NRRA Geotechnical Team
November 3, 2016

1. Welcome

2. NRRA Update – Worel

3. MnDOT Contracting Process
MnDOT has a master list (typical research efforts) and consultant/research TRAP lists (efforts under 100K) that are preapproved and ready to hire by MnDOT. MnDOT can also always do a RFP if its justified.

   1) Master Contractor List
   - Master List (MnDOT Prequalified – larger $ research efforts)
   - Iowa State University
   - Montana State University (Western Transportation Institute)
   - North Dakota State University
   - The Texas A&M University System (Texas Transportation Institute)
   - University of Minnesota & University of Minnesota Duluth
   - University of New Hampshire
   - Michigan Technological University
   - University of Pittsburgh
   - University of Wisconsin-Madison

   2) Consultant List / Research TRAP List (Under 100K – tech transfer topics)
   - Detail descriptions attached to this email.
   - Might also be able to use these contractors - [http://www.dot.state.mn.us/consult/prequal/documents/prequal-by-vendor.pdf](http://www.dot.state.mn.us/consult/prequal/documents/prequal-by-vendor.pdf)

4. Long Term Research

   a. Update on 2017 Designs (spreadsheet attached)
      i. Working towards a March 24, 2017 Letting
      ii. Discussed the current efforts and the 2017 construction layers but now need to focus on special provisions.
         ACTION ITEMS (see table 1)
         - Members review and comment on Layers / Materials for the 2017 construction planned
         - Member teams provide special provisions needed in November for the design turn in
         - MnDOT provide designs to the team members
         - MnDOT provide information on the sand and clay subgrades

   b. Research Contract timing/Tasks – See summary table 1
Discussion took place on the tasks a researcher needs to do to accomplish the goals set out in the written description of the long term research on the web. The team needs to determine the tasks and when they should be done. Need a work plan.
i. ACTION ITEM
   ➔ Members identify “research” proposed tasks needed for each of the topics
   Proposal will include all the tasks even if more than one contactor is needed
   and the timing details. Some of the effort is documented in each research
descriptions posted on the web. See table 1 for who is working on.
   ➔ MnROAD plans to do the monitoring and sensor installations as one of the
tasks and will provide an estimate to cover this effort.

5. Technology Transfer / Short Term Research Items
   a. Tech Transfer Update
   i. Yearly Budget for 4 short term @ 25K and 6 tech transfer @ 10K (160K/year)
   ii. Teams review top 2 for this effort – team was ok with the top two
   iii. ACTION ITEM ➔ GeoTech Tech Transfer Teams (see Table 2) work on online
        posted statement for the next meeting. Teams share with the whole team as
        they are completed. MnDOT will post on the web.
   iv. ACTION ITEM ➔ MnDOT will be working to develop the contract to work on the
        top two technical tech transfer topics. Report back in December. Hope to have
        consultant on board and working by January.
        • Do have other direct selection options (listing link above) and always
          could RFP each one.

Long Term Research (Table 1)

<table>
<thead>
<tr>
<th>Study</th>
<th>Construction Specs</th>
<th>Research Contract</th>
<th>Research Plan/tasks Team to work on</th>
<th>Sensors Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recycled Aggregates in Aggregate Base</td>
<td>Terry initial development Next week</td>
<td>MnROAD Monitoring (Ben Develop)</td>
<td>Illinois DOT Lead Sheila Beshears Heather Shoup (2 weeks)</td>
<td>Strain Pressure Moisture Temp MnDOT send out plan</td>
</tr>
<tr>
<td>Larger Subbase Materials</td>
<td>Terry initial development WI Subbase Spec</td>
<td>Contractor tasks 1 - Dynamic Testing 2 - Construction 3?</td>
<td></td>
<td>Strain Pressure Moisture Temp MnDOT send out plan Note ties to other studies – John Siekmeier noted later</td>
</tr>
</tbody>
</table>
Cost Effective Shoulder Alternatives
- Need to discuss and tie to cells 33-35
- 3% added emulsion
- Tie to the construction on cells 33-35

Tech Transfer (Table 2)

<table>
<thead>
<tr>
<th>Study</th>
<th>Write Ups Web</th>
<th>Type of Writer Needed</th>
<th>Team to Update Web Posting</th>
<th>Other Thoughts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Larger Subbase Materials</td>
<td></td>
<td></td>
<td>See posting on web Needs update</td>
<td>Who to lead?</td>
</tr>
<tr>
<td>Subgrade Design for New and Reconstructed</td>
<td></td>
<td></td>
<td>See posting on web Needs update</td>
<td>Who to lead?</td>
</tr>
</tbody>
</table>

Meeting Schedule notes
- General meetings once a month
- Specific meeting will be held as needed.
  - ACTION ITEM ➔ MnDOT will schedule on in 2 weeks @ 11/17/2016