

# MEETING NOTES

## MTO/ORBA Structures Technical Subcommittee

<b>Date</b>	September 12, 2024
<b>Time</b>	10:00 am to 1:00 pm
<b>Meeting Hosted By</b>	MTO
<b>Location</b>	Microsoft Teams

### Attendance:

#### ATTENDEE

Alfredo Maggio  
 Doubra Ambaiowei  
 Luigi Chiodo  
 Mike Desautels  
 Steven D'Orazio  
 Mike Doupe  
 Jesse Hopkins  
 Bart Kanters  
 Richard Mulder  
 Mark Podhorski  
 Tim Smith  
 Jon Vallieres  
 Cole Zanchetta  
 Jenn Meleschuk (co-chair)  
 Mohammad Aqel  
 James Combe  
 Jeffrey Giroux  
 Mireya Hidalgo  
 Walter Kenedi  
 Stephen Lee  
 Joel Magnan  
 Melissa Titherington

#### ORGANIZATION

Graham Bros. Construction Ltd.  
 ORBA  
 Alliance Verdi Civil Inc.  
 Atlantic Industries Limited  
 Clearwater Structures Inc.  
 McLean Taylor Construction Ltd.  
 Powell Contracting Limited  
 Concrete Ontario  
 Decast Ltd.  
 Bot Construction Ltd.  
 Cement Association of Canada  
 EllisDon (Looby Construction Limited)  
 R.W. Tomlinson Limited  
 MTO, Contract Management Office  
 MTO, Engineering Materials Office  
 MTO, Structures Office  
 MTO, Construction West  
 MTO, Contract Management Office  
 MTO, Structures Office  
 MTO, Engineering Materials Office  
 MTO, Engineering Materials Office  
 MTO, Engineering Materials Office

### Introduction / Announcements

- Dale Gaston has left the committee.
- Mike Desautels has joined the committee.
- Rebecca Li has left the committee.
- Jenn Meleschuk has joined the committee and is now the co-chair from MTO.
- Mireya Hidalgo has joined the committee.

- Stephen Lee joins the committee today as a guest.

## Open Items

### MAY 24-1, OPSS 366 – CONCRETE PAVEMENT AND BASE FWD TESTING

#### Description:

- **OPSS 366 identifies the need for pre-construction concrete base repairs identification using a Falling Weight Deflectometer (FWD). ORBA put this item forward to propose changing or eliminating the FWD testing requirement from this specification for highway rehabilitation projects over concerns about the current condition of Ontario highways typically requiring concrete base repairs, evaluation and testing procedures not being followed, and delays to construction projects caused by testing.**

#### Discussion:

##### *May 2024:*

- ORBA's position is that the new OPSS is not fair with a rigid pass/fail standard when work includes factors outside their control (e.g., existing base and concrete). Amendment proposals include lower acceptance limits (less than the 70% currently specified), possibly a graduated acceptance criterion, sampling on the new slab side only, and a temperature correlation factor.
- MTO has already taken some specific action with respect to testing concrete pavement and base where testing was not being performed according to the standard. Steps have been taken to ensure compliant and certified testers and equipment are used according to the test procedures. Test locations are to be marked so referee testing is taken in the same place.
- Discussion about what the load transfer test is testing for and why the limit is 70%. Less than 70% cannot be accepted by MTO and the value may be impacted by existing concrete, base, dowel placement, slab thickness, etc. All parameters have to be correct to achieve load transfer.
- MTO and ORBA agree that contract scope creep is an issue. MTO is investigating alternative data collection methods that may improve design estimates of repair work to be performed.

