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|---|-----|---------|----|----------------|--------------|---|---|--------------------|---|
|  | | | | | | FHWA Missouri Division | | | |
| | | | | | | Focused Review – Bridge Deck Pour | | | |
| | | | | | | MoDOT Job #: | | Federal Project #: | |
| | | | | | | Contract #: | | Inspection Date: | |
| | | | | | | MoDOT District: | | Report Date: | |
| | | | | | | Contractor: | | Report #: | |
| | | | | | | Inspection By: | | MoDOT RE: | |
| | | | | | | Time Elapsed: | % | Work Complete: | % |
| | | | | | | Accompanied By: | | | |
| | | | | | | | | | |
| Question | Yes | Partial | No | Not Applicable | Not Verified | Questions | | | |
| | | | | | | | | | |
| Section 1 - Epoxy Coated Rebar and Placement | | | | | | Specification | | | |
| 1.1 | | | | | | Was rebar placement confirmed by QC/QA Check? | Plans | | |
| | | | | | | Comment: | | | |
| 1.2 | | | | | | Was epoxy rebar free from coating deficiencies? (All damaged areas were coated or repaired.) | 1036.4.1.4 | | |
| | | | | | | Comment: | | | |
| 1.3 | | | | | | Were coating deficiencies patched with approved materials? (Discuss with inspectors) | 710.3.2.3 | | |
| | | | | | | Comment: | | | |
| 1.4 | | | | | | Were bars spliced only as shown on the plans or as directed by the engineer? | 706.3.2 | | |
| | | | | | | Comment: | | | |
| 1.5 | | | | | | Were reinforcing bars in the top mat tied at all intersections, except where spacing is less than or equal to 12 inches in each direction, in which case alternate intersections were tied. At other locations, were the bars firmly tied at alternate crossings or closer. | 706.3.1 | | |
| | | | | | | Comment: | | | |
| 1.6 | | | | | | Were reinforcing bars tied sufficiently so placement of concrete did not displace bars? | 706.3.3.2 | | |
| | | | | | | Comment: | | | |
| 1.7 | | | | | | Comment: | | | |
| | | | | | | Specification | | | |
| 2.1 | | | | | | Was concrete testing performed per established frequency? | | | |
| | | | | | | Comment: | | | |
| 2.2 | | | | | | Did concrete tests indicate appropriate Air, Slump and Temperature? (B-2 Concrete: 3" max slump, Min Air 5%, Max Air 7% (May be adjusted for air loss due to pumping), Temperature). Air content below 4% is unacceptable. For temperature, see 703.3.9+ or consult MoDOT staff? If B-2 Mod used: Max slump: 6, Air: 4.5< Air < 7. | 501.5 501.10.2 501.10.4.3 703.3.9 - 703.3.10 | | |
| | | | | | | Comment: | | | |
| 2.3 | | | | | | No substantial water was added to concrete at placement? | | | |
| | | | | | | Comment: | | | |
| 2.4 | | | | | | Was slump test performed properly with three equal volume layers with 25 compaction strokes with smooth 5/8" rod with rounded ends, penetrating previous layer about 1", and smooth pull-off? (Measure to original center.) | ASTM C143 | | |
| | | | | | | Comment: | | | |
| 2.5 | | | | | | Was air test performed with proper compaction (3 equal layers, rodded 25 times and mallet strikes on outside), strike-off, air bleeding with water, pressurized to initial pressure, opened, tapped with mallet and read meter reading? | ASTM C231 | | |
| | | | | | | Comment: | | | |
| 2.6 | | | | | | Was air meter calibration current? | | | |
| | | | | | | Comment: | | | |
| 2.7 | | | | | | Were certified testers used to conduct concrete QC/QA testing? | | | |
| | | | | | | Comment: | | | |
| 2.8 | | | | | | Were concrete cylinders created appropriately? (Each concrete testing frequency includes test cylinders. 1/3 vol layers for 6x12" with 5/8" rod or 1/2 layers and 3/8" rod for 4x8" cylinders, rodded 25 times, 10-15 tamps on mold sides, strike-off and cap. Labeled and stored where not disturbed for initial cure. | ASTM C31 | | |
| | | | | | | Comment: | | | |
| 2.9 | | | | | | Comment: | | | |

