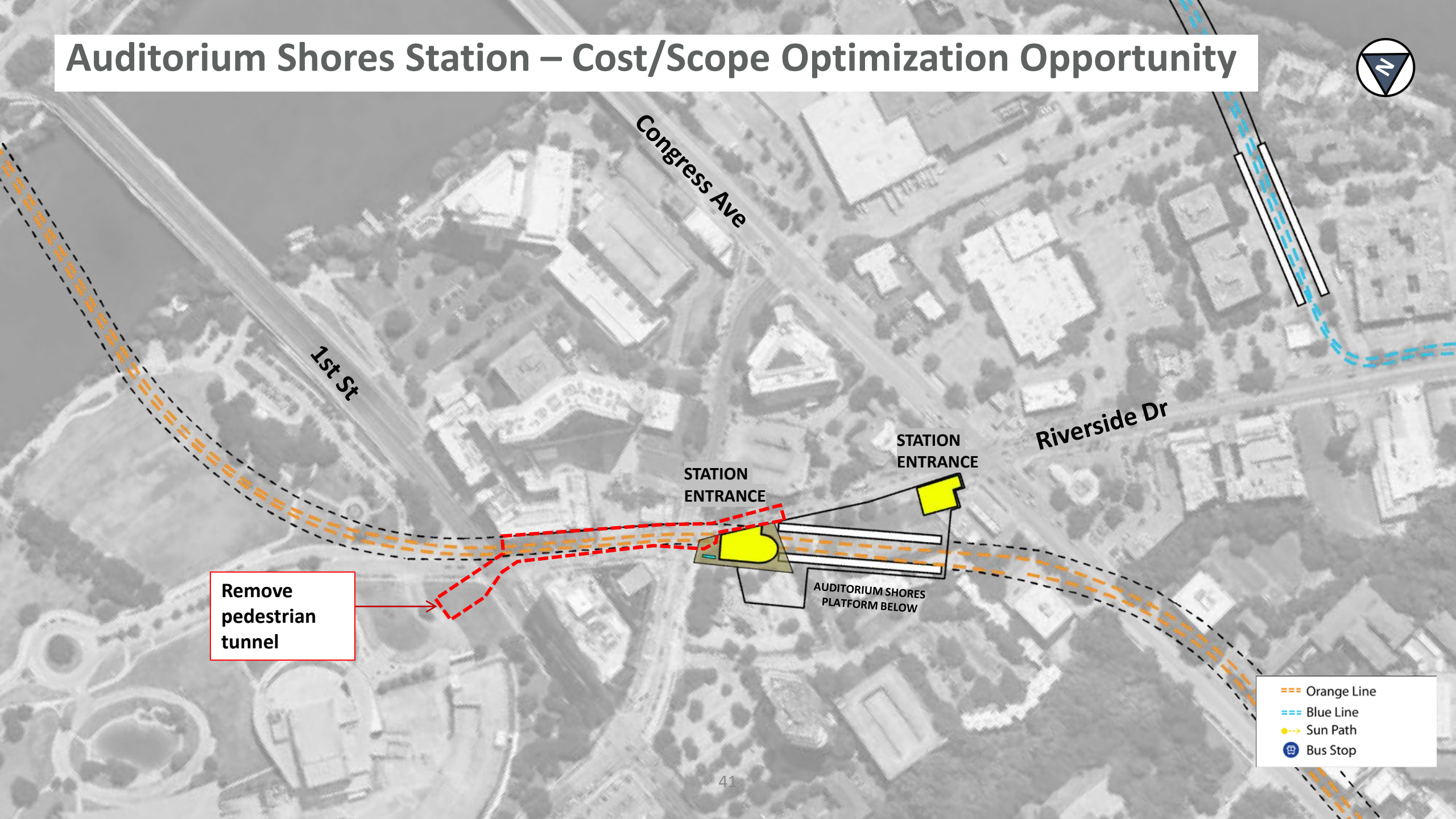
# Auditorium Shores Base Option – Concourse Level



- PL Plaza
- UZ Unpaid Zone
- VC Vertical Circulation
- PZ Paid Zone
- BH Back of House
- Bus Stop



# Auditorium Shores Station – Cost/Scope Optimization Opportunity



Remove pedestrian tunnel

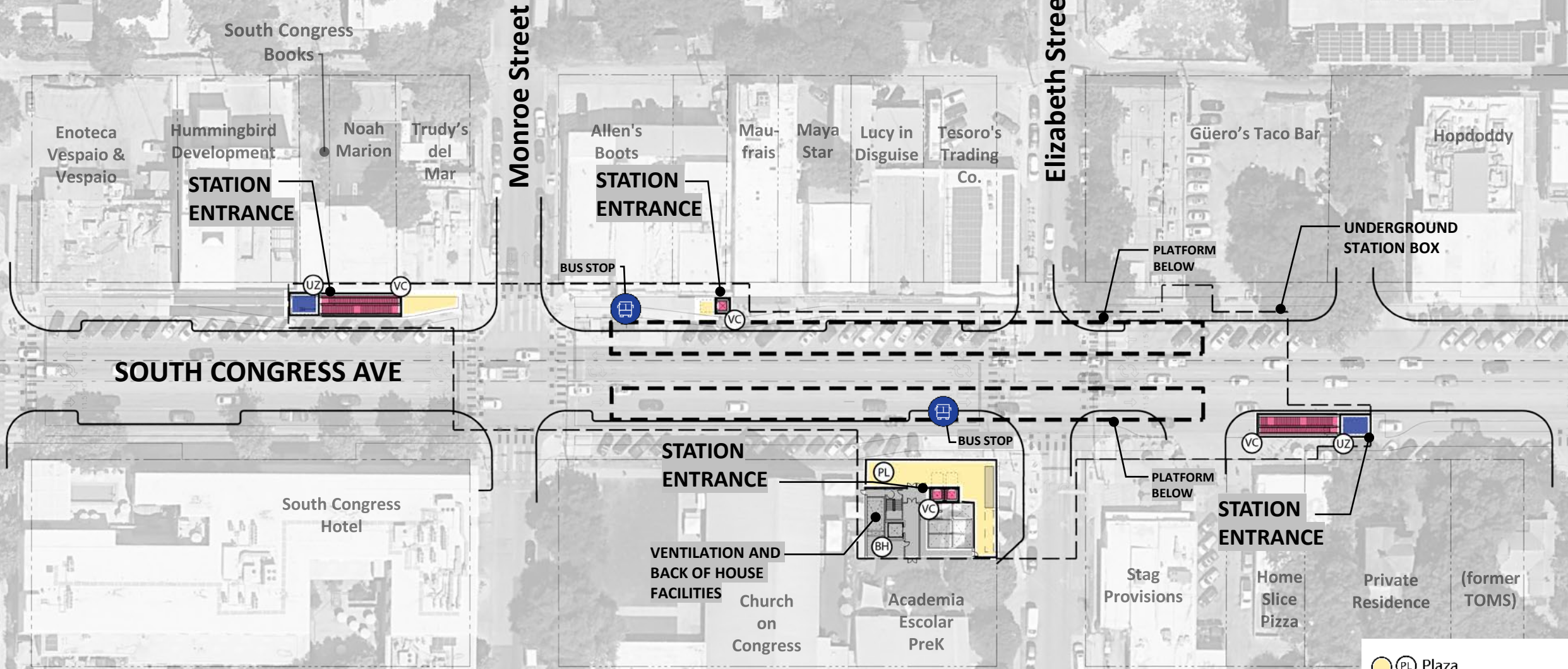
- Orange Line
- Blue Line
- Sun Path
- Bus Stop