##### *September 2024:*

- MTO provided a response to ORBA between meetings, but ORBA does not believe the response addressed all their prior concerns.
- FWD testing and load transfer efficiency requirements have been in AASHTO and ASTM specifications for about 40 years and have been generally consistent. Testing concrete load transfer efficiency is a proven method and is a pre-engineering decision process for whether to replace or repair concrete. It is also the same criteria used for acceptance of the work. FWD testing is quite slow, so it is a challenge to test the entire joint of all joints within a highway construction section.
- MTO investigations and testing have identified challenges with the quality of pre-engineering work of some new engineers; certification of FWD operators;

- inspection equipment methods available generally, and the sensitivity of FWD testing to plate placement specifically.
- Where pre-engineering has determined an acceptable course of action (repair or replace), the percentage of construction failures is low. Where pre-engineering was not as it should have been and repairs are attempted on slabs that should have been replaced, there is a corresponding high percentage of failure. MTO is aware of the issue and is working on contract specific resolutions.
  - MTO is investigating potential technologies to better scope work, including 3D GPR scanning and high-speed FWD. FWD operator certification is also being investigated; MTO has observed instances of critical components of equipment being missing and operators not being aware that they were operating defective equipment. Methods and contract language to establish consistent FWD plate placement are being worked on to ensure tests conducted at different times are comparable.

#### Action Items:

- ORBA will follow up with FWD operators.
- MTO will continue research into alternative pre-engineering survey technology and operator certification.
- MTO is reviewing the need for proficiency PROGRAMS FOR FWD OPERATORS, as well as any further clarifications to testing protocols.

### **MAY 24-2, OPSS 517 – FLOW RATES FOR IN-WATER WORK**

#### Description:

- **ORBA put this item forward to express concern that MTO is directing contractors to determine the flow rates in order to estimate the requirements for water diversions during tender estimating.**

#### Discussion:

##### *May 2024*

- ORBA's experience is that how a flow is to be managed is the contractor's responsibility, but historically the MTO has provided some information about what flow rate may need to be managed in the contract documents. A recent contract after the new publication of OPSS 517 did not provide flow rates and the bid enquiry response was that flow rates would not be provided. ORBA is concerned that flow rates may not be provided going forward.
- MTO will investigate the specific contract in question. However, noted it may be isolated and to bring further concerns to MTO's attention as applicable.

##### *September 2024:*

- MTO has not made any policy changes with regards to providing flow estimates for the temporary flow passage system items. Flow estimates should be provided in SP517F01 for any temporary flow passage items that are in the contract. The issue on the specific contract investigated appears to be contract specific and not a result of a change in MTO policy. Temporary flow passage

system items were not included in the contract; when the item is not included, flow estimates are not required. The item and a flow estimate should have been included because of CDED criteria 3 – a dewatering or temporary flow passage system is required to rehabilitate a bridge or structural culvert. A project specific decision may have been made, or there could have been an error in contract preparation.

Action Items:

- Item Closed.

**MAY 24-3, COMPENSATION FOR MOBILIZATION COSTS FOR RAPID CONCRETE BASE REPAIRS**

Description:

- **ORBA put forward this item at the end of the meeting because members have encountered an issue where a contract specifies Type A concrete removal and rapid set concrete replacement for concrete pavement patching but after asphalt removal, no concrete repair is required and the quantity for the payment item is 0.**
- **ORBA notes the small closure times permitted requires mobilization of all equipment and materials expecting the quantity of work identified in the contract documents. When the quantity is not accurate, there is no contractual mechanism for payment.**

Discussion:

*May 2024*

- ORBA notes that rapid hardening concrete and proprietary materials need to be purchased and on-site ahead of removal of asphalt or it will not be available for the repair within traffic closure time. A method of payment for these materials and mobilization costs for labour/equipment is requested.

*September 2024:*

- ORBA received contract information the morning of the meeting and provided four contract number examples for the MTO to review.

Action Items:

- MTO will review examples provided and investigate the potential for a mobilization item and a work item for this type of work.

**NOV 23-1, SUPPLY CHAIN DELAYS AND IMPACTS ON SCHEDULES (RCP ACCEPTANCE)**

Description:

- **This item was put forward by ORBA at the Contracts and Documents Subcommittee. MTO proposed that technical discussions about concrete acceptance requirements take place in the MTO-ORBA Structures Technical Subcommittee.**

## Discussion:

### *November 2023*

- Concrete supply challenges include fewer numbers of suppliers outside of the Greater Toronto Area as well as suppliers choosing to not supply concrete for MTO projects. Of 88 Concrete Ontario members, only 11 will supply MTO contracts.
- ORBA suggests the concrete specification requirements could be changed to attract more suppliers or permitting contractors to use mobile mix plants.
- MTO has not substantially changed concrete requirements from when more suppliers provided concrete and intends for specification requirements to be related to increased material durability. Volumetric mix trucks are being actively investigated and MTO will be meeting with industry soon to discuss research.
- Concrete Ontario has GPS located all 270 concrete plants and a map is available on the website. Location of supply should now be easier.

