Austin City Council/ Capital Metro Board

JOINT WORK SESSION

OCTOBER 30, 2019
AGENDA

AUSTIN STRATEGIC MOBILITY PLAN
- Implementing the ASMP
- Austin’s Mobility Challenges
- Mode Share Goal

PROJECT CONNECT
- Program Objectives
- Community Engagement
- Peer City Research
- High Capacity Transit – Orange and Blue Lines
- Alternatives Analysis

LOOKING FORWARD
- Policy Consideration
- Next Steps
IMPLEMENTING THE ASMP VISION
AUSTIN’S MOBILITY CHALLENGES

• Lowering the risk of travel-related injury
• Preparing for innovative transportation technology opportunities
• Ensuring financial and environmental sustainability on our transportation network
• Collaborating effectively with other agencies, organizations, and our community to make mobility decisions
• Supplying multimodal transportation options as we grow
**LOCAL AND REGIONAL GROWTH**

1.3 million by 2040

<table>
<thead>
<tr>
<th>Area</th>
<th>2019</th>
<th>2040</th>
<th>% CHANGE BY AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUSTIN</td>
<td>985K</td>
<td>1.3M</td>
<td>32% ↑</td>
</tr>
<tr>
<td>AUSTIN-ROUND ROCK MSA</td>
<td>2.2M</td>
<td>4.1M</td>
<td>86% ↑</td>
</tr>
</tbody>
</table>
AUSTIN’S MOBILITY CHALLENGE

Drive Alone | All other modes
--- | ---
26% | 74%

TODAY
2039

50% | 50%

TODAY
2039

50% | 50%
HOW DO WE GET TO 50/50?

- Prioritizing Our Safety
- Managing Our Demand
- Supplying Our Transportation Infrastructure
- Operating Our Transportation Network
- Protecting Our Health and Environment
- Implementing the Plan
MANAGING DEMAND

- Programming
  - Get There ATX
  - Smart Trips Program
  - Modernizing Telework Policy
- Regulations
  - Land Development Code
  - Transportation Criteria Manual
  - Street Impact Fee
- Partnerships
  - Movability
  - Commute Solutions
  - Telecommunications Industry
- Invest in Mobility as a Service (MAAS)
- Setting Goals by Mode

![Graph showing travel modes for 2039]
AUSTIN’S TOP STRATEGIES

- **Reduce traffic fatalities, serious injuries** by focusing on safety culture, behaviors
- **Manage congestion** by managing demand
- **Build active transportation access** for all ages and abilities on sidewalk, bicycle, and urban trail systems
- **Strategically add roadway capacity** to improve travel efficiency
- **Connect people to services and opportunities** for better health
- **Address affordability** by linking housing and transportation investments
- **Right-size and manage parking supply** to manage demand
- **Develop shared mobility options** with data and emerging technology
- **Build and expand community relationships** with plan implementation
- **Move more people** by investing in public transportation
SUPPORTING CARPOOLING

• Commute Solutions
• New shared technologies
• Movability
• Get There ATX website
• Smart Trips Program
• Capital Metro Vanpooling - MetroRideShare

11% ➔ 11%
SUPPORTING CARPOOLING

CARPOOLING  11%  ➔  11%

• Commute Solutions
• New shared technologies
• Movability
• Get There ATX website
• Smart Trips Program
• Capital Metro Vanpooling - MetroRideShare
SUPPORTING TELEWORK

- Movability
- Modernize Telework Policy
- Work with Telecommunications Partners to expand infrastructure and access

TELEWORK 8% → 14%
SUPPORTING ACTIVE TRANSPORTATION

- 2012, 2016, 2018 bond programs
- All Ages and Abilities Network expansion
- Sidewalk/Trail program
- Wayfinding, lighting, and crossings
- Micromobility
- Safe Route to School program
SUPPORTING ACTIVE TRANSPORTATION

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- All Ages and Abilities Network expansion
- Sidewalk/Trail program
- Wayfinding, lighting, and crossings
- Micromobility
- Safe Route to School program

