



Wisconsin Department of Transportation

Proposal 15
I-94 N-S Freeway

Project 1032-10-72	Projects 1032-14-71 & 1032-14-72
STH 50 Interchange	STH 158 Interchange
Mainline and Ramps	Local / Crossroads & Mainline and Ramps
Kenosha County	Kenosha County

Responses to Pre-bid Questions Submitted

Question 1: What is the extent of the limits for the Excavation for Structure item for these MSE Retaining Walls?

Response: Estimated “limits of excavation” for the retaining walls are shown on the cross sections and retaining wall plans. All excavations required for the retaining wall construction, including EBS and sloping behind the mechanically stabilized earth backfill zone needed to maintain a safe work area are incidental to the Excavation for Structures Retaining Wall bid items.

Question 2: Is the EBS beneath the MSE Walls really incidental to the Excavation for Structures item? This is not typically the way EBS has been handled in the past. EBS Should be measured and paid separately unless it is a uniform section that can be easily quantified.

Response: EBS beneath the MSE Walls is incidental to the Excavation for Structures Retaining Wall items as shown in the plans. A thorough geotechnical analysis was completed to determine the required limits of EBS which are detailed in the plans and quantifiable.

Question 3: Is the EBS backfill beneath the MSE Walls really incidental to the Excavation for Structures item? The structural plans indicate a small area 1.5 feet thick beneath the reinforcement zone is to be paid as Base Aggregate Dense, 1 1/4-inch. Which is correct?

Response: The backfill for the “limits of excavation” beneath the MSE walls will be paid for as Base Aggregate Dense 1 ¼-Inch and Backfill Granular as shown on the retaining wall plans. The estimate of quantities for these bid items are shown on the retaining wall plans. The cross section sheets incorrectly imply that all retaining wall backfill is incidental to construction. The note in the upper right corner of cross section sheets 1070 through 1081 should read “Estimated Excavation and Backfill Limits for Retaining Wall (Incidental to Construction)”. The only backfill that is incidental to the retaining wall construction is the Mechanically Stabilized Earth Backfill in the reinforced zone behind the wall.

Question 4: Is the triangular fill/backfill behind the MSE Wall reinforcing zone really incidental to the Excavation for Structures item? This is not typically the way this backfill has been handled in the past. It should really be part of the roadway excavation items and filled with compacted fill.

Response: **The excavation of the triangular area behind the MSE Wall reinforcing zone is incidental to the Excavation for Structures Retaining Wall items as shown in the plans. The backfill of this triangular area IS NOT incidental to the retaining wall construction. Use Backfill Structure to fill the void between existing embankment and the Mechanically Stabilized Earth Backfill. This quantity is not shown on the retaining wall plans per direction from WisDOT Bureau of Structures, but it is included in the miscellaneous quantities in the upper right corner of plan sheet #500.**

Question 5: What type of material is specified for the backfill for the EBS areas beneath the wall? If groundwater is encountered in the EBS areas, perhaps a larger crushed stone material is desirable as opposed to a granular backfill type item. How will this be addressed?

Response: **Both Base Aggregate Dense 1 ¼-Inch and Backfill Granular are shown on the retaining wall plans to backfill the “limits of excavation” areas beneath the retaining walls. Groundwater was not encountered in the structure borings in the area of these excavations.**

Question 6: Why do some MSE Walls have an embedment depth of 3’4” and others 1’6”? Should these be the same for all walls?

Response: **Geotechnical analysis determined that an embedment depth of 4’4” MIN was required for some of the MSE retaining walls located on top of a 3:1 slope.**

Question 7: In the earthwork chart for the HWY 50 portion of the project (Sheet 501), Note 3 indicates that EBS is to be backfilled with Select Borrow Special. Note 7 indicates EBS is to be backfilled with Select Crushed Material. Which is correct? (It seems that EBS on the 158 portion of the project clearly indicates backfill with Select Borrow Special.) Also, expanding the fill by a factor of 1.3, then converting to tons by using a factor of 2.0 probably overstates the total tonnage.

Response: **Note 3 is correct. Note 7 should also read Select Borrow Special to be consistent with Note 3 and to be consistent with how the contract quantities are estimated.**

Question 8: In the miscellaneous quantities for the Highway 50 portion of the project there is 63,000 TN of Select Borrow Special listed as undistributed (Sheet 533). Is this correct? Perhaps this is meant to backfill EBS voids. If it is undistributed, this is a very large volume of material which could total as much as \$1,000,000. These types of undistributed items create potential for confusion during the bidding and construction process.

Response: This material is for backfilling the Undistributed EBS voids per Sheet 501 Note 3.

Question 9: For Retaining Wall R-30-316: What is the elevation of the top of the sheet piling? What does the retaining wall section look like north of the north terminus of the sheet piling? Is there still an over excavation area to make room for Base Aggregate Open Graded? Does the lower portion of the MSE Wall backfill still need to be Base Aggregate Open Graded? Without sheet piling, how do we keep water out? Perhaps Breaker Run or Select Crushed Material might work better as a subgrade stabilization material.

Response: The sheet piling should be 1' above the subgrade elevation. The retaining wall section remains the same. The normal water level is 692', so it appears that the north end will be above this level.