### *May 2024:*

- Concrete Ontario does not anticipate any raw material shortages for 2024. Supply issues to MTO will be from member evaluation of risk involved with bidding on MTO contracts.
- ORBA suggests the concrete specification requirements could be changed to attract more suppliers or permitting contractors to use volumetric mixing trucks because MTO contracts are paying far above the market rate per m<sup>3</sup> of concrete and there are few available suppliers.
- MTO is currently conducting some trials with volumetric mix trucks for non-structural concrete and has concerns with uniformity of concrete being produced that's discharged from the truck. A second trial is being conducted with a second supplier.

### *September 2024:*

- Concrete supply in general is down about 8%. Concrete Ontario doesn't see a foreseeable issue with the concrete supply. Steel plate for bridge girders seems to consistently have a 2–3-month delay between placing an order to getting a rolling date. Girder fabrication is generally 5-6 months and can be an issue for some new bridges.
- Volumetric mix trucks have previously been discussed but the OPSS 1350 draft provided to ORBA does not include volumetric mix trucks; ORBA would like to know if MTO is still considering trials and possibly accepting volumetric mix trucks in the future. ORBA reiterates concerns about concrete waste related to patch work, supplier reluctance to supply MTO contracts, and greenhouse gas emissions.
- MTO would still like to conduct volumetric mix truck trials for non-structural components and is looking for suitable contracts to conduct trials. Requirements for volumetric mix trucks would be by Nssp modifying OPSS 1350. MTO stresses that consideration is only for non-structural applications because MTO still has technology concerns including uniformity of mixes, challenges with cementing materials because volumetric mix trucks can't have 2 types of cementing materials, and some trucks can't mix 19mm aggregate mixes.

- Trials will ideally include exposed conditions for extended performance monitoring, so trials may take 2-3 years.

Action Items:

- MTO will continue trials of volumetric mix trucks.

**SEPT 23-2, CONCRETE SPALLING ISSUES AND ACCEPTANCE SPECIFICATIONS**

Description:

- **ORBA's position is that there is no contractual requirement to resist chemical attacks nor is there any specific durability specification pertaining to salt or any other chemical. ORBA believes it is unreasonable for MTO to suggest that it is the contractor's and supplier's responsibility to make sure the concrete mix design is durable to a chemical that is not specifically identified.**
- ***OPSS 1350.04.01.01 "The concrete mix shall be designed to provide adequate strength and durability for the intended use and to meet the requirements as specified in the Contract Documents."***
- **904.08.01 also refers OPSS 1350, "Acceptance shall be according to OPSS 1350 and this specification..."**

Discussion:

*September 2023*

- ORBA noted the issue seems to be particular to concrete barrier, sidewalk, and curb, and would like to mitigate the issue (sealers) until MTO determines the specific cause. ORBA noted the following concerns:
  - The barrier seems to only spall on the traffic face so de-icing chemicals are suspected.
  - The sole purpose of the barrier is to prevent errant vehicles from leaving the highway and MTO shouldn't refer to OPSS 904 and OPSS 1350 to extend the purpose of barrier to resist de-icing chemical attack.
  - MTO contracts do not specify what chemical will be applied and how it will react with the concrete. Concretes exposed to severe chemical attack are typically epoxy coated.
  - Concrete has passed RCP and AVS tests and many examples were built in staged construction so at least half the barrier has had sufficient time to cure.
- MTO commented that a purpose of concrete is to be durable in its environment, RCP and AVS are specified for durability, proper curing is an important factor, and sealers may not be an effective solution based on data to date.
- The specific failure mechanism needs to be determined first before any further discussion can occur.