BICYCLE 1% → 5%
WALK 2% → 4%
SUPPORTING EFFICIENT MOVEMENT OF AUTOS AND FREIGHT

- Regional and Corridor Mobility Programs *(on time and on budget)*
- Strategic Partnerships
  - I-35 Capital Express project
  - MoPac North and South Express
  - US 183 North
  - US 183 South
  - US 290
- Smart parking facilities
- Interchange completions and Bottleneck projects
  - Loop 360
  - RM 620

DRIVE ALONE 74% → 50%

\[\text{Drive Alone: } 50\%\]
SUPPORTING EFFICIENT MOVEMENT
OF AUTOS AND FREIGHT

DRIVE ALONE 74% → 50%

- Regional and Corridor Mobility Programs
  (on time and on budget)
- Strategic Partnerships
  - I-35 Capital Express project
  - MoPac North and South Express
  - US 183 North
  - US 183 South
  - US 290
- Smart parking facilities
- Interchange completions and Bottleneck projects
  - Loop 360
  - RM 620
HOW TRANSIT FITS IN THE ASMP

- Guadalupe/Lavaca transit priority
- MoPac North and South Express
- Transit priority signals
- Transit data integration with traffic operations (swiftly)
- I-35 Capital Express project
- Transit Enhancement Program
- Park and Rides
- Transit Incentives Program
- Bike and Sidewalk infrastructure
- Project Connect
HOW TRANSIT FITS IN THE ASMP

- Guadalupe/Lavaca transit priority
- MoPac North and South Express
- Transit priority signals
- Transit data integration with traffic operations (swiftly)
- I-35 Capital Express project
- Transit Enhancement Program
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- Transit Incentives Program
- Bike and Sidewalk infrastructure
- Project Connect

TRANSIT 4% ➔ 16%
HOW TRANSIT FITS IN THE ASMP

1. Give public transportation priority
2. Enhance commuter public transportation service
3. Support local public transportation service
4. **Invest in a high-capacity transit system**
5. Improve the public transportation experience
6. Improve access to public transportation

TRANSIT 4% → 16%
HIGH CAPACITY TRANSIT AND 50/50

• “In order for the City of Austin to accomplish our mode share goals, it must create a complete transit system, including investing in high-capacity transit.”

• “High-capacity transit service is intended to be fast, frequent, and convenient, and is differentiated by other public transportation service by operating in fully dedicated space separate from the rest of traffic, or in ‘dedicated transit pathways.’”

• “Where these dedicated pathways would be, what they would look like, and the specific mode of public transportation traveling in them are all questions that Capital Metro, the City, and the community are working on answering together.”

- Austin Strategic Mobility Plan, 2019
System Components
Planning Milestones

- **APR 2019**: Project Connect Plan Alternatives Analysis Begins

- **JAN 2020**: October 30 Joint Work Session
  - Recommended Plan (Locally Preferred Alternative) Presented
  - CAMPO briefing

- **MAR 2020**: January 9 Joint Work Session
  - Recommended Plan (LPA) Decision
  - Prep for Potential Referendum
  - CAMPO Adoption; Project Development, NEPA

- **NOV 2020**: Potential Referendum

- **2021 – Beyond**: It’s Go Time!

- **Community Engagement Ongoing**
Expanding the Austin Rapid Transit System

Key System Components

- MetroBus
- MetroRapid
- Neighborhood Circulators
- MetroExpress
- Park and Rides
- Blue Line
- Orange Line
- MetroRail (Red and Future Green)
Developing a Balanced System

• Decisions that represent community input and public policy

• Should shape the future of mobility and be supportive of other initiatives

• Balance outcome with ability to fund and operate in a state of good repair
LONG TERM VISION PLAN

- ACC Highland
- Airport (AUS)
- Downtown/Convention Center
- Republic Square
- Tech Ridge
- Triangle
- Slaughter
- Crestview
- Colony Park
- Auditorium Shores

METRO | projectconnect

Local Bus Service
Commuter Rail
Red & Future Green Lines
High Capacity
Rapid Transit
Dedicated Pathways

30
LONG TERM VISION PLAN

- Better bus stops
- Greater frequency
- Real time arrival info
- Greater capacity
LONG TERM VISION PLAN

