

Bridge Deck Paving Best Practices

Nova Scotia User Producer Association
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Bridge Deck Paving – Best Practices

- Preparation Of The Deck
- Special Considerations During Paving Operations

Bridge Deck Paving – Best Practices

- NSTIR Standard Specifications
 - Division 4 Section 8: Asphalt Concrete Paving of Concrete Bridge Decks
 - References to:
 - Division 5 Section 9:
Waterproofing Concrete Bridge Decks
 - Division 4 Section 4:
Asphalt Concrete – Hot Mixed – Hot Placed

Bridge Deck Paving – Best Practices

- NSTIR Standard Specifications
 - Division 4 Section 8: Construction Methods
 - Place asphalt hot mix
 - Compaction of hot mix

Bridge Deck Paving – Best Practices

- Preparation of the Deck:
 - Bridge Deck Waterproofing
 - NSTIR Standard Specification Division 5 Section 9
 - Waterproofing Membrane
 - Protection Board

Waterproofing Membrane & Protection Board

Joints in protection board should be staggered in a brick type pattern.

Tack coat should be evenly distributed across the protection board.



Waterproofing Membrane & Protection Board

Joints in the protection board should not line up in the direction of travel of the traffic.

Tack coat should be evenly distributed.



Waterproofing Membrane & Protection Board

Protection board
should be free of all
debris before tack coat
is applied.



Bridge Deck Paving – Best Practices

- Deck is prepared...

Now what?



Bridge Deck Paving – Best Practices

Placing of the Hot Mix:

- Schedule the paving as soon as possible after the completion of the waterproofing membrane.
- Set up your paver. Some decks are short and do not leave enough time to make corrections during paving.
- Take your time and build the pad carefully. There is usually not much opportunity to correct if it is wrong.







Bridge Deck Paving – Best Practices

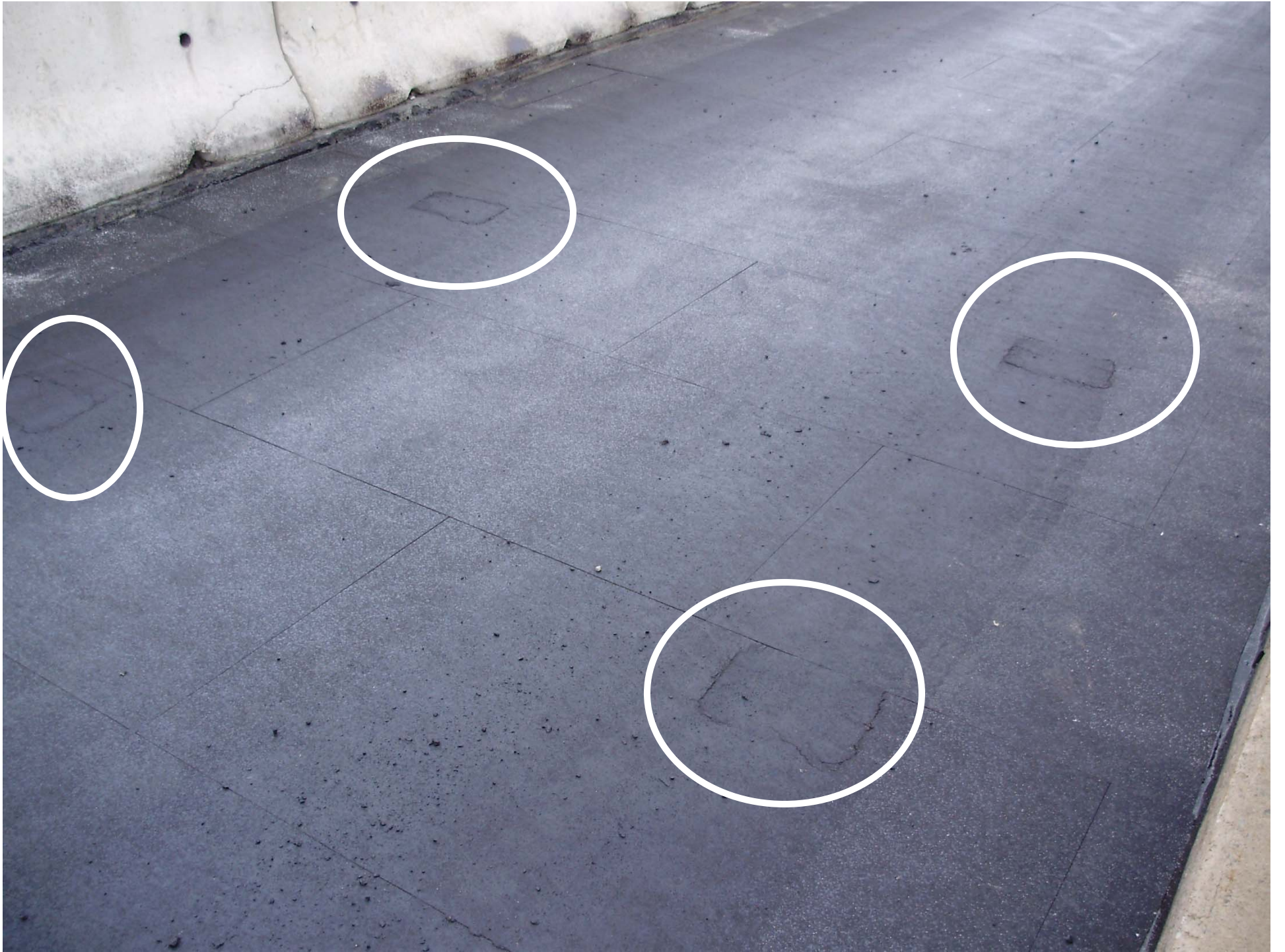
Placing of the Hot Mix:

- Paver should never go faster than 4 meters/minute
- The paver should always go straight on and straight off the deck. No turning on the deck.
- Ensure there is enough room to get all the way off the deck at the other end.
- Ensure the temperature of the hot mix does not exceed 165°C at any time.

Bridge Deck Paving – Best Practices

Dumping The Trucks:

- Trucks should go straight on and straight off the deck.
- No turning!
- No stopping on the deck.







Bridge Deck Paving – Best Practices

Dumping The Trucks:

- Trucks should go straight on and straight off the deck.
- No turning!
- No stopping on the deck.
- Back in to paver, fill hopper, pull out of paver. Pull off the deck and wait for the paver to need refilling.





Bridge Deck Paving – Best Practices

Dumping The Trucks:

**NO NOT PUSH THE TRUCK
WITH THE PAVER!**

Truck wheels sliding on the protection board
Paver track slipping on the protection board









Bridge Deck Paving – Best Practices

Compaction On The Bridge Deck:

- Allow hot mix to cool to 105°C before starting to roll
- Use boards to protect expansion joint verticals from damage from the rollers

Bridge Deck Paving – Best Practices

Compaction On The Bridge Deck:

- Should have two rollers: steel wheel & rubber tired
- Rollers should be a minimum of 7 tonnes
- **NO VIBRATION – STATIC MODE ONLY!**



Bridge Deck Paving – Best Practices

Compaction On The Bridge Deck:

- No stopping, starting or changing direction on the deck.
- Rollers should go straight on, make a full pass, and straight off the deck – no turning on the deck.



Bridge Deck Paving – Best Practices

Before you start...

Prepare Your Paving Plan!

Bridge Deck Paving – Best Practices

- What's In A Paving Plan?
 - In which direction are you going to pave?
 - How are the trucks going to access the deck?
 - Do you have the right equipment on site?
 - Is that equipment set up properly for bridge decks?
 - Is there room for the rollers to get on and off the mat?



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Thank you for your time.

Questions?