# SoCo Station

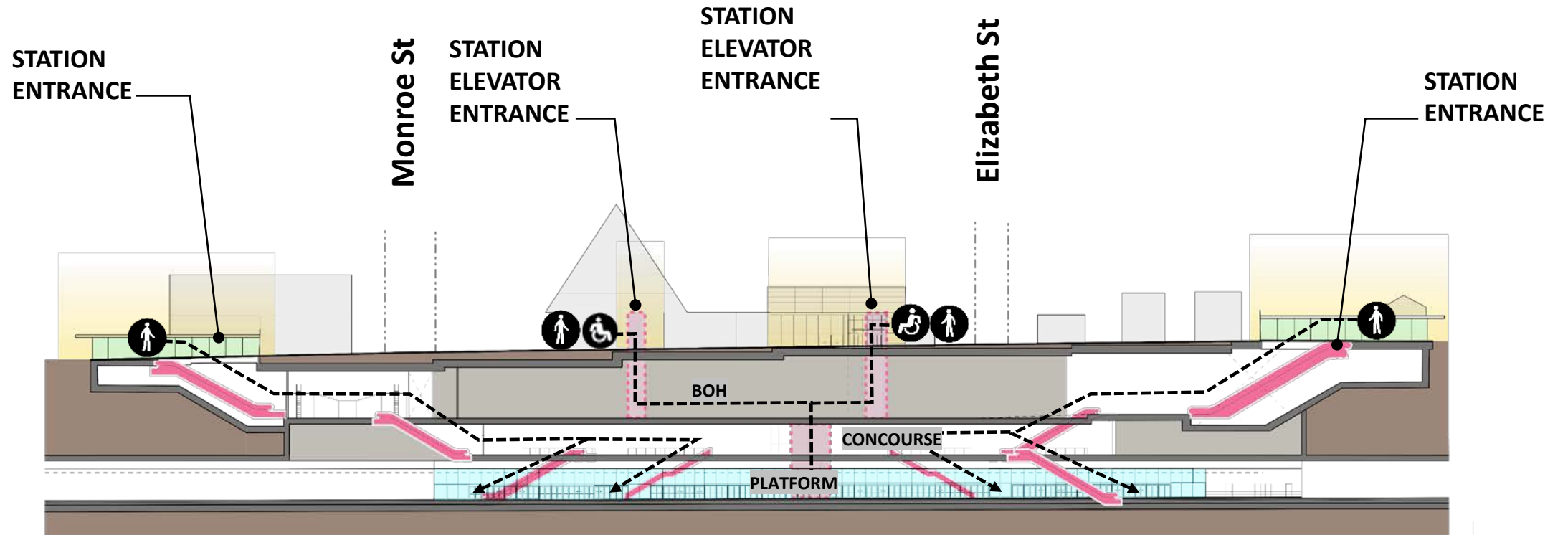


# SoCo Station – Street Plan



- (PL) Plaza
- (UZ) Unpaid Zone
- (VC) Vertical Circulation
- (PZ) Paid Zone
- (BH) Back of House

# SoCo Station – Section Looking West



*\*Conceptual drawing for illustration purposes subject to change*

- (PL) Plaza
- (UZ) Unpaid Zone
- (VC) Vertical Circulation
- (PZ) Paid Zone
- (BH) Back of House
- BS Bus Stop



# Q&A





# Downtown Transit Hub



# Downtown Transit Hub

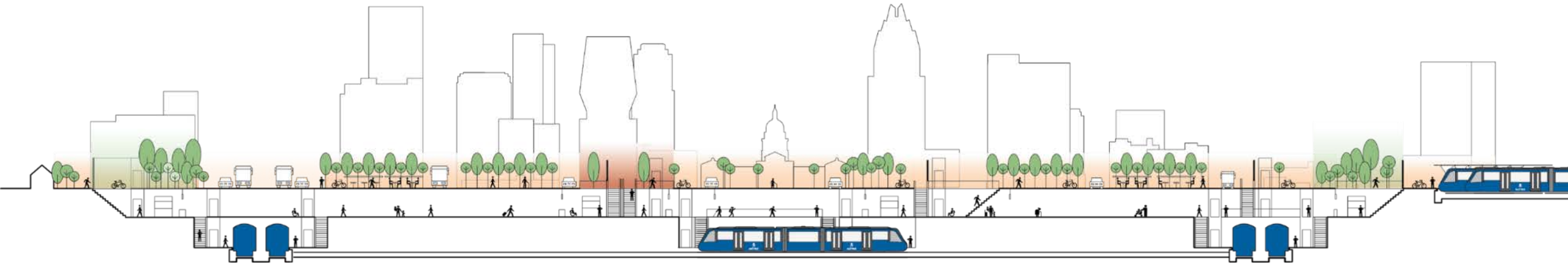
5 Minute Walkshed

5 Minute Walkshed

- Orange Line
- Blue Line
- Red Line
- Green Line
- Sun Path
- Bus Stop



# Downtown Transit Hub / 4<sup>th</sup> Street Mobility Corridor



*\*Conceptual drawing for illustration purposes*







# Congress Avenue Station



# Congress Ave Station – Street Plan

Mexic-Arte Museum

Brazos Lofts



**CONGRESS AVE  
STATION  
ENTRANCE**

**Congress Ave**

Frost Bank Tower

**Brazos St**

**BRAZOS  
STREET  
ENTRANCE** Brazos Hall

BIKE AND  
SCOOTER  
PARKING

METROBIKE  
RENTAL  
STATION

PLATFORM BELOW

**4<sup>TH</sup> St**

**UNDERGROUND  
STATION BOX**

Railyard Condos

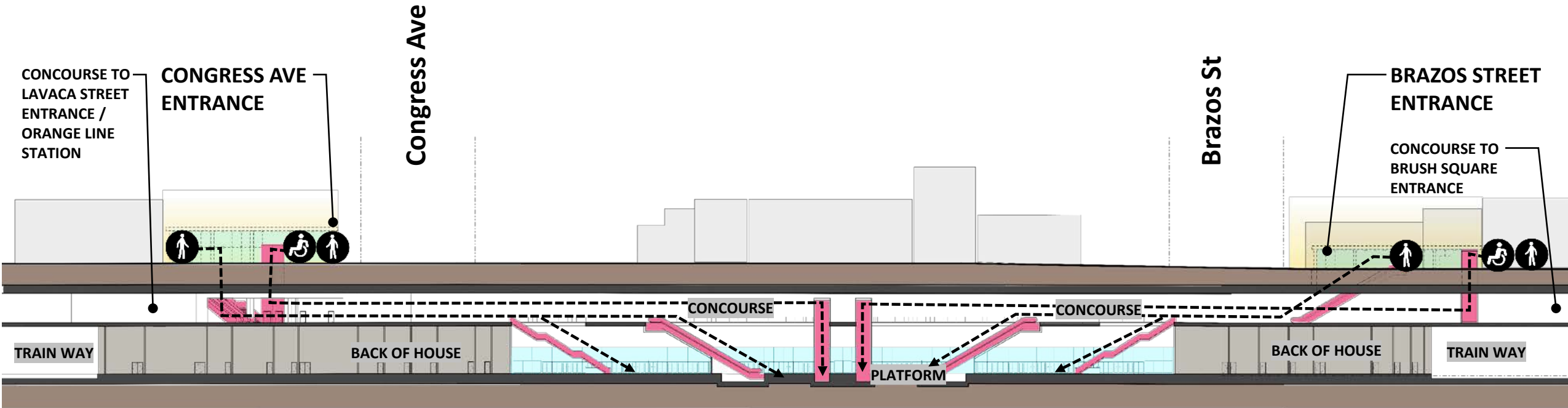
Texas Toy  
Museum

Elephant  
Room

50

- PL Plaza
- UZ Unpaid Zone
- VC Vertical Circulation
- PZ Paid Zone
- BH Back of House
- Bus Stop

