Today’s Topics

• Review In Kind Land Transfer (Action)
• Review Project Schedule
• Review Project Cost Estimate at 60% Design
• Review Project Scope (Action)
• Next Steps
Southwest LRT

- 14.5 miles new track
- 32 bridges
- 2 LRT tunnels
- Over 7 lineal miles of retaining walls
- 15 new stations
  - 1 deferred station
- 34,000 average weekday rides in 2040
Review Land Transfer
Background Summary

• July 1: CMC recommends revised project scope and cost estimate

• July 8: Met Council revised project scope and cost estimate
  - Project cost estimate of $1.744B

• July 21: Hennepin County commits to future transfer of land; initial estimated value of $30M
  - Project cost estimate of $1.774B

• Aug 3: Met Council submits New Starts Update to FTA
  - Project cost estimate of $1.774B
Recommendation & Action

• ECCB confirms future transfer of land from Hennepin County to Metropolitan Council
  ▪ Adds $30M to project cost estimate
  ▪ Project Cost estimate of $1.774B
  ▪ No increase of CTIB, HCRRA or State funding
Review Project Schedule
2015 Completed Milestones

- **July**  
  CMC recommended and Met Council approved a revised project scope and cost estimate

- **Aug 3**  
  Submitted New Start Application

- **Sept 25**  
  Received Municipal Consent on revised scope from all 5 cities and Hennepin County

- **Sept 28**  
  Completed 60% Civil and OMF Design Plans

- **Oct 5**  
  Submitted Notice of Intent to apply for Entry into Engineering

- **Oct 21**  
  Held Construction Contractor Kick-off Event

- **Oct 28**  
  Completed 60% System Design Plans
## Major Milestone

<table>
<thead>
<tr>
<th>Event Description</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><em><em>ECCB Reviews</em> 60% Project Cost Estimate</em>*</td>
<td>Jan 2016</td>
</tr>
<tr>
<td>90% Design Packages for Civil Completed</td>
<td>Jan 2016</td>
</tr>
<tr>
<td>LRV Proposals Due</td>
<td>Mar 2016</td>
</tr>
<tr>
<td><em><em>ECCB Reviews</em> 90% Civil Cost Estimate</em>*</td>
<td>Mar 2016</td>
</tr>
<tr>
<td>100% Design Packages for Civil Completed</td>
<td>Apr 2016</td>
</tr>
<tr>
<td>FEIS Publication</td>
<td>Apr 2016</td>
</tr>
<tr>
<td>Civil Invitation For Bid Issued</td>
<td>May 2016</td>
</tr>
<tr>
<td>90% Design Packages for Systems &amp; OMF Completed</td>
<td>May 2016</td>
</tr>
<tr>
<td>Environmental Record of Decision</td>
<td>June 2016</td>
</tr>
<tr>
<td><em><em>ECCB Reviews</em> 100% Civil/90% Systems &amp; OMF Cost Estimates</em>*</td>
<td>June 2016</td>
</tr>
<tr>
<td>ECCB Approves* Project Budget</td>
<td>June 2016</td>
</tr>
<tr>
<td>Approval to Enter Engineering <em>(previously July 2016)</em></td>
<td>Sept 2016</td>
</tr>
<tr>
<td>Letters of No Prejudice (LONP) from FTA</td>
<td>Pre FFGA</td>
</tr>
<tr>
<td>Full Funding Grant Agreement <em>(previously Dec 2016)</em></td>
<td>Mid 2017</td>
</tr>
<tr>
<td>Heavy Construction</td>
<td>2017-2019</td>
</tr>
<tr>
<td>Revenue Service</td>
<td>2020</td>
</tr>
</tbody>
</table>

*per CTIB Funding Commitment Resolution
Local Funding Commitment Timeline

$737.2M Committed out of $887.1 Million Needed
Outstanding Local Funds Must be Committed by July 1, 2016

$1.774 Billion

- CTIB $496M*
- HCRRA $165.3M*
- In-Kind Land $30M*
- Henn Co/Mtka St. Louis Park/Hopkins/EP $15.6M*
- State $30.3M*
- Other $14.9M

* Committed
Current Project Schedule Summary

- Project schedule version 8.0 has been updated to include specific construction activities; critical paths include:
  - Kenilworth Tunnel
  - Excelsior Blvd Bridge
  - Louisiana Station area
  - Operations and Maintenance Facility
Current Project Schedule Summary

• Risks to Construction Schedule
  ▪ State Funding
  ▪ Delay to start of early construction in Fall 2016
  ▪ Right of way acquisition on freight rail property
  ▪ Relocation delays at Operations and Maintenance Facility site
  ▪ Timing of Full Funding Grant Agreement award
  ▪ Labor market availability
  ▪ Acceleration of construction schedule
Potential Mitigation Strategies for Construction Schedule Delay