- ACC Highland Airport (AUS)
- Downtown/Convention Center
- Republic Square
- Tech Ridge
- Slaughter
- Crestview
- Neighborhood Circulators
- MetroRapid Routes
- Transit Priority Treatments
- Alternative Operating Route
- High Capacity Rapid Transit
- Dedicated Pathways
- Local Bus Service
- Commuter Rail
- Red & Future Green Lines
- Local Bus Service
- Commuter Rail
- Red & Future Green Lines
- High Capacity Rapid Transit
- Dedicated Pathways
- Alternative Operating Route
- Neighborhood Circulators
- MetroRapid Routes
- Transit Priority Treatments
- Alternative Operating Route
- High Capacity Rapid Transit
- Dedicated Pathways
- Local Bus Service
- Commuter Rail
- Red & Future Green Lines
LONG TERM VISION PLAN

- Local Bus Service
- Commuter Rail
- Red & Future Green Lines
- High Capacity
- Rapid Transit
- Dedicated Pathways
- Alternative
- Operating Route
- MetroRapid Routes
- Transit Priority Treatments
- Neighborhood Circulators
- Existing Park & Ride
- Proposed Park & Ride
- Existing Regional Express Routes
- Proposed Regional Express Routes
Community Engagement
Learning, Listening & Collaborating

**ASMP ADOPTION** Sets policy direction for dedicated transitways.

**LOCAL OUTREACH**
- Community and business meetings
- Neighborhood association meetings
- Street teams established

**ADVISORY GROUPS ENGAGED**
- Technical Advisory Committee
- Project Connect Ambassador Network (PCAN)

**Weekly Corridors Program Coordination**

<table>
<thead>
<tr>
<th>Month</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUG</td>
<td>6</td>
</tr>
<tr>
<td>NOV</td>
<td>28</td>
</tr>
<tr>
<td>MAR</td>
<td>4</td>
</tr>
<tr>
<td>OCT</td>
<td>30</td>
</tr>
<tr>
<td>JAN</td>
<td>9</td>
</tr>
</tbody>
</table>

**PEER CITY VISIT** Fact finding missions to learn about other communities

- Los Angeles
- Seattle
- Denver
- Indianapolis
- Minneapolis
Where We’ve Been

CONNECTING WITH THE COMMUNITY

• Nearly 15,000 People Engaged
  • Neighborhood, arts, business, faith, education, and health-related events
• Street Team outreach
• Community Office events
• Stakeholder group conversations
• Live & virtual open houses
• One-on-one discussions
Project Connect Advisory Network (PCAN)

- Group of over 150 community organizations and stakeholders
- Meeting monthly to receive update and provide input to process
- Three subcommittees:
  - Technical
  - Communications
  - Placemaking
Technical Advisory Committee Members

MONTHLY COORDINATION WITH TECHNICAL STAKEHOLDERS
Peer City Visits

LOS ANGELES

- Dedicated ROW for BRT
- LRT system expansion
- Mature Art-in-Transit program

Recent Capital Investments:
Measure M - $120 Billion (40 years)
Peer City Visits

SEATTLE

• Bus only arterials in CBD
• Expansion of LRT system
• Integrated regional fare system

Recent Capital Investments:
Sound Transit 3 - $54 Billion
Peer City Visits

DENVER

- Integration of transit into buildings, public spaces
- Placemaking and art around stations

Recent Capital Investments:
FasTracks - $8 Billion
Peer City Visits

INDIANAPOLIS

- Dedicated lanes through major corridors
- Level-boarding, all-door boarding, real-time information

Recent Capital Investments:
Red Line BRT - $100 Million
Peer City Visits

MINNEAPOLIS

• Mixing bus and LRT in dedicated ROW
• Expansion of LRT and BRT

Recent Capital Investments:
System Expansion - $3.1 Billion
High Capacity Transit: Orange and Blue Lines
Project Connect Key Differentiator

TRANSITWAYS

PEOPLE MOVED PER LIGHT CYCLE
126 People - 80 in transit.

