D2 Subway Project Development

Public Meeting

April 25, 2019
Purpose of Today’s Meeting

• To review progress on Project Development (PD) activities for the D2 Subway project including:
  – Alignment design
  – Station planning and urban design
  – Environmental conditions and potential impacts
• To collect your comments on issues as we continue the engineering, environmental, and urban design process
• To outline how you can continue to stay informed
Project Background and Overview
D2 Subway Alignment & Stations
Including CBD East Refinement
Project Purpose

- Add **Core Capacity** to and through downtown
  - Some trains will be at capacity within a few years
- Provide **Operational Flexibility** for the system
  - Continuity of service during incidents
  - System expansion/added service
- Enhance **Mobility and Access** for existing and future riders
  - Get our riders where they need to go
- Enhance **Economic Development**
  - Add value through context sensitive design

CORE CAPACITY
OPERATIONAL FLEXIBILITY
MOBILITY & ACCESS
LAND USE / URBAN DESIGN

let’s go.
DART Rail Operations with D2

Orange Line Options (3):
- Continue existing service pattern to Parker Road Station
- Terminate near East TC and turnback to DFW
- Add service to Baylor

LEGEND
- DART LRT
- Trinity Rail Express
- Existing Stations
- D2 Stations
Process and Schedule
Project Development Phase

- Project Development is the first phase of the federal funding process
- DART is doing Project Development and will request entry into Engineering after this phase is complete
Schedule

Note: Schedule is preliminary and subject to change.
Preliminary Engineering
Project Development Phase
Preliminary Engineering (PE)

- PE is the first stage of design
  - Project will be developed up to 30% level
    o Alignment
    o Tunnel section
    o Utilities, Subsurface
    o Station Design
    o Street Modifications
    o Right-of-way requirements
    o Construction approach
  - Future phases will do final design from 30-100% as part of a Design-Build contract
Project Development Engineering Activities

- 10% Preliminary Engineering – Submitted March 8, 2019
  - Plan/Profile Scroll Plots
  - Draft Design and Geotechnical Data Reports
  - Tunnel Cross-Sections
  - Urban Design Summary Report
  - Draft Underground Station Architecture Concepts

10% design information in at www.DART.org/D2
Engineering (10% level)
Engineering (10% level)
Environmental
Project Development Environmental Activities

• Existing conditions documentation is near completion to support Supplemental Draft Environmental Impact Statement (SDEIS)

• Key topics:
  – Traffic and transportation (auto, bike/pedestrian, parking, transit)
  – Noise/vibration
  – Displacement/acquisition
  – Historic resources and Parklands
  – Visual/aesthetics
  – Hazardous materials
  – Safety and security
  – Construction impacts
Historic Resources

• Area of Potential Effects (APE) defined as 300 feet from either side of alignment
• 600-foot radius around the three subway stations
• Resource age of 45 years from the anticipated revenue service date of 2024 (1979 or prior)
• Research conducted in collaboration with Preservation Dallas
Historic Resources

- Completed historic resource survey and request for determination of eligibility report
  - FTA submitted report to the Texas Historical Commission (THC) for review on March 14, 2019
  - Comments received April 12 and under review
Noise & Ground Borne Vibration

- Moderate Noise Impact (1.6 dBA) at 96 units
- Moderate Noise Impact (2.3 dBA) at 32 units
- Moderate Noise Impact (1.3 dBA) at 48 units
- Ground-borne Vibration Impacts at 36 units
- Ground-borne Noise Impacts at 54 units
- Analysis to be refined based on final track design
Parklands

- Belo Garden
- Carpenter Park
- Pegasus Plaza
- Main Street Garden
- Browder Street Mall
Traffic, Transportation and Access

- Supplemental Draft EIS will include chapter on Transportation
- Traffic analysis being initiated to evaluate:
  - Options for Good Latimer track placement (median or west-side)
  - Permanent changes to streets
  - Temporary construction impacts and mitigation guidance
- Ridership and station access (pedestrian/other modes)
- Bicycle lane interface
- Parking impacts/mitigation (temporary and permanent)
- Commercial/retail access (loading docks, valet, etc)
Construction Considerations

- Staging areas (materials, equipment, etc)
- Construction coordination/phasing with other projects
- Utility coordination/relocation
- Maintaining access / traffic & bus detours / pedestrian & bike access
- Construction noise/vibration
- Stormwater/air quality
- Safety
- Hauling routes
- Business impacts/Business Assistance
- Special events
- Other issues?
Station Architecture and Portal Concepts
D2 Stations

**MUSEUM WAY**
- Perot Museum of Nature and Science
- Victory Park/American Airlines Center
- Dallas World Aquarium
- High density, mixed-use developments
- Access to Klyde Warren Park

