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**August 25, 2025**

**Addendum No. 03**

**File Reference Number: RFP 2025 068**

**Title: ONTC Culvert Rehabilitation – Culvert Mile 109.8 Kapuskasing Subdivision**

**RE: Clarifications/Questions**

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Please refer to the following information/clarification:

**NON-MANDATORY VIRTUAL SITE MEETING:**

A non-mandatory virtual site meeting was conducted on Tuesday, August 19, 2025, at 2:00 p.m.

Please find the virtual site meeting presentation attached at the end of this Addendum.

**Item 1:** Can ONTC provide the train schedule before 48hrs to the contractor? This will help the contractor to schedule day-to-day work.

**Answer:** Please find below the train schedule for Kapuskasing Subdivision:

| No 313 S-T-T-- | | | | No 514 -M-W-F- |
|---|---|---|---|---|
| 13:00 | Ord | Cochrane | Arr | 12:00 |
| 13:30 | Dpt | | | |
| | | | | |
| 16:30 | Arr | Kapuskasing | Dpt | 09:00 |
| 17:00 | Dpt | | Arr | 08:30 |
| | | | | |
| | | Hearst | Dpt | 06:30 |
| 19:00 | Arr | | Ord | 06:00 |

**Item 2:** Is there any provision to pay the contractor's lost time due to the train operation?

**Answer:** No, there will not be a provision to pay the contractor for lost time due to train operations.

**Item 3:** If contractor entitle for the lost time, what is the protocol?

**Answer:** The contractor will not be paid for lost time during this project.

**Item 4:** How long will a train take to pass the construction area?

**Answer:** ONTC flagman will alert the contractor approximately 15 minutes before the train will pass through the work site. The contractor is to stop work. Once train has cleared the work site, ONTC flagman will give the contractor permission to resume work activities.

**Item 5:** What type of work is allowed during the Train operation?

**Answer:** All work within 30 feet of the nearest rail must be stopped on the approach of a train and remain stopped until the train has passed. Work beyond 30 feet from the nearest rail is permitted during train operations, with permission from ONTC Flagman.

This Addendum hereby forms part of the RFP.

Regards,

Brinda Ranpura
Procurement Contracts Specialist
brinda.ranpura@ontarionorthland.ca

# ONR Mile 109.8 Kapuskasing Subdivision Rail Culvert Rehabilitation Project

August 18, 2025

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# Safety Moment

## Regional SH&E Communication

Distracted Driving

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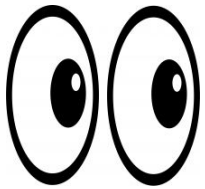
# AECOM's Policy


## Drive without Distractions

Every year, thousands are killed and injured by distracted drivers.

No phone call, text message or avoidable distraction is worth taking your attention off the road.

• No Headsets • No Phones • No Handheld GPS
• No Texting • No Food • No Earphones