PEOPLE MOVED PER LIGHT CYCLE
235 People - 204 in transit.
Orange, Blue and Gold Lines
OPTIONS FOR INTEROPERABILITY

Orange Line
Blue Line
Gold Line – Operating Alternative
Corridor - it's a question of geometry
Potential Corridor Configurations

CONCEPTUAL ARTIST RENDERINGS
# Orange Line

**CONCEPTUAL TECHNICAL SCREENING**

<table>
<thead>
<tr>
<th></th>
<th>Street Level</th>
<th>Elevated</th>
<th>Underground</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. North Austin</td>
<td>✓</td>
<td>X¹</td>
<td>X¹</td>
</tr>
<tr>
<td>2. North Central</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>3. Central Austin</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>4. Downtown</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>5. SoCo</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>6. South Central</td>
<td>✓</td>
<td>X¹</td>
<td>X¹</td>
</tr>
<tr>
<td>7. South Austin</td>
<td>✓</td>
<td>X¹</td>
<td>X¹</td>
</tr>
</tbody>
</table>

¹ *Elevated and Underground not necessary due to limited street-level tradeoffs*

* Segments have same general characteristics
## Blue Line

**CONCEPTUAL TECHNICAL SCREENING**

<table>
<thead>
<tr>
<th></th>
<th>Street Level</th>
<th>Elevated</th>
<th>Underground</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Highland</td>
<td>✔</td>
<td>X¹</td>
<td>X¹</td>
</tr>
<tr>
<td>2. Hancock</td>
<td>✔</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>3. Central</td>
<td>✔</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>4. E. Riverside</td>
<td>✔</td>
<td>X¹</td>
<td>X¹</td>
</tr>
<tr>
<td>5. ABIA</td>
<td>✔</td>
<td>✔️</td>
<td>✔️</td>
</tr>
</tbody>
</table>

*Elevated and Underground not necessary due to limited street level tradeoffs*

* Segments have same general characteristics
Transitway Treatment Examples

**Center Running - BRT**

Indianapolis, IN

**Special Event - LRT**

Phoenix, AZ
Transitway Treatment Examples

Operating at Street Level – LRT
Houston, TX

BRT Dedicated Guideway
Montgomery County, MD
Art in Transit & Placemaking

Used to integrate transit elements into the community and activate space

Integrated Art Elements - Houston

Placemaking - Denver
One App & Account for Central Texas Mobility

Unified fare collection system across service types.

- Hard plastic cards
- Validators & kiosks; mobile apps
- Potential for TNCs, scooters, bikes, tolls and CARTS, parking
- Account based system with fare capping (equity)
  - Miami, Oakland, Indianapolis, Portland
- Types: daily, weekly and monthly
- Off-board fare collection to speed up boarding
# Vehicle Characteristics

<table>
<thead>
<tr>
<th>Feature</th>
<th>BRT</th>
<th>LRT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stylized</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Branded</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>On-board Bike Racks</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Seating Areas and Standee Areas</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Electric Powered</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Total Capacity</td>
<td>115</td>
<td>172</td>
</tr>
<tr>
<td>Multiple Doors for Entry and Exit</td>
<td>Five</td>
<td>Eight</td>
</tr>
<tr>
<td>Wheelchair Self Securement</td>
<td>✔️</td>
<td>✔️</td>
</tr>
</tbody>
</table>
# Infrastructure and Operational Characteristics

<table>
<thead>
<tr>
<th>Feature</th>
<th>BRT</th>
<th>LRT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fast and Frequent</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Signal Priority</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Off-Board Payment Systems</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Real-Time Passenger Information</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Max Vehicles at Platform</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Boarding at Stations</td>
<td>Near Level / Level</td>
<td>Level</td>
</tr>
<tr>
<td>Ride Quality (Concrete Guideway)</td>
<td>Smooth</td>
<td>Smooth</td>
</tr>
<tr>
<td>System Downtime for Nightly Maintenance</td>
<td>Minimal</td>
<td>~ 2-4 Hours</td>
</tr>
</tbody>
</table>
BRT & LRT Maintenance Facilities

• Current facilities are at capacity
  • Maintenance and support facilities are needed for either mode selected

• Facility considerations
  • Size of facility & property need greater for light rail (30+/− acres for LRT versus 10-15 acres for BRT)
  • Light rail facility needs to be connected to system; a bus facility can be off route
Alternatives Analysis
Downtown Alignment Options

- Republic Square Area
- 1st Street Bridge Crossing
- Convention Center Expansion
- South Central Waterfront
- New Downtown Station

- Republic Square Area
- Convention Center Expansion
- South Central Waterfront
- New Downtown Station
Downtown Transit Tunnel

