Downtown – Uptown – Oakland – East End
Bus Rapid Transit (BRT) Project
Final Design Review Meeting
Project Stakeholders
How does a Microsoft Teams Live Event Work?

• We cannot hear or see you; Q&A will occur via the Q&A box on the right of your screen →
• First, please click the purple “Ask a question” button
• Then, you will see a person and white box appear
  • Next to the person, please write your name and organization (unless you wish to remain anonymous)
  • Then, please write any questions in the white box below that and click the arrow in the bottom right corner to send us the question
• Please add your questions to the chat box as you think of them so that we can sort and prioritize them for our Q&A session following this presentation
Tell us You’re Here!

- Please test out your ability to ask a question by retyping your name and organization to the Q&A box and sending it so that we have a record of who has joined us today.
- If you have technical difficulties, email: brt@portauthority.org
Agenda

Presentation
- Project Partners
- Goals and Overview of BRT
- Transit Service Changes
- Station Design and Locations
- Bicycle Infrastructure
- Drop off / Loading / Parking

- Fare Collection
- Sustainability
- Project Costs
- Project Timeline

Question and Answer Session
Project Partners

- Port Authority of Allegheny County
- City of Pittsburgh
- Allegheny County
- Urban Redevelopment Authority
Project Goals

ACCESS
Improve accessibility for persons of all ages and abilities

COMFORT AND EASE OF USE
Improve access to shelter and amenities for waiting passengers

EFFICIENCY
Improve transit reliability and speed

EQUITY
Ensure that communities of greatest need benefit from these investments via direct transit connections

SAFETY
Improve conditions for pedestrians and riders, and develop a safe bicycle network

SUSTAINABILITY
Encourage mode shift out of SOVs

Improve air quality through BEBs
Connecting the 2nd and 3rd largest employment centers in Pennsylvania

Inconsistent Traffic Patterns

Larger gaps in service and more bunching of buses

Gaps in service and bunching of Buses

Overcrowded buses followed by empty buses

Late buses

Average Oakland peak bus speeds: 9mph or less

Data Visualization: Mark Egge, http://bunching.github.io
What is Bus Rapid Transit (BRT)?

- Upgraded stations with real-time arrival info and fare payment
- Transit signal priority
- Upgraded pedestrian amenities
- Changes to street parking
- Specially branded (electric) buses
- Dedicated travel lane
- Economic development opportunities
Area with bus only lanes and protected bicycle facilities

Bus Routes becoming BRT:
P3, 61A, 61B, 61C, 71B
Local Routes Terminating in Oakland: 61D, 71A, 71C, 71D

Other Route Changes:
- P3 – shortened at outer end to Wilkinsburg
- 67, 69 – Use Blvd of Allies inbound through Uptown
- Downtown Minor Routing Changes – discussion in 2021
- Oakland Minor Routing Changes – discussion in 2021
Downtown Overview
Uptown Overview
Station at Duquesne University
Uptown - Forbes Ave Typical Plan
Oakland Overview
Oakland - Fifth Ave Typical Plan
Station at University of Pittsburgh
Oakland - Forbes Ave Typical Plan Example
Squirrel Hill Branch Overview

Starting at Craig Street in Oakland:

- 12 station pairs
- No bus lanes
- Select upgraded signals
- Small stations, many on bumpouts to extend sidewalk
- Last station pair at Greenfield Giant Eagle (Loretta St)
- 61C route continues on normal routing
Highland Park Branch Overview

- 13 station pairs
- End of line bus rerouting, 71A and 71B BRT (Bryant → Negley → Mellon Terrace)
Station Walksheds

- Stations are farther apart than existing bus stops
- Almost no one is more than a 5 minute walk from a station who's within a 5 minute walk of the 61s, 71s bus stops today (purple areas at edges of orange)
- Station spacing average: ¼ mile
  - Rapid guideline: ½ mile
  - Local guideline: 1/6 mile
Station Design & Amenities

Stations will be in 15, 30 or 60-foot-long sections depending on location (60 ft shown here)

*Select locations. TVMs will be at least at every other station in low volume areas.
Proposed Fare Payment and Structure*

FARE PAYMENT PROPOSAL

Fares within the infrastructure improvement area (areas with new stations) are proposed to be paid **OFF BOARD** with validators and/or ticket vending machines which will be installed inside stations

- Passengers will be able to board or alight at any door within this area
- Fare receipts or validated cards need to be held by passengers while riding
- Staff will assist passengers with fare payment

