

Concrete:

What is the status of RCC vs. CCP and what is MoDOT's policy on the use of these products?

Roller compacted concrete (RCC) will continue to be an optional pavement design on certain projects involving widening lanes and adding shoulders. It may also be an option for mainline pavements when combined with diamond grinding or a thin overlay to provide acceptable smoothness.

Compacted concrete pavement (CCP) is basically RCC that employs a high density paver to ensure 98% density after initial paving and a proprietary admixture to facilitate a smooth texture. MoDOT has no current intent to specify CCP in a contract other than the active research project on the I-55 outer road near Scott City. Its use on MoDOT projects may expand at some point if a non-proprietary special provision can be developed.

Safety Edge with concrete paving – Are there pictures/ideas/comments on performing this successfully?

The end of the specification change PP presentation from John Donahue contains example pictures of safety edge shaping on an I-44 unbonded concrete overlay project and on a Rte 87 shoulder widening with roller compacted concrete (RCC) project.

We are placing a lot of thin pavements as part of MoDOT's Asset Management Policy. What results and performance are we seeing concerning smoothness and service life?

The use of thin overlays is the most cost effective preventive maintenance policy targeted at keeping the existing good pavements in good condition with the funding available. There are over 34,000 miles of roadways and over 10,000 bridges competing for the same funds.

Thin treatments started with the Smooth Roads Initiative (SRI) in 2005 and at the time we expected to see 5-7 years of performance. The actual performance was 2-3 years of additional performance. Smoothness is improving – we are now on the 2nd and 3rd cycles and the pavements have been smoother than each previous treatment. A good pavement has an IRI of 100 or less and our projections currently indicate that we can just keep up with the funding we currently have available. The thin treatment service life assumptions for the pavements we are constructing today take into account the performance life we have experienced in the past. We expect to be able to maintain the thin treatment approach as a system wide approach, but there may be portions of pavements that need more extensive repairs in the future.

Discuss the Prime Contractors responsibility to insure that Subs perform traffic control appropriately and wear the appropriate PPE. Striping, rumble strips and other moving operations are the bigger challenges now.

TRAFFIC CONTROL - *The prime contractor is fully responsible for all actions of their subcontractors. Regarding traffic control, Section 616.3.3 (a) requires the prime to employ a certified Work Zone Specialist (WZS) who has the primary responsibility to implement the Traffic Management Plan and to be directly involved with daily traffic management. For all pre-activity meetings that include the need for traffic control, including any subcontractor activities, the WZS should lead the discussion on the details of what will be required to implement the traffic control plan.*

PPE - *The prime contractor's on-site project superintendent is responsible for ensuring all employees, including subcontractor employees, are equipped with the required PPE before the work begins. If PPE is not being utilized by any contractor/subcontractor employee, the inspector should first issue a verbal notice to the project superintendent. For repeated violations, the inspector should issue a NCR to the contractor's Project Manager. If the problem persists after those actions, a stoppage of work Order Record should be issued for that activity, along with a Corrective Action Request (see QM website for form). That will trigger a process that requires the prime to propose a corrective action procedure that meets the satisfaction of the engineer before the stopped activity can resume.*

Discuss the role expected of the contractors WZS and MoDOT's QA role concerning the Workzone.

Work Zone Specialist - *The primary role and responsibility of the Work Zone Specialist (WZS) is defined in Section 616.3.3 (a) and is applicable to all projects. The Work Zone Management JSP lists additional duties of the WZS that are generally only necessary for work on high volume routes or activities that might cause motorist delay. (display the two graphics below in PPT, if necessary, and discuss the highlighted phrases).*

The WZS is not necessarily required to be present on the job at all times, but should be present as needed to ensure all traffic control operations are performing smoothly and in accordance with the TCP and the TMP. If issues are identified with the current plan, the WZS should make recommendations to the engineer for improvements that are in accordance with MUTCD.

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MoDOT QA Role - *As with most activities, MoDOT's QA role for workzones is to attend the pre-activity meeting to ensure all pertinent planning aspects of traffic control and management are covered, and to then monitor the work to ensure the WZS (i.e. QC) is properly implementing the TCP and TMP. Due to the high importance of work zone*

safety, the inspector's QA monitoring role in this activity will be more frequent than the 10% rule-of-thumb QA check used for other activities.

616.3.3 The contractor shall:

(a) Designate an individual as the Work Zone Specialist (WZS) who is knowledgeable and competent by training and/or certification in the principles of proper temporary traffic control in accordance with Chapter 6 of the MUTCD, and who has the primary responsibility, with sufficient authority, for implementing the traffic management plan and other safety and mobility aspects of the project. The WZS shall be directly involved with daily traffic management, and shall communicate pertinent information with the engineer either in person or via telecommunication. Duties of the WZS shall include monitoring the work zone to ensure an efficient flow of traffic, correcting any failed or misaligned traffic control signs or devices, and recommending traffic management improvements to the engineer. The name, certification, and a 24-hour contact number for the WZS shall be provided to the engineer prior to the start of work. If the contractor makes a change in the designated WZS, the engineer shall be notified immediately. The WZS shall be trained and certified by a qualified person as defined by the Occupational Safety and Health Administration. The WZS shall have a card and/or certificate that includes the WZS's name, instructor's name and title, training entity/agency, date of training, and signature of the instructor. Re-certification shall be required a minimum of every four years.

1.1 Maintaining Work Zones and Work Zone Reviews. The Work Zone Specialist (WZS) shall maintain work zones in accordance with Sec 616.3.3 and as further stated herein. The WZS shall coordinate and implement any changes approved by the engineer. The WZS shall ensure all traffic control devices are maintained in accordance with Sec 616, the work zone is operated within the hours specified by the engineer, and will not deviate from the specified hours without prior approval of the engineer. The WZS is responsible to manage work zone delay in accordance with these project provisions. When requested by the engineer, the WZS shall submit a weekly report that includes a review of work zone operations for the week. The report shall identify any problems encountered and corrective actions taken. Work zones are subject to unannounced inspections by the engineer and other departmental staff to corroborate the validity of the WZS's review and may require immediate corrective measures and/or additional work zone monitoring.

Differing Site Conditions – Can this specification be further discussed concerning the actual site conditions verses the plans and specifically what the spec allows.

The specification definition of differing site conditions is "Subsurface or latent physical conditions at the site differing materially from those indicated in the contract, or unknown physical conditions of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in the work."

The litmus test for differing site conditions is determining what a person can reasonably expect to encounter. It is what you could not have anticipated instead of what you hoped to encounter.

Can the Contractor Performance Rating System be improved to better identify contractor's performance?

MoDOT has started revising the questions/evaluation criteria in order to better evaluate the contractor's performance towards the contract expectations of today. For Example, several questions are being proposed concerning the safety expectations with a project like PPE compliance, workzone management, worker accidents/incidents, etc. The revisions are also working towards reducing the evaluation criteria of over #100 to around #60-#70 elements. The State Statue 7 CSR 10-10 outlines this provision. The plan is to share the proposed new questions with industry in early 2019 and "pilot" this new criteria over the 2019 calendar year.