• Local Funding Commitments for early Construction pre Full Funding Grant Agreement
  ▪ Letters of No Prejudice from FTA
• Accelerated construction schedule
  ▪ 6 day work weeks
  ▪ Extension of construction season/winter work
• Continued workforce and contractor outreach
Letters of No Prejudice (LONP)

• FTA-issued “Letters” permitting project sponsors to incur construction costs prior to execution of Full Funding Grant Agreements (FFGA)
• “No Prejudice” means these costs will be eligible as local match for future federal funds
• Requires local funding partners to fully fund costs, including construction, pre-FFGA at their own risk
Review Project Cost Estimate at 60% Design
Cost Uncertainty By Project Phase

% Design Complete  Cost Uncertainty

1%  15%  30%  60%  100%
Contingency and Risk

- Contingency is budget set aside to account for project risks

Requirements
- Utilities
- Railroad Negotiations

Design
- Systems elements
- Freight rail requirements

Market
- Construction Bids
- Right-of-Way
- Finance Costs
- Schedule Delay
- Light Rail Vehicles

Construction
- Unforeseen Conditions
- Contaminated Soils
- Field Engineering
Cost Contingency Draw Down* (example)

*Subject to FTA risk assessment
## Potential Contingency Hold Points*

<table>
<thead>
<tr>
<th>Phase Description/Milestones</th>
<th>Hold Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Development</td>
<td>25 - 30%</td>
</tr>
<tr>
<td>Entry into Engineering: Budget Fixed</td>
<td>20 - 25%</td>
</tr>
<tr>
<td>Full Funding Grant Agreement</td>
<td>15 - 20%</td>
</tr>
<tr>
<td>20% Construction</td>
<td>12 - 15%</td>
</tr>
<tr>
<td>50% Construction</td>
<td>10 - 12%</td>
</tr>
<tr>
<td>75% Construction</td>
<td>8 - 10%</td>
</tr>
<tr>
<td>90% Construction</td>
<td>6 - 8%</td>
</tr>
<tr>
<td>Revenue Service Date</td>
<td>5 - 6%</td>
</tr>
</tbody>
</table>

*Hold points are shown for example purposes; actual hold points to be determined in consultation with FTA
30% Estimate vs 60% Estimate

• 30% Estimate: Average costs applied to known quantities, plus allowances for unknowns
• 60% Estimate: Complete “bottoms up” approach
  ▪ Used more detailed drawings and quantities
  ▪ Refined labor rates
  ▪ Obtained vendor material quotes
  ▪ Incorporated contractor markup including bonds, insurance, permit fees, and general conditions
  ▪ Projected reduction of allocated contingency with increase in confidence/decrease in design risk
Overview of 60% Cost Estimate

• Updated quantities based on 60% design plans
• Reduced unknowns through design advancement
• Used detailed build-up approach which produces more confident estimates than unit cost approach

Contingency

30% Design

Contingency 29%

60% Design

Contingency Forecast 25%
# Project Cost Estimate Update Summary

<table>
<thead>
<tr>
<th>Budget Category</th>
<th>30% Design (29% Contingency)</th>
<th>60% Design (25% Contingency)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guideway and Track</td>
<td>$440</td>
<td>$384</td>
</tr>
<tr>
<td>Stations, stops, terminals</td>
<td>$72</td>
<td>$70</td>
</tr>
<tr>
<td>Support facilities</td>
<td>$94</td>
<td>$90</td>
</tr>
<tr>
<td>Sitework, special conditions</td>
<td>$158</td>
<td>$164</td>
</tr>
<tr>
<td>Systems</td>
<td>$195</td>
<td>$238</td>
</tr>
<tr>
<td>ROW, land, existing improvements</td>
<td>$210</td>
<td>$210</td>
</tr>
<tr>
<td>Vehicles</td>
<td>$123</td>
<td>$126</td>
</tr>
<tr>
<td>Soft Costs ¹</td>
<td>$482</td>
<td>$492</td>
</tr>
<tr>
<td><strong>Total Project Costs</strong></td>
<td><strong>$1,774</strong></td>
<td><strong>$1,774</strong></td>
</tr>
</tbody>
</table>

¹ Professional Services, Unallocated Contingency and Finance Charges
## Guideway and Track (YOE, in $ Millions)

