

# #1

**COMPLETE**

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Page 1

## Q1

Your contact information:

Name	<b>Joe Barreres</b>
State Agency	<b>NV</b>
Email Address	<b>jbarreres@dot.nv.gov</b>

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## Q2 **Full Depth Concrete Pavement**

What types of concrete applications does your state use?  
Select all that apply.

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## Q3

Please provide a link to your Pavement Design Process and Standards.

AASHTOWare Pavement ME

<https://www.dot.nv.gov/home/showpublisheddocument/6916/636257041112930000>

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Page 2: Full-Depth Concrete Pavement

## Q4 **AASHTOWare Pavement ME Design (PMED) previously know as MEPDG**

What is the primary design software your Agency uses for full-depth concrete pavement design?

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## Q5 **15 ft**

Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

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**Q6**

**No**

Does your Agency have a minimum required full depth concrete thickness?

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**Q7**

What is your Agency's typical full depth pavement width?

12'

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**Q8**

What types of shoulders does your Agency use with full depth concrete pavements?

Concrete

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**Q9**

**Our agency does not regularly use subgrade treatments.**

Does your Agency require a subgrade treatment, and if so, what kind?

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**Q10**

**Respondent skipped this question**

What is the typical subgrade support value for pavement design input?

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**Q11**

**Cement treated/stabilized,**

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

**HMA/Asphalt treated,**

Please describe:

3" asphalt cushion course or CTB

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Page 3: Concrete Overlays

**Q12**

**Comments - Please explain if you use multiple designs for overlays.:**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

We have not constructed any concrete overlays

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**Q13**

**Other (please describe),**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

Please provide any additional information regarding joint spacing.:

N/A

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**Q14** Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

Please provide any additional information regarding joint spacing.:  
N/A

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**Q15** Does your Agency have a minimum overlay thickness?

**No**

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**Q16** What is your typical overlay thickness?

**Respondent skipped this question**

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**Q17** What types of shoulders does your Agency use with concrete overlays?

**Respondent skipped this question**

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**Q18** Does your Agency use fibers in concrete overlays?

**Respondent skipped this question**

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Page 4: Roundabouts

**Q19** Does your Agency utilize concrete roundabouts?

**Yes, concrete roundabouts and truck aprons**

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**Q20** What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

Concrete Roundabouts	<b>10"</b>
Concrete Truck Aprons	<b>10"</b>

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**Q21** Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

**Dowel bars,**  
**Reinforcing steel,**

Please provide any additional relevant information:  
Dowel bars on the transverse joints, tie bars on the longitudinal joints, reinforcing on any thin or odd shaped panels

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**Q22** Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

**Respondent skipped this question**

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Page 5: General Pavement Questions

**Q23**

Has your Agency experienced longitudinal cracking? If yes, please explain in comments.

**Yes,**

If yes, please explain what the pavement type was and if you made any design or specification adjustments to correct it?:

PCCP and asphalt. No adjustments recently made

**Q24**

What is the maximum number of lanes your Agency allows to be tied together?

3

**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

	Yes/No
Shorten Joint Spacing	<b>No</b>
Change Shoulder Design (Use Tied Shoulders)	<b>Yes</b>
Change Shoulder Design (Concrete vs AC vs RCC)	<b>No</b>
Use Dowel Bars	<b>Yes</b>
Use Widened Lanes	<b>No</b>
Change Base Type	<b>No</b>
Higher PCC Strength (Increased Concrete Strength)	<b>No</b>
Optimized Mix Design/Optimized Gradation	<b>Yes</b>

**Q26**

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

**Yes, concrete and asphalt**

**Q27**

Any other comments?

**Respondent skipped this question**

## #2

**COMPLETE**

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Page 1

### Q1

Your contact information:

Name	Eric Prieve
State Agency	CO
Email Address	eric.prieve@state.co.us

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### Q2

What types of concrete applications does your state use?  
Select all that apply.

Full Depth Concrete Pavement,  
Concrete Overlays of Asphalt (Conventional 6.5" or greater)  
,  
Concrete Overlays of Asphalt (Thin 6" or less)

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### Q3

Please provide a link to your Pavement Design Process and Standards.

<https://oitco.hylandcloud.com/cdotrmpop/docpop/docpop.aspx?docid=31608838>

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Page 2: Full-Depth Concrete Pavement

### Q4

What is the primary design software your Agency uses for full-depth concrete pavement design?

AASHTOWare Pavement ME Design (PMED) previously know as MEPDG

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### Q5

Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

15 ft

---

**Q6**

**No**

Does your Agency have a minimum required full depth concrete thickness?

---

**Q7**

What is your Agency's typical full depth pavement width?

no typical

---

**Q8**

What types of shoulders does your Agency use with full depth concrete pavements?

tied

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**Q9**

Does your Agency require a subgrade treatment, and if so, what kind?

**No subgrade treatment is required, but we will stabilize on a project by project basis**

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**Q10**

What is the typical subgrade support value for pavement design input?

Static k-value

**300**

Resilient Modulus

**R-value 78**

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**Q11**

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

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**Granular Subbase (unstabilized)**

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Page 3: Concrete Overlays

**Q12**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

**AASHTOWare Pavement ME Design (PMED) previously know as MEPDG**

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**Q13**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

**15 ft x 12 ft**

---

**Q14**

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

**6 ft x 6 ft,**

**4 ft x 4 ft**

**Q15**

Does your Agency have a minimum overlay thickness?

**Yes,**

If yes, what is the minimum thickness?:

4

**Q16**

What is your typical overlay thickness?

6

**Q17**

What types of shoulders does your Agency use with concrete overlays?

tied concrete

**Q18**

Does your Agency use fibers in concrete overlays?

**No**

Page 4: Roundabouts

**Q19**

Does your Agency utilize concrete roundabouts?

**Yes, concrete roundabouts and truck aprons**

**Q20**

What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

Concrete Roundabouts

**same as approach pavement thickness**

Concrete Truck Aprons

**same as approach pavement thickness**

**Q21**

Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

**Dowel bars,**

**Reinforcing steel**

**Q22**

Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

in the pavement design manual chapter 12.

<https://oitco.hylandcloud.com/cdotrmpop/docpop/docpop.aspx?docid=31608838>

Page 5: General Pavement Questions

**Q23**

Has your Agency experienced longitudinal cracking? If yes, please explain in comments.

**Yes,**

If yes, please explain what the pavement type was and if you made any design or specification adjustments to correct it?:

PCCP, too thin or wide

**Q24**

What is the maximum number of lanes your Agency allows to be tied together?

unlimited

**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

	Yes/No
Shorten Joint Spacing	<b>Yes</b>
Change Shoulder Design (Use Tied Shoulders)	<b>Yes</b>
Change Shoulder Design (Concrete vs AC vs RCC)	<b>No</b>
Use Dowel Bars	<b>Yes</b>
Use Widened Lanes	<b>No</b>
Change Base Type	<b>Yes</b>
Higher PCC Strength (Increased Concrete Strength)	<b>Yes</b>
Optimized Mix Design/Optimized Gradation	<b>No</b>

**Q26**

**No**

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

**Q27**

**Respondent skipped this question**

Any other comments?

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# #3

**COMPLETE**

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Page 1

## Q1

Your contact information:

Name	Christian Olmoz
State Agency	NYSDOT
Email Address	christian.olmoz@dot.ny.gov

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## Q2

What types of concrete applications does your state use?  
Select all that apply.

Full Depth Concrete Pavement,  
Concrete Overlays of Concrete (Thin 6" or less),  
Concrete Overlays of Concrete (Conventional 6.5" or greater),  
,  
Concrete Overlays of Asphalt (Conventional 6.5" or greater),  
,  
Concrete Overlays of Asphalt (Thin 6" or less)

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## Q3

Please provide a link to your Pavement Design Process and Standards.

NYSDOT Pavement Design Manual can be accessed at the following link. Most guidance is provided in Chapter 6.

<https://www.dot.ny.gov/divisions/engineering/design/dqab/cpdm>

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Page 2: Full-Depth Concrete Pavement

**Q4**

What is the primary design software your Agency uses for full-depth concrete pavement design?

**AASHTOWare Pavement ME Design (PMED) previously know as MEPDG**

**AASHTO Empirical (93, 86, 72),**

Comments:

A modified version of the AASHTO '93 empirical process is the default. For larger projects, AASHTO ME will be used to develop pavement sections.

**Q5**

Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

**15 ft,**

**Depends on thickness,**

Please provide any additional information regarding joint spacing.:

15' maximum is used for 8.5"+ pavements 1.75\*Pavement thickness maximum panel lengths for 7"-8" pavements 7" maximum spacing for pavements <6.5" These dimensions are provided on our 502-02 Standard sheet.

[https://www.dot.ny.gov/main/business-center/engineering/cadd-info/drawings/standard-sheets-us-repository/502\\_02\\_240501.pdf](https://www.dot.ny.gov/main/business-center/engineering/cadd-info/drawings/standard-sheets-us-repository/502_02_240501.pdf)

**Q6**

Does your Agency have a minimum required full depth concrete thickness?

**No**

**Q7**

What is your Agency's typical full depth pavement width?

Typical panel widths are 12' or 13' depending on thickness and shoulder type. SJPCP uses maximum of 7' panel width with longitudinal joint centered in the lane.

**Q8**

What types of shoulders does your Agency use with full depth concrete pavements?

Asphalt or tied concrete will be used depending on pavement thickness and shoulder design.

**Q9**

Does your Agency require a subgrade treatment, and if so, what kind?

**Our agency does not regularly use subgrade treatments.**

**Q10**

Respondent skipped this question

What is the typical subgrade support value for pavement design input?

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**Q11**

Granular Subbase (unstabilized)

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

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Page 3: Concrete Overlays

**Q12**

AASHTOWare Pavement ME Design (PMED) previously know as MEPDG

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

---

**Q13**

Other (please describe),

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

Please provide any additional information regarding joint spacing.:

Overlay panel size is determined on a project by project basis based on optimization of thickness/ joint spacing through ME.

---

**Q14**

6 ft x 6 ft

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

---

**Q15**

No

Does your Agency have a minimum overlay thickness?

---

**Q16**

What is your typical overlay thickness?

6" 6'x6' SJPCP overlays have been most common recently.

---

**Q17**

What types of shoulders does your Agency use with concrete overlays?

Depends on overlay design, similar to shoulder selection process for conventional pavement.

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**Q18**

Does your Agency use fibers in concrete overlays?

**It depends, please explain,**

If yes, what is the typical addition rate? Do you have an APL/QPL list? Do you allow larger panel sizes when fibers are use?:  
typical dosage is 4-5 lb/cy. Fibers are required in all overlays constructed without joint hardware. Larger panels in doveled pavements can use fibers but use of fibers is not required.

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Page 4: Roundabouts

**Q19**

Does your Agency utilize concrete roundabouts?

**Yes, concrete roundabouts and truck aprons,**

Additional Comments?:  
Most truck aprons are concrete. Selection of roadway pavement type is selected using Life Cycle Cost Analysis tools similar to the selection of mainline pavement selection.

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**Q20**

What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

Concrete Roundabouts

**Project Specific Design**

Concrete Truck Aprons

**8"**

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**Q21**

Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

**Dowel bars**

---

**Q22**

Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

Roundabout design is covered in the Highway Design Manual.

Pavement design is provided in the Comprehensive Pavement Design Manual referenced previously.

[https://www.dot.ny.gov/divisions/engineering/design/dqab/hdm/hdm-repository/chapt\\_26.pdf](https://www.dot.ny.gov/divisions/engineering/design/dqab/hdm/hdm-repository/chapt_26.pdf)

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Page 5: General Pavement Questions

**Q23**

Has your Agency experienced longitudinal cracking? If yes, please explain in comments.