Question 10: Why do some MSE Retaining Walls have an Excavation for Structure item and some do not (R-30-17,18,20 have no excavation item)? All MSE walls should have an excavation item so that the wall price is only for wall construction. Excavation volumes vary widely from wall to wall. Placing undercut and granular refill as an incidental item to the structure excavation item is not really a fair way to handle EBS.

Response: The special provision for item Wall Concrete Panel Mechanically Stabilized Earth Special, SPV.0165.403, includes a section on excavation and backfill and the payment of the item includes the excavation.

Question 11: The EBS beneath MSE walls is filled with granular backfill on the Highway 50 project and dense graded base 1-1/4" on the Highway 158 projects. Can this be made uniform throughout the project?

Response: Base Aggregate Dense 1 ¼-Inch is typically specified for backfill beneath the walls. Only walls R-30-27, 28 and 29 also include Granular Backfill to account for a unique condition at these locations. Bid per plan.

Question 12: The STH 158 Mainline plan shows a total quantity for Dense Graded Base ¾ Inch of 55,580 TN. I can only find 3540 TN in the Aggregate Base table on sheet 284. Where is the rest of the material for this portion (STH 158 Mainline) of the project?

Response: 1032-14-72 Misc Qty is correct, but the estimate is wrong. There are two lines that say ¾-inch (item 305.0110). The second line item should be the 1 ¼-inch instead (item 305.0120).

Question 13: Will there be rover/gps required for this project? This would eliminate the need for slope staking which was done on the Mitchell Project. Who is responsible for the survey staking of water and sanitary utilities? What is required for the red tops in the segment with an asphalt base (mainline)? Local streets? What is required for staking of signs and pavement markings? What is required for staking coordination between the contractor and the DOT administration? Is the

procedures going to be the same as for the Mitchell Project with similar timelines/detail for checking grades of the sub-grade, etc.? What is the scope of work for 2011?

Response: **This issue is addressed in Addendum #2.**

Question 14: It looks like the E-10 and E-3 on the Hwy 50 plans has the AC either 64-22 and 64-28. However, on the Hwy 158 plans the E-10 and E-3 is 58-28. Is this correct? Is there a reason for the different AC's for similar items?

Response: **Bid per plan.**

Question 15: The median cross over are called out to be placed in 3 lifts. Due to past yielding issues with the subgrade on other project could these medians be put in as one 25mm lift?

Response: **Bid per plan.**

Question 16: Under the pavement repair items it states that anything under 100' is paid per this item. What if an area is over 100'? Under which item is it paid?

Response: **Typically any area over 100' would fall under the concrete pavement specifications. Additional pay items to be negotiated at that time if applicable.**

Question 17: The temporary surface item on 122nd Ave and other temporary surface on the job (not including the widening on the mainline) how deep is that? There is only a cross section for the mainline widening.

Response: **Plan quantities are based on a temporary pavement repair of 5" Asphaltic Pavement Temporary on 12" Base Aggregate Dense 1 ¼-Inch.**

Question 18: The E-3 chart in the beginning of the plans call for asphaltic surface and asphaltic surface temporary to be in one lift using 25mm. Some of the areas on the plan that call for asphaltic surface is in parking lots. Is it correct that we are to use E-3 25mm in these areas per the chart? Also, per this chart the asphaltic base would be a E-3 mix with PG6-28 AC. However, the specifications have the asphaltic base as a E-1 25mm with PG64-22 AC. Should we follow the specifications?

Response: **Yes, bid per the contract special provisions.**

Question 19: In the summary of quantities for E-10 on project 1032-14-72, it states that there is approximately 1700 tons of material in both directions in the shoulders/median. What areas are they referring to? I didn't see any areas that get E-10 except the crossovers but that appears to be a separate line.

Response: **This is for the temporary shoulder and median used during the ramp cross over. This will later be removed and replaced with concrete. The rest of the E-10 is for IH-94 cross over on the north end of the project from 394+00 to 406+00 (and beyond to match existing). The misc. quantities are shown correctly in the plan.**

Question 20: On Hwy 50 and the temporary ramps it calls for E-3 6". Looking at the chart that thickness would be a single lift of E-3 25mm. Is this correct?

Response: No. The table states one lift for 6" Asphaltic Surface Temporary. The ramp connections should be made using 6" HMA Pavement Type E-3 per the typical sections.

2.5" Upper Layer 12.5mm Nom Max Gradation PG64-28

3.5" Lower Layer 19.0 mm Nom Max Gradation PG64-22

Question 21: Sheet #43 shows the pay limits of the vane drain areas in the cross hatched section of the plan representing the actual vane drain lengths. The notes below the diagrams seem to suggest that the concrete is to be poured integral with the rest of the panel. Please clarify what the expectations are for the limits of the vane drains and how if necessary it is to be constructed integral with the surrounding concrete.

Response: The pay limit of the drain is denoted in the cross hatched area on the detail. The drain will be poured integral with that particular panel or panels of concrete shoulder, depending on where the thru lane joints are located. The concrete outside the cross hatched area will be paid for as concrete pavement.