**EYE(S) ON THE ROAD**

**HAND(S) ON THE WHEEL**

**MIND ON THE DRIVE**

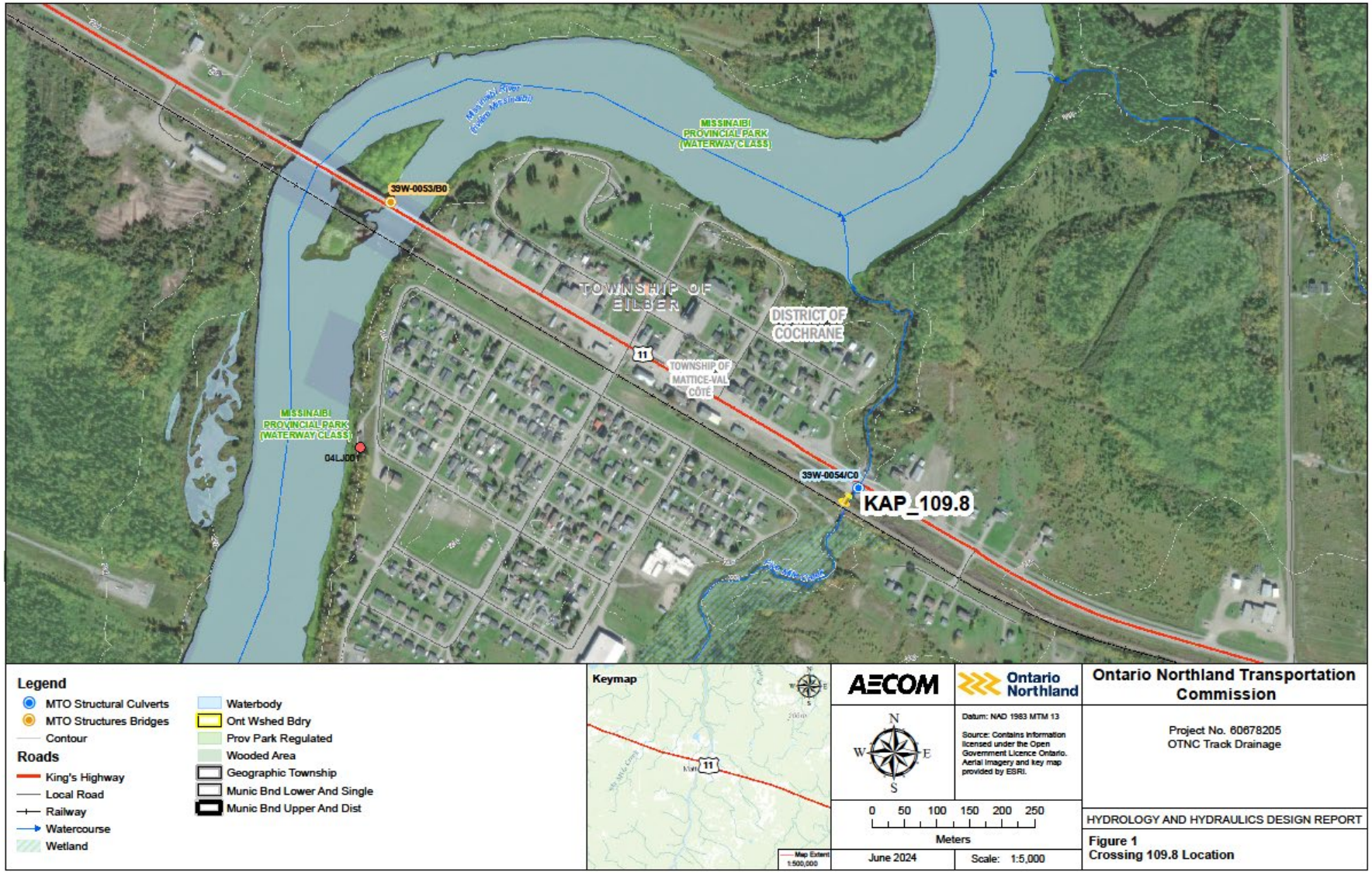
**An activity that takes the driver's attention away from the primary task of driving is considered a distraction.**

AECOM prohibits use of all portable electronic devices while operating a motor vehicle/ equipment, which includes being stopped at a traffic light or stop sign. Electronic devices include, but are not limited to, all cell phones, two-way radios, pagers, iPods, MP3s, GPS, DVD players, tablets laptops, and other portable electronic devices that can cause driver distraction. Hands-free device use is NOT allowed.

NOTE: GPS units and devices used for navigation may only be used if factory installed or secured to the vehicle with a bracket that allows the driver to view the image without having to take their eyes off the road. Electronic devices shall be setup for operation prior to commencing driving activities and shall NOT be changed by the driver while driving.

# ONR 109.8 Site Location

- Culvert is located at Mile 109.8 in Kapuskasing Subdivision along its rail corridor (49.610185, -83.257447).
- The culvert spans the Five Mill Creek under the railway track and connects with the Missinaibi River, approximately 425 m downstream of Highway 11, in the Municipality of Mattice, Ontario.
- Site access will be via Highway 11, with the culvert access location to be determined by the contractor in coordination with ONTC and the Township.



# ONR 109.8 – Existing Hydraulics Performance

| Culvert Size | | | | | U/S invert | D/S invert | Ballast Crest (Sag) | Cover | Flow (2098 CC Scenario) | | Flood Elevation | | Meet Criteria? | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Type | #Barrel | Span | Rise | Length | | | | | 25-yr | 100-yr | 25-yr | 100-yr | HW/D<1 (25-yr) | HW/D<1.5 (100-yr) | FB>0.6m (100-yr) | Meet? |
| | | m | m | m | m | m | m | m | ($m^3$/s) | ($m^3$/s) | m | m | | | | |
| **Concrete Circular (4.7 m dia)** | **1** | **4.7** | **4.7** | **27.58** | **216.15** | **216.08** | **227.49** | **6.64** | **25.3** | **29.3** | **220.35** | **220.61** | **0.89** | **0.95** | **6.88** | **Yes** |

Exhibit 1: Culvert upstream (left) and downstream condition (right) (Photo date: May 2024)