**Yes,**

If yes, please explain what the pavement type was and if you made any design or specification adjustments to correct it?:

Longitudinal cracking was prevalent in full depth JPCP pavements constructed on permeable bases. This resulted in excessive slab curl and subsequent cracking. Permeable bases were removed from pavement design.

**Q24**

What is the maximum number of lanes your Agency allows to be tied together?

No guidance is given

**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

	Yes/No
Shorten Joint Spacing	<b>Yes</b>
Change Shoulder Design (Use Tied Shoulders)	<b>Yes</b>
Change Shoulder Design (Concrete vs AC vs RCC)	<b>Yes</b>
Use Dowel Bars	<b>Yes</b>
Use Widened Lanes	<b>Yes</b>
Change Base Type	
Higher PCC Strength (Increased Concrete Strength)	
Optimized Mix Design/Optimized Gradation	<b>Yes</b>

**Q26**

**Yes, concrete and asphalt**

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

**Q27**

**Respondent skipped this question**

Any other comments?

# #4

**COMPLETE**

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Page 1

## Q1

Your contact information:

Name	<b>Jason Simmons</b>
State Agency	<b>Utah</b>
Email Address	<b>jasonsimmons@utah.gov</b>

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## Q2

What types of concrete applications does your state use?  
Select all that apply.

**Full Depth Concrete Pavement,**  
**Concrete Overlays of Concrete (Conventional 6.5" or greater)**  
,  
**Concrete Overlays of Asphalt (Conventional 6.5" or greater)**  
,  
**Concrete Overlays of Asphalt (Thin 6" or less),**  
Additional Comments:  
Concrete Overlays are in the tool box but used sparingly

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## Q3

Please provide a link to your Pavement Design Process and Standards.

[https://drive.google.com/file/d/17E21bzMdfbB8Dec4fQWdX2O1am47\\_h3B/view](https://drive.google.com/file/d/17E21bzMdfbB8Dec4fQWdX2O1am47_h3B/view)

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Page 2: Full-Depth Concrete Pavement

## Q4

What is the primary design software your Agency uses for full-depth concrete pavement design?

**AASHTOWare Pavement ME Design (PMED) previously know as MEPDG**

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**Q5** **15 ft**

Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

**Q6** **No**

Does your Agency have a minimum required full depth concrete thickness?

**Q7**  
What is your Agency's typical full depth pavement width?

12 ft lanes

**Q8**  
What types of shoulders does your Agency use with full depth concrete pavements?

tied concrete, same pavement section as lanes

**Q9** **Our agency does not regularly use subgrade treatments.**  
Does your Agency require a subgrade treatment, and if so, what kind?

**Q10** **Respondent skipped this question**  
What is the typical subgrade support value for pavement design input?

**Q11** **Granular Subbase (unstabilized),  
Cement treated/stabilized,  
HMA/Asphalt treated,**  
If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.  
Please describe:  
Most PCCP placed on 3" HMA and 16" granular

Page 3: Concrete Overlays

**Q12** **AASHTOWare Pavement ME Design (PMED) previously know as MEPDG**  
What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

**Q13** **15 ft x 12 ft,**  
Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)  
Please provide any additional information regarding joint spacing.:  
Have used some 12ft x 12 ft

---

**Q14** **6 ft x 6 ft**  
Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

---

**Q15** **No**  
Does your Agency have a minimum overlay thickness?

---

**Q16** **Respondent skipped this question**  
What is your typical overlay thickness?

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**Q17**  
What types of shoulders does your Agency use with concrete overlays?  
  
tied concrete shoulders

---

**Q18** **No**  
Does your Agency use fibers in concrete overlays?

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Page 4: Roundabouts

**Q19** **No**  
Does your Agency utilize concrete roundabouts?

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**Q20** **Respondent skipped this question**  
What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

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**Q21** **Respondent skipped this question**  
Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

---

**Q22**

Respondent skipped this question

Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

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Page 5: General Pavement Questions

**Q23**

No

Has your Agency experienced longitudinal cracking? If yes, please explain in comments.

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**Q24**

What is the maximum number of lanes your Agency allows to be tied together?

3

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**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

	Yes/No
Shorten Joint Spacing	Yes
Change Shoulder Design (Use Tied Shoulders)	No
Change Shoulder Design (Concrete vs AC vs RCC)	No
Use Dowel Bars	Yes
Use Widened Lanes	Yes
Change Base Type	Yes
Higher PCC Strength (Increased Concrete Strength)	No
Optimized Mix Design/Optimized Gradation	Yes

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**Q26**

No

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

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**Q27**

Respondent skipped this question

Any other comments?

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# #5

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
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Page 1

## Q1

Your contact information:

Name	<b>Michael Mellons</b>
State Agency	<b>Tennessee DOT</b>
Email Address	<b>MICHAEL.J.MELLONS@tn.gov</b>

---

## Q2 **Full Depth Concrete Pavement**

What types of concrete applications does your state use?  
Select all that apply.

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## Q3

Please provide a link to your Pavement Design Process and Standards.

[https://www.tn.gov/content/dam/tn/tdot/hq-materials-tests/  
pavement-design/TDOT%20Pavement%20Design%20Guide  
%202025.pdf](https://www.tn.gov/content/dam/tn/tdot/hq-materials-tests/pavement-design/TDOT%20Pavement%20Design%20Guide%202025.pdf)

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Page 2: Full-Depth Concrete Pavement

## Q4 **AASHTO Empirical (93, 86, 72),**

What is the primary design software your Agency uses for full-depth concrete pavement design?

Comments:  
1993 AASHTO Guide for Design of Pavement Structures to obtain a Portland Cement Concrete (PCC) layer thickness (D) thickness

---

## Q5 **15 ft**

Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

---

**Q6**

Does your Agency have a minimum required full depth concrete thickness?

**Yes,**

If yes, what is the minimum required thickness?:  
6-12 inches

**Q7**

What is your Agency's typical full depth pavement width?

Varies

**Q8**

What types of shoulders does your Agency use with full depth concrete pavements?

Concrete & Asphalt

**Q9**

Does your Agency require a subgrade treatment, and if so, what kind?

**No subgrade treatment is required, but we will stabilize on a project by project basis**

**Q10**

What is the typical subgrade support value for pavement design input?

Static k-value

**See Design Manual for values**

Resilient Modulus

**See Design Manual for values**

**Q11**

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

**Granular Subbase (unstabilized),  
Cement treated/stabilized**

Page 3: Concrete Overlays

**Q12**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

**AASHTO Empirical (93)**

**Q13**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

**Respondent skipped this question**

**Q14**

Respondent skipped this question

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

---

**Q15**

Respondent skipped this question

Does your Agency have a minimum overlay thickness?

---

**Q16**

Respondent skipped this question

What is your typical overlay thickness?

---

**Q17**

Respondent skipped this question

What types of shoulders does your Agency use with concrete overlays?

---

**Q18**

Respondent skipped this question

Does your Agency use fibers in concrete overlays?

---

---

Page 4: Roundabouts

**Q19**

Yes, concrete roundabouts and truck aprons

Does your Agency utilize concrete roundabouts?

---

**Q20**

What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

Concrete Roundabouts

See Design Manual for values

Concrete Truck Aprons

See Design Manual for values

---

**Q21**

Respondent skipped this question

Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

---

**Q22**

Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

<https://www.tn.gov/tdot/materials-and-tests/pavementdesign.html>

html

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Page 5: General Pavement Questions

**Q23** **No**

Has your Agency experienced longitudinal cracking? If yes, please explain in comments.

**Q24** **Respondent skipped this question**

What is the maximum number of lanes your Agency allows to be tied together?

**Q25**  
Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

	Yes/No
Shorten Joint Spacing	<b>Yes</b>
Change Shoulder Design (Use Tied Shoulders)	
Change Shoulder Design (Concrete vs AC vs RCC)	<b>Yes</b>
Use Dowel Bars	
Use Widened Lanes	<b>No</b>
Change Base Type	<b>It depends</b>
Higher PCC Strength (Increased Concrete Strength)	
Optimized Mix Design/Optimized Gradation	<b>Yes</b>

**Q26** **Yes, concrete and asphalt**

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

**Q27** **Respondent skipped this question**

Any other comments?

# #6

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
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Page 1

## Q1

Your contact information:

Name	<b>Andrew Thaxton</b>
State Agency	<b>West Virginia</b>
Email Address	<b>andrew.m.thaxton@wv.gov</b>

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## Q2

What types of concrete applications does your state use?  
Select all that apply.

**Full Depth Concrete Pavement,**  
**Concrete Overlays of Concrete (Thin 6" or less),**  
**Concrete Overlays of Concrete (Conventional 6.5" or greater)**  
,  
**Concrete Overlays of Asphalt (Conventional 6.5" or greater)**  
,  
**Concrete Overlays of Asphalt (Thin 6" or less),**  
**Roller Compacted Concrete (RCC)**

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## Q3

Please provide a link to your Pavement Design Process and Standards.

<https://transportation.wv.gov/highways/TechnicalSupport/Documents/Design%20Directives/2014%20DD%20Manual%20Master%20rev%202023-05-10.pdf>

---

Page 2: Full-Depth Concrete Pavement

**Q4** **AASHTOWare Pavement ME Design (PMED) previously know as MEPDG**  
 What is the primary design software your Agency uses for full-depth concrete pavement design?  
 ,  
**Other,**  
 Comments:  
 PerRoad, Darwin

**Q5** **15 ft**  
 Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

**Q6** **No**  
 Does your Agency have a minimum required full depth concrete thickness?

**Q7**  
 What is your Agency's typical full depth pavement width?  
 10'-12' per lane

**Q8**  
 What types of shoulders does your Agency use with full depth concrete pavements?  
 Paved

**Q9** **No subgrade treatment is required, but we will stabilize on a project by project basis**  
 Does your Agency require a subgrade treatment, and if so, what kind?

**Q10**  
 What is the typical subgrade support value for pavement design input?  
 Static k-value **.14**  
 Resilient Modulus **4500**

**Q11** **Granular Subbase (unstabilized), Cement treated/stabilized, Geogrid**  
 If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

Page 3: Concrete Overlays

**Q12**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

**AASHTOWare Pavement ME Design (PMED) previously know as MEPDG**

,

**Other,**

Comments - Please explain if you use multiple designs for overlays.:

Darwin

**Q13**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

**15 ft x 12 ft**

**Q14**

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

**15 ft x 12 ft**

**Q15**

Does your Agency have a minimum overlay thickness?

**Yes,**

If yes, what is the minimum thickness?:

2"

**Q16**

What is your typical overlay thickness?

2"

**Q17**

What types of shoulders does your Agency use with concrete overlays?

paved shoulder

**Q18**

Does your Agency use fibers in concrete overlays?

**Yes,**

If yes, what is the typical addition rate? Do you have an APL/QPL list? Do you allow larger panel sizes when fibers are use?:

Per the manufacturers recommendations. APL List for concrete fibers. Panel size is dictated upon the width of the lane and the length of the paving train.

Page 4: Roundabouts

**Q19** **Yes, concrete roundabouts and truck aprons**

Does your Agency utilize concrete roundabouts?

---

**Q20**  
What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

Concrete Roundabouts **No Standard Detail**

Concrete Truck Aprons **No Standard Detail**

---

**Q21** **None of the above,**  
Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply. Please provide any additional relevant information:  
Roundabouts and aprons are designed per Project Special Provisions

---

**Q22**  
Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

<https://transportation.wv.gov/highways/TechnicalSupport/Documents/Design%20Directives/2014%20DD%20Manual%20Master%20rev%202023-05-10.pdf>

---

Page 5: General Pavement Questions

**Q23** **Yes,**  
Has your Agency experienced longitudinal cracking? If yes, please explain in comments. If yes, please explain what the pavement type was and if you made any design or specification adjustments to correct it?:  
Asphalt, updated crack sealing Specifications.

