Dulles Corridor Metrorail Project
Phase 2, Package A

Capital Rail Constructors:
Quarterly Update to MWAA Board of Directors

Keith Couch
Capital Rail Constructors

July 2017
Agenda

1. Safety
2. Schedule
3. Progress
4. Labor Statistics
5. DBE Subcontracts
Scope
Safety

Since Notice to Proceed:

- **Manpower Hours:** 4,382,739
  (As of 06/23/2017)
- **Recordable Rate:** 0.82
  (vs. National Average: 3.30)
- **Lost Time Rate:** 0.05
  (vs. National Average: 1.70)

Current Program Focus:

- Work adjacent to traffic and within Maintenance of Traffic (MOT) areas
- Mobile equipment
- Elevated work
Overall Project Status

<table>
<thead>
<tr>
<th>Category</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design and Construction</td>
<td>67.12%</td>
</tr>
<tr>
<td>Construction Status</td>
<td>61.12%</td>
</tr>
<tr>
<td>Design Status</td>
<td>99.97%</td>
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</tbody>
</table>
Project Progress

Cost Percent Completion Curves by Discipline
Entire Project (Base Contract)
Aerial Guideway: Girders

622 of 622 Girders Fabricated (100%)
622 of 622 Girders Installed (100%)

Final Girder Span Installation at Dulles
March 3, 2017
Aerial Guideway: Decks

156 of 177 Decks Poured (88% Complete)
(Does not include Dulles Station which has another 16 pours)
Facilities: Dulles Airport Station

- Mechanical/Electrical/Plumbing Rough-In: Ongoing
- Precast Erection: Ongoing - Sept 2017
- Track Deck: Jun 2017 - Sept 2017
- Station Pedestrian Tunnel Moving Walkway Rebuild: Jun 2017 - Sept 2017
- Canopy Steel: Jul 2017 - Aug 2017
- Tower Crane Removal: Aug 2017
- Track through Dulles Station: Sep 2017 - Nov 2017
Facilities: Innovation Center Station

- Mechanical/Electrical/Plumbing Rough-In: Ongoing
- Roofing, Skylights: Ongoing
- Granite: Start Aug 2017
- Ceiling Framing: Start Sep 2017
- Curtainwall: Start Oct 2017
Facilities: Herndon Station

- Steel Erection: Finishing in Jul 2017
- Metal Decking: Jul 2017 - Aug 2017
- Mechanical/Electrical/Plumbing Rough-in: Ongoing
- Roofing/Skylights: Aug 2017 - Fall 2017
Facilities: Reston Town Center Station

- Precast: Oct 2016 - Jul 2017
- Steel Erection: May 2016 - Aug 2017
- Mechanical/Electrical/Plumbing Rough-In: Jan 2017 - Fall 2018
- Metal Decking: Start Jul 2017
- Reston North Pavilion Structure: Nov 2016 - 1st Qtr 2018
Facilities: Loudoun Gateway Station

<table>
<thead>
<tr>
<th>Activity</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precast Erection</td>
<td>Apr 2017</td>
<td>Jul 2017</td>
</tr>
<tr>
<td>Steel Erection</td>
<td>Jul 2017</td>
<td>Oct 2017</td>
</tr>
<tr>
<td>North Pavilion Concrete</td>
<td>Jun 2017</td>
<td>Sep 2017</td>
</tr>
</tbody>
</table>
Facilities: Ashburn Station

- Cast-in-place Concrete: Jan 2017 – Jul 2017
- Precast Erection: May 2017 – Sep 2017
- Steel Erection: Sep 2017 – Nov 2017
Station Pavilions

- Herndon Station South Pavilion
- Ashburn Station North Pavilion
Pedestrian Bridges

- Pedestrian Bridge Drilled Shafts: 27 of 32
- Pedestrian Bridge Columns: 17 of 24
- Pedestrian Bridge Caps: 12 of 22
- Pedestrian Bridge Spans On-site: 12 of 31 Spans
- Pedestrian Bridge Erection: Start Jul 2017
Civil: Wayside Ductbank

- TBS 9 Wayside: Active
- TBS 10 Wayside: Active
- TPSS 18 Wayside & Median: Active
- TBS 11 Median: Active
- TPSS 19 Wayside: Complete
- TPSS 19 Median: Deep conduit complete
- TPSS 20 Wayside: Active
- TPSS 20 Median: On hold for precast
- TBS 8 Wayside: Start Q3
- TBS 8 Median: Active
- TPSS 17 Wayside: Complete
- TBS 9 Wayside: Active
- TBS 10 Wayside: Active
- TPSS 18 Wayside & Median: Active
- TBS 11 Median: Active
- TPSS 19 Wayside: Complete
- TPSS 19 Median: Deep conduit complete
- TPSS 20 Wayside: Active
- TPSS 20 Median: On hold for precast
- TBS 8 Wayside: Start Q3
Civil: 34.5 kV Ductbank

153 of 166 Manholes installed
57,238 feet of 61,705 foot duct bank installed (93%)

- N07: Tie in to Phase 1 Q3
- N08: Complete
- N09: Complete
- N10: Active, complete Q3
- N97: Active, complete Q3
- N11 & N12: Active, complete Q3
Civil: Storm Drainage

