Today’s Topics

- Welcome
- February Town Hall Community Meeting Update
- Project Update
  - Water Resources Draft Report Discussion
  - Freight Rail Relocation Draft Report Discussion
- Adjourn
February Town Hall
Community Meetings
February 10 & 12 Town Hall Community Meetings

• Opportunity to:
  ▪ Ask questions and provide verbal testimony on draft water resources and freight rail relocation studies
  ▪ Share community concerns with public officials

• 625+ attendees

• 75+ written comments received
February 10 and 12 Town Hall Meetings

Minneapolis Feb 10
February 10 and 12 Town Hall Meetings

St. Louis Park Feb 12
Comments on Draft Reports
Due March 3, 2014

- Online: www.SWLRT.org
- Email: SWLRT@metrotransit.org
- U.S. Mail
- Filling out a comment card
Water Resources
Draft Report Discussion
Independent Consultant’s Draft
Conclusions / Recommendations

• No fatal flaws with the shallow LRT tunnel design
• Add lateral and nested piezometers
• Collect seasonal water level data
• Complete a comprehensive capacity analysis for sanitary and storm sewer systems
• Design the underground infiltration chambers for the 100-year design storm event
Independent Consultant’s Draft Recommendations (continued)

• Incorporate stormwater pre-treatment devices in the design

• Complete a Phase II Environmental Site Assessment

• Revise the draft Water Monitoring Plan
  ▪ Determine key monitoring locations
  ▪ Define parameter and threshold criteria
  ▪ Monitor infiltration chamber system
  ▪ Sample groundwater quality near chambers and sites in the corridor away from the chambers

• Sample and analyze groundwater for hydrocarbons, chlorides, other potential contaminants
Barr Engineering Memo

• Prepared for City of Minneapolis and MPRB
• Received by SPO Jan. 16, 2014
• Issues and Questions in Memo
  ▪ Effectiveness of sheet pile sealing and seal pour performance
  ▪ Groundwater and surface water
  ▪ Proposed bored twin tunnels
  ▪ Ground movements and impacts to adjacent structures
  ▪ Vibration impacts of freight and LRT on shallow LRT tunnels
  ▪ Maintenance considerations
• Response sent to City and MPRB Feb. 14, 2014
Freight Rail Relocation
Draft Report Discussion
TranSystems’ MN&S North Concept
Freight Rail Relocation Draft Report
Discussion

• Safety considerations
• Property impacts
• Cost
• Operational considerations
Safety Considerations
## At-Grade Freight Rail Crossings Comparison

<table>
<thead>
<tr>
<th>Element</th>
<th>Kenilworth Route</th>
<th>MN&amp;S North Route</th>
</tr>
</thead>
</table>
| **Existing No. Crossings** | 4  
  • Wooddale  
  • Beltline  
  • Cedar Lake  
  • 21st | 6  
  • Walker  
  • Library  
  • Lake  
  • Dakota  
  • 29th  
  • 28th |
| **Proposed No. Crossings** | 4  
  • Wooddale  
  • Beltline  
  • Cedar Lake  
  • 21st | 2  
  • Library  
  • Dakota |
## At-Grade Freight Rail Crossings Comparison

<table>
<thead>
<tr>
<th>Element</th>
<th>Kenilworth Route</th>
<th>MN&amp;S North Route</th>
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</thead>
<tbody>
<tr>
<td>TranSystems</td>
<td>22,000</td>
<td>14,000</td>
</tr>
<tr>
<td>Average Daily Traffic (ADT)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPO 2013 ADT</td>
<td>33,600</td>
<td>15,000</td>
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<tr>
<td>TranSystems</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Average Daily Trains One Way</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPO</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Average Daily Trains One Way</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Proximity to Schools and Residential Units

<table>
<thead>
<tr>
<th>Element</th>
<th>Kenilworth Route</th>
<th>MN&amp;S North Route</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of schools within 150’ of tracks</td>
<td>No. of residential units within 150’ of tracks</td>
</tr>
<tr>
<td>TranSystems</td>
<td>0</td>
<td>367</td>
</tr>
<tr>
<td>SPO</td>
<td>0</td>
<td>140</td>
</tr>
<tr>
<td>No. of schools within 150’ of tracks</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>No. of residential units within 150’ of tracks</td>
<td>367</td>
<td>140</td>
</tr>
</tbody>
</table>
Property Impacts
## Property Impacts Requiring Relocation Comparison