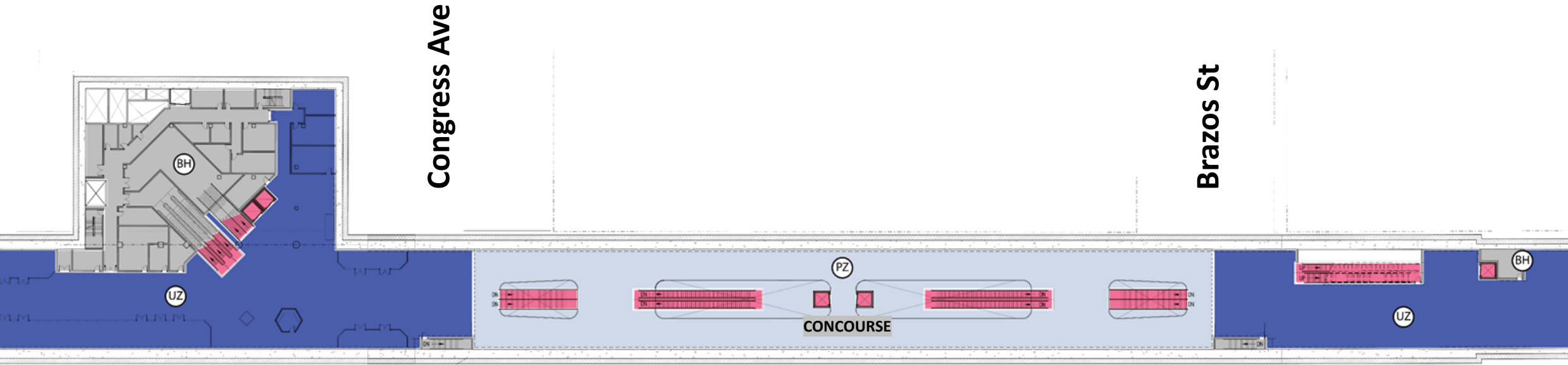
# Congress Ave Station – Section



*\*Conceptual drawing for illustration purposes subject to change*

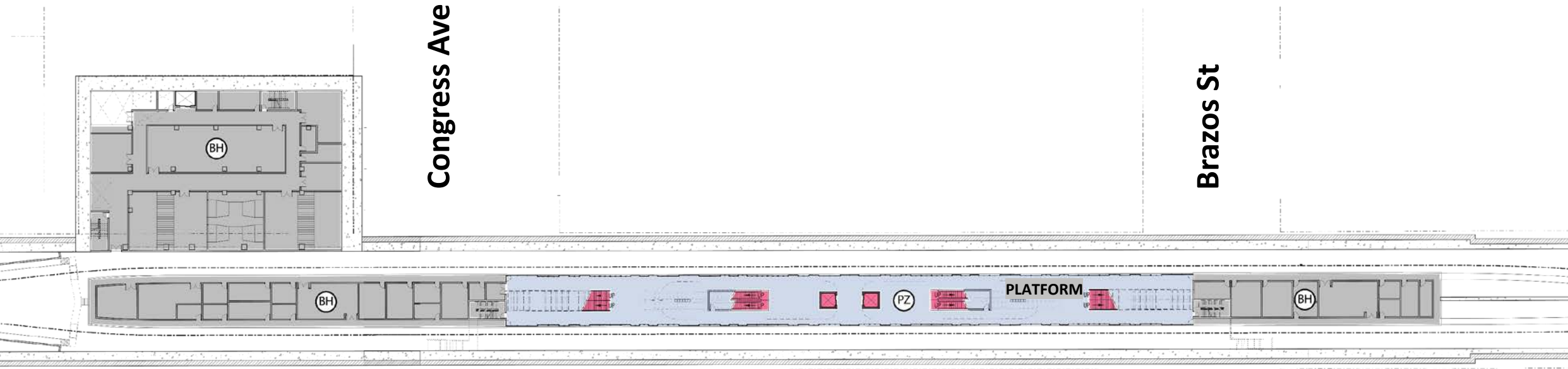
- (PL) Plaza
- (UZ) Unpaid Zone
- (VC) Vertical Circulation
- (PZ) Paid Zone
- (BH) Back of House
- (BS) Bus Stop

# Congress Ave Station – Concourse Plan



- PL Plaza
- UZ Unpaid Zone
- VC Vertical Circulation
- PZ Paid Zone
- BH Back of House
- Bus Stop

# Congress Ave Station– Platform Plan



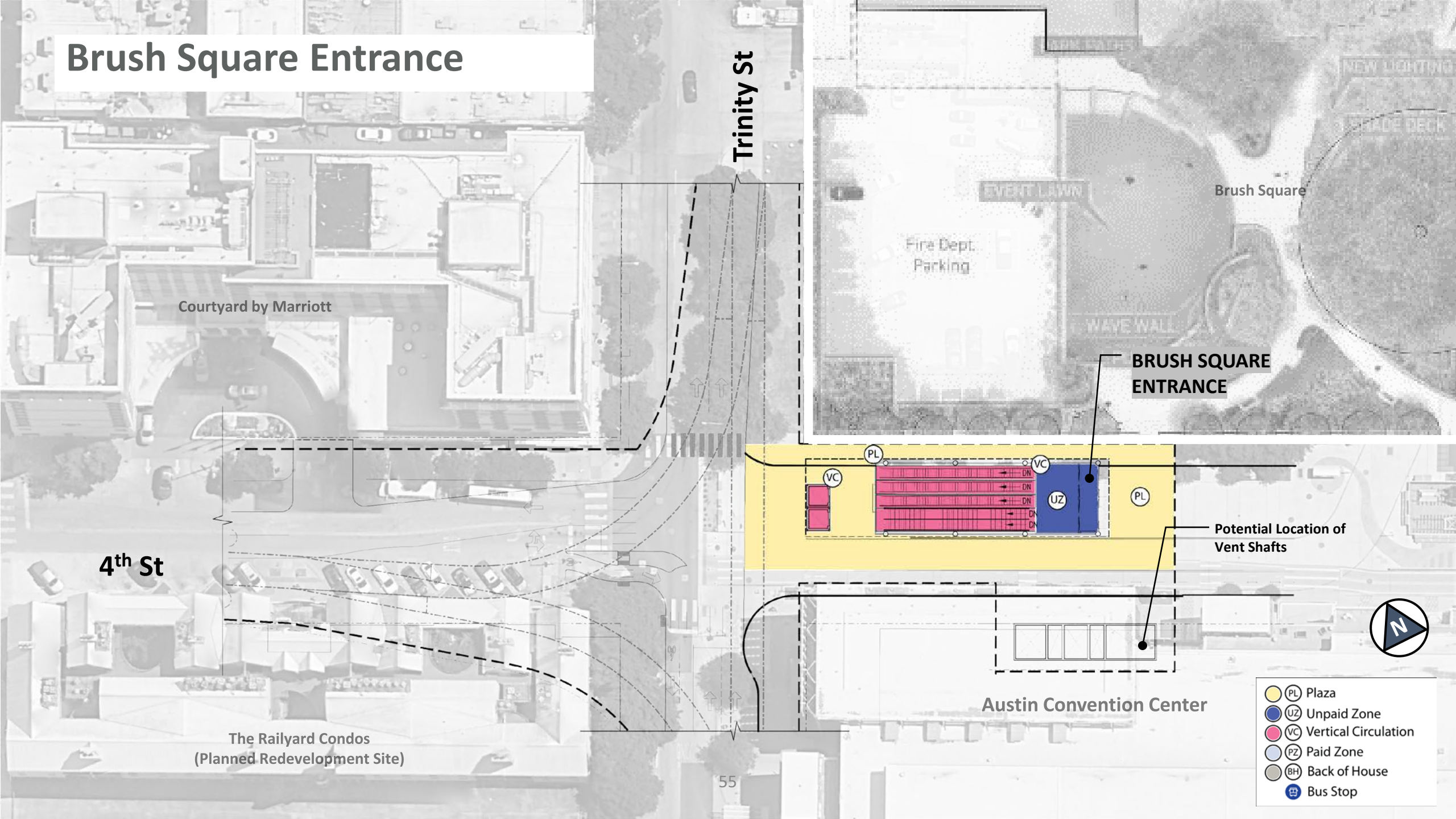
- PL Plaza
- UZ Unpaid Zone
- VC Vertical Circulation
- PZ Paid Zone
- BH Back of House
- Bus Stop