• Results
  • Conflict-free transitway
  • Improved frequency
  • Improved reliability
  • Generational investment
  • Portal location conflicts

• Option 1
  • Trinity from Lake to 11th, 4th from Trinity St. to Guadalupe, and Guadalupe from Cesar Chavez to 9th
  • Order of Magnitude cost: $2.3-$2.5B

• Option 2
  • Exclude tunnel on Trinity St. from 4th to 11th
  • Order of Magnitude cost: $1.9-$2.0B
Federal Process
Project Connect Update and Federal Funding Process

New Starts and Core Capacity Process
- Project Development
- Engineering
- Full Funding Grant Agreement

Small Starts Process
- Project Development
- Small Starts Grant Agreement

Legend:
- FTA approval
- FTA evaluation, rating, and approval
## Timeline to Operation

<table>
<thead>
<tr>
<th>Service/Mode</th>
<th>Years from Funding Approval &amp; Env. Clearance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus Rapid Transit – Orange and Blue</td>
<td>3 – 4 Years</td>
</tr>
<tr>
<td>Light Rail Transit – Orange and Blue</td>
<td>4 – 6 Years</td>
</tr>
<tr>
<td>MetroRapid</td>
<td>2 – 3 Years</td>
</tr>
<tr>
<td>MetroExpress</td>
<td>1 – 2 Years</td>
</tr>
<tr>
<td>Neighborhood Circulators</td>
<td>1 Year</td>
</tr>
</tbody>
</table>

- Preliminary timelines after approval of funding and environmental clearance
- Actual timelines will be dictated by final alternatives selected
Modeling and Cost Methodology

- Ridership and Travel Times utilize 2040 CAMPO data in the FTA STOPS (Simplified Trips-on-Project Software) model
  - Utilizes local information and national data to forecast ridership results
  - Base service plan outlines operational characteristics
  - Model evolves and is upgraded based on results from other programs and projects

- Capital cost estimates were developed using data from other projects and local conditions
  - Capital cost carry a 3.5% per year inflation factor to midpoint of expenditure

- Operations and Maintenance costs:
  - LRT – peer cities and national transit database
  - BRT – based on historical operating and maintenance costs
  - MetroRapid – based on historical operating and maintenance costs
  - Green Line – based on Red Line

Note: CAMPO 2040 model does not incorporate all known growth (i.e. Rainey St., South Waterfront Dev., etc.)
Anticipate updated CAMPO data in May 2020.
Orange Line - PRELIMINARY RESULTS

Street Level

<table>
<thead>
<tr>
<th>Key Metrics</th>
<th>Bus Rapid Transit</th>
<th>Light Rail Transit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ridership Potential (2040)</td>
<td>45,000-54,000</td>
<td>54,000-62,000</td>
</tr>
<tr>
<td>End-to-End Travel Time (min)</td>
<td>53 min</td>
<td>53 min</td>
</tr>
<tr>
<td>Capital Cost, 2025$ (B)</td>
<td>$2.0B</td>
<td>$3.8B</td>
</tr>
<tr>
<td>O&amp;M, 2028$, (M) (Gross)</td>
<td>$23M-$25M</td>
<td>$47M-$49M</td>
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</table>

Elevated (Partial)

<table>
<thead>
<tr>
<th>Key Metrics</th>
<th>Bus Rapid Transit</th>
<th>Light Rail Transit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ridership Potential (2040)</td>
<td>54,000-66,000</td>
<td>66,000-74,000</td>
</tr>
<tr>
<td>End-to-End Travel Time (min)</td>
<td>42 min</td>
<td>42 min</td>
</tr>
<tr>
<td>Capital Cost, 2025$ (B)</td>
<td>$3.5B</td>
<td>$5.1B</td>
</tr>
<tr>
<td>O&amp;M, 2028$, (M) (Gross)</td>
<td>$29M-$32M</td>
<td>$52M-$57M</td>
</tr>
</tbody>
</table>

Ridership potential is based upon the FTA STOPS model.
### Blue Line - PRELIMINARY RESULTS