---

**Q24**  
What is the maximum number of lanes your Agency allows to be tied together?

Not specified

---

**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

	Yes/No
Shorten Joint Spacing	Yes
Change Shoulder Design (Use Tied Shoulders)	Yes
Change Shoulder Design (Concrete vs AC vs RCC)	Yes
Use Dowel Bars	Yes
Use Widened Lanes	Yes
Change Base Type	Yes
Higher PCC Strength (Increased Concrete Strength)	It depends
Optimized Mix Design/Optimized Gradation	Yes

**Q26**

Yes, concrete and asphalt

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

**Q27**

Respondent skipped this question

Any other comments?

# #7

**INCOMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Thursday, August 21, 2025 8:35:58 AM  
**Last Modified:** Thursday, August 21, 2025 8:41:52 AM  
**Time Spent:** 00:05:54  
**IP Address:** 205.174.143.2

---

Page 1

## Q1

Your contact information:

Name	<b>John P Jennings</b>
State Agency	<b>AL</b>
Email Address	<b>jenningsj@dot.state.al.us</b>

---

## Q2

What types of concrete applications does your state use?  
Select all that apply.

**Full Depth Concrete Pavement,**  
**Concrete Overlays of Concrete (Conventional 6.5" or greater)**  
,  
**Roller Compacted Concrete (RCC),**  
**Other,**  
Additional Comments:  
RCC is only used for shoulders.

---

## Q3

Please provide a link to your Pavement Design Process and Standards.

N/A

---

Page 2: Full-Depth Concrete Pavement

## Q4

**AASHTO Empirical (93, 86, 72)**

What is the primary design software your Agency uses for full-depth concrete pavement design?

---

## Q5

**15 ft**

Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

---

**Q6**

**No**

Does your Agency have a minimum required full depth concrete thickness?

---

**Q7**

What is your Agency's typical full depth pavement width?

25ft

---

**Q8**

What types of shoulders does your Agency use with full depth concrete pavements?

Tied PCC.

---

**Q9**

Does your Agency require a subgrade treatment, and if so, what kind?

**No subgrade treatment is required, but we will stabilize on a project by project basis**

---

**Q10**

What is the typical subgrade support value for pavement design input?

**Respondent skipped this question**

---

**Q11**

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

**Granular Subbase (unstabilized),  
Open graded subbases (unstabilized)**

---

Page 3: Concrete Overlays

**Q12**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

**AASHTO Empirical (93)**

---

**Q13**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

**15 ft x 12 ft**

---

**Q14**

**Respondent skipped this question**

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

---

**Q15**

**No**

Does your Agency have a minimum overlay thickness?

---

**Q16**

**Respondent skipped this question**

What is your typical overlay thickness?

---

**Q17**

What types of shoulders does your Agency use with concrete overlays?

Tied PCC.

---

**Q18**

**Respondent skipped this question**

Does your Agency use fibers in concrete overlays?

---

Page 4: Roundabouts

**Q19**

**Concrete truck aprons only**

Does your Agency utilize concrete roundabouts?

---

**Q20**

What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

Concrete Truck Aprons

**10 in**

---

**Q21**

**Dowel bars,**

Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

**Wire Mesh**

---

**Q22**

**Respondent skipped this question**

Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

---

Page 5: General Pavement Questions

**Q23**

**Respondent skipped this question**

Has your Agency experienced longitudinal cracking? If yes, please explain in comments.

---

**Q24**

**Respondent skipped this question**

What is the maximum number of lanes your Agency allows to be tied together?

---

**Q25**

**Respondent skipped this question**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

---

**Q26**

**Respondent skipped this question**

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

---

**Q27**

**Respondent skipped this question**

Any other comments?

---

# #8

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Thursday, August 21, 2025 11:03:19 AM  
**Last Modified:** Thursday, August 21, 2025 11:23:11 AM  
**Time Spent:** 00:19:51  
**IP Address:** 156.63.69.215

---

Page 1

## Q1

Your contact information:

Name	Dave Miller
State Agency	Ohio DOT
Email Address	dave.miller2@dot.ohio.gov

---

## Q2

What types of concrete applications does your state use?  
Select all that apply.

**Full Depth Concrete Pavement,  
Concrete Overlays of Concrete (Conventional 6.5" or  
greater)**

---

## Q3

Please provide a link to your Pavement Design Process and Standards.

<https://www.transportation.ohio.gov/working/engineering/pavement/pavement-design-manual/01-pdm>

---

Page 2: Full-Depth Concrete Pavement

## Q4

What is the primary design software your Agency uses for full-depth concrete pavement design?

**AASHTO Empirical (93, 86, 72)**

---

## Q5

Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

**15 ft**

---

**Q6**

Does your Agency have a minimum required full depth concrete thickness?

**Yes,**

If yes, what is the minimum required thickness?:  
8 inches

---

**Q7**

What is your Agency's typical full depth pavement width?

12 feet

---

**Q8**

What types of shoulders does your Agency use with full depth concrete pavements?

Concrete

---

**Q9**

Does your Agency require a subgrade treatment, and if so, what kind?

**Lime stabilization,**

**Other (please describe),**

Please describe:

Cement stabilization is the most common

---

**Q10**

What is the typical subgrade support value for pavement design input?

Resilient Modulus

**7200**

---

**Q11**

**Granular Subbase (unstabilized)**

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

---

---

Page 3: Concrete Overlays

**Q12**

**AASHTO Empirical (93)**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

---

**Q13**

**15 ft x 12 ft**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

---

**Q14**

**Respondent skipped this question**

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

---

**Q15**

Does your Agency have a minimum overlay thickness?

**Yes,**

If yes, what is the minimum thickness?:  
8 inches

---

**Q16**

What is your typical overlay thickness?

9 inches

---

**Q17**

What types of shoulders does your Agency use with concrete overlays?

Concrete

---

**Q18**

Does your Agency use fibers in concrete overlays?

**No**

---

Page 4: Roundabouts

**Q19**

Does your Agency utilize concrete roundabouts?

**Yes, concrete roundabouts and truck aprons**

---

**Q20**

What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

Concrete Roundabouts

**8 inches**

Concrete Truck Aprons

**8 inches**

---

**Q21**

**Dowel bars**

Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

---

**Q22**

Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

<https://www.transportation.ohio.gov/working/engineering/roadway/manuals-standards/location-design-vol-1/0400/0400#403Roundabouts>

---

Page 5: General Pavement Questions

**Q23**

Has your Agency experienced longitudinal cracking? If yes, please explain in comments.

**Yes,**

If yes, please explain what the pavement type was and if you made any design or specification adjustments to correct it?:

16-foot wide concrete ramps would often crack longitudinally so now we build two 8-foot wide slabs tied together with a longitudinal joint.

---

**Q24**

What is the maximum number of lanes your Agency allows to be tied together?

Unlimited

---

**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

	Yes/No
Shorten Joint Spacing	<b>No</b>
Change Shoulder Design (Use Tied Shoulders)	<b>No</b>
Change Shoulder Design (Concrete vs AC vs RCC)	<b>No</b>
Use Dowel Bars	<b>No</b>
Use Widened Lanes	<b>No</b>
Change Base Type	<b>No</b>
Higher PCC Strength (Increased Concrete Strength)	<b>No</b>
Optimized Mix Design/Optimized Gradation	<b>No</b>

Please explain:

We use standard joint spacing, tied concrete shoulders, and dowel bars on all our concrete pavements.

**Q26**

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

**Yes, concrete and asphalt,**

Provide additional information or a link to the guidance you provide.:

<https://www.transportation.ohio.gov/working/engineering/pavement/pavement-design-manual/01-pdm>

**Q27**

Any other comments?

**Respondent skipped this question**

# #9

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, August 20, 2025 7:09:51 AM  
**Last Modified:** Thursday, August 21, 2025 11:55:26 AM  
**Time Spent:** Over a day  
**IP Address:** 165.206.200.230

Page 1

## Q1

Your contact information:

Name	<b>Todd Hanson</b>
State Agency	<b>IA</b>
Email Address	<b>todd.hanson@iowadot.us</b>

## Q2

What types of concrete applications does your state use? Select all that apply.

**Full Depth Concrete Pavement,**  
**Concrete Overlays of Concrete (Thin 6" or less),**  
**Concrete Overlays of Asphalt (Conventional 6.5" or greater)**  
 ,  
**Concrete Overlays of Asphalt (Thin 6" or less)**

## Q3

Please provide a link to your Pavement Design Process and Standards.

<https://iowadot.gov/consultants-contractors/design/design-manual>

Page 2: Full-Depth Concrete Pavement

## Q4

What is the primary design software your Agency uses for full-depth concrete pavement design?

**Other,**  
 Comments:  
 PCA, moving to PMED

## Q5

Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

**>16 ft,**  
 Please provide any additional information regarding joint spacing.:  
 17 ft.

**Q6**

Does your Agency have a minimum required full depth concrete thickness?

**Yes,**

If yes, what is the minimum required thickness?:  
9 inch

---

**Q7**

What is your Agency's typical full depth pavement width?

24

---

**Q8**

What types of shoulders does your Agency use with full depth concrete pavements?

Interstate, FD PCC, Primary 6" PCC or HMA Alternate

---

**Q9**

Does your Agency require a subgrade treatment, and if so, what kind?

**Our agency does not regularly use subgrade treatments.**

'  
Please describe:  
Fly ash or cement treated for wet spots

---

**Q10**

What is the typical subgrade support value for pavement design input?

Static k-value

**150**

---

**Q11**

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

**Granular Subbase (unstabilized),**

Please describe:  
6" granular subbase. Geogrid used for some projects

---

Page 3: Concrete Overlays

**Q12**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

**State Built,**

Comments - Please explain if you use multiple designs for overlays.:  
Excel spreadsheet from Dr. Cable

---

**Q13**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

**12 ft x 12 ft,**

Please provide any additional information regarding joint spacing.:

8 & 8.5 inch 14 x 12 ft 9 inch or thicker 15 x12 ft.

---

**Q14**

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

**6 ft x 6 ft,**

Please provide any additional information regarding joint spacing.:

12x12 ft spacing with macrofibers

---

**Q15**

Does your Agency have a minimum overlay thickness?

**Yes,**

If yes, what is the minimum thickness?:

4"

---

**Q16**

What is your typical overlay thickness?

6"

---

**Q17**

What types of shoulders does your Agency use with concrete overlays?

PCC

---

**Q18**

Does your Agency use fibers in concrete overlays?

**Yes,**

If yes, what is the typical addition rate? Do you have an APL/QPL list? Do you allow larger panel sizes when fibers are use?:

4 lb/cy. Approved list. Yes, 6x6 without fibers, 12 x12 with fibers

---

Page 4: Roundabouts

**Q19**

Does your Agency utilize concrete roundabouts?

**Yes, concrete roundabouts and truck aprons**

---

**Q20**

What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

Concrete Roundabouts	<b>9.5" to 10"</b>
Concrete Truck Aprons	<b>14"</b>

---

**Q21**

**Dowel bars**

Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

---

**Q22**

**Respondent skipped this question**

Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

---

Page 5: General Pavement Questions

**Q23**

Has your Agency experienced longitudinal cracking? If yes, please explain in comments.

**Yes,**

If yes, please explain what the pavement type was and if you made any design or specification adjustments to correct it?:  
at 1/4 point in 14 ft widened lanes (26 ft width). Changed to 24 ft (2 -12 ft. lanes) with a tied PCC shoulder.

---

**Q24**

What is the maximum number of lanes your Agency allows to be tied together?

