Concrete Paving Field Inspection Inspector’s Workshop

What happens before you start paving?
Concrete Paving Field Inspection Inspector’s Workshop

1. Why are we here?
2. How do we achieve quality for PCC paving?
3. Got a project….Now what?
4. What is concrete?
5. What kinds of equipment are used?
6. **What happens before you start paving?**
7. What happens when you’re finally paving?
8. What is the inspector’s role?
9. What about all of the other road building stuff?
10. What do you look for in urban paving?
11. What paperwork?
Instructor

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Representing the National Concrete Pavement Technology Center

www.cptechcenter.org
WHAT HAPPENS BEFORE YOU START PAVING?
Daily Items Before Paving

• Dust Control
• Safety/Traffic Control
• Aggregate Stockpile & Plant
  • Dowel Basket Placement
• Haul Road
• Vibrators
• Stringline Control/Grade
Dust Control

• Environmental awareness
• Public relations
• Visibility ⇒ Safety
Inform the contractor of any traffic control deficiencies

Never walk under the spreader belt when it is in the upright position
Safety

Be cautious when near trucks backing up to the spreader belt

Be alert when working near traffic
Safety

Park vehicles in safe areas away from traffic

The plant site poses many safety concerns
Minimize segregation

- Build long and wide—NOT high!
- Build stockpiles in tiers to avoid segregation

Picture courtesy of Martin Marietta Materials
Aggregate Stockpile Management

• Uniform Moisture
  ➢ Stable and well drained foundation underneath stockpiles
  ➢ Place a separation layer on top of soil
  ➢ Draw from areas of known moisture content
  ➢ Mix the pile to create a uniform moisture
Aggregate Stockpile Management

Contamination - mud balls

On the tires

Dig too deep
Plant Set-up and Calibration

- Calibrate scales and water meters
  - Each time the plant is set-up
  - At regular intervals

- Verify that the batch control computer
  - Has correct mix design(s)
  - Has appropriate aggregate moisture contents

- TEST BATCH!
Mixture Verification Stage

• Compares field concrete to the mixture design

• Is this the same concrete?

• Trial Batch

SAME?
Recommended Practices

Adequate mixing time
• Uniformity
• Air entrainment
• Strength
• Workability
Daily Items Before Paving

- Traffic Control
- Dust Control
- Safety
- Aggregate Stockpile & Plant
- Dowel Basket Placement
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Dowel Basket Placement

Placement tolerance
• Vertical – 2” cover

• ALIGNMENT (TILT & SKEW) – most critical,

• non-uniformity can cause joint lockup
Dowel Basket Placement

• Joint spacing
• Lateral position
• Bar alignment
• Joint positively marked
Dowel Basket Placement

- Bond breaker
- Anchoring to subbase
Haul Road - Inspection

• Identify unstable areas
• Notify the contractor
• Have a back up plan
Vibrators - Verification

• Contractor decides upon number, spacing and position

• Vibrator monitor in use?
  ➢ Time
  ➢ Location
  ➢ Frequency
Vibrator Trails

• Noted by deeper groove

• Notify contractor and make adjustments

Left core - aggregate segregation (hardened air results)

- Upper: 2-3%
- Lower: 5-6%

- Upper: 5-6%
- Lower: 6-8%
Check Equipment

Tining forks should be clean

Texture material should be clean/free of clumps
Check Grade

• The grade should be checked before and during pour

• The paving equipment will follow the string

• It is easier and safer to adjust the string rather than to crank the paver sensors
Summary – What happens before you start paving?

- Dust Control
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THANK YOU!

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