FFY25 RFP Questions & Responses

All responses are provided in red and italics.

Administrative Questions

No questions received.

Investigate Removing Existing Abutment Expansion Joints

No questions received.

Optimization of Dowel Bars in Concrete Pavements

1. As mentioned in the RFP, the Laboratory and/or Accelerated Testing will be conducted to Validate Modeling Effort. Will the field test be needed for model validation, as the lab test results can be used to compare with the model for determining the load transfer efficiency?

   Field testing is not required for model validation.

Investigation of Reflective Cracking in Wisconsin

1. I'm having trouble finding an official copy of the special provision specification for BMDs in Wisconsin. I found a copy buried in what appears to be an old bid document, but I'm concerned that this isn't the current, official version. Can you tell us where to find a current copy of the BMD SP specification?

   Our BMD SPV is a moving target that we are currently making changes to. The included BMD table is provided to give an idea of the general requirements.

2. The Report Balanced Mix Design Implementation Report (West et al., March 2021, WisDOT ID no. 0092-20-04) includes only summary statistics for the results of the benchmarking experiment. Can you make detailed data available for the benchmarking experiment? Information on mixture volumetric composition and performance test results for the 18 mixes included in the benchmarking experiment would be useful in preparing our proposal.

   See the table provided with the performance results from 0092-20-04.

Table 1: Average Results Summary - Benchmarking Experiment

Contractor	NCAT Mix ID	Aggregate Source	Primary Aggregate Type	NMAS	Traffic Level	RAP (%)	RAS (%)	IDEAL-CT Avg.	DCT FE Avg. (J/m^2)	HB Passes to 12.5 mm	HB SIP	HB CRD 20k	HB SN
[redacted]		Christian Gade	Gravel	12.5	LT	29	0	53.1	300	14,400	9,563	5.20	3,000
		Waukeska	Limestone	12.5	LT	29	0	73.7	316	17,100	11,688	5.56	4,160
		Cisler	Granite	12.5	LT	20	2	94.0	465	17,400	12,500	7.72	5,713
		Williams	Quartz	12.5	LT	21	3	46.1	411	>20,000	>20,000	5.99	8,598
		Townline	Gravel	9.5	LT	32	0	86.8	317	16,400	12,688	6.16	4,004
		Christian Gade	Gravel	9.5	MT	30	0	56.8	335	16,019	8,500	3.85	2,701
		Waukeska	Limestone	9.5	MT	31	0	55.2	321	17,300	13,875	5.27	3,549
		Cisler	Granite	12.5	MT	14	2	116.0	556	>20,000	>20,000	4.86	20,000
		Wimmie	Gravel	9.5	MT	35	0	63.1	*240	8,300	5,375	7.05	1,573
		Plant 87	Limestone	12.5	MT	26	0	27.5	310	13,800	8,800	4.13	2,253
		Halquist-Sussex	Limestone	9.5	MT	30	0	62.7	338	9,800	6,125	4.55	1,561
		Halquist-Sussex	Limestone	12.5	MT	10.1	3.4	36.0	349	>20,000	>18,000	2.66	6,076
		Williams	Quartz	12.5	MT	18	3	25.4	433	>20,000	16,063	3.40	20,000
		Townline	Gravel	12.5	MT	38	0	40.6	302	>20,000	>20,000	3.36	8,131
		Waukeska	Limestone	12.5	HT	16	0	50.9	292	19,000	12,688	3.65	3,579
		Wimmie	Gravel	12.5	HT	10	0	39.5	419	14,300	9,938	4.66	1,753
		Plant 87	Limestone	12.5	HT	15	0	45.5	383	11,855	9,000	4.61	2,136
		Waukeska	Limestone	12.5	SMA	0	3	128.1	433	>20,000	>20,000	4.96	20,000

* = Mix with PG 52S-34 binder tested at -24C. Other mixes tested at -18C.

Table 2: Suggested Threshold Criteria

Traffic Level	Min. CT Index	DCT Min. Fracture Energy (J/m2)	Hamburg			
			Min. Passes to 12.5 mm	Min. SIP (passes)	Max. CRD 20k (mm)	Min. SN (passes)
SMA	80	400	15,000	9,000	6.0 mm	2,000
High	40	300	15,000	9,000	6.0 mm	2,000
Med	40	300	15,000	9,000	7.0 mm	2,000
Low	40	300	10,000	9,000	8.0 mm	2,000

Hydraulic Conductivity of Base Course Materials, Pavement Drainage, and Relation to Pavement Buckling

1. Given that the data collected from the field will be limited (even hundreds of samples are still not a big dataset for statistical analysis with many interested variables), is there any historical data that can be provided as a supplement to the data source for a data-driven or statistical analysis to assess the relationship between hydraulic parameters (base course material properties) and pavement buckling potential? Meanwhile, is it possible to have access to the design document for the drainage and base course in Wisconsin to facilitate the understanding of local drainage conditions and common base course design?

   There is not historic data between hydraulic parameters and pavement buckling potential. Here is the link to the prior WHRP study that reviewed pavement buckling factors: wisconsindot.gov/documents2/research/0092-20-02-final-report.pdf

   Here is a link to a WHRP project that evaluated Open Graded Base Course:

   Performance Evaluation of Open Graded Base Course with Doweled and Non-Doweled Transverse Joints (marquette.edu)

2. Meanwhile, is it possible to have access to the design document for the drainage and base course in Wisconsin to facilitate the understanding of local drainage conditions and common base course design?

   Standard Detail Drawing https://wisconsindot.gov/rdwy/sdd/sd-08d15.pdf#page=1

   Subgrade and Base Course FDM Reference 14-5.15
   https://wisconsindot.gov/rdwy/fdm/fd-14-05.pdf#fd14-5-15

   Select Materials in Subgrade FDM Reference 11-05-15
   https://wisconsindot.gov/rdwy/fdm/fd-11-05.pdf#fd11-5-15
   When using Select Materials in Subgrade that involves Select Crushed Material (SCM), the SCM may be daylighted approximately every 250 feet to drain trapped water.

   Bases, Subbases and Subgrade Agg Standard Specs:
   300 Bases, Subbases, and Subgrade Aggregates (wisconsindot.gov)