

Tri-Party Work Session Appendices

The following pages are intended to offer additional context and framing for topics still undergoing additional technical analysis, public input and staff collaboration between the Project Connect partners.

People interested in any of these topics are encouraged to attend an upcoming community workshop specific to their topic(s) of interest. The workshops will be posted online at ProjectConnect.com/get-involved, once scheduled.



Riverside/Pleasant Valley Station Design (Blue Line)

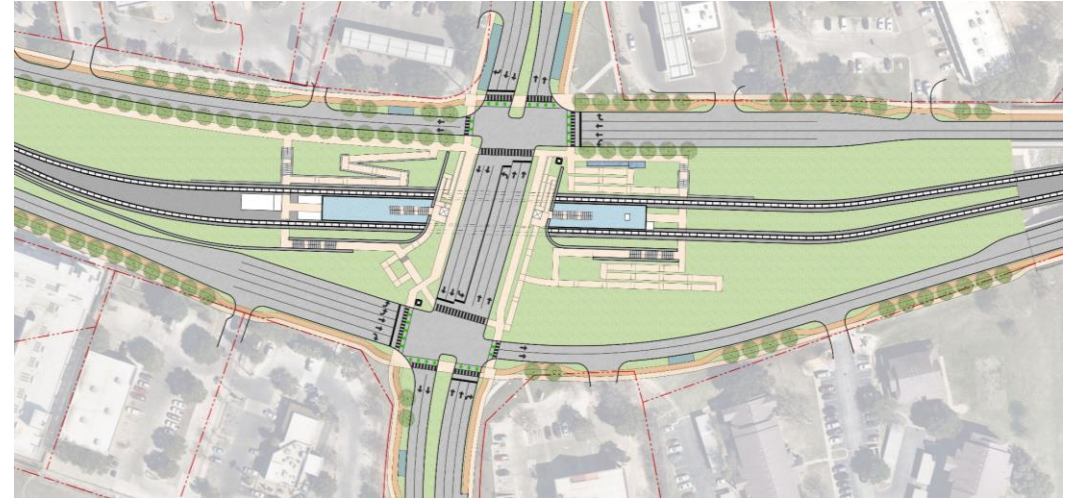
Options:

- Option A: **Underpass Design**— rail underneath Pleasant Valley w/ same roadway configuration as today
- Option B: **At-Grade Transit Plaza Design**— rail/bus together at street level with new roundabout

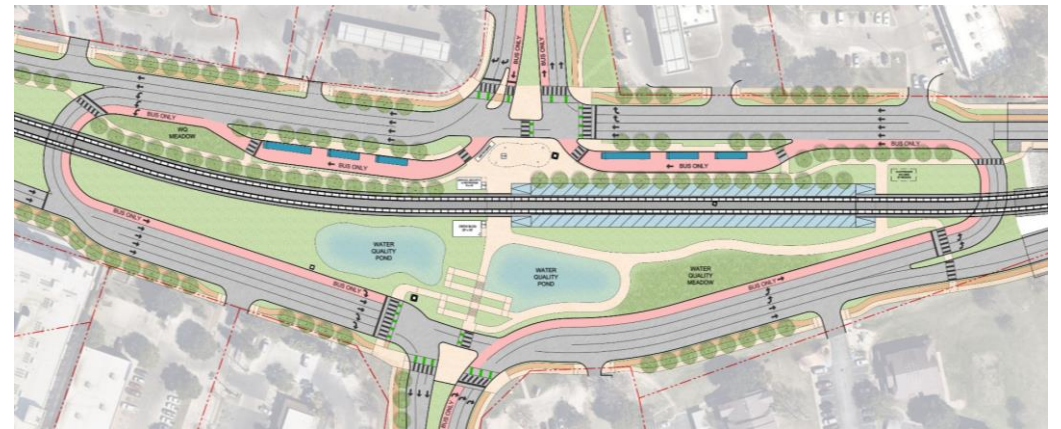
Considerations and Trade-Offs:

- Accessibility
- Transfers between transit modes
- Safety
- Travel times
- Water quality management
- Placemaking and landscaping
- Costs

