



ADSC/WSDOT Joint Meeting
 January 24, 2019, 8:30 A.M. – 11:30 A.M.
ADSC/WSDOT Sign-In Form

Team Members

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¹ Team co-chair

Guest Sign-in

Attendee	Company	Phone	E-mail
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1. Welcome/Review of Agenda

Michael Rosa opened the meeting and everyone introduced themselves. Mike then reviewed the agenda for the meeting.

2. Approval of Minutes

Mike asked the group if there were any revisions needed to the November 11, 2018 meeting minutes. No revisions were suggested. Mike will post the minutes to the internet.

3. Changes to Concrete Filled Steel Tubes (CFST) Special Provisions

Amy Leland presented draft specifications for Concrete Filled Steel Tubes. Concrete Filled Steel Tubes are being used more to reduce shaft diameter while meeting design requirements for stiffness. Spec elements reviewed included cleaning and inspection, manufacture of casing, and field slicing. The specifications require that after excavation the internal surfaces of the shaft permanent casing shall be clean as verified by visual inspection. Discussion was had on how practical visual inspection would be at depth and potentially underground water. The team discussed potential solutions including exempting inspection from installations that could be assured would be clean based on soil type and installation method.

Action Items: Amy will suggest additional changes to address the inspection issue.

4. Modification to SS 6-19.3(3)I

Mike asked the group how the infiltration rate for compliance with SS 6-19.3(3)I, Required Use of Slurry in Shaft Excavation, was being determined in the field. The specification requires that slurry be used when the infiltration rate reaches 12 inches in 1 hour. The specification does not consider shaft diameter and the work does not stop for a reasonable measurement while at the same time water is being removed by the grab. Jim asked for suggestions on a verifiable method for determining when slurry should be added to the excavation. This topic will be revisited at the next meeting.

Action Items: Jim will evaluate suggestions.

5. Constructability Review – SR520 Low Overhead Cut Wall at 10th Ave

This item was deferred to the next meeting.

Action Items: None

6. Shaft Inspection Form

Jim presented a shaft inspection form that will be used by WSDOT inspection staff. Currently there is not a standardized form. The form included a pour log to be filled out by the inspector. The group felt that the Contractor pour log that is required by specification should be enough. The amount of communication required during the work for the inspector to adequately fill out a separate log would likely disrupt the operation. Jim asked the group for comments. The form will be revisited at the next meeting.

Action Items: Jim will evaluate any comments received.

7. ADSC/WSDOT Joint Training – Spring 2019

The Joint Training will be deferred to next Fall.

Action Items: None

8. Action Items

Force Account Obstruction Removal rates and cost/time

Deferred to next meeting.

Project: US 101 Elwha River Bridge – Shaft Installation in Weak Rock – Review Additional Geotechnical Information

This item was deferred pending new information.

Future Projects Update

Amy presented a listing of future projects that would likely include drilled shaft work for bridges or walls. This will be an ongoing update as new projects are added.

Other Topics

Shaft Dimensions on Plan Sheets

Amy told the group that the shaft dimensions, both oscillator and conventional, were going to be removed from plans as they are already in the specifications. Amy asked for feedback. Some felt that having the information in both places was beneficial. Amy will reevaluate and let the group know the outcome.

Rock Socket Dimensions

Rock socket dimensions were discussed. The contract plans do not typically show how the interface at the top of socket and bottom of casing. The plans also typically show the socket dimension to be the same as the outside diameter of the casing. This is not practical as the drilling equipment must fit into the inner diameter of the casing. The group asked for clarification on an acceptable diameter reduction for the rock sockets.

This will be added to the agenda for next meeting.

Next Meeting March 14, 2019



ADSC/WSDOT Joint Meeting
 September 13, 2019, 8:30 A.M. – 11:30 A.M.
ADSC/WSDOT Sign-In Form

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Guest Sign-in

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Chappelle, Chase	Michels		cchappelle@michels.us

1. Welcome/Review of Agenda

Michael Rosa opened the meeting and everyone introduced themselves. Michael then reviewed the agenda for the meeting.

2. Approval of Minutes

Michael asked the group if there were any revisions needed to the January 24, 2019 meeting minutes. No revisions were suggested. Michael will post the minutes to the internet.

