Portland-Milwaukie Light Rail Project
Willamette River Transit Bridge
Bridge Study Working Group, July 15, 2008

Anticipated Attendees

<table>
<thead>
<tr>
<th>HBTB and Consultant Team</th>
<th>Local Agencies</th>
<th>TriMet</th>
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<tbody>
<tr>
<td>David Calver</td>
<td>Teresa Boyle, PDOT</td>
<td>Rob Barnard</td>
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<td>Steve Litchfield</td>
<td>Patrick Sweeney, PDOT</td>
<td>Sean Batty</td>
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<td>Semyon Treyger</td>
<td>Art Pearce, PDOT</td>
<td>Dave Unsworth</td>
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<td>Bill James</td>
<td>Troy Doss, Planning</td>
<td>Ann Becklund</td>
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<td>Greg DeMond</td>
<td>Patrick Quinton, PDC (East side)</td>
<td>Bob Hastings</td>
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<td>Gary Peterson</td>
<td>Kia Selley, PDC (West side)</td>
<td>Calvin Lee</td>
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<td>Daryl Wendle</td>
<td>Robin Grimwade, Parks</td>
<td>DeeAnn Sandberg</td>
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<td>Mary Wahl, BES</td>
<td>Claudia Steinberg</td>
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<td>Richard Brandman, Metro</td>
<td>John Fall</td>
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<td>Kenny Asher, City of Milwaukie</td>
<td>Dian Goodwin</td>
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<td>Stephanie Ratcliffe</td>
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<td>Rosales and Consultant Team</td>
<td>Other</td>
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<td>Miguel Rosales</td>
<td>David Knowles, DEA</td>
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<td>Etty Padmodipietro</td>
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<td>Virginia Ferriday</td>
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<td>Michael Stein</td>
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<td>Carol Mayer-Reed</td>
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Agenda

1. Welcome
2. Introductions
3. Meeting Goals
4. Chartering - Background
   a. Initial thoughts on project vision, goals and guiding principles
   b. Bridge Study Process
   c. Expectations on final product (universe of types to 2-4 viable)
   d. Expectations from TAC participants
   e. Touch points with other groups not represented
   f. Obtain input - what items are important to you?

5. Work
   a. Bridge Types
      i. First meeting will generate range of approximately nine viable types from universe of bridges
      ii. What types should be explored?
   b. Challenges and Opportunities
      i. Review design considerations - where is there flexibility - where is it firm?
      ii. What else should the consultant team consider?
   c. Consultant opportunity to ask TAC questions - what do you need from us?

6. Next Steps – Homework
   a. Generate list of bridge types that should be explored at 8/7/08 meeting
   b. Generate list of possible screening criteria that might be used to reduce list from 9 to 6+/- at 8/28/08 meeting
   c. Generate list of possible screening criteria that might be used to reduce list from 6 to 3+/- at 9/15/08 meeting
Welcome

• Thank you for agreeing to participate in the Bridge Study
• This is the next key step on the journey to add another bridge in downtown Portland
• A critical link to connect the east and west side of the river and extend light rail to Milwaukie

• Congratulations to the HNTB and Rosales teams on two excellent proposals and terrific interviews
  o HNTB
    ▪ A world-class engineering firm with a history of award winning bridges – Semyon Treyger
    ▪ An engineering firm who brings experience working with architects – Greg DeMond
  o Rosales
    ▪ A firm who specializes in the conceptual design and architecture of landmark bridges – Miguel Rosales
    ▪ An architectural firm who brings experience working with engineers – Michael Stein

• Our community will truly benefit from the vast experience, talent and deep commitment to developing world class infrastructure that improves livability that each of your teams bring
• Personally I’m very excited to be here today
• Being able to participate in first steps towards building a new bridge in our city’s core is an honor
• As we all know this is a once in a career opportunity and it is amazing to be part of the team working to make it a reality
**Introductions**

**TriMet**
- Dave Unsworth – Manager Project Development
- Ann Becklund – Director, Community Relations
- Sean Batty – Corridor Design Manager
- Bob Hastings – Agency Architect
- Rob Barnard – Project Director
- Calvin Lee – Structural
- DeeAnn Sandberg – Community Affairs
- Claudia Steinberg – Community Affairs

**HNTB Leads**
- David Calver – Principal in charge
- Semyon Treger - PM and Structural Lead (Bellevue)
- Greg DeMond - Architect Lead (Kansas City)
- Bill James - Civil Lead (Bellevue)
- Daryl Wendle – Environmental
- Gary Peterson - Geotechnical