*November 2023:*

- MTO and ORBA repeated their positions from the September 2023 meeting.

*May 2024:*

- MTO held an industry outreach meeting in February 2024. Scaling was identified in 23 cases over the past 5 years, so the issue is not as widespread as initially

thought. MTO's experience is that concrete sealers do not solve the problem but just delay observation of the problem.

- MTO is continuing work on site investigations and winter maintenance practices, as well as lab testing to identify potential cause(s) and will follow up with ORBA when results of investigations are complete.
- MTO is also proceeding with a related HIIFP research project. ORBA would like to see the terms of the research proposals.
- Discussion about higher supplementary cementitious materials (SCM) content for concrete not exposed to chlorides that was also discussed at the industry outreach meeting. Any specifications changes related to SCMs will not be complete in 2024.
- ORBA suggests higher strength concrete for barriers/sidewalks and states MTQ specifies 50MPa for barriers, as that some DOT's specify sealers.

*September 2024:*

- MTO sent ORBA HIIFP topic 4 about research related to slag content between meetings. The topic was recently awarded to University of Toronto and should start later this month. Research will investigate different slag content and the impact of slag content on salt scaling and freeze/thaw performance.
- ORBA would have liked to see the research include higher slag percentages and investigate different de-icing chemicals. The scope of research appears to be less than discussed at the stakeholders meeting. This research proposal was issued prior to any discussion at stakeholder meetings and 2025 HIIFP proposals are due soon so future research may include additional scope.
- ORBA asks for specific de-icing chemical compositions being used and application rates from Area Maintenance Contracts (AMC).
- Draft OPSS 904 includes a clause about an approved list for concrete sealers. MTO position on sealers has not changed, they were already permitted for certain applications in the specification but did not say what sealers to use. The new clause is to notify contractors of the approved product list.

Action Items:

- MTO will look into whether INDUSTRY would be permitted to meet with HIIFP researchers for HIIFP projects, OR alternatively PROVIDE INDUSTRY feedback TO THE RESEARCHER.
- MTO will review what has been presented and see if there is more/new information about de-icing chemicals to share.

## **SEPT 23-3, OPSS 914 RESPONSE TO TCP COMMENTS**

Description:

- **Areas of disagreements to be discussed.**

Discussion:

*September 2023*

- ORBA asked if it will be a unified 2-layer system on future contracts.

- It is a requirement of the July 2023 specification that is going on contracts advertised after specification implementation.
- ORBA asked for clarification about TCP comment number 3 “Also concern about the no rain or moisture on the deck for 72 hours prior to the start of the waterproofing but is that realistic given the shortened time frame to get work completed.” The response was that this has always been a requirement. ORBA believes this was about air curing. Is the moisture requirement to air cure for 72 hours, or no precipitation for 72 hours?
- MTO will have to take this back for review.
- ORBA believes the requirement to empty the kettle and start with a clean one each time is wasteful. The owner may take QA samples at any time to determine if there is burned material or if it has exceeded the acceptable limits.
- MTO understands that this requirement can lead to waste, however it is known that a strong indicator of poor waterproof performance is exceeding the time and temperature requirements. MTO is currently experiencing significant issues with waterproofing and is not currently willing to take additional risk of excessively heated waterproofing material.
- ORBA noted that the double layer application method on older contracts that do not use the July 2023 specification requiring it are taking twice as long to apply the waterproofing as anticipated. How will contractors be compensated for that?
- MTO cannot discuss payment today at the structures technical subcommittee.

#### *November 2023*

- MTO intended to clarify the OPSS 904 requirement for 72hrs air curing prior to application of waterproofing by moving it to OPSS 914 as it was a waterproofing requirement.
- As written was not clear to ORBA. ORBA’s expectation was that a concrete deck be air cured for 72hrs and then make sure it is dry before waterproofing, not preventing precipitation for 72hrs.