5

---

**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

	Yes/No
Shorten Joint Spacing	<b>No</b>
Change Shoulder Design (Use Tied Shoulders)	<b>No</b>
Change Shoulder Design (Concrete vs AC vs RCC)	<b>No</b>
Use Dowel Bars	<b>Yes</b>
Use Widened Lanes	<b>No</b>
Change Base Type	<b>No</b>
Higher PCC Strength (Increased Concrete Strength)	<b>No</b>
Optimized Mix Design/Optimized Gradation	<b>Yes</b>

**Q26**

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

**Yes, concrete and asphalt,**

Provide additional information or a link to the guidance you provide.:

Only as requested.

**Q27**

Any other comments?

**Respondent skipped this question**

# #10

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Thursday, August 21, 2025 2:20:05 PM  
**Last Modified:** Thursday, August 21, 2025 2:58:51 PM  
**Time Spent:** 00:38:45  
**IP Address:** 108.59.60.252

---

Page 1

## Q1

Your contact information:

Name	Tommy Nantung
State Agency	INDOT
Email Address	tnantung@indot.in.gov

---

## Q2

What types of concrete applications does your state use?  
Select all that apply.

Full Depth Concrete Pavement,  
Concrete Overlays of Concrete (Conventional 6.5" or greater)  
,  
Concrete Overlays of Asphalt (Conventional 6.5" or greater)  
,  
Concrete Overlays of Asphalt (Thin 6" or less)

---

## Q3

Please provide a link to your Pavement Design Process and Standards.

<https://www.in.gov/dot/div/contracts/design/IDM.htm>

---

Page 2: Full-Depth Concrete Pavement

## Q4

What is the primary design software your Agency uses for full-depth concrete pavement design?

AASHTOWare Pavement ME Design (PMED) previously know as MEPDG

---

**Q5** **16 ft,**

Please select your agency's typical joint spacing(s) for full-depth concrete pavements? **15 ft**

---

**Q6** **Yes,**

Does your Agency have a minimum required full depth concrete thickness? If yes, what is the minimum required thickness?:  
9 inches

---

**Q7**

What is your Agency's typical full depth pavement width?

12 feet

---

**Q8**

What types of shoulders does your Agency use with full depth concrete pavements?

Both concrete or asphalt

---

**Q9** **Lime stabilization,**

Does your Agency require a subgrade treatment, and if so, what kind? **Cement treated**

---

**Q10**

What is the typical subgrade support value for pavement design input?

Static k-value **>150 pci**

Resilient Modulus **9,000 psi to 14,000 psi**

---

**Q11** **Granular Subbase (unstabilized),**

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments. **Open graded subbases (unstabilized),  
HMA/Asphalt treated,  
Stabilized open graded subbases**

---

**Q12**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

**AASHTOWare Pavement ME Design (PMED) previously know as MEPDG**

**Q13**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

**15 ft x 12 ft**

**Q14**

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

**6 ft x 6 ft,**

Please provide any additional information regarding joint spacing.:

Only concrete overlay over asphalt or concrete overlay over composite pavement.

**Q15**

Does your Agency have a minimum overlay thickness?

**Yes,**

If yes, what is the minimum thickness?:

For concrete overlay over asphalt or composite, it is 4 inches

**Q16**

What is your typical overlay thickness?

4 to 4.5 inches

**Q17**

What types of shoulders does your Agency use with concrete overlays?

Concrete over granular subbase

**Q18**

Does your Agency use fibers in concrete overlays?

**Yes,**

If yes, what is the typical addition rate? Do you have an APL/QPL list? Do you allow larger panel sizes when fibers are use?:

The typical rate depends on the mix design and residual stresses. Yes, we have APL/QPL. Only case by case that we allow larger panels.

**Q19** **Yes, concrete roundabouts and truck aprons**

Does your Agency utilize concrete roundabouts?

---

**Q20**  
What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

Concrete Roundabouts **It depends on the design and traffic loads mostly 9 inches**

Concrete Truck Aprons **It depends on the design and traffic loads mostly 9 inches**

---

**Q21** **Dowel bars,**  
**Reinforcing steel,**  
Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.  
Please provide any additional relevant information:  
<https://www.in.gov/dot/div/contracts/design/Part%203/Chapter%2051%20-%20Special%20Design%20Elements.pdf#page=202&zoom=100,93,93>

---

**Q22**  
Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

<https://www.in.gov/dot/div/contracts/design/Part%203/Chapter%2051%20-%20Special%20Design%20Elements.pdf#page=202&zoom=100,93,93>

---

## Page 5: General Pavement Questions

**Q23** **Yes,**  
Has your Agency experienced longitudinal cracking? If yes, please explain in comments.  
If yes, please explain what the pavement type was and if you made any design or specification adjustments to correct it?:  
Mostly in the ramps due to the width of the ramp and the concrete pavement placement width. The correction is to provide joint in the middle of the ramp so the width of the slab will not exceed 16 feet.

---

**Q24**  
What is the maximum number of lanes your Agency allows to be tied together?

For new construction all lanes have to be tied.

---

**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

	Yes/No
Shorten Joint Spacing	<b>Yes</b>
Change Shoulder Design (Use Tied Shoulders)	<b>Yes</b>
Change Shoulder Design (Concrete vs AC vs RCC)	<b>Yes</b>
Use Dowel Bars	<b>Yes</b>
Use Widened Lanes	<b>Yes</b>
Change Base Type	<b>Yes</b>
Higher PCC Strength (Increased Concrete Strength)	<b>No</b>
Optimized Mix Design/Optimized Gradation	<b>Yes</b>

Please explain:

They are all depend on the designer and the performance expectation

**Q26**

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

**No,**

Provide additional information or a link to the guidance you provide.:

Only case by case basis for the LPA projects.

**Q27**

Any other comments?

**Respondent skipped this question**

# #11

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Friday, August 22, 2025 11:25:36 AM  
**Last Modified:** Friday, August 22, 2025 12:04:09 PM  
**Time Spent:** 00:38:32  
**IP Address:** 164.165.100.254

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Page 1

## Q1

Your contact information:

Name	<b>John Arambarri</b>
State Agency	<b>Idaho Transportation Department</b>
Email Address	<b>john.arambarri@itd.idaho.gov</b>

---

## Q2

What types of concrete applications does your state use?  
Select all that apply.

**Full Depth Concrete Pavement,**  
**Concrete Overlays of Concrete (Conventional 6.5" or greater)**

**Concrete Overlays of Asphalt (Thin 6" or less),**

Additional Comments:

Concrete overlays are little tricky for us due to grade changes. Our concrete overlays to date are unbound pcc on pcc (and we've only done two). New full depth concrete pavement tends to be our primary PCC construction.

---

## Q3

Please provide a link to your Pavement Design Process and Standards.

Section 520 of our Materials Manual

[https://apps.itd.idaho.gov/apps/manuals/Materials/materials\\_manual.pdf](https://apps.itd.idaho.gov/apps/manuals/Materials/materials_manual.pdf)

Standard drawing: [https://apps.itd.idaho.gov/apps/StandardDrawings/409-1\\_0513s.pdf](https://apps.itd.idaho.gov/apps/StandardDrawings/409-1_0513s.pdf)

---

Page 2: Full-Depth Concrete Pavement

**Q4** **AASHTOWare Pavement ME Design (PMED) previously know as MEPDG**  
 What is the primary design software your Agency uses for full-depth concrete pavement design?

---

**Q5** **15 ft**  
 Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

---

**Q6** **Yes,**  
 Does your Agency have a minimum required full depth concrete thickness?  
 If yes, what is the minimum required thickness?:  
 10 inches on Interstate 8 inches on other highways

---

**Q7**  
 What is your Agency's typical full depth pavement width?  
 37.5 ft in one direction (12 ft wide panels) and then inside and outside shoulders

---

**Q8**  
 What types of shoulders does your Agency use with full depth concrete pavements?  
 Tied shoulders typically, some inside shoulders are widened panels.

---

**Q9** **Our agency does not regularly use subgrade treatments.**  
 Does your Agency require a subgrade treatment, and if so, what kind?

---

**Q10**  
 What is the typical subgrade support value for pavement design input?  
 Static k-value **Rarely use AASHTO 93, perhaps 150 pci**  
 Resilient Modulus **6,000 to 14,000 depends on subgrade material**

---

**Q11** **Granular Subbase (unstabilized)**  
 If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

---

**Q12**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

**AASHTOWare Pavement ME Design (PMED) previously know as MEPDG**

**Q13**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

**15 ft x 12 ft**

**Q14**

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

Please provide any additional information regarding joint spacing.:

N/A for thin concrete overlays

**Q15**

Does your Agency have a minimum overlay thickness?

**No**

**Q16**

What is your typical overlay thickness?

10 inch

**Q17**

What types of shoulders does your Agency use with concrete overlays?

Tied shoulder

**Q18**

Does your Agency use fibers in concrete overlays?

**No,**

If yes, what is the typical addition rate? Do you have an APL/QPL list? Do you allow larger panel sizes when fibers are use?:

We don't have much experience with concrete overlays

Page 4: Roundabouts

**Q19**

Does your Agency utilize concrete roundabouts?

**Yes, concrete roundabouts and truck aprons,**

Additional Comments?:

We don't have many roundabout projects on our highways. We've seen only a handful and don't have much for standards.

**Q20**

What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

Concrete Roundabouts	<b>unknown</b>
Concrete Truck Aprons	<b>unknown</b>

---

**Q21**

Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

Please provide any additional relevant information:  
unknown

---

**Q22**

Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

n/a

---

Page 5: General Pavement Questions

**Q23**

Has your Agency experienced longitudinal cracking? If yes, please explain in comments.

**Yes,**  
If yes, please explain what the pavement type was and if you made any design or specification adjustments to correct it?:  
We've seen some longitudinal cracking on PCC pavements, not a widespread problem, and have not investigated with any detail.

---

**Q24**

What is the maximum number of lanes your Agency allows to be tied together?

60 ft width (5 lanes)

---

**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

	Yes/No
Shorten Joint Spacing	<b>It depends</b>
Change Shoulder Design (Use Tied Shoulders)	<b>Yes</b>
Change Shoulder Design (Concrete vs AC vs RCC)	<b>It depends</b>
Use Dowel Bars	<b>Yes</b>
Use Widened Lanes	<b>It depends</b>
Change Base Type	<b>It depends</b>
Higher PCC Strength (Increased Concrete Strength)	<b>No</b>
Optimized Mix Design/Optimized Gradation	<b>It depends</b>

Please explain:

We give our pavement designers significant latitude.

**Q26**

**No**

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

**Q27**

**Respondent skipped this question**

Any other comments?

# #12

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Monday, August 25, 2025 7:23:49 AM  
**Last Modified:** Monday, August 25, 2025 7:30:29 AM  
**Time Spent:** 00:06:39  
**IP Address:** 205.204.186.47

---

Page 1

## Q1

Your contact information:

Name	<b>Brad Frazier</b>
State Agency	<b>KYTC</b>
Email Address	<b>Brad.Frazier@ky.gov</b>

---

## Q2

What types of concrete applications does your state use?  
Select all that apply.

**Full Depth Concrete Pavement,**  
**Concrete Overlays of Concrete (Thin 6" or less),**  
**Concrete Overlays of Concrete (Conventional 6.5" or greater)**  
,  
**Concrete Overlays of Asphalt (Conventional 6.5" or greater)**  
,  
**Concrete Overlays of Asphalt (Thin 6" or less)**

---

## Q3

Please provide a link to your Pavement Design Process and Standards.

<https://transportation.ky.gov/Highway-Design/Pages/Pavement-Design.aspx>

---

Page 2: Full-Depth Concrete Pavement

## Q4

What is the primary design software your Agency uses for full-depth concrete pavement design?