**Rosales + Partners Leads**
- Miguel Rosales - PM and Lead Designer (Boston)
- Etty Padmodiopetro - Project Coordinator (Boston)
- Virginia Ferriday - Local Architect and Urban Designer
- Carol Mayer - Reed - Landscape Architect
- Michael Stein - Structural Advisor - Schlaich Bergermann (New York)

**HNTB Subconsultant Team**
A. Shannon & Wilson ........................................................ Geotech - Foundation ....................... Frank Fujitani
   1. Park Piao and Gary Peterson
B. West Consultants ......................................................... Hydraulic, Scour ......................... Jeffrey Bradley
   1. Chris Bahner – Task Lead for Hydraulics and Stormwater
   2. Thomas Grindeland – VP
C. Riverwise, LLC .......................................................... River Navigation ......................... Peg Johnson
D. Parametrix ................................................................. Planning, Enviro, Regulatory .......... Steve Maltby
E. Lindsay Yamane, Daryl Wendle, Bill Hall, Douglas Gates
F. Good Company ............................................................ Sustainable Design ....................... Joshua Proudfoot
G. National Constructors Group ........................................ Risk, Cost, Constructability ........... Paul Silvestri
H. Mayano Leadership Group ........................................... Bridge Types ............................. Dave Moyano
I. Rowan Williams Davies & Irwin ................................. Risk and Vulnerability – Wind ...... Stoyan Stoyanoff

**Rosales Team**
A. Virginia Ferriday
   1. City of Portland’s Historic Resource Inventory
B. Carol Mayer – Reed
   1. Bachelor Fine Arts,
   2. Masters in Landscape Architecture
   3. Fellow of the American Society of LA
C. Schlaich Bergermann and Partners
   1. Jorg Schlaich is an internationally recognized engineer
   2. "The engineer’s mission in the name of society and culture is to build well and to build beautifully.”
Meeting Goals
1. Share initial thoughts on project vision – guiding principles
2. Discuss Bridge Study Goals
3. Review known constraints and items of concern
4. Discuss initial thoughts on work plan framework and public involvement
5. Discuss next steps for scope and fee development

Agenda

1. Share initial thoughts on project vision, core values and guiding principles
   A. Vision
      1. Creating a project vision to guide our decision making set the path for the project is a critical element
      2. Developing the project’s vision will need much thought and participation by many
      3. However, what I heard during the HNTB interview struck a true note for me
      4. To build on that draft notion put forth by HNTB
         a. Deliver a bridge for the citizens of Portland that is Beautiful, Functional and Affordable.
         • Will need to work on the term “beautiful” but the essence behind it valid
         • Aesthetics – the right bridge for the context
         • Function – the right bridge for the site, use and environment
         • Cost – the right bridge for the budget
         • One is not sacrificed to advance the other but rather a balance is struck between all three
   B. Core Values
      1. This project could be viewed as a symbol for our communities identity
      2. River City – Bridge Town
      3. As a “Transit Only” bridge it embodies our communities commitment to supporting diverse transportation modes
         a. Our transit system carries more people than any other US transit system its size
         b. Ridership has increased each of the last 19 years and at a faster rate than population growth
         c. Last year we had approximately 97 million boarding’s for a region with 1 million people
         d. Our community has been recognized for being bike friendly
         e. Our community has been recognized for its streetcar
         f. For innovative transportation options like the TRAM
      4. I feel this bridge is right for the times – with the rising cost of fuel – the push/pull of food versus bio-fuel
      5. Being a transit only bridge embodies one of TriMet’s core values of being an Environmental Leader
   C. Guiding Principle
      1. Public involvement that leads to consensus building and project understanding
      2. Evaluate alternatives at three levels – looking at the bridge, being near the bridge and being on the bridge
      3. Evaluate alternatives impartially
      4. Evaluate alternatives with active participation by empowered representatives for all stakeholders

2. Discuss Bridge Study Goals – the task at hand
   A. Risk Management
      1. TriMet must be able to make realistic commitments to the public, stakeholders, resource agencies & FTA
      2. TriMet needs sound and reliable information on which to base these decisions and commitments
   B. Input for Biological Assessment
   C. Roadmap for regulatory approval

3. Review known constraints and items of concern
   A. Sean Show
B. Circle back to one alignment and two possible navigational clearance options

4. Discuss initial thoughts on work plan framework and public involvement
   A. Concept
      1. Narrow the universe of bridge types through a series for filters and evaluations of 2-4 options to begin a public conversation
      2. Obtain a solid understanding of the risk profile for each viable option
         a. For example – two versus four piers
      3. Obtain a solid understanding of the opportunities and challenges for each viable option
         a. For example – a box girder is rather nimble at how it can touch down and be integrated into the landside development versus a cable stay that is more rigid in its geometry

