**GLS Tech Team Meeting - Minutes**

**WEMA, WisDOT, Industry and Partners**

**Wednesday, September 27, 2023; 1:00 - 4:00 PM**

**{Hybrid Meeting – WisDOT Truax Building – Antigo Silt Loam Conference Room/Teams Virtual Meeting}**

Meeting Attendees:

**Truax Building**: Andy Luehmann - HNTB, Erik Lyngdal - WisDOT BTS, Ed Lilla – WisDOT BPD, Jake David - WEMA, Tim Peterson – James Peterson and Sons, Josh Wade – Arbor Green, Mark Polega – WisDOT BHM, David Staab WisDOT - BTS

**Virtual Attendees on TEAMS**: Brian DuPont – WisDOT BPD, Steven Maxwell - WisDOT SE Region, Jesse Hansen WisDOT, Michael Hoelker – WisDOT BPD, Steven Popke – WisDOT, Shawn Hoffman – Hoffman Construction Comp., Jonathon Engerson – WisDOT, Andy Ruffing - Musson, Jeff Maples - Vinton, Steven Nachreiner - Edgerton, Thor Wick - Integrity, Sara Herr - WisDOT SE Region, Travis Giese – Hoffman Construction, Tadd Owens - CORRE, Hans Hallanger – WisDOT, Cami Peterson – WDNR, Nicholas Perna – FHWA, Steve Doocy – WisDOT, Chad Hayes – WisDOT BPD, Brandon Lamers – WisDOT BPD, Jeremy Ashauer – WisDOT, Nathaniel Schumaker – WisDOT,

**Introduction/Welcome** – Dave Staab

* Membership updates – Added: Andy Luehmann, HNTB;

Departed: Beth Cannestra retired from WisDOT (Membership list attached)

* Meeting Notes: Brian DuPont/Dave Staab
* This meeting will be recorded for the purpose of preparing meeting minutes – any objections? None raised.
* Approval of previous meeting minutes (03-22-2023 Minutes attached). Meeting minutes from 3/22/23 were accepted with revisions in red. GLS meeting minutes will be posted at the following web page: [Wisconsin Department of Transportation Construction Materials Technical Committees (wisconsindot.gov)](https://wisconsindot.gov/Pages/doing-bus/contractors/tech-teams/materials.aspx)

# Recurring & Previous Meeting Carryover Topics:

**Environmental Topics** - Hans Hallanger and Jeremy Ashauer

* Transportation Construction General Permit (TCGP) update: New permit was signed in April and staff continues to work with WDNR on its implementation. WisDOT staff will be involved through the Standards Oversight Committee. Staff is looking to allow for revisions to the permit and allow transfer of select sites between WisDOT projects. We are updating our guidance document that we have on our erosion control website for the TCGP that's currently in progress.
	+ ECIP Form Updates : Form is being updated to increase functionality and is anticipated to be ready in January 2024
* Transportation Separate Storm Sewer System (TS4) update: Permit was agreed to by WisDOT and WDNR and was sent to EPA in July 2023 for their review. Once EPA approves it will be signed by WDNR and available on our website.

**Select Site Issues with local municipalities**: Jake David

Jake asked about issues that contractors are having with local municipalities regarding operations of select sites. Brandon Lamers explained that the WisDOT Office of General Council has provided assurance that WisDOT does not need to change the select site process. He asked that contractor work through project staff and region oversight engineers to address any issues with municipalities regarding select sites. Andy Ruffing, Musson indicated he had trouble on one of his projects but the owner of the select site did not want to upset the City officials so he incurred extra costs to address their concerns. Jake asked if the contractors needed to talk to legislators about these situations. Brandon said that it was better to address these at the project level and work upward as needed. He suggested that a subcommittee could be formed if industry was agreeable. Jake thought that was worthwhile and said he would talk to contractors and get back to WisDOT about forming a subcommittee.