# ONR 109.8 – Proposed Hydraulics Performance

| Culvert Crossing Data | | | | | | Manning's n | U/S invert | D/S invert | Top of Ballast (Sag) | Cover | Flow (2098) | | Flood Elevation | | Meet Criteria? | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Scenarios | Type | #Barrel | Span | Rise | Length | | | | | | 25-yr | 100-yr | 25-yr | 100-yr | HW/D< 1 (25-year) | HW/D< 1.5 (100-year) | FB>0.6 m (100-year) | Meet? |
| | | | m | m | m | - | m | m | m | m | ($m^3/s$) | ($m^3/s$) | m | m | | | | |
| Selected Option | 4,400 mm Dia Circular Corrugated galvanized Tunnel Liner Plate | 1 | 4.348 | 4.348 | 27.58 | 0.028 | 216.33 | 216.26 | 227.49 | 6.82 | 25.3 | 29.3 | 220.46 | 220.76 | 0.95 | 1.02 | 6.73 | Yes |

# ONR 109.8 – Managing Flows During Construction

- Duration of construction is no more than 4 weeks.
- August flow is expected to be the lowest.
- The inlet of the downstream culvert is at a higher elevation compared to the outlet of the existing ONTC culvert. This cause water ponding upstream of the highway culvert.
- Refer to MTO Drainage Management Manual TW-1 for temporary drainage works.
- Up to the contractor to decide the best arrangement and equipment.

**Table TW1-1: Minimum Minor AEP (Return Period) For Temporary Drainage Works**

| Design Flow Probability of Occurrence | | | | | | |
|---|---|---|---|---|---|---|
| Duration of Temporary Drainage Works | Consequence | | | | | |
| | Low | | Medium | | High | |
| | AEP (%) | RP (Yrs) | AEP (%) | RP (Yrs) | AEP (%) | RP (Yrs) |
| Less than 2 months | 50% | 2 | 50% | 2 | 50% | 2 |
| Up to 4 months | 50% | 2 | 20% | 5 | 20% | 5 |
| Up to 8 months | 20% | 5 | 20% | 5 | 10% | 10 |
| Up to 12 months | 20% | 5 | 20% | 5 | 5% | 20 |
| Up to 18 months | 20% | 5 | 10% | 10 | 4% | 25 |
| Greater than 18 months | 10% | 10 | 10% | 10 | 4% | 25 |

# ONR 109.8 – Environmental - Fisheries

## Waterbody and fish protection measures recommended to reduce the likelihood of contravention of the Fisheries Act by DFO and need for Authorization.

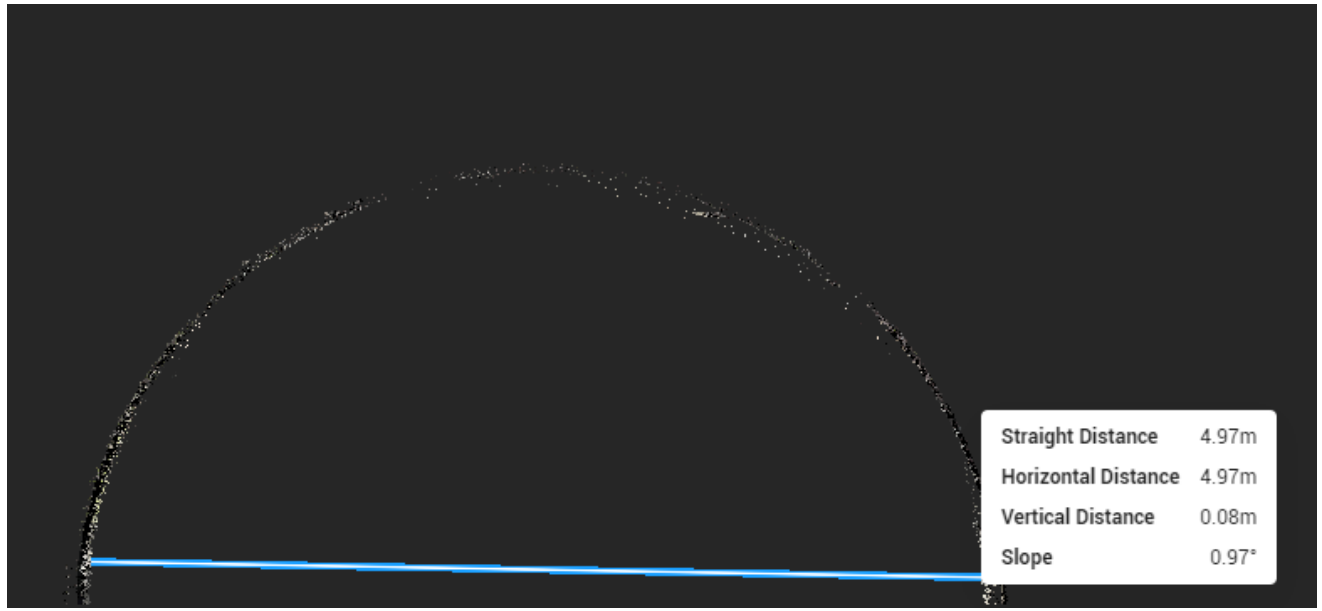
- Reinstating or maintaining fish passage is a key issue.
- Avoid in-water work during Walleye timing restrictions (April 1–June 20), as confirmed by MNRF.
- Culverts are sized to avoid a velocity barrier to fish during high flow conditions and to minimize scour and erosion.
- Preserve riparian vegetation where possible; restore or reseed disturbed areas.
- Use best practices for cofferdam and pumping
- Implement erosion and sediment controls to prevent release of sediment to the waterbody.
- Prevent harmful substances from entering waterways. This includes sediment, concrete, and concrete wash. Prepare a spill response plan that includes reporting of spills to Ontario Spills Action Centre.
- Placement of material following specifications and OPSS (i.e. properly-sized riverstone with mixed with smaller material) to promote fish passage.
- Pipe or closed-foot structures should consider countersunk and backfilled with lakebed material to add roughness and natural bed conditions to facilitate fish movement.
- Ensure ongoing environmental monitoring by the Contractor and inspections by ONR.