# Brush Square Entrance



# Brush Square Entrance



Trinity St

Brush Square

Courtyard by Marriott

Fire Dept. Parking

EVENT LAWN

WAVE WALL

NEW LIGHTING

TERRACE DECK

BRUSH SQUARE ENTRANCE

4th St

Potential Location of Vent Shafts

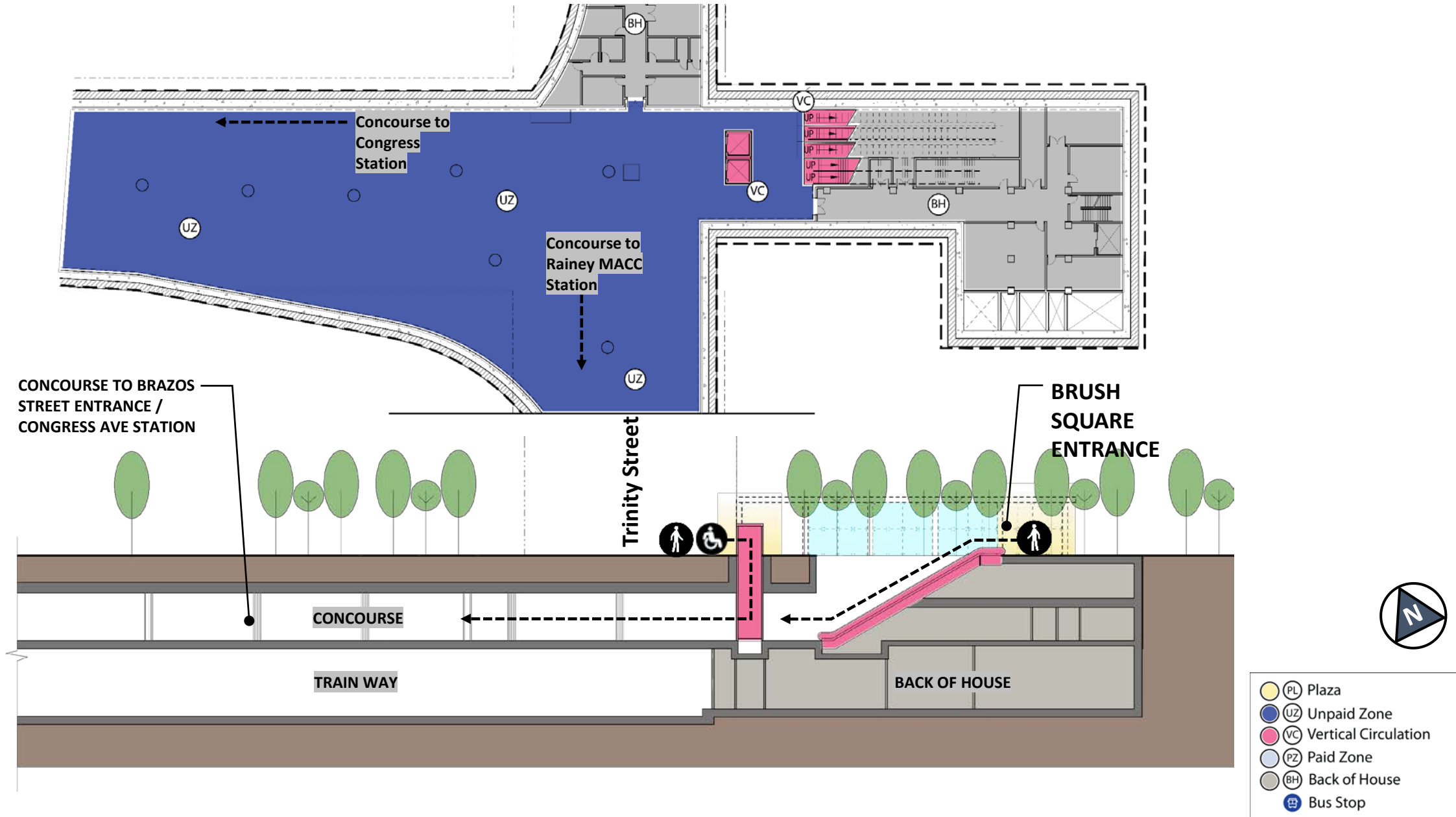
Austin Convention Center

The Railyard Condos  
(Planned Redevelopment Site)

- PL Plaza
- UZ Unpaid Zone
- VC Vertical Circulation
- PZ Paid Zone
- BH Back of House
- Bus Stop