FARE STRUCTURE

- The fare for BRT is expected to be the same as existing Port Authority fares
  - Note that PAAC is undergoing a separate fare study in 2020-2021; recommendations from this study may be put in place in the future

*All changes to Port Authority's fare structures or payment methods must be reviewed and voted upon by the Authority's Board*
Bicycle Infrastructure & ADA

**Uptown**
Mainly a single direction, sidewalk-level bicycle path (outbound Forbes, inbound Fifth)

**Birmingham Bridge (Uptown) to Bellefield (Oakland)**
Contraflow bus lane on Fifth becomes a 14-foot shared use path (bikes + pedestrians) at sidewalk level
Right Turns Across BRT Lanes

Where right turns are allowed, the bus lane will be shown as striped or hashed red pavement/signs.
Parking and Curb Use Changes

- Uptown – on-street parking on the right side of each street in the direction of travel will be eliminated.

- Oakland – Forbes Ave parking is unchanged; Fifth Avenue gains some parking between Bigelow and Bellefield on the south side (left side in direction of travel) of the street.

- In some cases, parking on Fifth Avenue will take place across the BRT lane; in these instances, vehicles are allowed to enter the BRT lane to parallel park.
Bigelow Blvd Station Area Operation - Fifth Ave Inbound
Pickup / Dropoff / Loading

General pickup, drop-off, and loading activities
- General traffic will not be allowed to conduct pickup/drop-off activity in the BRT lanes
- City will update signage to allow for pickup/drop-off/loading activity

Paratransit pickup / drop-off
ACCESS paratransit will be allowed to pick up or drop off in the BRT lanes when an alternative location is unavailable (3% expected); buses will go around parked ACCESS vehicles if needed
Sustainability

Battery-Electric Buses
- Planned: 15 articulated (60 foot) battery-electric buses to be run on the P3 or other East Liberty Bus Garage based BRT routes

Trees
- Tree replacement where necessary – limited except example to the right

Stormwater
- PWSA designed 20 GI systems, mainly in Uptown, in conjunction with the BRT project
  - These projects will manage approximately 6 acres of stormwater runoff and reduce overflows by 2 million gallons annually

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<tr>
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<td>Quantity</td>
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<td>Downtown</td>
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<tr>
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<td>Oakland</td>
<td>6</td>
<td>44</td>
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<tr>
<td>SH Branch</td>
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<td>53</td>
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<tr>
<td>HP Branch</td>
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<td>Total</td>
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<tr>
<td>Difference</td>
<td>+232 trees</td>
<td>+420 inches</td>
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Project Costs

Total Budget: $230 million
Sources of Funding

Total Budget: $230 million
Project Timeline

2019
- 60% design complete
- Shelter design public input
- Design team begins 90% designs

2020
- 90% design complete
- Stakeholder engagement to review 90% designs

2021
- Early: Public engagement to review final designs
- Bid and let project; begin construction (fall/winter)
- Right of way acquisition

2022
- Construction

2023
- Construction
- Late 2023: Revenue Service
Questions and Discussion

IF YOU DO NOT WISH TO ASK YOUR QUESTION NOW, OR WE RUN SHORT ON TIME, PLEASE EMAIL YOUR QUESTION/CONCERN TO BRT@PORTAUTHORITY.ORG.

FOR MORE PROJECT INFORMATION, INCLUDING THE INTERACTIVE MAP, ROLL PLOT SHEETS, AND DESIGN DOCUMENTS, GO TO WWW.PORTAUTHORITY.ORG/BRT.
Design Characteristics by Section

<table>
<thead>
<tr>
<th>Section</th>
<th>Details</th>
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<tbody>
<tr>
<td>Downtown</td>
<td>• Reversal of bus loop (inbound/westbound Fifth, northeast bound Liberty, outbound/eastbound Sixth), red BRT lanes</td>
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<tr>
<td></td>
<td>• Traffic Signals, Bump Outs, Stations and Lane Markings</td>
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<tr>
<td>Uptown</td>
<td>• Mill &amp; Overlay Street Reconstruction, red BRT lanes, Bump Outs, New sidewalks, Bike Lanes on Sidewalks, Traffic Signals</td>
</tr>
<tr>
<td>Oakland</td>
<td>• Traffic Signals, Stations, Bump Outs and Lane Markings, red BRT lanes (inbound Fifth, outbound Forbes), all bus traffic outbound moves to Forbes</td>
</tr>
<tr>
<td></td>
<td>• Fifth Ave contra-flow Bus Lane becomes 2-way Cycle Track</td>
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<tr>
<td></td>
<td>• West Oakland Bus Layover</td>
</tr>
<tr>
<td>Branches (Squirrel Hill, Highland Park)</td>
<td>• Isolated Traffic Signals, Stations and Bump Outs, no BRT lanes</td>
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<tr>
<td></td>
<td>• Mellon Terrace Bus Layover (HP)</td>
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<tr>
<td>Wilkinsburg</td>
<td>• Electrical Bus Charging Systems adjacent to station</td>
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<tr>
<td>Further East and South - Mon Valley (Routes 61ABC)</td>
<td>• No infrastructure improvements as part of this project (future projects as aligned with long-range planning)</td>
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<td></td>
<td>• Branded BRT buses</td>
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Squirrel Hill Branch – Specific Updates from 60% to 90% Design