# ONR 109.8 – Existing Structural Condition

1. Significant **concrete deterioration** is evident at the culvert headwalls and barrel, including widespread cracking, and spalling.
2. Pronounced vertical and horizontal **cracks** indicate advanced structural distress and potential loss of load-carrying capacity.
3. Supplementary **timber supports** are provided at the ends for lateral stability
4. Extensive **efflorescence** and water staining within the barrel suggest long-term water ingress and compromised durability.
5. Overall condition points to severe aging and degradation, warranting the need for **replacement** to maintain operational safety and reliability.

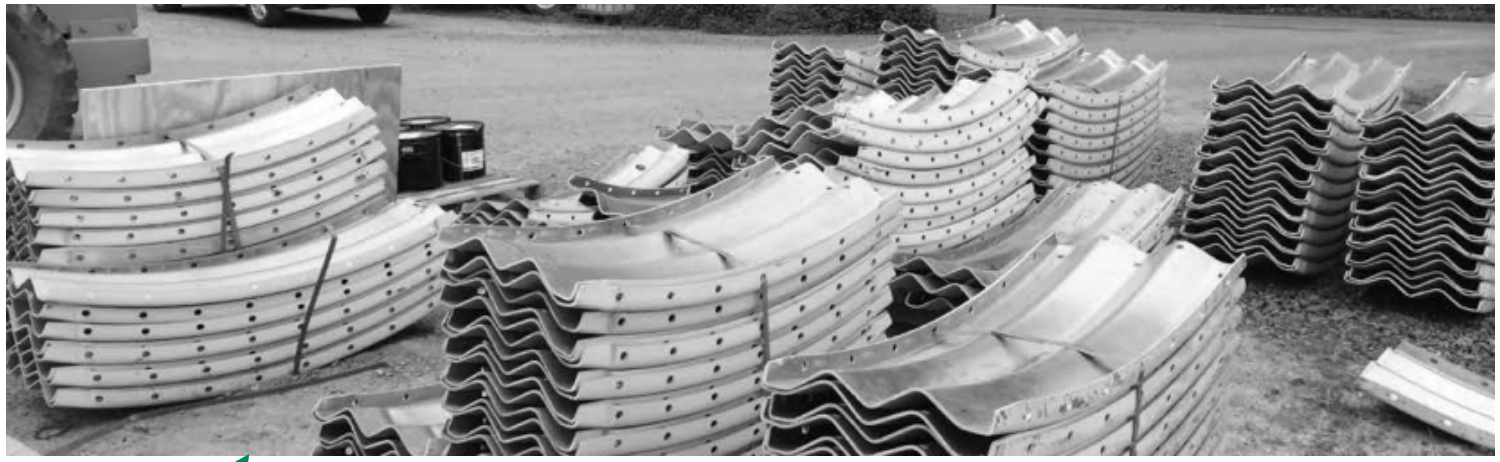
# ONR 109.8 – Existing Cross Section

- Existing drawings for this location are not available.
- Existing Size:
  - Concrete Circular Culvert (5.0 m x 4.7 m)
  - The bottom of the culvert was filled with mud and rock so from obvert to ground was 4.7-4.8 m. Cross sectional geometry is hard to determine. When GROMA drew a 3-point arc it looks very consistent at 5m as a circular culvert.
  - Due to sediments in the culvert, the rise could not be measured. Based on the survey information the culvert rise is approximately 4.7m.
  - The culvert bed profile shall be confirmed by the contractor and submitted to the contract administrator.