**AASHTOWare Pavement ME Design (PMED) previously know as MEPDG**

---

**Q5**

**15 ft**

Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

**Q6**

**Yes,**

Does your Agency have a minimum required full depth concrete thickness?

If yes, what is the minimum required thickness?:  
8 inches

**Q7**

**Respondent skipped this question**

What is your Agency's typical full depth pavement width?

**Q8**

What types of shoulders does your Agency use with full depth concrete pavements?

asphalt or concrete

**Q9**

**Other (please describe),**

Does your Agency require a subgrade treatment, and if so, what kind?

**Lime-cement stabilization**

**Q10**

What is the typical subgrade support value for pavement design input?

Resilient Modulus

**typically called for from geotechnical report**

**Q11**

**Granular Subbase (unstabilized)**

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

Page 3: Concrete Overlays

**Q12**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

**AASHTOWare Pavement ME Design (PMED) previously know as MEPDG**

**Other,**

Comments - Please explain if you use multiple designs for overlays.:

Interstate design catalog by University of Kentucky

**Q13**

**15 ft x 12 ft**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

---

**Q14**

**6 ft x 6 ft**

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

---

**Q15**

Does your Agency have a minimum overlay thickness?

**Yes,**

If yes, what is the minimum thickness?:  
6 inches for thin concrete overlay

---

**Q16**

**Respondent skipped this question**

What is your typical overlay thickness?

---

**Q17**

What types of shoulders does your Agency use with concrete overlays?

asphalt or concrete

---

**Q18**

**No**

Does your Agency use fibers in concrete overlays?

---

Page 4: Roundabouts

**Q19**

**Yes, concrete roundabouts and truck aprons**

Does your Agency utilize concrete roundabouts?

---

**Q20**

What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

Concrete Truck Aprons

**8 inches**

---

**Q21**

**Dowel bars**

Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

---

**Q22**

Respondent skipped this question

Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

Page 5: General Pavement Questions

**Q23**

Has your Agency experienced longitudinal cracking? If yes, please explain in comments.

**Yes,**

If yes, please explain what the pavement type was and if you made any design or specification adjustments to correct it?:

asphalt: longitudinal joint adhesive and crack sealing

**Q24**

What is the maximum number of lanes your Agency allows to be tied together?

I'm unaware of a limit

**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

	Yes/No
Shorten Joint Spacing	No
Change Shoulder Design (Use Tied Shoulders)	Yes
Change Shoulder Design (Concrete vs AC vs RCC)	Yes
Use Dowel Bars	Yes
Use Widened Lanes	No
Change Base Type	Yes
Higher PCC Strength (Increased Concrete Strength)	No
Optimized Mix Design/Optimized Gradation	No

**Q26**

**Yes, concrete and asphalt**

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

**Q27**

**Respondent skipped this question**

Any other comments?

---

# #13

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Thursday, August 21, 2025 8:23:48 AM  
**Last Modified:** Monday, August 25, 2025 1:48:31 PM  
**Time Spent:** Over a day  
**IP Address:** 167.7.17.3

---

Page 1

## Q1

Your contact information:

Name	Dahae Kim
State Agency	SCDOT
Email Address	kimd@scdot.org

---

## Q2

What types of concrete applications does your state use?  
Select all that apply.

**Full Depth Concrete Pavement,**  
**Concrete Overlays of Concrete (Conventional 6.5" or greater)**  
,  
**Roller Compacted Concrete (RCC)**

---

## Q3

Please provide a link to your Pavement Design Process and Standards.

<https://www.scdot.org/content/dam/scdot-legacy/business/pdf/materials-research/PavementDesignGuide2008.pdf>

---

Page 2: Full-Depth Concrete Pavement

## Q4

What is the primary design software your Agency uses for full-depth concrete pavement design?

**AASHTOWare Pavement ME Design (PMED) previously know as MEPDG**

---

## Q5

Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

**15 ft**

---

**Q6**

**No**

Does your Agency have a minimum required full depth concrete thickness?

---

**Q7**

What is your Agency's typical full depth pavement width?

12 ft

---

**Q8**

What types of shoulders does your Agency use with full depth concrete pavements?

full depth concrete -match the mainline pavement

---

**Q9**

Does your Agency require a subgrade treatment, and if so, what kind?

**No subgrade treatment is required, but we will stabilize on a project by project basis**

**Cement treated**

---

**Q10**

What is the typical subgrade support value for pavement design input?

Static k-value

**200**

Resilient Modulus

**10000 psi**

---

**Q11**

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

Please describe:

8" GAB and 175 psy Surface C or 12 inches of CMRB and 175 psy Surface C

---

Page 3: Concrete Overlays

**Q12**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

**Pavement Designer,**

**AASHTO Empirical (93)**

---

**Q13**

**15 ft x 12 ft**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

---

**Q14**

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

Please provide any additional information regarding joint spacing.:

SCDOT does not routinely design PCC pavement less than 6 "

---

**Q15**

**No**

Does your Agency have a minimum overlay thickness?

---

**Q16**

What is your typical overlay thickness?

10"

---

**Q17**

What types of shoulders does your Agency use with concrete overlays?

full depth concrete- match with mainline

---

**Q18**

**No**

Does your Agency use fibers in concrete overlays?

---

---

Page 4: Roundabouts

**Q19**

**Concrete truck aprons only**

Does your Agency utilize concrete roundabouts?

---

**Q20**

What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

Concrete Truck Aprons

**8"**

---

**Q21**

**None of the above**

Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

---

**Q22**

Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

n/a

Page 5: General Pavement Questions

**Q23**

Has your Agency experienced longitudinal cracking? If yes, please explain in comments.

**Yes,**

If yes, please explain what the pavement type was and if you made any design or specification adjustments to correct it?:

process of examining

**Q24**

What is the maximum number of lanes your Agency allows to be tied together?

60'

**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

	Yes/No
Shorten Joint Spacing	<b>No</b>
Change Shoulder Design (Use Tied Shoulders)	<b>Yes</b>
Change Shoulder Design (Concrete vs AC vs RCC)	<b>It depends</b>
Use Dowel Bars	<b>Yes</b>
Use Widened Lanes	<b>Yes</b>
Change Base Type	<b>It depends</b>
Higher PCC Strength (Increased Concrete Strength)	<b>It depends</b>
Optimized Mix Design/Optimized Gradation	<b>Yes</b>

Please explain:

Everything doweled widened lanes - 13' outside lanes only

**Q26**

**Yes, concrete and asphalt**

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

**Q27**

**Respondent skipped this question**

Any other comments?

---

# #14

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, August 26, 2025 6:59:59 AM  
**Last Modified:** Tuesday, August 26, 2025 7:13:33 AM  
**Time Spent:** 00:13:33  
**IP Address:** 174.178.27.25

---

Page 1

## Q1

Your contact information:

Name	Joshua Freeman
State Agency	PennDOT
Email Address	josfreeman@pa.gov

---

## Q2

What types of concrete applications does your state use?  
Select all that apply.

**Full Depth Concrete Pavement,**  
**Concrete Overlays of Concrete (Thin 6" or less),**  
**Concrete Overlays of Concrete (Conventional 6.5" or greater)**  
,  
**Concrete Overlays of Asphalt (Conventional 6.5" or greater)**  
,  
**Concrete Overlays of Asphalt (Thin 6" or less),**  
**Roller Compacted Concrete (RCC),**  
Additional Comments:  
Full Depth also includes Long-Life Concrete Pavement mixes

---

## Q3

Please provide a link to your Pavement Design Process and Standards.

<https://www.pa.gov/content/dam/copapwp-pagov/en/penndot/documents/public/pubsforms/publications/pub-242/pub%20242%20change%209.pdf>

---

Page 2: Full-Depth Concrete Pavement

**Q4** **AASHTO Empirical (93, 86, 72),**

What is the primary design software your Agency uses for full-depth concrete pavement design?

Comments:  
AASHTO 1993, ASSHTOWare DARWin 3.1 software

**Q5** **15 ft**

Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

**Q6** **Yes,**  
If yes, what is the minimum required thickness?:  
See Pub 242 Table 8.3 for minimum thicknesses, from link provided in question #3. The table with JPCP and JRCP is our previous minimums. Our newly approved minimums are only for JPCP since we don't construct JRCP as often.

**Q7**  
What is your Agency's typical full depth pavement width?

12', sometimes 13'

**Q8**  
What types of shoulders does your Agency use with full depth concrete pavements?

mostly full depth, refer to Pub 242, Section 8.14 for all scenarios

**Q9** **No subgrade treatment is required, but we will stabilize on a project by project basis**

Does your Agency require a subgrade treatment, and if so, what kind?

,  
Please describe:  
Geotextile fabric separator layer required on subgrade before subbase

**Q10**  
What is the typical subgrade support value for pavement design input?

Static k-value **201 psi/in**

Resilient Modulus **7,500 psi**

**Q11**

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

**Granular Subbase (unstabilized),  
Cement treated/stabilized,  
HMA/Asphalt treated,**

Please describe:

Asphalt/Cement treated base course, 4" minimum depth, required to be alternately bid. 4" to 6" unbound subbase required under base course. See Table 8.3 in Pub 242

Page 3: Concrete Overlays

**Q12**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

**AASHTO Empirical (93),  
Bonded Concrete Overlay of Asphalt - Mechanistic  
Empirical (BCOA-ME)**

Comments - Please explain if you use multiple designs for overlays.:

Unbonded concrete overlays use DARWin. Bonded concrete overlay on asphalt use BCOA-ME. Bonded concrete overlay on concrete also uses DARWin, but not done very often.

**Q13**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

**6 ft x 6 ft,**

Please provide any additional information regarding joint spacing.:

This question said to select all panel sizes, but only allows for one answer. PennDOT allows 6x6 ft and 15x12 ft for conventional concrete overlays.

**Q14**

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

**6 ft x 6 ft,**

**Other (please describe),**

Please provide any additional information regarding joint spacing.:

Have used 3' x 3' or 3.3' x 3'. Refer to Pub 242, Table 10.10 for additional joint spacing options.

**Q15**

Does your Agency have a minimum overlay thickness?

**Yes,**

If yes, what is the minimum thickness?:  
Refer to Pub 242, Table 10.10

**Q16**

What is your typical overlay thickness?

6"

---

**Q17**

What types of shoulders does your Agency use with concrete overlays?

rigid & flexible, but rigid is preferred and recommended

---

**Q18**

Does your Agency use fibers in concrete overlays?

**It depends, please explain,**

If yes, what is the typical addition rate? Do you have an APL/QPL list? Do you allow larger panel sizes when fibers are use?:

PennDOT requires the use of fibers in concrete overlays in thin (</= 4" depth) overlays bonded to asphalt-surfaced pavements (refer to Pub. 408, Section 541)

---

Page 4: Roundabouts

**Q19**

Does your Agency utilize concrete roundabouts?

**Yes, concrete roundabouts and truck aprons,**

Additional Comments?:

The Districts can decide when to use concrete pavements in the circular roadway. When there is an expected high volume of truck traffic tends to be when they are chosen.

---

**Q20**

What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

Concrete Roundabouts

**9" or greater**

Concrete Truck Aprons

**8" or greater**

---

**Q21**

Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

**None of the above,**

Please provide any additional relevant information:

While there is no Department standard for reinforcement in concrete truck aprons in roundabouts, there have been project specific contract items for using wire mesh and/or dowel bars.