| Question | Yes | Partial | No | Not Applicable | Not Verified | Questions |
|----------|-----|---------|----|----------------|--------------|--|
| | | | | | | Section 3 - Concrete Placement |
| | | | | | | Specification |
| 3.1 | | | | | | Were plywood forms oiled with light paraffin based oil before reinforcing steel was placed? Comment: 703.3.2.7 |
| 3.2 | | | | | | Were rebar and forms clean and clear of debris prior to concrete placement? Comment: |
| 3.3 | | | | | | Was concrete pour rate maintained to match pouring plan chosen? Was the minimum pouring rate maintained throughout the pour? Comment: Plan rate= cy/hr. Plans, 703.2.8 |
| 3.4 | | | | | | If slab is on straight grade, was pour uphill? Comment: 751.10.1.12 |
| 3.5 | | | | | | Concrete placement around reinforcement did not displace the steel? Comment: 703.3.3.2 |
| 3.6 | | | | | | Were P/C P/S Panel forms prewetted ahead of concrete placement? Comment: 710.3.2.2 |
| 3.7 | | | | | | Was concrete compacted by vibration during placement? (Vibration is to densify concrete, not move concrete.) Comment: 703.2.8 |
| 3.8 | | | | | | In order to prevent damaging the coated bars, was the vibrator head covered with a sheet of rubber, and was it equipped with a rubber tip with a maximum diameter of 2 1/2 inches. (Another resilient material may be substituted for rubber as approved by the engineer.) Comment: 710.3.2.2 |
| 3.9 | | | | | | Were transverse or longitudinal construction joints located as shown on the plans? Comment: Plans 703.3.4 |
| 3.10 | | | | | | Was construction joint offset a minimum of 6" from P/C panel joints? Comment: 703.3.4?? |
| 3.11 | | | | | | Were Stay-In-Place (SIP) form supports <u>not</u> welded to girder flanges? Comment: 751.10.2.3 |
| 3.12 | | | | | | Were SIP form corrugations foam filled? Comment: 751.10.2.3 |
| 3.13 | | | | | | Did finish machine push material ahead (no lack of concrete at screed)? Comment: |
| 3.14 | | | | | | Were edges along curbs hand finished without tining? Comment: |
| 3.15 | | | | | | Was the finished concrete surface tined with 1/8" wide x 1/8" deep grooves 5/8" to 3/4" spacing when surface firmed enough to hold tining marks? Comment: 703.3.5.1 |
| 3.16 | | | | | | Were the diaphragms poured a minimum of 30 minutes and maximum of 2 hours prior to deck pour over them? Were integral diaphragms poured a minimum of 12 hours prior to the deck pour or per note on the plans? Plans, 703.2.8 |
| 3.17 | | | | | | Comment: |
| | | | | | | Section 4 - Concrete Curing |
| | | | | | | Specification |
| 4.1 | | | | | | Was curing compound Type 1-D liquid membrane-forming curing compound used? (May be Type 1-D or Type 2 if diamond grinding is specified.) Comment: 703.3.6.1 1055 |
| 4.2 | | | | | | Was curing compound applied at the manufacturer's recommended rate, but not less than one gallon per 150 SF? (Applied to thoroughly cover the concrete surface.) Comment: 703.3.6.1 |
| 4.3 | | | | | | Was the curing compound applied within 10 feet of the tining of the deck. Comment: 703.3.6.1.2 |
| 4.4 | | | | | | Was the concrete covered with clean mats as soon as the curing compound dried sufficiently to prevent adhesion, and as soon as the concrete surface would support the curing mat without marring or distorting the finish, but no more than 90 minutes after the concrete was floated or textured? Placement of the mats may be delayed as directed by the engineer until the deck is firm enough to not mar the deck. (Typically, saturated burlap is used.) If > 15% fly ash and/or slag is used and deck remains plastic after 90 minutes, the engineer can delay placement of mats. Comment: 703.3.6.1.4 |
| 4.5 | | | | | | Were the curing mats sufficiently wet at the time of placement to prevent moisture absorption from the finished surface? Comment: 703.3.6.1.4 |
| 4.6 | | | | | | Was the continuous wet cure maintained a minimum of seven days and until the concrete attained a minimum compressive strength of 3,000 psi? (This would be a follow-up check after the inspection.) Comment: 703.3.6.1.4 |
| 4.7 | | | | | | Comment: |

| | Y/N | | | Comments |
|----------|---------------|---------------|----------------|----------|
| Question | Best Practice | Major Finding | Issue Resolved | |
| | | | | |
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Checklist Follow-Up Action Requirements

1. All Questions answered as "Partial" or "No" are required to have a comment in the comment section.
2. Comments must describe the deficiency and required follow-up action (if not completed) or the best practice.
3. Comments must contain information on what type of follow-up is required, the manner in which it must be completed (if applicable) and the timeframe to complete the follow-up.
4. Completion of any follow-up required, that is not to be completed prior to the completion of the inspection report, is the responsibility of the MoDOT inspector to complete and/or provide direction to the Contractor to resolve.
5. For general findings or observations that cannot be characterized by a given question and are worthy of being noted, a comment can be provided in the comments section on the checklist.

[illegible]