55

# Brush Square Entrance - Concourse Plan and Section



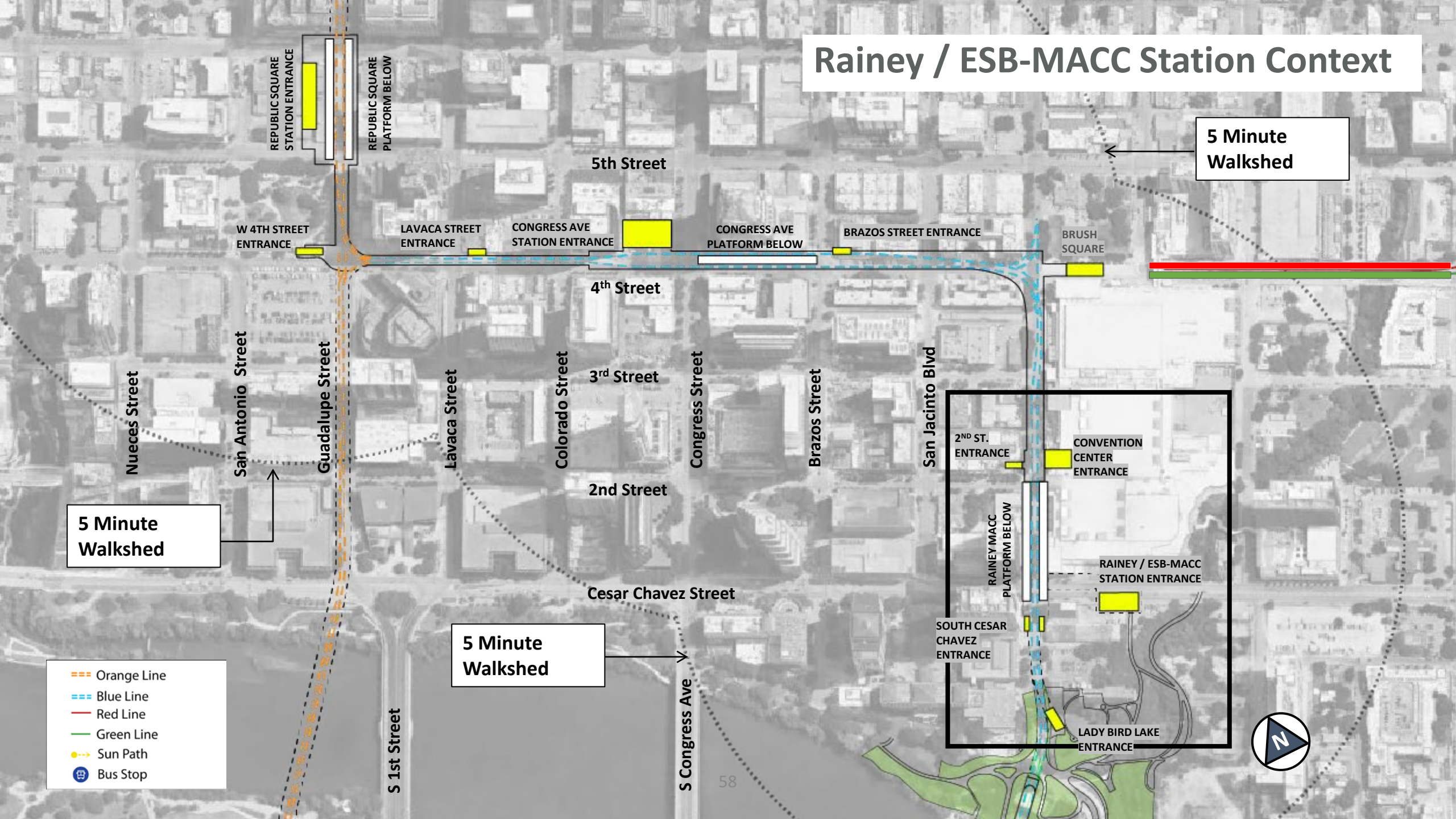




# Rainey / ESB-MACC Station



# Rainey / ESB-MACC Station Context



5 Minute Walkshed

5 Minute Walkshed

5 Minute Walkshed

- Orange Line
- Blue Line
- Red Line
- Green Line
- Sun Path
- Bus Stop



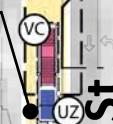
# Rainey / ESB-MACC Station – Street Level