3. Rock Socket Step vs. Rock Strength

Michael Rosa presented the rock socket options that had been emailed out previously to the group. One option showed a rock socket the same diameter as the casing extending into rock. The second option showed a smaller diameter CFST going into the rock and the full sized CFST stopping at the rock layer. The first option is preferred as it is difficult to place the smaller casing down in the shaft. Weak rock (3000 to 4000 psi limit) can be drilled through fairly easily. Projects with stronger rock would need to be presented to the ADSC on a case by case basis for recommendations. Typically, when going into rock, a 6 inch reduction in shaft diameter is desired to better fit the tooling within the casing. The designer should consider allowing for a reduction in cover on the cage in the reduced section. The standard drilled shaft details should show a step in the cover when drilling into strong rock layers.

Action Items: None. Projects should continue to be brought to ADSC if there are any questions regarding constructability.

4. Centralizer Detail with Large Clear Cover

Amy Leland presented an issue with our centralizer detail when the cover to the cage grows to ~1'-0". A recent job had a large cover to accommodate a reduced shaft diameter for the rock socket. These centralizers did not hold their shape.

The ADSC group mentioned that the rebar cage comes with the centralizers on them, so issues with the design should be addressed by the rebar manufacturer. Chuck Olney from Harris rebar had assisted in the current centralizer design. Chuck may be retired.

Amy asked if anyone has experienced any issues with the centralizers, and none were mentioned.

Action Items: None for the group. WSDOT to seek guidance from Harris Rebar.

5. Cage Reinf. Detailing – Contractor Preference

After the discussion during the last topic, Amy realized that this was not the correct group to solicit opinions on this topic.

Action Items: None.

6. Shaft Special Provision – Shaft Obstructions

Michael presented the proposed Special Provision on shaft obstructions for Jim Cuthbertson. The Standard Specification for Removal of Shaft Obstructions is intended for unknown obstructions and pays for them by force account to track time and equipment used. The East Trent Bridge Project in Eastern Region has a high risk of encountering existing timber piles from a previous bridge at the same location. However, there are no records of the bridge, and the pile locations are unknown. The Special Provision was written to pay for the removal of existing timber piles encountered during shaft installation as part of the Remove Existing Bridge pay item because they would not be considered obstructions. The issue pointed out is that this is a lump sum item and will require the Contractor to include in their bid based on an unknown quantity. It is therefore difficult to quantify, potentially passing the risk to the driller. The ADSC group feels that they should be considered an obstruction and paid through the Removal of Shaft Obstruction item. Alternatively WSDOT could add a line item for the removal and pay for the removal per each. However, when there is >25% change in the plan quantity, then a CO would be triggered which may result in tracking force account work anyway.

Action Items: The recommendation will be provided to the Specification Engineer for possible revision.

7. Action Item (a) Changes to Concrete Filled Steel Tubes (CFST) Special Provisions

Amy presented the modifications that WSDOT will be making to the CFST Special Provisions. Some changes were based on recommendations at the last ADSC meeting. These changes were made to the cleaning and welding sections of the Special Provisions.

A question was raised if the cleaning process had to be a separate event. That is how the Special is currently written. Amy said that it did not have to be a separate event. Eliminating the first few words of that section would fix this issue.

No other comments were made to the changes presented.

Malcom mentioned that he would be willing to present their lessons learned on the construction of their first CFST project, the Chehalis River Bridge. That project had multiple sizes of CFSTs, including the largest ever designed at 10'-0" diameter and 2" casing thickness.

Action Items: Amy will slightly modify the cleaning portion of the Special again. Malcom will present on their lessons learned at our next meeting.

8. Action Item (b) Modification to SS 6-19.3(3)I

Michael presented the updates that Jim made to the slurry specification. Since the revisions were not sent to the group prior to the meeting, the Contractors were not prepared to comment on them.

Action Items: Michael will send the revisions to the group after this meeting for review.

9. Action Item (c) Shaft Inspection Form

Michael presented the updated shaft inspection form that Jim made.

There were no specific comments from the group. The consensus was that TIP testing is more expensive than CSL and will most likely only be used when required per contract.

Action Items: None.

10. Action Item (d) Force Account Obstruction Removal rates and cost/time

Tom mentioned that he had sent a request out to those in the industry to see if this issue still needs to be addressed. He did not receive any response, so recommends removing from action item list.

One contractor mentioned that he would like to have a summary made on this topic.

Action Items: Tom to pursue again.

11. ADSC/WSDOT Joint Training – Spring 2020

Tom will reach out to the industry, and will put something together for our next meeting. We will need presenters and projects showing challenges as well as successes.

Action Items: Tom to contact industry, book a room, and begin planning.

Other Topics

No other topics were presented.

Next Meeting: November 14, 2019 (Thursday)