---

**Q22**

Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

[https://www.pa.gov/content/dam/copapwp-pagov/en/penndot/documents/public/pubsforms/publications/pub-72m/72m\\_2010\\_12/72m\\_2010\\_12.pdf](https://www.pa.gov/content/dam/copapwp-pagov/en/penndot/documents/public/pubsforms/publications/pub-72m/72m_2010_12/72m_2010_12.pdf)

Page 5: General Pavement Questions

**Q23**

**No**

Has your Agency experienced longitudinal cracking? If yes, please explain in comments.

**Q24**

What is the maximum number of lanes your Agency allows to be tied together?

No established maximum

**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

	Yes/No
Shorten Joint Spacing	<b>No</b>
Change Shoulder Design (Use Tied Shoulders)	<b>Yes</b>
Change Shoulder Design (Concrete vs AC vs RCC)	<b>Yes</b>
Use Dowel Bars	<b>Yes</b>
Use Widened Lanes	<b>No</b>
Change Base Type	<b>No</b>
Higher PCC Strength (Increased Concrete Strength)	<b>No</b>
Optimized Mix Design/Optimized Gradation	<b>No</b>

Please explain:

Type of shoulder material, type of shoulder support, and dowel bars control the Load Transfer Coefficient input (refer to Pub 242, Table 8.2). While the other items are used in construction and the mix design, they are not considered in the pavement design.

**Q26**

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

**Yes, concrete and asphalt,**

Provide additional information or a link to the guidance you provide.:

PennDOT Pub. 447 - Approved Products for Lower Volume Local Roads: <https://www.pa.gov/content/dam/copapwp-pagov/en/penndot/documents/public/pubsforms/publications/pub%20447.pdf> PennDOT Pub. 408 - Specifications: [https://www.pa.gov/content/dam/copapwp-pagov/en/penndot/documents/public/pubsforms/publications/pub\\_408/408\\_2020/408\\_2020\\_11/408\\_2020\\_11.pdf](https://www.pa.gov/content/dam/copapwp-pagov/en/penndot/documents/public/pubsforms/publications/pub_408/408_2020/408_2020_11/408_2020_11.pdf) PennDOT Local Technical Assistance Program: <https://gis.penndot.gov/LTAP/default.aspx>

---

**Q27**

Any other comments?

I will email a pdf with some of the references made in my responses.

---

# #15

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, August 26, 2025 8:40:46 AM  
**Last Modified:** Tuesday, August 26, 2025 9:19:52 AM  
**Time Spent:** 00:39:06  
**IP Address:** 165.189.255.43

Page 1

## Q1

Your contact information:

Name	<b>Tirupan Mandal</b>
State Agency	<b>Wisconsin</b>
Email Address	<b>tirupan.mandal@dot.wi.gov</b>

## Q2

What types of concrete applications does your state use? Select all that apply.

**Full Depth Concrete Pavement,**  
**Concrete Overlays of Concrete (Conventional 6.5" or greater)**  
 ,  
**Concrete Overlays of Asphalt (Conventional 6.5" or greater)**  
 ,  
 Additional Comments:  
 Concrete overlays are being piloted.

## Q3

Please provide a link to your Pavement Design Process and Standards.

<https://wisconsindot.gov/rdwy/fdm/fd-14-00toc.pdf>

Concrete overlays are designed using WinPAS 12.

Page 2: Full-Depth Concrete Pavement

## Q4

What is the primary design software your Agency uses for full-depth concrete pavement design?

**AASHTO Empirical (93, 86, 72),**  
**State Built,**  
 Comments:  
 WisDOT uses AASHTO 72 design methodology using WisPAVE that is the state-built design software.

**Q5**

**15 ft**

Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

**Q6**

**Yes,**

Does your Agency have a minimum required full depth concrete thickness?

If yes, what is the minimum required thickness?:  
6 inches

**Q7**

What is your Agency's typical full depth pavement width?

12 to 14 feet

**Q8**

What types of shoulders does your Agency use with full depth concrete pavements?

Asphalt, concrete, or hybrid - designer choice

**Q9**

**Our agency does not regularly use subgrade treatments.**

Does your Agency require a subgrade treatment, and if so, what kind?

'  
Please describe:  
Not required, but is allowed using lime, cement, or geogrid.

**Q10**

What is the typical subgrade support value for pavement design input?

Static k-value

**375**

Resilient Modulus

**40000 psi**

**Q11**

**Granular Subbase (unstabilized),**

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

**Geogrid**

**Q12**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

**Other,**

Comments - Please explain if you use multiple designs for overlays.:

WinPAS 12

---

**Q13**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

**15 ft x 12 ft**

---

**Q14**

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

**Respondent skipped this question**

---

**Q15**

Does your Agency have a minimum overlay thickness?

**Yes,**

If yes, what is the minimum thickness?:

6 inches

---

**Q16**

What is your typical overlay thickness?

7-9 inches

---

**Q17**

What types of shoulders does your Agency use with concrete overlays?

Asphalt or concrete - depends on the underlying roadway geometrics

---

**Q18**

Does your Agency use fibers in concrete overlays?

**No**

---

Page 4: Roundabouts

**Q19**

Does your Agency utilize concrete roundabouts?

**Yes, concrete roundabouts and truck aprons**

---

**Q20**

What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

Concrete Roundabouts

**Varies based on the design**

Concrete Truck Aprons

**12 inches**

---

**Q21**

Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

**Dowel bars,**

**Reinforcing steel,**

Please provide any additional relevant information:

Tie bars and/or dowel bars

---

**Q22**

Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

<https://wisconsindot.gov/rdwy/fdm/fd-14-10.pdf>

<https://wisconsindot.gov/rdwy/fdm/fd-11-26.pdf>

---

Page 5: General Pavement Questions

**Q23**

Has your Agency experienced longitudinal cracking? If yes, please explain in comments.

**Yes,**

If yes, please explain what the pavement type was and if you made any design or specification adjustments to correct it?:

Jointed Plain Doweled Pavement. No adjustments were made.

---

**Q24**

What is the maximum number of lanes your Agency allows to be tied together?

---

**Respondent skipped this question**

**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

	Yes/No
Shorten Joint Spacing	<b>No</b>
Change Shoulder Design (Use Tied Shoulders)	<b>No</b>
Change Shoulder Design (Concrete vs AC vs RCC)	<b>No</b>
Use Dowel Bars	<b>No</b>
Use Widened Lanes	<b>No</b>
Change Base Type	<b>No</b>
Higher PCC Strength (Increased Concrete Strength)	<b>No</b>
Optimized Mix Design/Optimized Gradation	<b>No</b>

Please explain:

All these are considered in standard practices but not for optimization during pavement design.

**Q26**

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

**Yes, concrete and asphalt,**

Provide additional information or a link to the guidance you provide.:

Guidance is provided if within the state system.

**Q27**

Any other comments?

**Respondent skipped this question**

# #16

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Monday, August 25, 2025 4:25:05 PM  
**Last Modified:** Tuesday, August 26, 2025 10:58:57 AM  
**Time Spent:** 18:33:52  
**IP Address:** 156.75.176.208

Page 1

## Q1

Your contact information:

Name	Mary Jane Hayden
State Agency	FDOT
Email Address	maryjane.hayden@dot.state.fl.us

## Q2 Full Depth Concrete Pavement

What types of concrete applications does your state use?  
 Select all that apply.

## Q3

Please provide a link to your Pavement Design Process and Standards.

<https://www.fdot.gov/roadway/pm/publications.shtm>

Page 2: Full-Depth Concrete Pavement

## Q4 AASHTOWare Pavement ME Design (PMED) previously know as MEPDG

What is the primary design software your Agency uses for full-depth concrete pavement design?

## Q5 15 ft

Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

## Q6 Yes, If yes, what is the minimum required thickness?: 8 inches

Does your Agency have a minimum required full depth concrete thickness?

**Q7**

What is your Agency's typical full depth pavement width?

13 feet (widened outside slab)

---

**Q8**

What types of shoulders does your Agency use with full depth concrete pavements?

either concrete or asphalt may be used

---

**Q9**

Does your Agency require a subgrade treatment, and if so, what kind?

**Other (please describe),**

Please describe:

Existing subgrade is stabilized in accordance with FDOT Standard Specification 160 ([https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/specifications/by-year/fy-2025-26/ebook/2025-26-ebook-compressed.pdf?sfvrsn=a07d3f95\\_2](https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/specifications/by-year/fy-2025-26/ebook/2025-26-ebook-compressed.pdf?sfvrsn=a07d3f95_2))

---

**Q10**

What is the typical subgrade support value for pavement design input?

Resilient Modulus

**12,000 psi is assumed**

---

**Q11**

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

**Granular Subbase (unstabilized),**

**HMA/Asphalt treated,**

Please describe:

we have 2 standard base types: 4" HMA base or 60" special select soil base (A-3 material with minimum permeability of  $5 \times 10^{-5}$  cm/s per AASHTO T215)

---

Page 3: Concrete Overlays

**Q12**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

**Other,**

Comments - Please explain if you use multiple designs for overlays.:

We currently don't have standard design guidance for concrete overlays. However, if concrete overlays are proposed, we would expect PMED to be used for design.

---

**Q13**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

**Other (please describe),**

Please provide any additional information regarding joint spacing.:  
Not applicable, as we don't currently use concrete overlays as a standard practice.

**Q14**

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

**Respondent skipped this question**

**Q15**

Does your Agency have a minimum overlay thickness?

**Respondent skipped this question**

**Q16**

What is your typical overlay thickness?

**Respondent skipped this question**

**Q17**

What types of shoulders does your Agency use with concrete overlays?

**Respondent skipped this question**

**Q18**

Does your Agency use fibers in concrete overlays?

**Respondent skipped this question**

Page 4: Roundabouts

**Q19**

Does your Agency utilize concrete roundabouts?

**Concrete truck aprons only,**

Additional Comments?:  
We require all truck aprons to be concrete pavements. The circulatory roadway can be concrete pavement, as well, but we don't require that.

**Q20**

What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

Concrete Truck Aprons

**12 inches is our standard thickness**

**Q21**

Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

**Dowel bars**

**Q22**

Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

See FDOT Design Manual, Chapter 213 for Modern

Roundabout design requirements. Section 213.3.8 is specific to truck aprons.

[https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/roadway/fdm/2025/2025fdm213modroundabout.pdf?sfvrsn=4e4b4830\\_1](https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/roadway/fdm/2025/2025fdm213modroundabout.pdf?sfvrsn=4e4b4830_1)

---

Page 5: General Pavement Questions

**Q23**

Has your Agency experienced longitudinal cracking? If yes, please explain in comments.

**Yes,**

If yes, please explain what the pavement type was and if you made any design or specification adjustments to correct it?:

Our most recent pavement condition survey (2025) indicated rigid sections with light, moderate, and severe longitudinal cracking. The majority of these sections were in the light to moderate range of severity. No design or specification adjustments have been made at this point.

---

**Q24**

What is the maximum number of lanes your Agency allows to be tied together?

We don't specify a maximum.

---

**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

**Respondent skipped this question**

---

**Q26**

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

**Yes, concrete and asphalt,**

Provide additional information or a link to the guidance you provide.:

We provide assistance upon request. Additionally, FDOT's State Roadway Design Office maintains the Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways (also called the Florida Greenbook). Pavement Design and Construction is discussed in Chapter 5. This Manual is used by any local municipality that does not maintain their own set of design standards.

<https://www.fdot.gov/roadway/floridagreenbook/fgb.shtm>

---

**Q27**

**Respondent skipped this question**

Any other comments?

---

# #17

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, August 26, 2025 1:04:24 PM  
**Last Modified:** Tuesday, August 26, 2025 1:38:15 PM  
**Time Spent:** 00:33:51  
**IP Address:** 152.22.36.22

---

Page 1

## Q1

Your contact information:

Name	Shihai Zhang
State Agency	North Carolina DOT
Email Address	szhang2@ncdot.gov

---

## Q2

What types of concrete applications does your state use?  
Select all that apply.