# ONR 109.8 – Proposed Liner

1. The inside of the existing culvert will be re-lined with corrugated tunnel liner plates connected to form a continuous desired cross section profile.
2. These are completely assembled from the inside.



Tunnel liner plates bolted together

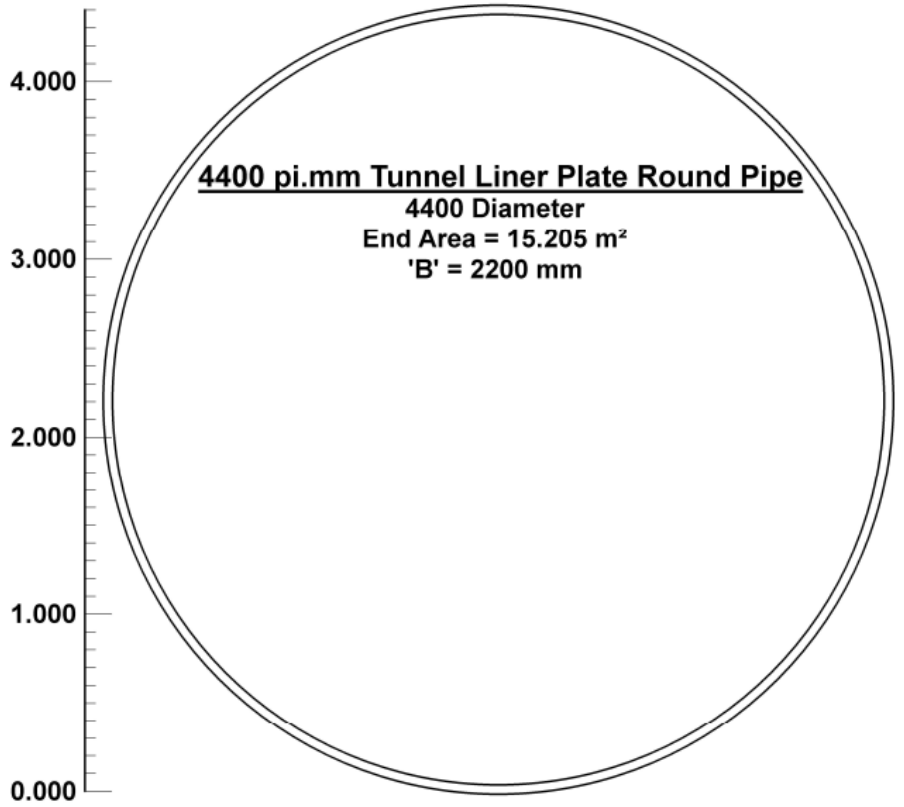

Image showing installation is progress. Annular spaces are also visible

# ONR 109.8 – Proposed Liner

- Once the tunnel line plate installation is complete and profile checked, the annular space between the liner and the existing culvert is filled with grout
- Temporary supports are required to maintain the profile and the annular space.
- Typically, bulkheads are provided at each end to facilitate grouting of the annular space

# ONR 109.8 – Proposed Liner

- Neutral axis span: 4,400 mm
- Approx. inside span: 4,348 mm
- Approx. neutral axis end area: 15.205 $m^2$
- Approx. inside end area: 14.778 $m^2$
- Approx. grout thickness at top and bottom assuming an existing rise of 4700 mm: (4700-(4400+52))/2 = 124 mm
- Details (Coating: Galvanized, Live Loading: E-80, DSL: 75 years, Design Code: AREMA)




Footing of the concrete wing wall and head wall will need to be constructed prior to assembly of the tunnel plate liner towards the culvert ends unless the contractor propose a different sequence per their method of work.
The wing walls and head walls can be constructed after grouting.

# ONR 109.8 – Stability and protection of the existing culvert and slopes

1. Stability and protection of the existing structure and slopes will be the contractor's responsibility.
2. Do not undermine foundation of the existing culvert.
3. Provide temporary shoring for the slopes at the culvert ends, as needed, to construct the wing walls and head walls.
4. Do not excavate existing slopes at the culvert ends without adequate shoring and consultation with the Contract Administrator.
5. Do not remove any component of the existing structure without approval from the Contract Administration.

# ONR 109.8

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## Questions?