CONVENTION  
CENTER  
ENTRANCE



2<sup>ND</sup> STREET  
ENTRANCE

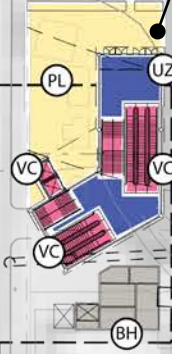


2<sup>nd</sup> St

Trinity St

Cesar Chavez St

RAINEY / ESB-  
MACC  
STATION  
ENTRANCE



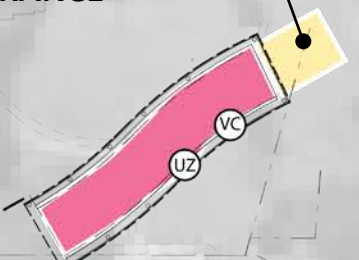
CESAR CHAVEZ  
STREET  
ENTRANCE



CESAR CHAVEZ  
STREET ENTRANCE

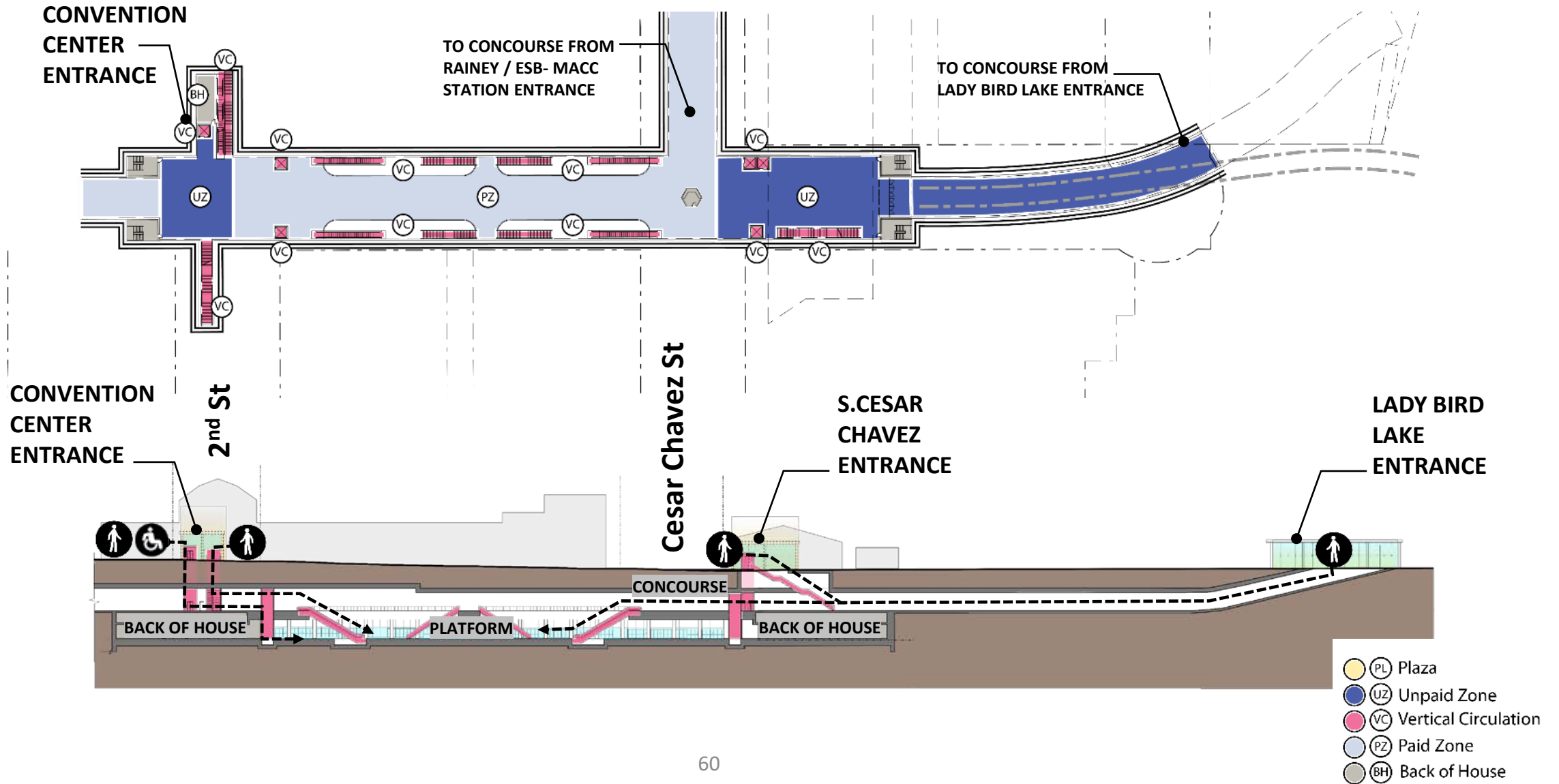


LADY BIRD LAKE  
ENTRANCE

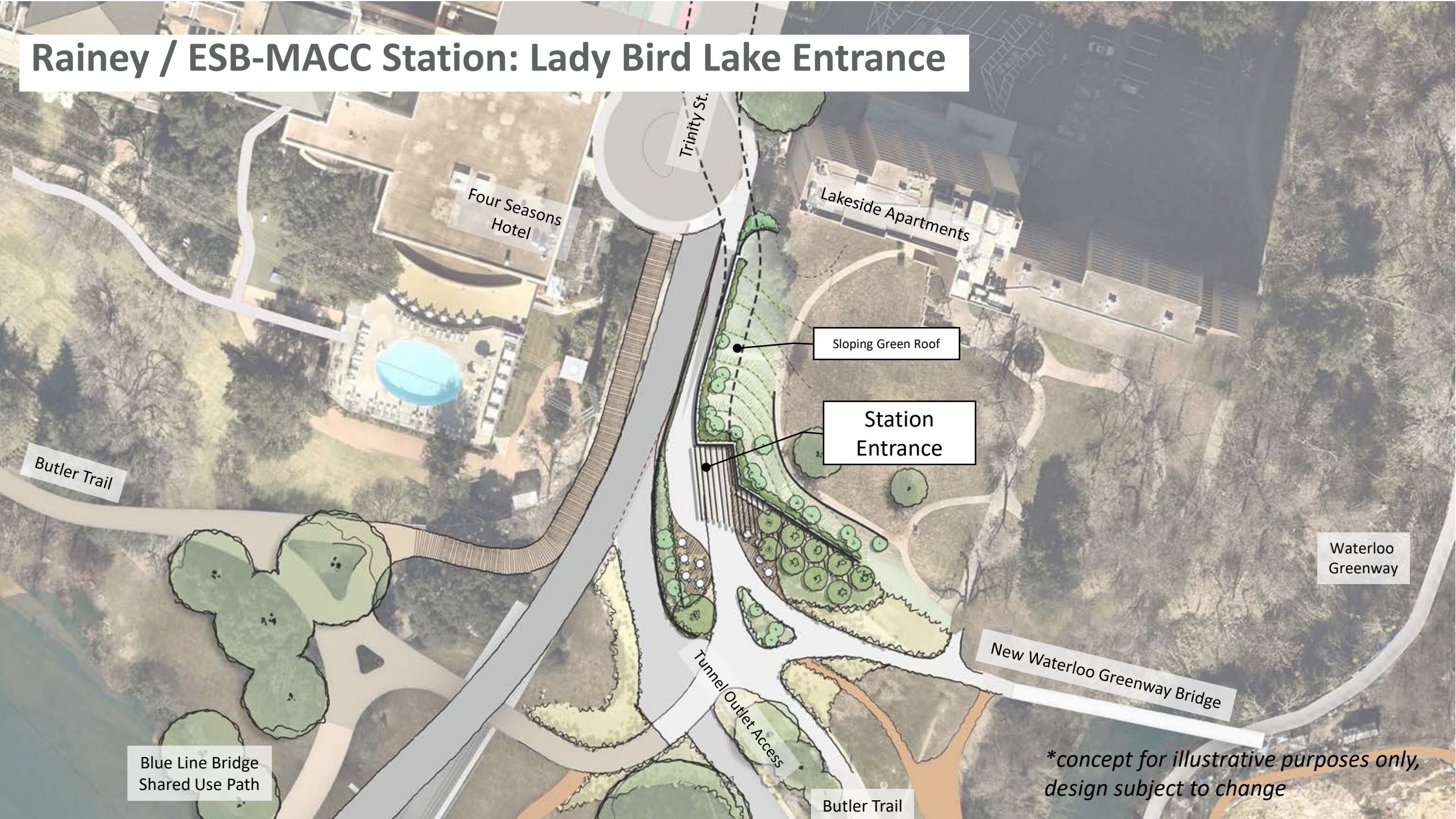


- PL Plaza
- UZ Unpaid Zone
- VC Vertical Circulation
- PZ Paid Zone
- BH Back of House

# Rainey / ESB-MACC Station – Concourse and Section



# Rainey / ESB-MACC Station: Lady Bird Lake Entrance



Trinity St.