**METRO CENTER**
- West End Historic District
- El Centro College
- West Bus Transfer Center
- Red/Blue Line Transfers
- Government/Office Buildings

**COMMERCE**
- AT&T Headquarters & Discovery District
- Main Street Entertainment District
- Central Dallas Commercial Core
- Hotels/Restaurants
- Access to City Hall

**CBD EAST**
- UNT System/College of Law
- Main Street Garden & Carpenter Park
- Majestic Theatre
- Farmers Market
- East Bus Transfer Center
Museum Way Overview and Station
Museum Way Overview and Station
Victory-Perot Station Area Plan
Subway Station Space Planning

- Station Sizing Considerations:
  - Functions to be accommodated and space needed such as vertical circulation, restrooms, service rooms (mechanical, electrical), police office, etc.
  - Maximum train capacity x 2.5
  - Design level of service (LOS) for passengers
  - Where fare enforcement begins (street level vs. mezzanine)
  - Physical constraints:
    - Building foundations
    - Geology (rock depth, thickness)
    - Right-of-way
    - Utilities
Metro Center Station
Metro Center Station
Depth and Proximity to Limestone

Ground Level
20’ below
40’ below
60’ below

Shale
Limestone
Sand Clay

Metro Center Station
Depth and Proximity to Limestone
Metro Center Station
Overall Station and Portal Area Site Plan

Potential access portal
Metro Center Station
Station Portal Locations/Concepts

Portal on Undeveloped Land (parking lot)

Development Occurs around Station
Metro Center Station
Station Portal Locations/Concepts

Elm/ Griffin Concept

Elm/Griffin Precedent Image
Metro Center Station
Overall Concourse Plan

Griffin St
West Transfer Center
Pacific Ave
Elm St

Legend:
- PRE-FARE PUBLIC SPACES
- CONCOURSE
- PLATFORM
- DART POLICE
- DFD SPACES
- STAFF SPACES
- SERVICE SPACES
- VERTICAL CIRCULATION
- VERTICAL CIRCULATION SERVICE
- MECHANICAL
- ELECTRICAL
- ELECTRICAL
Metro Center Station
Overall Platform Plan

West Transfer Center

Griffin St

Elm St

Pacific Ave
Metro Center Station
Platform Level Rendering
Commerce Station
Commerce Station
Depth and Proximity to Limestone
Commerce Station
Overall Station and Portal Area Site Plan
Commerce Station
Station Portal Locations/Concepts
Commerce St. Station
Station Portal Locations/Concept

Commerce/Ervay Concept
Commerce Station
Overall Platform Plan

• Center platform
• End loaded due to space constraints
Commerce Station
West Side Access (near Akard St)
Commerce Station
Longitudinal Section (looking north)
Commerce Station
Cross Section (looking west near Akard)

AT&T / Browder Plaza

Magnolia Hotel / Pegasus Plaza
Commerce Station
Platform Level Rendering
CBD East Station
CBD East Station
Depth (shallow station)
CBD East Station

Shallow station without mezzanine level requires direct access from ends of or above platform
CBD East Station
Station Portal Access/Concepts

Existing Location

Gipuzkoa, Spain

Istanbul, Turkey
CBD East Station
Station Portal Access/Concepts

Existing Location
Glasgow, Scotland
New York City, NY
CBD East Station
Station Portal Access/Concepts
CBD East Station
Station Development/Access Concept
East Tunnel Portal
Center Tracks | Urban Design Concept

CONCEPTUAL ONLY
FEBRUARY 26, 2019
East Tunnel Portal
West Side Tracks | Urban Design Concept

CONCEPTUAL ONLY
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Good Latimer Cross Sections
South of Live Oak

Good Latimer | Proposed Cross Section South of Live Oak - Tracks in Center
View Looking North

Good Latimer | Proposed Cross Section South of Live Oak - Tracks West
View Looking North

CONCEPTUAL ONLY
FEBRUARY 26, 2019
Next Steps and How to Stay Involved
Next Steps

- Finalize SDEIS Existing Conditions
- Complete impact assessments concurrent with 20% design
- Refine subway station concept plans (size, functions, access portal locations, fare control points)
- Refine Urban Design plans for station and tunnel portal areas
- Finalize Good Latimer track location in cooperation with Deep Ellum Foundation
- Evaluate tunnel construction methods
Stay Involved

• Attend Public Meetings and review website information
  – Provide comments on issues important to you
  – Complete relevant questionnaires and surveys
• Comment on issues to be covered in SDEIS
• Request briefings for your building/area/organization on general or specific topics
• Disseminate project information to others
How to Stay Involved

- Visit www.DART.org/D2
- Email D2@DART.org
- Attend meetings regularly
- Sign up for project alerts at www.DART.org/D2
- Request a briefing or meeting with your organization
- Mail the Project Manager