Community Workshop: May 2022



Option A: Underpass



Option B: At-Grade Transit Plaza

Source: Pleasant Valley Community Workshop Presentation



The Drag

Options:

- Option A: **Light Rail + One Traffic Lane** (in each direction)
 - Traffic lane could be used for buses and cars or buses only.
- Option B: **Transit Mall**: Light Rail with Bus Option
 - No general-purpose traffic lanes; the LRT transitway could accommodate buses; extent pending additional analysis

Considerations and Trade-Offs:

- Transfers between transit modes
- Optimization of bus/rail network
- Street trees
- Pedestrian and cyclists' comfort
- Safety
- Local business access

Community Workshop: May 2022



Option A: Light Rail with One Traffic Lane (in each direction)

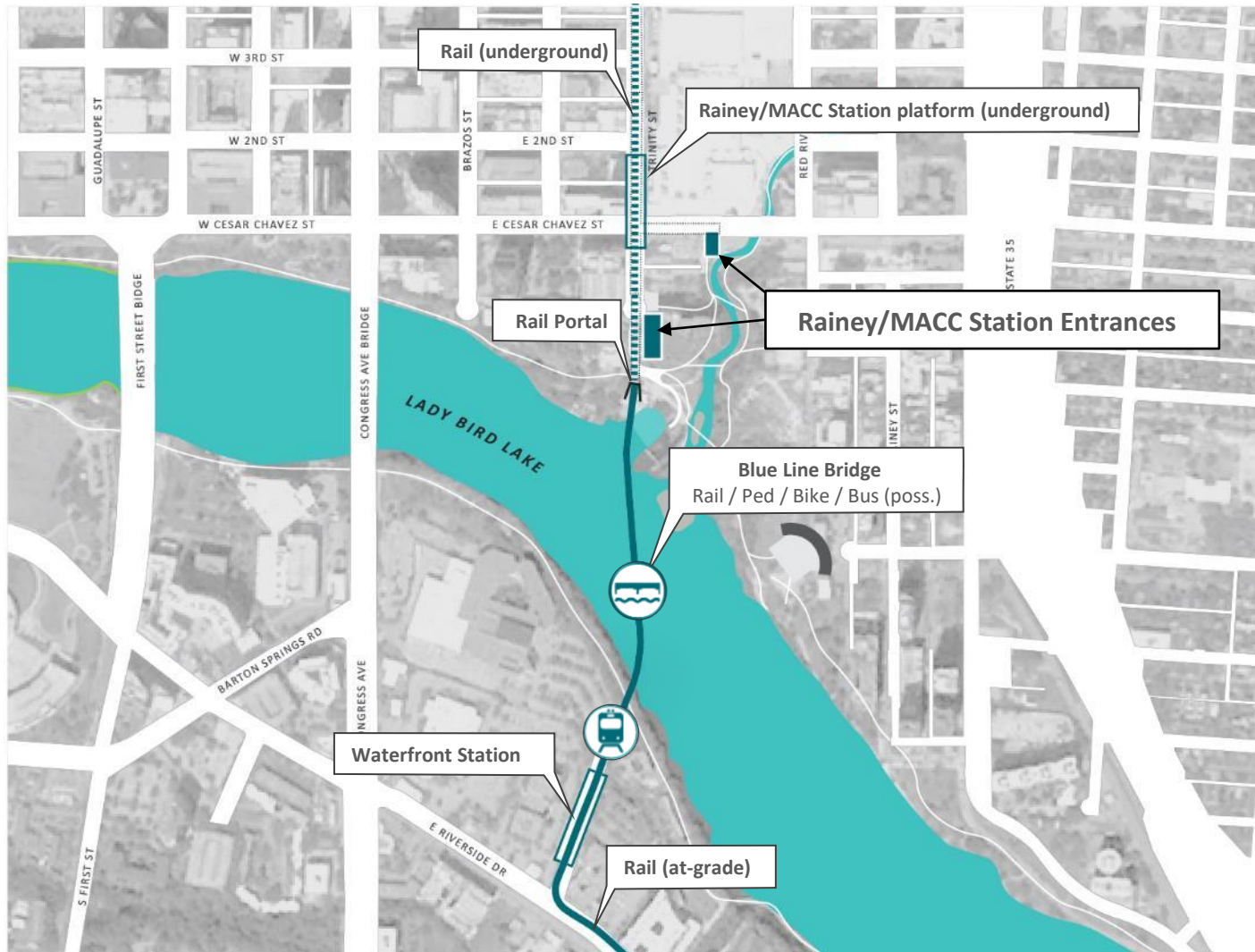


Option B: Transit Mall

Source: Drag Community Workshop Presentation



Blue Line Bridge at Lady Bird Lake



Bridge Will Accommodate:

