Potomac Avenue Alignment:

- **Routing overview**
- Traffic review
- Constructability
Potomac Avenue Alignment:

- Routing overview
- Traffic review
- Constructability
Traffic Review

Route 1
vs.
Potomac Avenue
Traffic Impacts

Typical Concerns:
- Traffic Volumes
- Roadway Width – Number of Lanes
- Intersection/Signal spacings
- Lane Closures
Traffic Data Evaluation

- 24 Hour Traffic Counts
  - Volumes
  - Vehicle Classifications
  - Speeds
- Segment Length
- Number of Traffic Signals
- Level of Service (LOS)
Traffic Impact Factors
Level of Service

- Measure of traffic flow based on various performance factors – density, speed, % of time on route, delay, etc.

- Level A
  Free Flow

- Level B
  Reasonably Free Flow

- Level C
  Stable Flow

- Level D
  Approach. Unstable Flow

- Level E
  Unstable Flow

- Level F
  Breakdown Flow
ROUTE Analysis

ROUTE 1
- NB LOS (north end of US 1)
  - AM: D → F w/ Lane Closure
  - PM: E → F w/ Lane Closure
- NB LOS (south end of US 1)
  - AM: C → F w/ Lane Closure
  - PM: D → F w/ Lane Closure

POTOMAC AVENUE
- NB LOS (north end of Potomac Ave)
  - AM: B → C w/ Lane Closure
  - PM: C → D w/ Lane Closure
- NB LOS (south end of Potomac Ave)
  - AM: B → C w/ Lane Closure
  - PM: C → D w/ Lane Closure
Route 1
North End

- Blue line: NB Veh/Hr
- Red line: Capacity of single lane
- Green line: SB Veh/Hr
- Purple line: Combined Veh/Hr
Route Analysis

Route 1
South End

Graph showing the number of vehicles per hour (Veh/Hr) for Northbound (NB), Southbound (SB), and Combined traffic on Route 1 at the South End. The graph also indicates the capacity of a single lane for comparison.
Route Analysis

Potomac Ave
South End

- NB Veh/Hr
- Capacity of single lane
- SB Veh/Hr
- Combined Veh/Hr
Potomac Avenue Alignment:

- Routing overview
- Traffic review
- Constructability
230kV DUCTBANK CONSTRUCTION
TRENCH EXCAVATION
230kV DUCTBANK CONSTRUCTION
CONDUITS AND MANHOLE INSTALLATION
230kV DUCTBANK CONSTRUCTION
INTERIM PAVEMENT OVER MANHOLE
230kV DUCTBANK CONSTRUCTION
PAVEMENT RESTORATION

INTERIM

PARTIALLY RESTORED
230kV XLPE CABLE INSTALLATION
CABLE PULLING EQUIPMENT
230kV XLPE CABLE INSTALLATION
CABLE PULLING EQUIPMENT
230kV XLPE CABLE INSTALLATION
CABLE SPLICING
CABLE REMOVAL
AND
PIPE INSPECTION
Cable Pulling Equipment Setup - Reel End
CABLE PULLING EQUIPMENT
Cable Splicing
<table>
<thead>
<tr>
<th></th>
<th>Potomac Ave. (Glebe-Potomac River Project)</th>
<th>Route 1 (Rebuild Alternative)</th>
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</thead>
<tbody>
<tr>
<td><strong>City</strong></td>
<td>Relocation of Potomac Yards terminal station, pending SCC approval</td>
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<td></td>
<td>Ability to add conduit for fiber, installed in duct bank</td>
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<td>Compensation for City real estate</td>
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<td>Improvements at Potomac River Substation</td>
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</tbody>
</table>
| **Construction**     | Total project duration – approximately 3 years (**In street open trench-Potomac Ave. 9 months to 1 year. Massey Lane 4 to 6 months)**\[** = Can Run Concurrent  * = Based on five 8 hour days\]  
Open trench offers flexibility for alignment, schedule and work hours  
No seasonal transmission outages required for new line  
New easement required  
No buildings, no large trees allowed within easement  | Total project duration – approximately 3 to 4 years (In street work zone disruptions – Route 1 – Two to three years for both circuits. Holland Lane to N. Alexandria Sub 12-18 months)**\[** = Can Run Concurrent  * = Based on five 8 hour days\]  
No flexibility on construction method  
Seasonal transmission outages required  
Existing right of way  
Unknown condition of 20-30 year old existing infrastructure, e.g. conduit damage may require excavation  
Double work in construction area, one circuit replaced at a time |
| **Community**        | Traffic Impacts/Lane closure                                                                        | Traffic Impacts/Lane closure                                                                  |
|                      | Temporary impacts to nearby recreation areas, sidewalks, landscaping                                 | Temporary impacts to dog park, sidewalks, landscaping, commercial business entrances          |
| **Reliability**      | Resolves NERC criteria violation – maintains reliable service to customers in area                    | Resolves NERC criteria violation – maintains reliable service to customers in area          |
|                      | New 230 kV source into the area                                                                       |                                              |
|                      | Resiliency benefits                                                                                   |                                              |
Questions?