**Grass Seed Mixes & Seed and Sod Specification Updates** – Mark Polega

* Seed Specification Updates : Temporary seed mixes may be overused and should be used to hold soil until permanent seeding can be established. A new seed mix 35 is going to be added to the spec for areas with high pH soils. 45 mix is the new mix we're proposing to put in, and that's an all-fescue mix, primarily a lower maintenance type of seed mix which won’t be mowed. It's tolerant of shade. There will now be 6 highway seed mixes.
* Native seed mixes: There are 6 native seed mixes that were developed for differing conditions of the soil.
* Hybrid seed mixes: Three types of hybrid seed mixtures for specialty conditions
* Hydroseeding: Hydroseeding is being better described to add it as an alternative method of application
* Seed Mix Rates. Seed Mix rates are being increased as they were historically low
* Coated Seed: Coated seed is not desired by WisDOT due to added weight of seed and should only be used if a shortage of regular seed is occurring.
* Success or failure of vegetative cover: Trying to establish criteria for success or failure of seed applications.
* Watering: Seed should be watered from when it is applied until it is established at a suggested rate of 3.5 gal/sq. yd./day. Rates may need to be adjusted for soil types and precipitation conditions.
* Seeding enhancement: Techniques to assist seed establishment are needed in the spec such as: mowing, herbicides, fertilizers etc.
* Scheduling: Permanent seeding should not be performed during summer months. If a project is completed during the summer, temporary seeding should be performed and followed by permanent seeding in the fall.

Comments about new seed spec: Josh asked if installers of native seed need to be “certified installers”? ~~Mark said yes and information will be provided on that before the spec is finalized.~~ CORRECTION (Christa Schaefer/Mark Polega): The contractors will NOT need to be certified under the standard spec. However, there is a special out there now that if the project would like they can include to require a pre-certified sub-contractor be used from the list.  This can happen for living snow fence, native seed, and planting of trees and shrubs.  Again this is only if the special is used. I don’t see this becoming part of the standard spec at this time.

Josh commented that in many urban project staging prohibits the contractor from accessing the areas of new seeding to provide watering and the spec should be flexible in these situations.

He also asked if WisDOT could raise the seed rates now (prior to a rewrite of the seed spec) in order to have better success in the 2024 construction season. He would like to be involved with the development of a “warranty spec” to determine if the risk needs to be bid in at letting or if this would be a separate pay item if it is needed. Timing of permanent seeding and placement of E-mat needs to be addressed.

Brandon asked how the seed rates are so low. Josh recalled that the seed rates included 1.5 pounds of temporary seed in all mixes except 40 seed about 15 years ago. The temp seeding has been removed after a Texas study showing the temporary and permanent seeds do not germinate well together. However the permanent seed rates were not increased when the temporary seed was deleted. Brandon asked if the contractors had ideas about how watering could be accomplished on urban projects (possibly by temp lane closures). Josh stated that for single lane in each direction projects it would not be allowed and even on two lanes in each direction it would be extremely difficult.

**QMP Subgrade Update** – Dave Staab

* Draft updated QMP Subgrade SPV was completed.
* Distributed to WisDOT and WEMA for review.
* Meeting with WEMA tomorrow (9/28/2023).
* Goal is to complete by end of the year.
* Pilot project in 2024.
* **Trench safety with QMP Subgrade** – Adjustments being made in the QMP Subgrade SPV update to address this concern.
	+ - Density tests will be conducted in trenches shallower than 5 ft and in trenches with sloped or benched protective systems in accordance with OSHA guidance (29 CFR 1926, OSHA subpart P).

**Standardized Proof-Rolling** – Dave Staab/Jake David

* WEMA taking the lead. WisDOT is reviewing a reports from River Valley Engineering and Indiana DOT regarding proof rolling.
* No additional work by WisDOT currently.

**Rock Excavation for Culvert Installations** – Dave Staab

* Sections 520, 521, 522, 524, 525, and 530 updated for 2024 Standard Specifications
* Separate bid item for rock excavation at culverts similar to Storm Sewer (Section 608)
* Was not included in an ASP-6 due to few annual occurrences.

**Excavation Waste Bid Item** – David Staab

* Project in SER had Excavation Waste bid at $0.01/CY.
* 5 of 7 projects have been had $0.01/CY winning bids.
* When there are penny bids, there is reduced incentive to closely track these items, and for a pilot project effort, that defeats the process.
* There is little motivation within the department to continue studying excavation waste.
* If excavation waste is important to contractors to reduce their risk associated with blended excavation bid prices, we would have expected different unit costs.
* Unless there is a compelling justification to continue the Excavation Waste Pilot Project, the department intents to end this effort.
* If the effort is to continue, there needs to be a champion within the department to work with industry on this effort.