#### *May 2024*

- MTO internally reviewed concerns brought up at the last meeting and does not believe the 72hr requirement is an issue for contracts or contract administration as it has been a specification requirement for a long time. Where there is a contract specific issue, change proposals may be submitted.
- ORBA agrees that it has been a requirement for a long time that a concrete deck be dry before applying waterproofing membrane but disagrees with the MTO’s position that the addition of “with no exposure to precipitation or water” to 914.07.03 of OPSS 914, July 2023 is not a substantial change.

#### *September 2024*

- There is a discussion about water/moisture and the waterproofing pinhole/bubbling issue previously discussed. The pinhole/bubbling is still occurring but less frequently and industry is more aware of it. There is concern that moisture may contribute to the issue, but excessive moisture has other impacts, including on adhesion, so the 72hr requirement is not only about pinholing.



- If moisture is an MTO concern, is there an avenue of being more prescriptive about how to prepare the deck surface prior to waterproofing instead of the 72hr requirement?
- ORBA notes previously discussed concerns about the clean kettle requirement which results in more idle time and material waste.
- MTO issued HIFP research topic 5 about waterproofing to investigate deck drying, moisture content and tools to measure moisture content.

Action Items:

- MTO will continue waterproofing research.

**MAY 23-2, OPSS 904 UPDATE (INCLUDES NOV 19-2, 19-3, 19-4, 19-5, 19-6)**

Description:

- **The following items are consolidated into one OPSS 904 item (May 23-2): Nov 19-2, Nov 19-3, Nov 19-4, Nov 19-5, Nov 19-6.**

Discussion:

*May 2023*

- OPSS 930 references OPSS 904 so there has been interpretation on site that form and pump concrete requires internal vibration. ORBA to provide examples. (Nov 19-2).
- ORBA will provide bonding agent proprietary product information to MTO for review. (Nov 19-3)
- MTO will review cold weather concrete requirements. (Nov 19-4)
- MTO will review sandblasting and power washing requirements for new concrete. (Nov 19-5)
- MTO will review fog misting systems requirements. (Nov 19-6)
- ORBA asked if the OPSS 904 draft will be ready for review prior to the next meeting in September.
- MTO is currently targeting November publication and TCP is now the forum for document review, but MTO will provide a copy of the draft when it is available.

*September 2023*

- MTO is experiencing delays and is now anticipating April 2024 publication of the updated specification. Consultation will occur prior to publication.

*November 2023*

- OPSS 904 is an important specification for this committee, ORBA is concerned that MTO wants to publish it in April 2024, but has not seen a draft specification yet. ORBA has concerns that TCP is not providing ORBA enough time and input into specifications before they are implemented and would like to review the consultation process.
- MTO suggests that the TCP process be discussed at the Contracts and Documents Subcommittee because the process affects all specifications. Work on OPSS 904 has not started yet and the target publication date is now July 2024.

*May 2024*

- MTO committed to providing a draft of OPSS 904 and OPSS 1350 to ORBA 30 calendar days prior to posting the draft on the TCP. Drafts are now targeted for November 2024, but the date could change depending on time required for consultation and review.

- ORBA requests a tracked changes document for the draft.

*September 2024*

- MTO sent draft versions of OPSS 904 and OPSS 1350 to ORBA between meetings. ORBA's comments have been received and responses are being prepared. The OPSS's will be posted to the TCP in about a week.
- MTO will make best efforts to respond to ORBA comments by the end of next week. MTO will schedule a meeting to discuss comments with ORBA for early October.

Action Items:

- MTO will set up a meeting in early October with ORBA to discuss OPSS comments/responses.

**MAY 23-3, FOUNDATION INFORMATION REPORTS**

Description:

- **ORBA would like MTO to provide the FIDR in contract documents.**

Discussion:

*May 2023*

- ORBA requested to include the recommendations section of the FIR with tender documents. Some other DOTs provide the description of the soils as well as the recommendations.
- MTO will review what subsoil investigation information is provided with tender documents.

*September 2023*

- Inclusion of FIDR's in ContractsSept82023 PowerPoint slides (attached).
- MTO current state of practice is not to include the FIDR in Design Bid Build contracts. In Design Build contracts it is included with a letter of reliance. The information is available in the GEOCRE system, but it is not included in the contract documents.
- MTO's jurisdiction scan shows that most jurisdictions are also not supplying the FIDR. There are owner risks to supplying the FIDR and it is not produced to be a contract document.
- ORBA noted safety concerns of not being provided information, such as base heave.
- MTO has additional mechanisms in place to communicate safety information in a contract without supplying a FIDR.