B. Details on Framework
   1. See attached handout
   2. Stakeholder committee – Ann Becklund

   3. HNTB Plan – from the proposal
      a. Phase I: Preliminary Bridge Type Analysis
         I. Meeting 1 – Bridge Type Analysis Kick-Off
         II. Assess Site Conditions and Identify Constraints
         III. Meeting 2 – Identify Potential Bridge Types (9 +/-)
         IV. Design Development of Initial Bridge Types
         V. Meeting 3 – Bridge Types Refinement (LPA Available) (9 to 6)
         VI. Refine Initial Bridge Types
         VII. Meeting 4 – Initial Bridge Type Screening
         VIII. Design Development of Narrowed Menu of Bridge Types
         IX. Meeting 5 – Draft Menu of Bridge Types
         X. Refine Menu and Prepare Preliminary Bridge Analysis Presentation
         XI. Preliminary Bridge Analysis Presentation to TriMet - Deliverable

      b. Phase II: Refine Bridge Type Analysis
         I. Refine Materials for Public Outreach - Deliverable
         II. TriMet’s Public Outreach
         III. Refine Input for EIS and BA
         IV. Meeting 6 – Review Draft Environmental Input
         V. Input for Use in Environmental Process and Biological Assessment – Deliverable
         VI. Refine Cost and Risk Assessment
         VII. Meeting 7 – Review Costs and Risks
         VIII. Prepare Final Bridge Study Report
         IX. Final Bridge Study Report Submitted to TriMet – Deliverable

      c. Phase III: Public Outreach
         I. Public Ground Work Program
            • Bridge 101 – Why, Where and How a Bridge is Built
            • History of Portland’s Bridges
            • Bridge Technology Today
            • Natural Hazards at the Proposed Bridge Site
            • Presentations on Viable Options and Process

4. Architects Interface
5. Other

C. Develop key investigations, by type, for this early bridge study activity
   1. Cost Analysis
   2. Geotechnical
3. Foundation Design  
4. Environmental Impacts – Short Term (construction) and Long Term  
5. Seismic  
6. Constructability  
7. Construction Duration – Schedule  
8. Maintenance  
9. Vibration  
10. Aesthetic values  
11. Shoreline integration (hazmat cleanup, habitat restoration, park/green space and urban developments)  
12. Neighborhood impacts  
13. Hydraulics – scour  
14. Risk – vulnerability  
15. Compliance with Design Criteria  
16. Environmental Sustainability – Alternative Energy  
17. Other?  

D. Manner and Method – how will we work together  
1. Series of workshops or working meetings at 2 – 3 week intervals?  
2. Video conferencing?  

E. Deliverables  
1. Engineer  
   a. Site-specific Design Criteria Report  
   b. Site-specific Seismic Hazard Study  
   c. Foundation Report  
   d. Construction Impact on River Traffic Report  
   e. Illustrations of early bridge types: 2D line section and elevation  
   f. Round One Evaluation Matrix  
   g. Illustrations initial viable alternatives: 2D line section, elevation and perspective  
   h. Round Two Evaluation Matrix  
   i. Illustrations viable alternatives: 2D line section, elevation and perspective, 3D visual simulation  
   j. Input for EIS and BA  
   k. Permit Playbook  
   l. Cost Estimates  
   m. Construction phasing and staging concepts  
   n. Public Outreach Materials  
   o. Other?  

2. Architect  
   a. Bridge Design Framework  
   b. Public Outreach Materials  
   c. Other  

5. Discuss next steps for scope and fee development  
   A. Development of team and project organizational chart  
   B. Develop an mutual understanding of the project roles for each team  
   C. Contract items to Jackie – O/H rates etc.  
   D. Consensus on schedule, framework, manner and method of how we will work together  
   E. List of deliverables  
   F. List of anticipated meetings  
   G. Receipt of draft scope of work and fee proposal
Reference Notes – subject to revision based on above discussion

Engineering Services Draft Task Orders
1. Administration – Project Management
2. Public Involvement, Graphics and Rendering
3. Environmental Review
4. Geotechnical Exploration and Reports
5. Foundation Reports
6. Conceptual Drainage Design
7. Conceptual Bridge and Structures Design
8. Estimating

Advanced Conceptual Design Bridge Architectural Services Draft Task Orders
1. Initial Scoping
2. Coordination Plan and Effort
   A. Develop a framework for participation, analysis and recommendations
3. Conceptual Bridge Architectural and Aesthetic Recommendations – Definition of Terms, Setting and Principles
4. Draft – Opportunities and Challenges by Type
5. Final – Opportunities and Challenges by Type
6. Graphics and Renderings
7. Presentations