Discussion regarding waste bid item: It was mentioned that a reason for the penny bid on the waste item may be that WisDOT picked the wrong project for a trial. Jake stated that there is still a need for this item to reduce the risk for the contractors if the expansion factor is not accurate and the contractor ends up hauling off more waste. Brian DuPont commented that penny bids provide no useful information to the department and do nothing to minimize the risk of the bidders who want a separate bid item to minimize their risk. Tim stated it depends on how the earth flows occur on the project. Every project is different. Brian acknowledged that projects are different, but if the project overran 1000 cubic yards of waste how is the contractor covered for your risk if WisDOT is only paying $10.00 for that overrun.

Jake said he thinks there are good points on both sides, but WEMA wanted to know how many load counts differed from the amount of waste shown on the plans. He thinks the volume of waste is good information regardless of what the bid amount happens to be. Brian said that you don’t get that load count information until after the project, and WisDOT needs to provide bidders with information before the bid.

Tim said he has read Bob Arndorfer’s report on the initial batch of waste item projects and it provides good information about what works and doesn’t work. David said that he has that document but as we continue to spec the bid item we continue to see penny bids which is deflating to the WisDOT staff.

Jesse Hansen said he had two projects in the NE Region and they were both penny bids. One was an urban reconstruction 0.6 miles long and the other was a 2 lane to 4 lane rural expansion. Shawn Hoffman stated that the biggest risk is when there is cut where 50% is staying on the project and 50% is waste offsite. Jesse said his project were all waste on the urban project and about a balance on the rural project. Shawn felt that was probably the reason for the penny bid. He stated when the projects are 50/50 and then it changes to say 40% stays and 60% is waste then that is when the contractors have a large extra cost to get rid of the waste, especially in an urban environment, like the SE Region. Shawn thought that WisDOT had picked the wrong projects because there was not a split of material that was to stay on the project and to be wasted offsite. He suggested asking WEMA for input on which projects were appropriate for this trial in the future.

Brandon suggested that we take the input from the contractors at this meeting and meet internally to determine if the trial should continue and, if so, how to choose other trial projects. David said we could do that, but he had asked about other potential project to study and he only got the one project in the SE Region last year.

Jonathon Engerson thought that measurement of the waste was an issue on all the trial projects. Size of truck, how full it was, where it was going, was the truck filled with trench excavation, etc. were all issues for project staff to track.

# New Topics:

**Review Topsoil spec that is being used in the I-43 corridor projects** – Tim Peterson

* It is pretty much a given that no existing topsoil to be salvaged has a pH of 6.0 to 7.0.  Most topsoil along Wisconsin highways is 7.0 to 8.0.
* If the pH is not going to be adjusted, a bid item should be used to lower the natural occurring pH because how does a contractor know the pH at the time of bid?
* From what he understands, elemental sulfur, aluminum sulfate, or sulfuric acid needs to be added to lower the pH.  He has no idea how it applies nor the cost, but the contractor should not have to take the risk.
* Grass will grow in topsoil with a pH greater than 7.0.

Tim Peterson stated that current spec gives the contractor the option of using salvage topsoil or bring in new topsoil but either one needs to have a pH greater than 7.0. Without having any data on the existing topsoil’s pH, all the risk is on the contractor to attain this requirement. He recommended that existing soil information be provided pre-bid. He also asked for the rational for changing the pH when chemicals are added to the topsoil the pH change tends to be temporary and over time the soil reverts back to the pretreatment pH.

Mark agreed and said that we need other tools to achieve the vegetative requirements. Josh said the money is better spent elsewhere from trying to temporarily change the pH. If there's another tool in the toolbox to use with extra fertilizer and extra seed that would help maintain this long term, that would be a better use of money than a temporary change to the pH level of the soil. Mark said the attempts to change pH were just to get better vegetative cover, not to focus on a long-term adjustment of the pH level.

There was a long discussion on if WisDOT could see how the increased seed rates worked with the possibility of enhancing with fertilizer applications, before attempting to change pH levels. Josh said there was excessive risk for the contractor to guarantee vegetative cover. Brian asked Josh what he would recommend to minimize the contractor’s risk. Josh said changing the pH is expensive and if that was required, contractors need the existing pH in the soils of the project. He thought that changing the pH was the most expensive alternative and agreed that trying higher seed rates and more fertilizer applications were a more cost effective first step.