Full Depth Concrete Pavement,  
Concrete Overlays of Concrete (Conventional 6.5" or greater)  
,  
Concrete Overlays of Asphalt (Conventional 6.5" or greater)  
,  
Roller Compacted Concrete (RCC)

---

## Q3

Please provide a link to your Pavement Design Process and Standards.

<https://connect.ncdot.gov/resources/Materials/MaterialsResources/Pavement%20Design%20Manual.pdf>

---

Page 2: Full-Depth Concrete Pavement

## Q4

AASHTO Empirical (93, 86, 72)

What is the primary design software your Agency uses for full-depth concrete pavement design?

---

**Q5**

**15 ft**

Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

**Q6**

**Yes,**

Does your Agency have a minimum required full depth concrete thickness?

If yes, what is the minimum required thickness?:  
9 inches

**Q7**

What is your Agency's typical full depth pavement width?

12 ft to 13 ft

**Q8**

What types of shoulders does your Agency use with full depth concrete pavements?

concrete shoulder or asphalt shoulder, RCC shoulder

**Q9**

Does your Agency require a subgrade treatment, and if so, what kind?

**No subgrade treatment is required, but we will stabilize on a project by project basis**

**Lime stabilization,  
Cement treated**

**Q10**

What is the typical subgrade support value for pavement design input?

Static k-value

**200 to 400**

**Q11**

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

**Granular Subbase (unstabilized),  
Cement treated/stabilized,  
HMA/Asphalt treated,  
Stabilized open graded subbases**

**Q12**

**AASHTO Empirical (93)**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

---

**Q13**

**15 ft x 12 ft**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

---

**Q14**

**6 ft x 6 ft**

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

---

**Q15**

**No**

Does your Agency have a minimum overlay thickness?

---

**Q16**

What is your typical overlay thickness?

10 to 12 inches

---

**Q17**

What types of shoulders does your Agency use with concrete overlays?

concrete shoulder, asphalt shoulder

---

**Q18**

**No**

Does your Agency use fibers in concrete overlays?

---

Page 4: Roundabouts

**Q19**

**Concrete truck aprons only,**

Does your Agency utilize concrete roundabouts?

Additional Comments?:

Some roundabouts have concrete roadway and concrete truck aprons

---

**Q20**

What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

Concrete Roundabouts	<b>9 to 11 inches</b>
Concrete Truck Aprons	<b>7 to 12 inches</b>

---

**Q21**

**Wire Mesh**

Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

---

**Q22**

Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

None

---

Page 5: General Pavement Questions

**Q23**

Has your Agency experienced longitudinal cracking? If yes, please explain in comments.

**Yes,**

If yes, please explain what the pavement type was and if you made any design or specification adjustments to correct it?:

Some are related to 14' wide slab or sawing joint late

---

**Q24**

What is the maximum number of lanes your Agency allows to be tied together?

three (typically)

---

**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

	Yes/No
Shorten Joint Spacing	No
Change Shoulder Design (Use Tied Shoulders)	Yes
Change Shoulder Design (Concrete vs AC vs RCC)	Yes
Use Dowel Bars	Yes
Use Widened Lanes	Yes
Change Base Type	Yes
Higher PCC Strength (Increased Concrete Strength)	No
Optimized Mix Design/Optimized Gradation	No

**Q26**

No

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

**Q27**

Respondent skipped this question

Any other comments?

# #18

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, August 27, 2025 11:56:58 AM  
**Last Modified:** Wednesday, August 27, 2025 12:25:07 PM  
**Time Spent:** 00:28:08  
**IP Address:** 167.131.0.194

Page 1

## Q1

Your contact information:

Name	<b>Paul Burch</b>
State Agency	<b>Oregon DOT</b>
Email Address	<b>paul.t.burch@odot.oregon.gov</b>

## Q2 **Full Depth Concrete Pavement**

What types of concrete applications does your state use?  
 Select all that apply.

## Q3

Please provide a link to your Pavement Design Process and Standards.

<https://www.oregon.gov/ODOT/Construction/Pages/Pavement-Services-Index.aspx>

[https://www.oregon.gov/odot/Business/Pages/Standard\\_Specifications.aspx](https://www.oregon.gov/odot/Business/Pages/Standard_Specifications.aspx)

Page 2: Full-Depth Concrete Pavement

<b>Q4</b>	<b>AASHTOWare Pavement ME Design (PMED) previously know as MEPDG</b>
What is the primary design software your Agency uses for full-depth concrete pavement design?	

<b>Q5</b>	<b>15 ft</b>
Please select your agency's typical joint spacing(s) for full-depth concrete pavements?	

**Q6**

Does your Agency have a minimum required full depth concrete thickness?

**Yes,**

If yes, what is the minimum required thickness?:  
Minimum thickness is 8 Inches.

---

**Q7**

What is your Agency's typical full depth pavement width?

14 Feet for outside lanes.

---

**Q8**

What types of shoulders does your Agency use with full depth concrete pavements?

We use both asphalt and concrete shoulders depending upon need.

---

**Q9**

Does your Agency require a subgrade treatment, and if so, what kind?

**No subgrade treatment is required, but we will stabilize on a project by project basis**

**Other (please describe),**

**Cement treated,**

Please describe:

Cement treated subgrade or over excavation and backfill with stone embankment.

---

**Q10**

What is the typical subgrade support value for pavement design input?

Resilient Modulus

**5000 psi**

---

**Q11**

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

**HMA/Asphalt treated,**

Please describe:

All concrete is placed on an asphalt base, over an aggregate base layer.

---

**Q12**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

**AASHTOWare Pavement ME Design (PMED) previously know as MEPDG**

Comments - Please explain if you use multiple designs for overlays.:

However, we have not performed any concrete overlays of existing concrete pavements.

**Q13**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

**Other (please describe),**

Please provide any additional information regarding joint spacing.:

N/A

**Q14**

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

**Other (please describe),**

Please provide any additional information regarding joint spacing.:

N/A

**Q15**

Does your Agency have a minimum overlay thickness?

If yes, what is the minimum thickness?:

N/A

**Q16**

What is your typical overlay thickness?

N/A

**Q17**

What types of shoulders does your Agency use with concrete overlays?

N/A

**Q18**

Does your Agency use fibers in concrete overlays?

If yes, what is the typical addition rate? Do you have an APL/QPL list? Do you allow larger panel sizes when fibers are use?:

N/A

Page 4: Roundabouts

**Q19**

**Yes, concrete roundabouts and truck aprons**

Does your Agency utilize concrete roundabouts?

**Q20**

What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

Concrete Roundabouts	<b>10 inches</b>
Concrete Truck Aprons	<b>10 inches</b>

---

**Q21**

**Reinforcing steel**

Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

---

**Q22**

Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

<https://www.oregon.gov/ODOT/Engineering/Pages/Hwy-Design-Manual.aspx>

See part 500, section 509.

---

Page 5: General Pavement Questions

**Q23**

Has your Agency experienced longitudinal cracking? If yes, please explain in comments.

**Yes,**

If yes, please explain what the pavement type was and if you made any design or specification adjustments to correct it?:

It was a jointed plain concrete pavement. Small amount and not a typical occurrence. Appeared during construction that the joints were sawn a little too late. Most concrete pavement placed in Oregon is CRCP.

---

**Q24**

What is the maximum number of lanes your Agency allows to be tied together?

Three

---

**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

	Yes/No
Shorten Joint Spacing	No
Change Shoulder Design (Use Tied Shoulders)	Yes
Change Shoulder Design (Concrete vs AC vs RCC)	Yes
Use Dowel Bars	Yes
Use Widened Lanes	Yes
Change Base Type	Yes
Higher PCC Strength (Increased Concrete Strength)	No
Optimized Mix Design/Optimized Gradation	Yes

**Q26**

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

**Yes, concrete and asphalt,**

Provide additional information or a link to the guidance you provide.:

We would provide guidance / assistance if asked.

**Q27**

Any other comments?

**Respondent skipped this question**

# #19

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Thursday, August 28, 2025 9:03:14 AM  
**Last Modified:** Thursday, August 28, 2025 9:34:20 AM  
**Time Spent:** 00:31:06  
**IP Address:** 164.154.156.90

---

Page 1

## Q1

Your contact information:

Name	Darin Hodges
State Agency	South Dakota
Email Address	darin.hodges@state.sd.us

---

## Q2

What types of concrete applications does your state use?  
Select all that apply.

Full Depth Concrete Pavement,  
Concrete Overlays of Concrete (Thin 6" or less),  
Concrete Overlays of Concrete (Conventional 6.5" or greater)  
,  
Concrete Overlays of Asphalt (Conventional 6.5" or greater)

---

## Q3

Please provide a link to your Pavement Design Process and Standards.

NA

---

Page 2: Full-Depth Concrete Pavement

## Q4

AASHTO Empirical (93, 86, 72)

What is the primary design software your Agency uses for full-depth concrete pavement design?

---

**Q5**

Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

**Depends on thickness,**

Please provide any additional information regarding joint spacing.:

Project Specific now and depends on thickness, CTE of aggregate likely to be used, and traffic volume and speeds.

**Q6**

Does your Agency have a minimum required full depth concrete thickness?

**Yes,**

If yes, what is the minimum required thickness?:  
7"

**Q7**

What is your Agency's typical full depth pavement width?

11 to 14' lanes

**Q8**

What types of shoulders does your Agency use with full depth concrete pavements?

Asphalt

**Q9**

Does your Agency require a subgrade treatment, and if so, what kind?

**Our agency does not regularly use subgrade treatments.**

**Q10**

What is the typical subgrade support value for pavement design input?

Static k-value

**75 to 195 depending on location**

Resilient Modulus

**7,500 to 13,000**

**Q11**

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

**Granular Subbase (unstabilized)**

**Q12**

**AASHTO Empirical (93)**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

---

**Q13**

**12 ft x 12 ft**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

---

**Q14**

**6 ft x 6 ft**

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

---

**Q15**

Does your Agency have a minimum overlay thickness?

**Yes,**

If yes, what is the minimum thickness?:  
7"

---

**Q16**

What is your typical overlay thickness?

8"

---

**Q17**

What types of shoulders does your Agency use with concrete overlays?

Varies. Asphalt or PCCP

---

**Q18**

**No**

Does your Agency use fibers in concrete overlays?

---

Page 4: Roundabouts

**Q19**

**No**

Does your Agency utilize concrete roundabouts?

---

**Q20**

Respondent skipped this question

What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

---

**Q21**

Respondent skipped this question

Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

---

**Q22**

Respondent skipped this question

Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

---

---

Page 5: General Pavement Questions

**Q23**

Has your Agency experienced longitudinal cracking? If yes, please explain in comments.

**Yes,**

If yes, please explain what the pavement type was and if you made any design or specification adjustments to correct it?:

If the lane widths are too wide (over 14'). Some are subgrade related. SDDOT also regularly gets some construction related longitudinal cracking (saw timing, depth, weather).

---

**Q24**

What is the maximum number of lanes your Agency allows to be tied together?

**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

	Yes/No
Shorten Joint Spacing	<b>Yes</b>
Change Shoulder Design (Use Tied Shoulders)	<b>Yes</b>
Change Shoulder Design (Concrete vs AC vs RCC)	<b>Yes</b>
Use Dowel Bars	<b>Yes</b>
Use Widened Lanes	<b>Yes</b>
Change Base Type	<b>No</b>
Higher PCC Strength (Increased Concrete Strength)	<b>No</b>
Optimized Mix Design/Optimized Gradation	<b>Yes</b>

**Q26**

**Yes, concrete and asphalt**

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

**Q27**

**Respondent skipped this question**

Any other comments?