Storm/Wet Utilities

57,065 of 82,922LF SD Installed (69%)

• N07: Reston Station interior storm active in Q3
• N08: Herndon South C/D Detour complete Q2, DIAAH/DTR median storm Q3, Sunrise Valley/Herndon South Pavilion storm active Q3
• N09: DIAAH/DTR median storm active Q3
• N10: Adjacent to Dulles Station Q3, Water/Sanitary Q3
• N96: Autopilot storm complete Q2
• N97: TPSS #18 to 606 bridge storm complete Q2
• N11: 606 Station to Broad Run Bridge active Q3
• N11 & N12: Broad Run to 772 Station complete Q2, North 772 pavilion active Q2-Q3
Civil: Track Wall

- Job to Date:
  - 55,000 LF of 75,000 LF Total Footer (73%).
  - 50,000 LF of 75,000 LF Total Wall (67%)
  - East Segment: Finish remaining work Q3
  - West Segment: Active in all segments from Abutment B to Ashburn Station
East Segment:
• Turnover sub-ballast to Track by end of August
• Eastbound DTR Road widening at Herndon-Monroe Park & Ride
• Herndon & Reston South work started

West Segment:
• Active Duct Bank, Drainage, Trackwall
• Abutment B to 772 Station thru Q3
Track: Cable Trough

- Precast Cable Trough Installed: 37,624 of 85,730 linear feet - 44% complete
- Cast-in-Place Cable Trough Poured: 12,647 of 38,520 linear feet - 33% complete
Track: Direct Fixated (DF) Plinths

- Direct Fixated Track Plinth Poured: 17,022 of 37,595 track feet - 45% complete
Track: Special Track

Direct Fixated Special Track – all five units are poured out

#10 Double Cross-Over
Track: Ballasted

- 20,000 TF of ties set and rail clipped of 87,000 track feet
Systems: Traction Power Substations

- TPSS 13 and 15: Buildings set in place
- TPSS 13, 14, 15, 16, 17, 18, and 19: DVP switch yard installations complete
- TPSS 14 and 17 and TBS 6, 7 and 10: Ground Grids completed and building installs upcoming
- 34.5 kV Cabling: DVP cabling completed from TPSS 15 to TPSS 14 and TPSS 15 to TPSS 17. Cabling from TPSS 14 to TPSS 13 and TPSS 17 to TPSS 18.
- Electrical Grounding: Ongoing at Bridges/Track Wall/Dulles Aerial Track Piers
## Manpower Hours

**March 2017 – May 2017**

<table>
<thead>
<tr>
<th></th>
<th>Mar 2017</th>
<th>Apr 2017</th>
<th>May 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Professional Staff</strong></td>
<td>49,651</td>
<td>51,208</td>
<td>47,229</td>
</tr>
<tr>
<td><strong>Craft Labor – CRC &amp; Subcontractors</strong></td>
<td>152,149</td>
<td>144,880</td>
<td>148,623</td>
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</table>
### Labor by Race/Ethnicity
#### September 2013 to June 23, 2017

<table>
<thead>
<tr>
<th></th>
<th>African American</th>
<th>Asian</th>
<th>Caucasian</th>
<th>Hispanic</th>
<th>Other</th>
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</thead>
<tbody>
<tr>
<td>Total Hires</td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
<td>#</td>
</tr>
<tr>
<td>4977</td>
<td>765</td>
<td>15.37</td>
<td>54</td>
<td>1.08</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1795</td>
<td>36.07</td>
<td>2259</td>
<td>45.39</td>
<td>104</td>
</tr>
</tbody>
</table>

- African American: 765 (15.37%)
- Asian: 54 (1.08%)
- Caucasian: 1795 (36.07%)
- Hispanic: 2259 (45.39%)
- Other: 104 (2.09%)
Labor by State
September 2013 – June 23, 2017

<table>
<thead>
<tr>
<th></th>
<th>Virginia</th>
<th>Maryland</th>
<th>District of Columbia</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 2013 –</td>
<td>56.68%</td>
<td>26.92%</td>
<td>3.50%</td>
<td>12.90%</td>
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<tr>
<td>June 23, 2017</td>
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<td></td>
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### DBE Status: May 2017

<table>
<thead>
<tr>
<th></th>
<th>DBE Project Goal</th>
<th>DBE Committed Value Against Awarded Contracts</th>
<th>Remaining to Buy</th>
<th>Projected Finish</th>
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<tbody>
<tr>
<td>Dollars Procured to DBE</td>
<td>$180,000,000.00</td>
<td>$167,212,580.00</td>
<td></td>
<td>$169,046,913.62</td>
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<tr>
<td>DBE Status</td>
<td>$164,888,780.00</td>
<td>$167,212,580.00</td>
<td>$-</td>
<td>$169,046,913.62</td>
</tr>
</tbody>
</table>

- DBE Status: $164,888,780.00
- DBE Committed Value: $167,212,580.00
- Remaining to Buy: $-
- Projected Finish: $169,046,913.62
Local Employment Outreach Program

March–May 2017:
03/16/17: Greater Washington Urban League
04/27/17: Greater Washington Urban League
05/24/17: Good Will Energy Job Fair: Arlington, VA
06/09/17: Building Futures Program, DC