<table>
<thead>
<tr>
<th>Factors</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Updated Quantities</td>
<td>Determined retaining wall dimensions, shoring requirements; earthwork cut, fill, and export requirements; bridge lengths</td>
</tr>
<tr>
<td>Reduced Unknowns</td>
<td>Developed construction approach and phasing for bridge and tunnel structures; determined structural pile requirements</td>
</tr>
<tr>
<td>Refined Cost Inputs</td>
<td>Updated special trackwork costs using recent national vendor quotes</td>
</tr>
</tbody>
</table>

### Graph

- **30% Design**
  - Base: $384
  - Unallocated Contingency Forecast: $440
  - Unallocated Contingency Forecast: 27%

- **60% Design**
  - Base: $384
  - Unallocated Contingency Forecast: $440
  - Unallocated Contingency Forecast: 12%
### Stations (YOE, in $ Millions)

<table>
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<tr>
<th>Factors</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Updated Quantities</td>
<td>Refined SouthWest Station parking ramp dimensions and material quantities; Defined station platform materials</td>
</tr>
<tr>
<td>Reduced Unknowns</td>
<td>Determined quantity and depth for pile requirements at station and vertical circulation (elevators, stairs) facilities</td>
</tr>
<tr>
<td>Refined Cost Inputs</td>
<td>Updated costs for mechanical, structural, electrical and architectural design elements based on vendor quotes</td>
</tr>
</tbody>
</table>
Support Facilities/OMF (YOE, in $ Millions)

Factors | Examples
--- | ---
Updated Quantities | Identified architectural, mechanical, electrical, civil/site, track, retaining wall, yard, track and systems quantities
Reduced Unknowns | Confirmed operating and maintenance requirements for full functionality; identified building foundation approach
Refined Cost Inputs | Updated special trackwork costs using recent national vendor quotes
Site Work, Special Conditions (YOE, in $ Millions)

### Factors

<table>
<thead>
<tr>
<th>Factors</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Updated Quantities</td>
<td>Updated Smetana and Feltl bridge scope from guideway and track; prepared “bottoms up” approach to surface park and ride design elements</td>
</tr>
<tr>
<td>Reduced Unknowns</td>
<td>Identified utility relocations and drainage design approach</td>
</tr>
<tr>
<td>Refined Cost Inputs</td>
<td>Updated pedestrian bridge costs based on defined structural and architectural features; defined sound mitigation requirements, barrier and retaining wall costs</td>
</tr>
</tbody>
</table>
# Systems (YOE, in $ Millions)

<table>
<thead>
<tr>
<th>Factors</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Updated Quantities</td>
<td>Identified quantities for traction power distribution elements, signals, OCS poles, and communication equipment for guideway, stations, tunnels, roadway crossings</td>
</tr>
<tr>
<td>Reduced Unknowns</td>
<td>Determined freight signal requirements, system wide wayside radio and repeaters, intrusion protection requirements</td>
</tr>
<tr>
<td>Refined Cost Inputs</td>
<td>Updated systems element costs using recent vendor quotes</td>
</tr>
</tbody>
</table>
## Right of Way (YOE, in $ Millions)

### Factors

<table>
<thead>
<tr>
<th>Factors</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Updated Quantities</td>
<td>Refined ROW acquisition limits based on 60% design plans</td>
</tr>
<tr>
<td>Reduced Unknowns</td>
<td>Completed field titles on 60% of property acquisitions, interviewed 80% of tenants to be relocated</td>
</tr>
<tr>
<td>Refined Cost Inputs</td>
<td>ROW requirements based on 60% design plans. ROW values will adjust upward once appraised values of in-kind land is concurred by FTA.</td>
</tr>
</tbody>
</table>

*Latent Contingency: Line item cost allowance to account for unknown or undetermined cost and/or risk*
Review Project Scope
Candidate In-Kind Land Transfers

- Will increase project cost estimate when value is confirmed by FTA
- Apply in-kind land transfers to local match
- Leverages Federal match
Requested City/County Scope Elements

- Trail crossings, pedestrian tunnel and road extension provide better local access and connections
Blake Station: Trail Underpass
Louisiana Station: Pedestrian Underpass
Wooddale Station: Trail Underpass
Recommendation & Action

• ECCB approve these additions to the proposed Southwest LRT project scope
  ▪ Cost of scope elements is estimated at $16.2M
    ○ $8.1M of local match funded by city or county
    ○ $8.1M of federal funds
• Project Cost Estimate of $1.79B
• No increase of CTIB, HCRRA or State funding
Next Steps
Next Steps

• CTIB
  ▪ Approval of 2016 Grant

• ECCB
  ▪ Review 90% civil cost estimate
  ▪ Review outcomes of project risk assessment including contingency hold points
  ▪ Review 100% civil cost estimate
  ▪ Review 90% Systems and OMF cost estimates
  ▪ Approve cost estimate as project budget prior to applying for entry into Engineering
More Information

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