#### Street Level

<table>
<thead>
<tr>
<th>Key Metrics</th>
<th>Bus Rapid Transit</th>
<th>Light Rail Transit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ridership Potential (2040)</td>
<td>30,000-41,000</td>
<td>38,000-49,000</td>
</tr>
<tr>
<td>End-to-End Travel Time (min)</td>
<td>42 min</td>
<td>45 min</td>
</tr>
<tr>
<td>Capital Cost, 2025$ (B)</td>
<td>$1.2B</td>
<td>$2.5B</td>
</tr>
<tr>
<td>O&amp;M, 2028$, (M) (Gross)</td>
<td>$14M-$16M</td>
<td>$33M-$37M</td>
</tr>
</tbody>
</table>

#### Elevated (Partial)

<table>
<thead>
<tr>
<th>Key Metrics</th>
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<th>Light Rail Transit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ridership Potential (2040)</td>
<td>36,000-45,000</td>
<td>44,000-52,000</td>
</tr>
<tr>
<td>End-to-End Travel Time (min)</td>
<td>35 min</td>
<td>37 min</td>
</tr>
<tr>
<td>Capital Cost, 2025$ (B)</td>
<td>$2.0B</td>
<td>$3.0B</td>
</tr>
<tr>
<td>O&amp;M, 2028$, (M) (Gross)</td>
<td>$18M-$20M</td>
<td>$28M-$30M</td>
</tr>
</tbody>
</table>

Ridership potential is based upon the FTA STOPS model.
# Conceptual Capital Cost

## System Elements

<table>
<thead>
<tr>
<th>MetroRapid</th>
<th>MetroRail Red</th>
<th>MetroRail Green</th>
<th>MetroExpress &amp; Park and Rides</th>
<th>Neighborhood Circulators</th>
<th>Support Facilities (Bus and/or Rail)</th>
<th>Fare Collection Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>$150M-$170M</td>
<td>$55M-$65M</td>
<td>$460M-$510M</td>
<td>$180M-$220M</td>
<td>$2M-$3M</td>
<td>$250M-$300M</td>
<td>$20M-$30M</td>
</tr>
<tr>
<td>$340M-$380M (Phase II)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>System Elements Subtotal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$1.5B – $1.7B</td>
</tr>
</tbody>
</table>

## High Capacity Rapid Transit (2025$)

<table>
<thead>
<tr>
<th></th>
<th>Bus Rapid Transit</th>
<th>Light Rail Transit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Orange Line</strong></td>
<td>$2.0B-$3.5B</td>
<td>$3.8B-$5.1B</td>
</tr>
<tr>
<td><strong>Blue Line</strong></td>
<td>$1.2B-$2.0B</td>
<td>$2.5B-$3.0B</td>
</tr>
<tr>
<td><strong>High Capacity Rapid Transit Subtotal</strong></td>
<td>$3.2B - $5.5B</td>
<td>$6.3B - $8.1B</td>
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## Program Range Grand Total

<table>
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<tr>
<th></th>
<th>Bus Rapid Transit</th>
<th>Light Rail Transit</th>
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<tbody>
<tr>
<td><strong>Program Range Grand Total</strong></td>
<td>$4.7B - $7.2B</td>
<td>$7.8B - $9.8B</td>
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<tr>
<td><strong>40% Federal Funding</strong></td>
<td>$1.9B - $2.9B</td>
<td>$3.1B - $3.9B</td>
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<td><strong>Local Funding</strong></td>
<td>$2.8B - $4.3B</td>
<td>$4.7B - $5.9B</td>
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*FTA Funding Assumption of 40%*
Conceptual Operating Costs

COSTS EXCLUDE ORANGE AND BLUE LINES

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<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
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<th>2032</th>
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<td>Circulators</td>
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Policy and Next Steps
Planning Milestones

**APR 2019**
- Project Connect Plan Alternatives Analysis Begins

**JAN 2020**
- October 30 Joint Work Session

**MAR 2020**
- January 9 Joint Work Session
- Recommended Plan (Locally Preferred Alternative) Presented
- CAMPO briefing

**NOV 2020**
- Recommended Plan (LPA) Decision
- Prep for Potential Referendum
- CAMPO Adoption; Project Development, NEPA

**2021 – Beyond**
- Potential Referendum
- It’s Go Time!

**Community Engagement Ongoing**
Discussion