It was discussed to see about the possibility of forming a statewide sub-committee to help formulate techniques to be implemented for improving the establishment of vegetative cover.

**Separate items for asphalt and concrete pavement removal, not included in common excavation** – Jake David

* Concrete removal as separate bid item, not included in common excavation – pilot projects were completed to study this and decision was made not to include concrete removal as separate bid item.
* WisDOT concerns:
* Extensive effort to calculate a volume in design.
* Extensive effort to measure and document in the field.
* Uncertainty in estimating (field exploration, as-builts, etc.)

David recapped the WisDOT position above and asked for comment. Shawn Hoffman stated all the states around us have separate bid items, and by not having them it causes blended prices for pavement removal and earthwork in common excavation. WisDOT has all the as-builts and should be calculating the volumes so that individual contractors don’t all need to perform that effort separately. He asked which project was used as a pilot. Johnathan Engerson recalled that was a part of all the “waste item” projects to get a better handle on the amount of waste that needed to be hauled offsite. He stated that the additional effort to verify thicknesses of concrete and asphalt overlays with certainty is expensive and that WisDOT has decided to accept the risk bid in by contractors instead. Shawn thought that a separate pilot from the waste item projects should be conducted. David stated if this were to be studied further WisDOT would need someone to spearhead that effort. He would check into interest after the meeting.

**Separate items for EBS and EBS backfill** - Jake David

Contractors are requesting separatebecause this will reduce the number of tasks that are blended in the removal items. This is a particular problem on urban projects where it is difficult to dispose of poor soils removed as part of the EBS. David will check with staff on their perspective and report at the next meeting.

**Culvert Pipe Lining** – Josh Wade

* SPV updates needed, as current item is out of date and not constructable.
* Specifically, the requirements for the mix design of the grout, the pouring in lifts, the blocking, and project timeframes for these bid items don’t track with the empirical evidence found in the field.  (Josh Wade)

Josh mentioned that it is becoming more difficult to obtain fly-ash to grout culvert linings and that they tried to use slag, and that didn’t work well. Ed Lilla said the fly-ash was added back in 2018 to address “blow-outs” they were having with linings and he acknowledged that the spec may need to be adjusted due to the limited availability of fly-ash.

**Rock excavation at inlets, manholes and catch basins** – Jake David

* These items are typically deeper than Storm Sewer (Std. Spec. 608), and there are provisions for rock excavation in Storm Sewer.
* Adjustments were recently made to the include rock excavation for culverts.
* Does it make sense to include rock excavation provisions for inlets, manholes and catch basins (Std. Spec. 611)?
* Contractors perceive this potential adjustment as reducing their risk.
* Has this been an issue on prior projects?

This has not been a large problem for contractors as they are paid for the length of pipe which includes extending to the center of the structure. For inline structures they are covered, but for end of line MH or catch basins, the only go to center of structure. Ed Lilla mentioned he would look into clarifying this between spec sections so that it was covered appropriately.

**Contractors would really like DOT to provide road centerline data on all projects, including local program projects** – Jake David

**Response from Drew Kottke, Design & Technologies Technology Chief (8/30/2023)**: *Thank you for the feedback on providing alignment data for construction projects. Construction Data Packets (CDP) at a minimum, include a LandXML format alignment file. At this time, we require CDPs on state projects only. The consultant industry has expressed concerns over the added work that CDPs add to the design phase; however, the department continues to hear from the construction community that CDPs add value and it is time we include them on local program projects too. We will discuss the added benefits and potential implementation of CDPs on local program projects.*

Jake asked if WisDOT could at least provide centerline data for contractors to use for their layout. Michael Hoelker indicated that may be possible to provide for all projects and WisDOT could check into that.

# Other/Additional Topics -All

**Next Meeting:** March 20, 2024 - 1-4 PM (Virtual/In-person TBD)

(There is a let on 03/18/2024. No concerns raised with meeting on 3/20/2024.)

Meeting ended at 4:15PM

# Attachments:

* GLS Membership List
* Previous Meeting (03-22-23) Minutes -Virtual meeting

**GLS 09-27-2023 Minutes.docx**

**DAS**