Four Seasons Hotel

Lakeside Apartments

Sloping Green Roof

Station Entrance

Butler Trail

Waterloo Greenway

New Waterloo Greenway Bridge

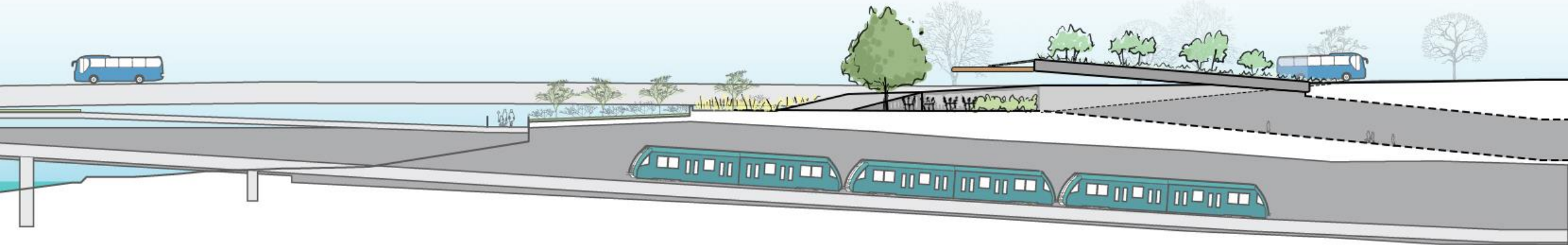
Tunnel Outlet Access

Blue Line Bridge Shared Use Path

Butler Trail

*\*concept for illustrative purposes only, design subject to change*

# Rainey / ESB-MACC Station: Lady Bird Lake Entrance



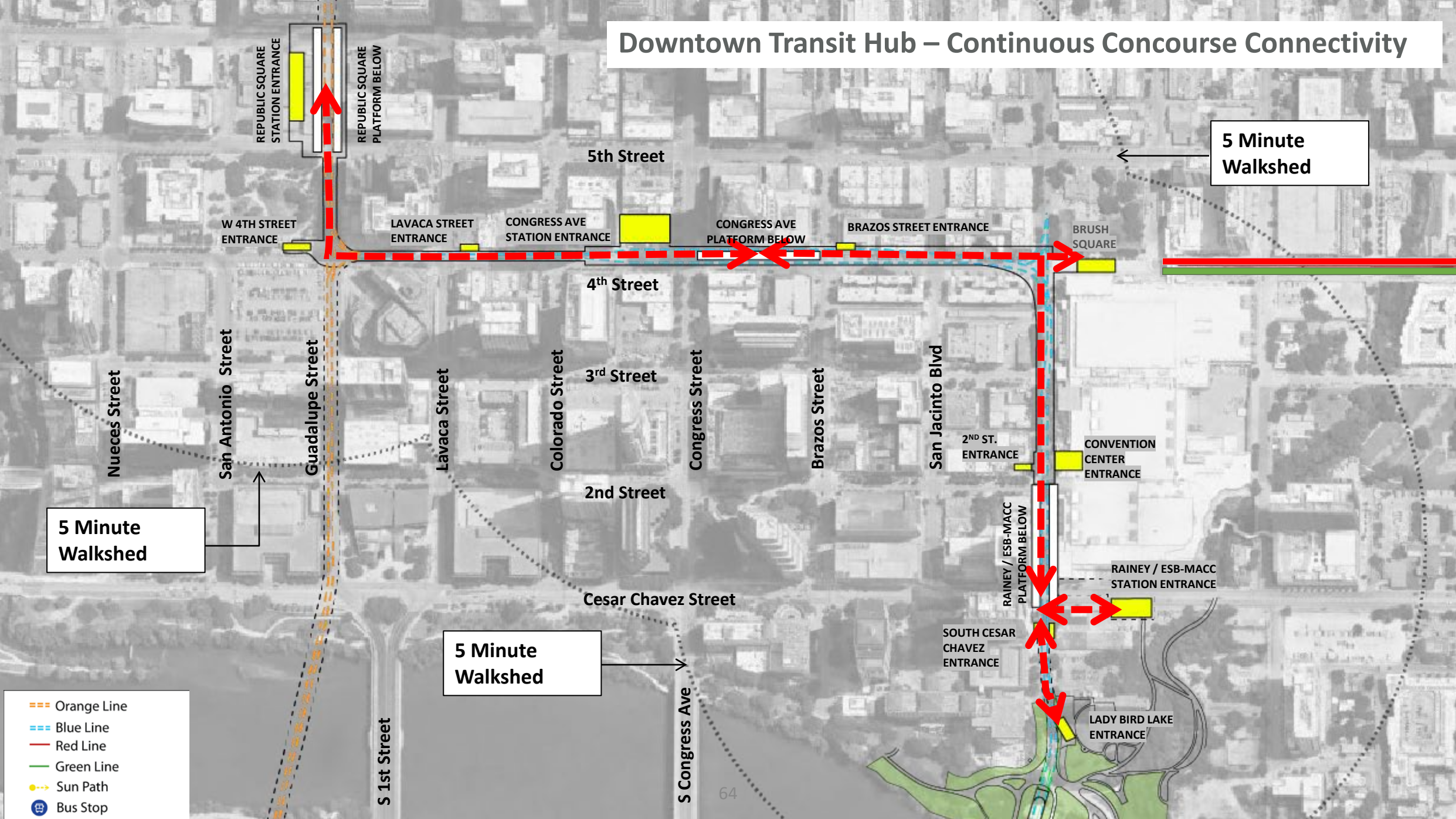


# Downtown Transit Hub

## Cost/Scope Optimization Opportunities

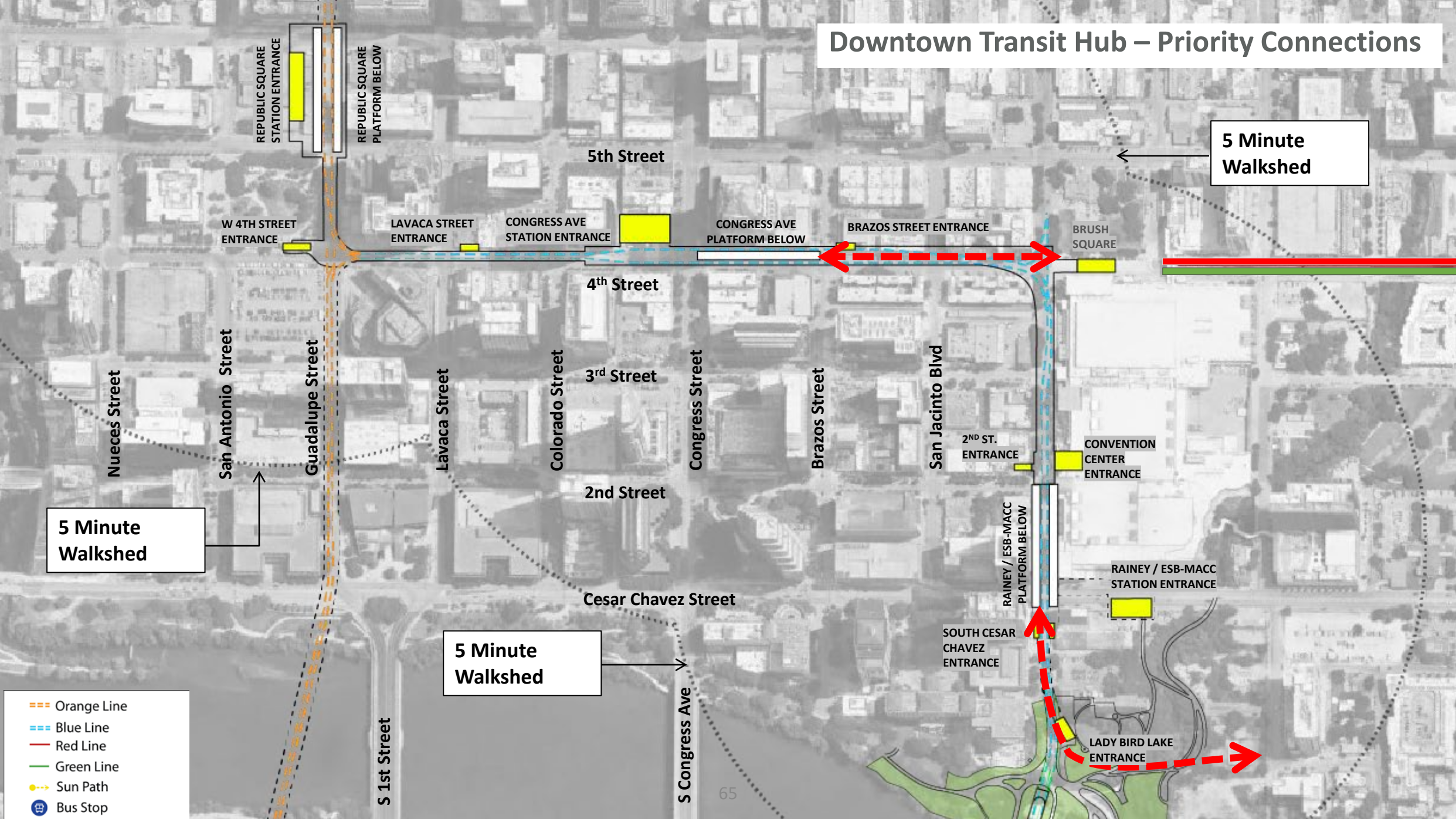


# Downtown Transit Hub – Continuous Concourse Connectivity





# Downtown Transit Hub – Priority Connections



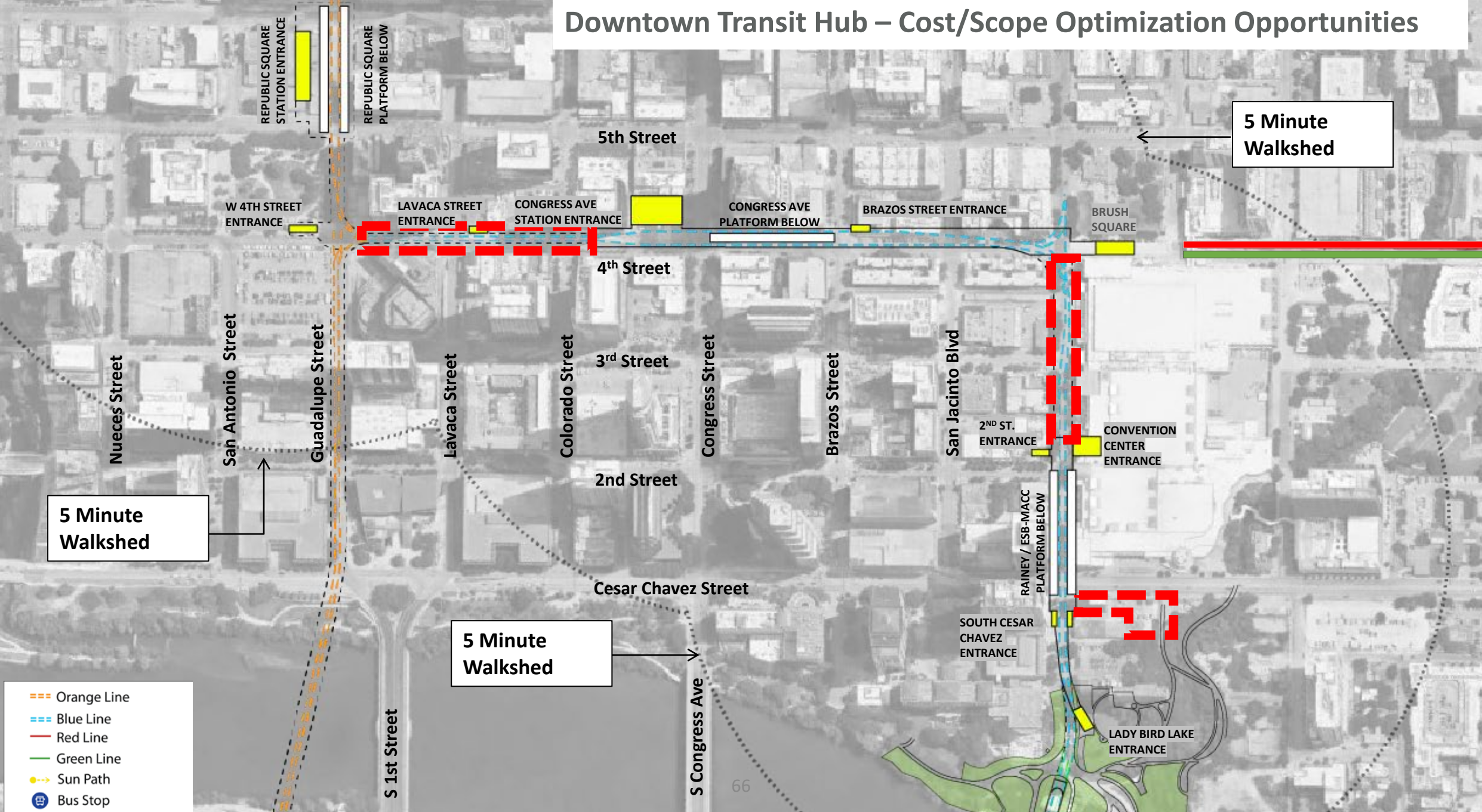
5 Minute Walkshed

5 Minute Walkshed

5 Minute Walkshed