General
• Reduction in number of ticket vending machines

Specific to Branch
• Reduced bike lane-bus conflict points near CMU
• Forbes-Morewood Stations have through traffic lanes in each direction
• Bumpouts reduced mainly to station areas and in some cases entirely
• Forward Ave Inbound Station moved farside in front of Starbucks parking lot
Highland Park Branch – Specific Updates from 60% to 90% Design

General
• Reduction in number of ticket vending machines

Specific to Branch
• Bumpouts mostly removed from branch intersections
• Terminus area changes, including:
  ◦ Rerouting of both BRT (71B) and 71A routes
    ◦ BRT (71B) L Highland R L Bryant R R Negley R R Mellon Terr R L Mellon St R L Mellon Terr to Layover Station
    ◦ 71A L Negley R L Mellon Terr R L Mellon St R L Mellon Terr to Layover Station
• Layover both routes on Mellon Terrace (current layover) – slight widening to accommodate
• New shared used (bike + ped) path along this length of Mellon Terrace
• Operator restroom placed near old PWSA pumphouse off NW corner of Mellon Terrace
Downtown Pittsburgh – Summary of Changes from 60% - 90% Design

• General
  • Reduction in number of ticket vending machines

• Specific to Area
  • Smithfield Station moved back to far side of William Penn Place
  • Grant Street Station moved to Ross St near side due to existing underground structures
  • Half block of bus only running westbound between Washington Place and Sixth Ave on Fifth Ave removed
Uptown and Soho Area – Summary of Changes from 60% - 90% Design

• **General**
  • Reduction in number of ticket vending machines

• **Specific to Area**
  • Uptown West Station moved to in front of PPG Paints Arena.
  • Shared use path narrowed from 17 feet to 12 feet wide.
  • Right side parking on Forbes Ave near Van Braam and Miltenberger far side have been moved to left side parking.
  • Bike lane on Forbes Ave from Stevenson to Pride (1 block) is now at street level.
  • Kirkpatrick Street realigned at intersection with Birmingham Bridge; off street parking for Fifth Ave residents here added.
  • Mill and Overlay road surface in lieu of full depth reconstruction. Sidewalk is still reconstruction.
  • Bus only lane removed from Birmingham Bridge around the bend east into Oakland; no longer an additional traffic light at merge point
Oakland and Transition to Uptown – Summary of Changes from 60-90%

• **General**
  • Reduction in number of ticket vending machines

• **Specific to Area**
  • Forbes-Craig St Inbound station – bike lane moved to front of station, sidewalk level
  • Forbes-Craig St Outbound station – bike lane moved to front of station, sidewalk level, station is to remain where it is today near side of the intersection
  • Margaret Morrison outbound station – bike lane will be at street level
  • Stopped buses serving both stations at Forbes & Morewood will not block travel lane
  • Local bus stop added immediately behind the BRT station at Craft Ave farside on Forbes (West Oakland Outbound Station)
  • W. Oakland inbound station moved from island at Robinson St to Craft Ave farside; current design of turnaround area will remain open for emergency access
  • Bus only lane removed from Birmingham Bridge around the bend east into Oakland; no longer an additional traffic light at merge point
  • Bus only lane on Forbes Ave picks up after Craft Ave now (was immediately before at 60% design)
  • Middle proposed bus only lane on Bellefield goes away; northern half of blocks is two lanes only
  • Lose eastbound (outbound) bus only lane on Fifth Ave between Bellefield and Craig
  • Parking area immediately behind Bigelow Blvd Inbound station will become local bus stop pullout (in front of Soldiers and Sailors)
  • Elimination of bike lane on Fifth Ave from Bellefield to Dithridge.
  • Removed milling and overlay along Neville St.