*November 2023*

- MTO work on this item has not started yet, there is no update for this meeting.

*May 2024*

- MTO will try to have an update on this item for the next meeting.

*September 2024*

- MTO has started a jurisdictional scan, but nothing has been finalized yet and an internal meeting is scheduled with the Contract Management Office to discuss the risks of releasing this information. There are no major updates.

Action Items:

- Item remains open.

**MAY 19-4, OPSS 903 – UPDATE – A REVIEW OF CAISSON CONCRETE REQUIREMENTS**

Description:

- **Proposal for a meeting to discuss workability issues with placing concrete for caissons.**

Discussion:

*May 2019*

- ORBA suggested organizing a meeting to discuss workability issues with pouring concrete for caissons. Caissons may go deep into the ground where no vibration of concrete is possible. Caissons may have congested reinforcement so larger sized aggregate can get hung up which can pull the reinforcing cage down significantly.
- Meeting should include representatives from MTO Bridge Office, MERO Concrete Section and Foundations. Several members from the ORBA committee expressed interest in attending.
- ORBA to organize meeting.

*November 2019*

- Representatives of MTO and ORBA met on November 18, 2019, to discuss caisson issues; Andrew Weltz provided a brief summary of the meeting. The group plans to meet again in the new year. MTO is planning to address some of the more straight forward concerns by developing a NSSP for short term use and work on updating OPSS 903 in the longer term.
- ORBA will send MTO the minutes from that meeting.
- Combined this item with May 19-4 and updated item name.

*June 2020*

- A meeting was held on May 6<sup>th</sup>. OPSS 903 is being split into two different specifications, drilled and driven piles.

*November 2020*

- An ORBA member noted that recently no further action has been taken to further this item since in-person meetings are on hold.
- ORBA will reach back out to MTO and restart the work on this item.
- ORBA also wanted to note that they have not lost interest in this.

*May 2021*

- Andrew Weltz gave an overview of the work being completed. Generally, the work is considered to be a modernization of the specification. Previously, OPSS 903 focused on driven piles rather than caissons. The new specifications will be split into Driven Piles and Caissons.

- Conversations to date have been very productive, with engagement of Consultants, ORBA and other agencies.
- For Caissons, the following issues have been the focus of the updates:
- The ratio of concrete aggregate size and rebar spacing. The root cause of this issue was a design philosophy. The solution is to establish a designer guide for rebar spacing in the cage.
- *Traditionally, you use a higher slump mix so that the concrete can make it through the cage, but the dense cage stops the aggregate from passing through and leads to quality issues. Designer guide will provide a minimum spacing.*
- Improve the requirements and guidance for use of Tremie concrete.
- Tony is bringing in a testing regime for caissons which involves sophisticated testing to gain a better understanding of what the load bearing capacity will be prior to loading.
- The group will be focusing on the driven pile specification shortly.
- MTO asked how they plan to ensure the quality of the Tremie Concrete. A.W noted that Cross Hole Sonic Logging will be used to verify the overall quality of the concrete. The holes will be installed by the contractor, and testing will be completed by an independent testing lab.
- MTO asked how they plan to provide the notes to the designer regarding the spacing of rebar in the spiral. A.W noted that the specification will have a Notes to Designer section where it will state the rebar spacing requirements (i.e. Rebar Spacing = 5\*Max Agg. Size)
- Working group will continue the development of the specification and report back to the group with progress.

*November 2021*

- A NSSP was created to put into contracts. It will likely be another year before projects use the specification and lessons learned can be prepared.
- Item left on the agenda and will be addressed once another working group meeting occurs or there is more information from new projects.

*May 2022*

- Draft caisson specification issued as an NSSP.
- Another meeting is scheduled for June for the working group to review the pile driving specification.

