Electrification Infrastructure Design Build RFP

Board of Directors
February 5, 2015
Agenda Item 8

Context

- JPB approved Peninsula Corridor Electrification Corridor project (Jan 2015)
- Federal and State environmentally cleared (Dec 2009, Jan 2015)
- JPB approved contract methodology (Sept 2013)
  - Design Build for electrification infrastructure
  - Evaluation criteria weighted to ensure highly experienced contractor
  - Best Value for vehicles (Electric Multiple Units)
RFP Preparation

- More than 800 comments from six prequalified firms and three funding partners
- Technical Review
  - Six prequalified firms
  - HSR, VTA, SFMTA
- On-going coordination with funding partners

RFP Key Components

- Electrification Scope / Adjustments
- Power Facilities Selection
- Maintenance Options
- Minimize Tree Removal
- Non-standard Workweek
Electrification Scope / Adjustments

- **Scope**
  - 50+ mile 25 kV system
  - Overhead Contact System (OCS)
  - Traction Power System

- **Adjustments**
  - Defer electrification south of Tamien Station
  - Defer electrification of storage tracks at 4th and King
  - Eliminate electrification of UP owned MT-1
  - Share foundations for guy wire pole

Power Facilities Selection

<table>
<thead>
<tr>
<th>Facilities / Jurisdiction</th>
<th>Option Selection</th>
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<tbody>
<tr>
<td>Traction Power Substations (2)</td>
<td>Option 4</td>
</tr>
<tr>
<td>- TPS 1 (South San Francisco)</td>
<td>TBD</td>
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<tr>
<td>- TPS 2 (San Jose)</td>
<td>TBD</td>
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<tr>
<td>Switching Station (1)</td>
<td>TBD</td>
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<tr>
<td>- SS (Redwood City)</td>
<td>TBD</td>
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<tr>
<td>Paralleling Stations (7)</td>
<td>Option 1 (no other option)</td>
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<tr>
<td>- PS 1 (San Francisco)</td>
<td>Option 1 (no other option)</td>
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<tr>
<td>- PS 2 (San Francisco)</td>
<td>TBD</td>
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<tr>
<td>- PS 3 (Burlingame)</td>
<td>Option 3</td>
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<tr>
<td>- PS 4 (San Mateo)</td>
<td>Option 2</td>
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<tr>
<td>- PS 5 (Palo Alto)</td>
<td>Option 2</td>
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<tr>
<td>- PS 6 (Sunnyvale)</td>
<td>TBD</td>
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<tr>
<td>- PS 7 (San Jose)</td>
<td>TBD</td>
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Note: TBD is subject to further coordination with jurisdictions / agencies.
DB Maintenance Options

- Electrification will require specialized maintenance
- Maintenance options will provide information on DB capabilities and cost
- Two options
  - Overhead contact system
  - Signal and communication systems

Minimize Tree Removal

- Pole placement between tracks where space permits
- Double poles utilized from one side spanning both tracks where trees can be saved beyond opposite track
- Portal structures with feeder cable located closer to track minimizing tree removal and tree trimming
Non-standard Workweek

- Operational requirement for safe, efficient customer service prohibits work times during weekday peak periods
- Lower ridership during weekends allows for single track operations to support continuous work from Friday evening until Monday morning
- Thursday and Monday evenings until end of revenue service followed by work until start of service provide an additional full shift
- Limited work hours during non revenue hours results in 3-4 work hours
- A PLA is currently being negotiated with the labor unions that will be presented to the Board in the near future

Questions