- Light rail (Blue Line)
- Cyclists and Pedestrians
- Buses (*analysis is underway*)

Considerations and Trade-Offs

- Design/Engineering
- Constructability/phasing
- Local trail/park impacts
- Bus service network
- Safety and operations
- Blue Line federal review, schedule, and funding
- Transportation network interdependencies
- Cost

Community Workshop: April 2022

Source: Lady Bird Lake Bridge Community Design Workshop



Crestview Station

Station Area Options:

- Base Option: **Orange Line (OL) on elevated structure**
 - Orange Line station: elevated structure on Lamar Blvd.
 - Red Line / Freight Line: remains at street level
- Potential Option: **Orange Line (OL) at street level**
 - Orange Line station: center platform in the center of Lamar Blvd, just north of Airport Blvd
 - Red Line / Freight depressed below Lamar Blvd.* (This grade-separation project is being analyzed by Capital Metro, separate from the Orange Line project, and would require additional, non-Project Connect funding sources.)

Considerations and Trade-Offs:

- Safety
- Transfers between transit modes
- Urban design opportunities
- Red Line Trail coordination
- Adjacent mixed-use development projects
- Additional funding availability

Community Town Hall: April 2022



Base option: OL elevated; Red Line / Freight at grade (existing condition)



Potential option: OL at street level; Red Line / Freight depressed



Tunnel / Subway Considerations

Orange Line

- Proposed 2.9-mile tunnel, crossing under Lady Bird lake
 - South portal: South Congress near Live Oak
 - North portal: Guadalupe near MLK
- 4 underground stations (2 multi-line)

Blue line

- Proposed 0.8-mile tunnel under 4th St and Trinity Street
 - South portal: Trinity St near Lady Bird Lake
- 2 underground stations

Considerations and Trade-offs:

- Tunnel depth requirements under Lady Bird Lake
- Optimal station depth for public access
- Blue Line Concourse extents
- Tunnel construction methodologies
- Space for staging / launching of tunnel boring machine
- Minimize surface disruptions
- Seismic and noise monitoring during construction
- Cost effectiveness and economy of scale



Rail Maintenance Facility Location

Options

- Site evaluations are in progress
- No available options on Orange Line between Stassney and North Lamar Transit Center (initial Orange Line investment)

Constraints/Considerations

- Real estate market
- Adjacent property and community impacts
- Zoning and entitlements
- Property acquisition Schedule
- Site alternatives and lead track options
- Must be adjacent to rail line
- Minimum of 60 acres needed
- Cost (property, site-specific costs, etc.)

Community Meeting: March 2022



Example: Sound Transit (Seattle)

Vehicle and Systems Design

Vehicle Requirements and Considerations

- 100% Low-Floor Design
- Accessibility & Americans with Disability Act (ADA) Compliance
- Direct Current (DC) powered rail vehicles
- Catenary (OCS) and Battery Energy Management
- Communications Based Train Control (CBTC)
- Customer Information Systems & Technology
- Platform Screen Doors & Precision Stopping
- Application of European and Asian Equipment Technology
- Max speed being targeted 55 mph +/-

Community Meeting: June 2022

System Requirements and Considerations

- Communications (Voice, Data & Video)
- Power (during construction and for operations)
- Security
- Fare System Integration
- Traffic Signal integration
- Traction Power Substation with redundant, dedicated feeders
- Tunnel & Station Systems
- Coordination of interlined Orange and Blue Lines in some segments
- Maintenance Facility Systems
- Control Centers Systems
- Customer Information for Stations and Applications