*November 2022*

- The specification has been worked on for about three years now.
- ORBA members missed one meeting last year and were surprised to find the specification was finalized. Meetings have resumed and expect the specification won't be ready for the new year. Understand that in the meantime the NSSP is being issued with contracts, but ORBA considers this problematic because it hasn't been fully reviewed by the working group but does expect that MTO will not be willing to use the previously published specification now that the draft NSSP has been issued in contracts.

*May 2023*

- The caisson NSSP has been used on several contracts now. It is a challenging specification with a number of changes, but it is now on par with other jurisdictions.

- Driven piles specification draft is currently under review.  
*September 2023*
- MTO is collating comments to update the specification and the completed draft will be distributed for review.
- The draft of OPSS 903 will be posted to TCP for comment before publication.  
*November 2023*
- Work is progressing on this item and is targeted for Spring 2024. The draft has not been posted on TCP yet.  
*May 2024*
- Work is progressing on this item and the draft has not been posted on TCP yet.  
*September 2024*
- MTO has a version issued as a Nssp for a couple of contracts, but it isn't final and MTO is still open to making changes. The specification is being trialed right now and makes more sense to use for drilled caissons being designed now than to go back to the older specification that did not consider them.

Action Items:

- MTO subject matter expert will be invited to the next meeting to discuss.

## New Items

### NOV 22-1, SAFETY TALK

Description:

- **It was agreed at the May 2022 meeting that this would be a recurring item to promote safety culture. MTO and ORBA are both free to propose their own safety talk items.**
- **ORBA and MTO will alternate who is responsible for the safety talk at each meeting.**

Discussion:

- This meeting the safety talk was led by ORBA.
- ORBA presents about Opioids in the trades. This class of drugs includes heroin, fentanyl, oxycodone, hydrocodone, codeine, and morphine which seem to be more readily available and are dangerous. Workers in construction are particularly vulnerable to addictions and harms. The reasons are complex, but the need for pain management, a 'work hard, play hard' culture, and social stigma are significant factors. Drug overdose is on the rise and 30% of victims worked in construction, making it the most impacted industry.
- Workers should be connected to appropriate sources for professional help, the sooner the better for treatment. Staff should be able to describe the signs and symptoms of an overdose and Naloxone can temporarily help. Immediate action should be taken if it is suspected that a worker is impaired while at work and they should be removed from the workplace. They could be a danger to themselves and others.

Action Items:

- N/A

## SEPT 24-1, ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM

### Description:

- **MTO has generally restricted the use of post-installed adhesive anchors (dowels) from upwardly inclined and overhead installations since the collapse of the suspended ceiling system of the I-90 connector tunnel in Boston in 2006.**
- **Following the collapse, extensive research has been conducted and codes are approaching consensus on material standards, design standards, and requiring certified installers.**
- **MTO presentation about post-installed adhesive anchors to facilitate discussion about certified installers for anchor installation in upwardly inclined and overhead orientations.**

### Discussion:

- MTO provides a brief history of its policy on adhesive anchor applications for permanent sustained tension or overhead applications. Many factors influencing bond strength are controlled by the installer and the DSM list does not include any products approved for use in overhead installation.
- ACI 318, IBC, AASHTO, CSA A23.3 and proposed changes to CSA S6-25 have similar provisions for adhesive anchors. Like other codes, S6-25 draft provisions include a requirement for certified installers.
- ACI/CRSI Adhesive Anchor Installer Certification Program (ACI CPP 680.1-17) is available, but there are few testing centers in Canada. Adhesive supplier certification programs appear to be less robust than the ACI program and are similarly not broadly available.
- Depending on the location of dowel installation, many different staff may require certification. There could be a significant training backlog if certification is required. It was asked if there is a concern that needs to be addressed if installed dowels are passing pull testing requirements.

### Action Items:

- MTO will re-introduce the item for further discussion with ORBA if implementing installer certification is considered.
- Item Closed.

## Information Shared for this Meeting

DOCUMENT TITLE	SHARED BY	FORMAT
Post-Installed Adhesive Anchorage	MTO	PPTX

## Next Meeting

- Thursday, November 21, 2024 – ORBA to host.