<table>
<thead>
<tr>
<th>Full Permanent Acquisition*</th>
<th>Kenilworth Route</th>
<th>MN&amp;S North Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Private Business**</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>School***</td>
<td>0</td>
<td>1</td>
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</tbody>
</table>

* Numbers do not include acquisitions required for Southerly Connection, which are common to both routes

** Includes STEP Food Shelf property

*** Metropolitan Open School
Cost
Cost Terminology

• $2013: Capital improvement costs
  ▪ Based on 2013 unit costs

• $YOE: Year of expenditure costs
  ▪ Includes:
    o Capital improvements and ROW based on 2013 unit costs
    o Contingency costs
    o Design related costs
Kenilworth Corridor Shallow LRT Tunnels

<table>
<thead>
<tr>
<th>Element</th>
<th>$YOE (M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Costs</td>
<td>$150 – $160</td>
</tr>
<tr>
<td>Common Elements</td>
<td>$85 - $90</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$235 - $250</strong></td>
</tr>
</tbody>
</table>

- **Common elements’ primary cost drivers:**
  - Freight rail track
  - Freight rail bridges
  - CP ROW swap
  - Southerly connection (Bass Lake Spur to MN&S Spur)
## TranSystems’ MN&S North Concept Cost Estimate

<table>
<thead>
<tr>
<th>Element</th>
<th>$2013 (M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Improvements</td>
<td>$60</td>
</tr>
<tr>
<td>Common Elements</td>
<td>$26</td>
</tr>
<tr>
<td>Right-of-Way</td>
<td>$0*</td>
</tr>
<tr>
<td>Engineering (5%)</td>
<td>$4</td>
</tr>
<tr>
<td>Contingency (25%)</td>
<td>$22</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$112</strong></td>
</tr>
</tbody>
</table>

* TranSystems’ estimate does not include ROW costs
TranSystems’ MN&S North Concept Cost Estimate: SPO Identified Additions and Adjustments

- Right-of-Way in $2013:
  - Add $20-$25M
- Additional Common Elements in $2013:
  - Add $40-$45M:
    - Freight track from TH 169 to Blake
    - CP ROW swap (ROW cost)
    - Southerly connection (ROW cost)
- Adjust engineering and contingency:
  - Add $35-$40M
- Adjust to $YOE:
  - Add $15-$20M
## TranSystems’ MN&S North Concept Cost Estimate

<table>
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<tr>
<th>Element</th>
<th>Original 2013 (M)</th>
<th>Adjusted (M)</th>
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<td>Capital Improvements</td>
<td>$60</td>
<td>$60*</td>
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<tr>
<td>Common Elements</td>
<td>$26</td>
<td>$65-$70*</td>
</tr>
<tr>
<td>Right-of-Way</td>
<td>$0</td>
<td>$20-$25*</td>
</tr>
<tr>
<td>Engineering/Contingency</td>
<td>$26</td>
<td>$60-$65*</td>
</tr>
<tr>
<td>YOE</td>
<td>$0</td>
<td>$15-$20</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$112</strong></td>
<td><strong>$220 - $240</strong></td>
</tr>
</tbody>
</table>

* 2013 Costs
TranSystems’ MN&S North Concept

Unaccounted Costs

• Additional retaining walls for LRT
  ▪ Blake to Louisiana

• Additional Right-of-Way
  ▪ Skunk Hollow Rail Customer
  ▪ Property along North Frontage Road
  ▪ 27th Street Properties

• Freight track removal – Bass Lake Spur/Kenilworth
  ▪ MN&S to Cedar Lake Junction

• North Cedar Lake Trail Bridge (Iron Triangle)

• Xcel Substation Impacts
Cost of Project Delay

• The cost of project delay assumptions:
  ▪ $1.553 B project
  ▪ 3% escalation per year
  ▪ $45 - $50 M
# Freight Rail Cost Comparison ($YOE)

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<td>$85 - $90</td>
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<td><strong>TOTAL</strong></td>
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Freight Rail Relocation Draft Report Discussion

- Safety considerations
- Property impacts
- Cost
- Operational considerations
More Information

Online:
www.SWLRT.org

Email:
SWLRT@metrotransit.org

Twitter:
www.twitter.com/southwestlrt