- Orange Line
- Blue Line
- Red Line
- Green Line
- Sun Path
- Bus Stop

# Downtown Transit Hub – Cost/Scope Optimization Opportunities



- Orange Line
- Blue Line
- Red Line
- Green Line
- Sun Path
- Bus Stop



# Q&A



# Stay Engaged

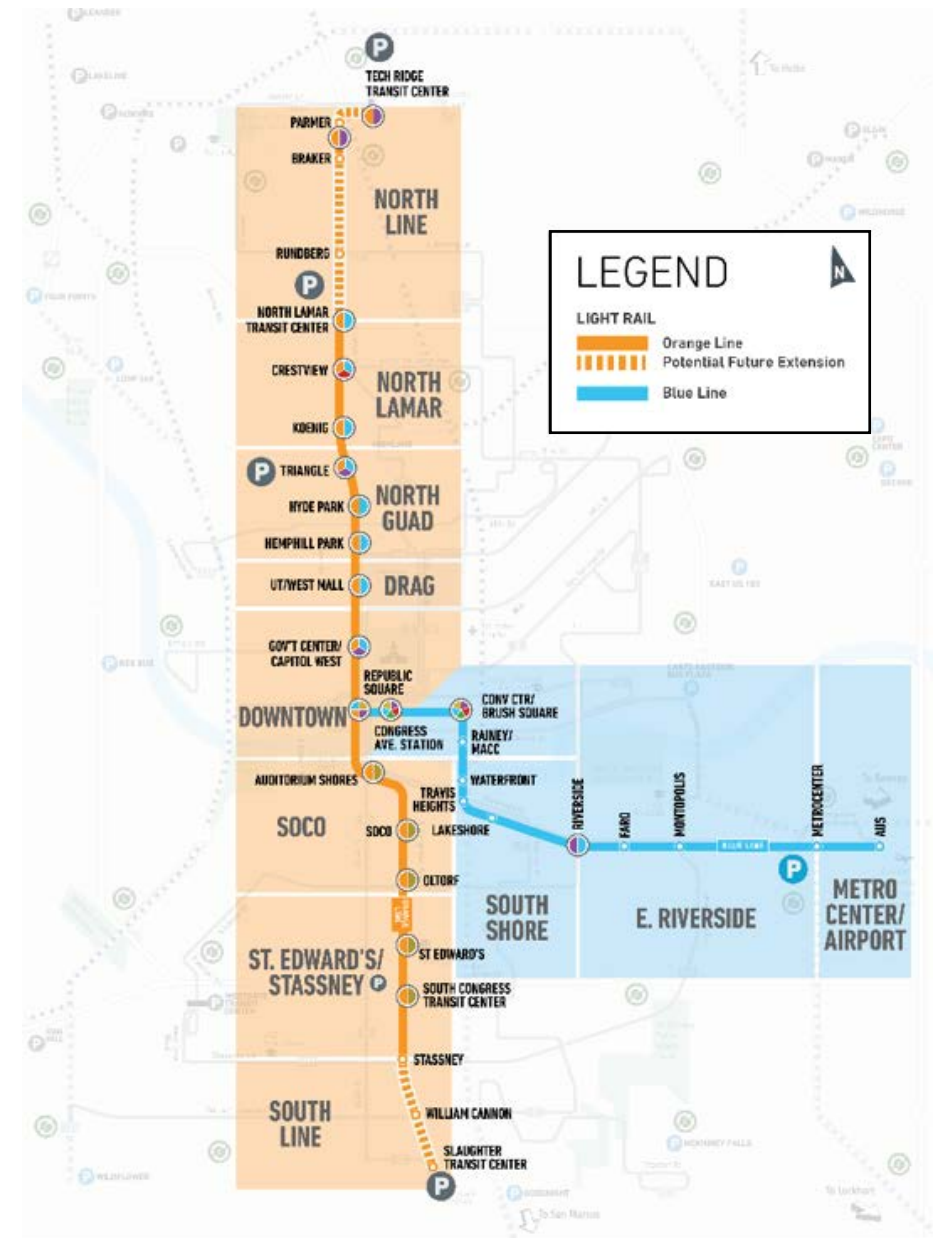
Get involved! [projectconnect.com/get-involved](http://projectconnect.com/get-involved)

## Other ways to submit feedback:

E-mail: [feedback@capmetro.org](mailto:feedback@capmetro.org)

Mail: Project Connect Planning Team  
Austin Transit Partnership  
301 Congress Avenue  
Austin, TX 78701

*Materials are available in English and Spanish*



Thanks for joining us.  
Visit [ProjectConnect.com](https://ProjectConnect.com) for more information.