# #20

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Thursday, August 28, 2025 9:02:17 AM  
**Last Modified:** Thursday, August 28, 2025 9:53:08 AM  
**Time Spent:** 00:50:51  
**IP Address:** 136.226.12.191

---

Page 1

## Q1

Your contact information:

Name	Charles Wienrank
State Agency	IL DOT
Email Address	charles.wienrank@illinois.gov

---

## Q2

What types of concrete applications does your state use?  
Select all that apply.

Full Depth Concrete Pavement,  
Concrete Overlays of Concrete (Thin 6" or less),  
Concrete Overlays of Concrete (Conventional 6.5" or greater),  
,  
Concrete Overlays of Asphalt (Thin 6" or less),  
Roller Compacted Concrete (RCC),  
Additional Comments:  
Illinois constructs both jointed plain concrete pavement (JPCP) and continuously reinforced concrete pavement (CRCP).

---

## Q3

Please provide a link to your Pavement Design Process and Standards.

<https://idot.illinois.gov/doing-business/procurements/engineering-architectural-professional-services/consultant-resources/highways/manuals-and-guides.html>

---

Page 2: Full-Depth Concrete Pavement

**Q4**

What is the primary design software your Agency uses for full-depth concrete pavement design?

**State Built,**

Comments:

M-E design procedure developed by the University of Illinois.

**Q5**

Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

**Depends on thickness,**

Please provide any additional information regarding joint spacing.:

12 ft if less than 10 inches, 15 ft for 10 inches or greater.

**Q6**

Does your Agency have a minimum required full depth concrete thickness?

**Yes,**

If yes, what is the minimum required thickness?:

6 inches, but that would generally only be on local agency projects

**Q7**

What is your Agency's typical full depth pavement width?

12 ft lane width

**Q8**

What types of shoulders does your Agency use with full depth concrete pavements?

Tied concrete shoulders are required on most projects.

**Q9**

Does your Agency require a subgrade treatment, and if so, what kind?

**Lime stabilization,**

**Cement treated,**

**Lime-cement stabilization,**

Please describe:

Either stabilized soil or aggregate used for improved subgrade layer.

**Q10**

What is the typical subgrade support value for pavement design input?

Static k-value

**Not a direct input in our procedure, but for poor soil type it would be 50 pci..**

Resilient Modulus

**Not used, but for poor soil it would be 2-3 ksi.**

**Q11**

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

**Granular Subbase (unstabilized),**

**Cement treated/stabilized,**

**HMA/Asphalt treated,**

Please describe:

4 inches of cement or asphalt treated material is used for a stabilized subbase. This layer is allowed to be omitted in urban areas with curb and gutter and storm sewer.

---

Page 3: Concrete Overlays

**Q12**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

**State Built**

**Q13**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

**15 ft x 12 ft,**

Please provide any additional information regarding joint spacing.:

Question only allows one selection. Transverse joint spacing varies with pavement thickness, same as for new JPCP.

**Q14**

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

**6 ft x 6 ft**

**Q15**

Does your Agency have a minimum overlay thickness?

**Yes,**

If yes, what is the minimum thickness?:

3 inches for BCOA

**Q16**

What is your typical overlay thickness?

4 to 6 for BCOA, 6 for UBOL of PCC

**Q17**

What types of shoulders does your Agency use with concrete overlays?

PCC

**Q18**

Does your Agency use fibers in concrete overlays?

**Yes,**

If yes, what is the typical addition rate? Do you have an APL/QPL list? Do you allow larger panel sizes when fibers are use?:

5 pcy is typical. Fibers are required. QPL link below.

[https://idot.illinois.gov/content/dam/soi/en/web/idot/docume](https://idot.illinois.gov/content/dam/soi/en/web/idot/documents/doing-business/specialty-)

[nts/doing-business/specialty-lists/highways/materials/materials---physical-research/concrete/fibersforconcrete.pdf](https://idot.illinois.gov/content/dam/soi/en/web/idot/documents/doing-business/specialty-lists/highways/materials/materials---physical-research/concrete/fibersforconcrete.pdf)

---

Page 4: Roundabouts

**Q19**

Does your Agency utilize concrete roundabouts?

**Yes, concrete roundabouts and truck aprons**

**Q20**

What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

Concrete Roundabouts

**Same as conventional JPCP.**

**Q21**

Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

**Dowel bars**

**Q22**

Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

NA

---

Page 5: General Pavement Questions

**Q23**

Has your Agency experienced longitudinal cracking? If yes, please explain in comments.

**Yes,**

If yes, please explain what the pavement type was and if you made any design or specification adjustments to correct it?:

Lanes wider than 14 ft tend to develop longitudinal cracks. For 16 ft ramps, we now saw a joint down the middle of the slab that includes tie bars. In urban areas, especially with curb and gutter, cracking can occur when multiple lanes are all tied together. We now require dowel instead of tie bars at specified longitudinal joints.

**Q24**

What is the maximum number of lanes your Agency allows to be tied together?

5 lanes (60 ft total width)

**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

Yes/No

Shorten Joint Spacing

Change Shoulder Design (Use Tied Shoulders)

Change Shoulder Design (Concrete vs AC vs RCC)

Use Dowel Bars

Use Widened Lanes

Change Base Type

Higher PCC Strength (Increased Concrete Strength)

Optimized Mix Design/Optimized Gradation

Please explain:

These are all set by our pavement design polices. We would consider changes on a case by case basis (value engineering proposal by contractor) but this rarely occurs.

**Q26**

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

**Yes, concrete and asphalt,**

Provide additional information or a link to the guidance you provide.:

We have a separate manual for the Bureau of Local Roads and Streets.

<https://idot.illinois.gov/content/dam/soi/en/web/idot/documents/doing-business/manuals-split/local-roads-and-streets/chapter-44.pdf>

**Q27**

Any other comments?

**Respondent skipped this question**

# #21

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Thursday, August 28, 2025 8:56:14 AM  
**Last Modified:** Thursday, August 28, 2025 10:55:27 AM  
**Time Spent:** 01:59:13  
**IP Address:** 159.238.36.124

Page 1

## Q1

Your contact information:

Name	<b>Whitney Wise</b>
State Agency	<b>WYDOT</b>
Email Address	<b>whitney.wise@wyo.gov</b>

## Q2

What types of concrete applications does your state use? Select all that apply.

**Full Depth Concrete Pavement,**  
**Concrete Overlays of Asphalt (Conventional 6.5" or greater)**  
 ,  
**Concrete Overlays of Asphalt (Thin 6" or less)**

## Q3

Please provide a link to your Pavement Design Process and Standards.

**Respondent skipped this question**

Page 2: Full-Depth Concrete Pavement

## Q4

What is the primary design software your Agency uses for full-depth concrete pavement design?

**AASHTOWare Pavement ME Design (PMED) previously know as MEPDG**

## Q5

Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

**15 ft**

## Q6

Does your Agency have a minimum required full depth concrete thickness?

**Yes,**  
 If yes, what is the minimum required thickness?:  
**8 inches**

**Q7**

What is your Agency's typical full depth pavement width?

38 ft

---

**Q8**

What types of shoulders does your Agency use with full depth concrete pavements?

4 ft inside, 10 ft outside

---

**Q9**

Does your Agency require a subgrade treatment, and if so, what kind?

**No subgrade treatment is required, but we will stabilize on a project by project basis**

---

**Q10**

What is the typical subgrade support value for pavement design input?

Resilient Modulus

**10021**

---

**Q11**

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

**Granular Subbase (unstabilized)**

---

Page 3: Concrete Overlays

**Q12**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

**AASHTOWare Pavement ME Design (PMED) previously know as MEPDG**

---

**Q13**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

**15 ft x 12 ft**

---

**Q14**

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

**6 ft x 6 ft**

---

**Q15**

Does your Agency have a minimum overlay thickness?

**Yes,**

If yes, what is the minimum thickness?:

4 inches

---

**Q16**

What is your typical overlay thickness?

11 inches

---

**Q17**

What types of shoulders does your Agency use with concrete overlays?

4 ft minimum

---

**Q18**

Does your Agency use fibers in concrete overlays?

**No**

---

---

Page 4: Roundabouts

**Q19**

Does your Agency utilize concrete roundabouts?

**Yes, concrete roundabouts and truck aprons**

---

**Q20**

What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

Concrete Roundabouts

**9 inches**

Concrete Truck Aprons

**9 inches**

---

**Q21**

Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

**Dowel bars**

---

**Q22**

Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

**Respondent skipped this question**

---

---

Page 5: General Pavement Questions

**Q23**

Has your Agency experienced longitudinal cracking? If yes, please explain in comments.

**Yes,**

If yes, please explain what the pavement type was and if you made any design or specification adjustments to correct it?:

Various pavement types; set maximum longitudinal joint spacings.

**Q24**

What is the maximum number of lanes your Agency allows to be tied together?

2

**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

	Yes/No
Shorten Joint Spacing	<b>Yes</b>
Change Shoulder Design (Use Tied Shoulders)	<b>Yes</b>
Change Shoulder Design (Concrete vs AC vs RCC)	<b>Yes</b>
Use Dowel Bars	<b>Yes</b>
Use Widened Lanes	<b>No</b>
Change Base Type	<b>Yes</b>
Higher PCC Strength (Increased Concrete Strength)	<b>No</b>
Optimized Mix Design/Optimized Gradation	<b>No</b>

**Q26**

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

**Yes, concrete and asphalt**

**Q27**

Any other comments?

**Respondent skipped this question**

# #22

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Thursday, August 28, 2025 3:26:29 PM  
**Last Modified:** Thursday, August 28, 2025 3:57:55 PM  
**Time Spent:** 00:31:25  
**IP Address:** 170.85.100.127

---

Page 1

## Q1

Your contact information:

Name	Nairi Matevosyan
State Agency	OK DOT
Email Address	<a href="mailto:nmatevosyan@odot.org">nmatevosyan@odot.org</a>

---

## Q2

What types of concrete applications does your state use?  
Select all that apply.

**Full Depth Concrete Pavement,**  
**Concrete Overlays of Concrete (Thin 6" or less),**  
**Concrete Overlays of Concrete (Conventional 6.5" or greater)**  
,  
**Concrete Overlays of Asphalt (Conventional 6.5" or greater)**  
,  
**Concrete Overlays of Asphalt (Thin 6" or less),**  
Additional Comments:  
Concrete overlays are not a concrete practice.

---

## Q3

Please provide a link to your Pavement Design Process and Standards.

Section 414 Portland Cement Concrete Pavement  
(Construction)  
Section 701 Portland Cement Concrete (Mix Design)  
<https://oklahoma.gov/content/dam/ok/en/odot/documents/c-manuals/specbook/2019-full-spec-web-version.pdf>  
2019 Roadway Design Standards  
<https://www.odot.org/roadway/roadway2019/IndexStandards2019.htm>

---

Page 2: Full-Depth Concrete Pavement

**Q4**

What is the primary design software your Agency uses for full-depth concrete pavement design?

**Other,**

Comments:  
DARWin

**Q5**

Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

**15 ft**

**Q6**

Does your Agency have a minimum required full depth concrete thickness?

**Yes,**

If yes, what is the minimum required thickness?:  
8" to 12", Generally 8"

**Q7**

What is your Agency's typical full depth pavement width?

12', 14'

**Q8**

What types of shoulders does your Agency use with full depth concrete pavements?

Class AP Concrete

**Q9**

Does your Agency require a subgrade treatment, and if so, what kind?

**No subgrade treatment is required, but we will stabilize on a project by project basis**

**Q10**

What is the typical subgrade support value for pavement design input?

Static k-value

**going to change based on resilient modulus**

Resilient Modulus

**changes based on project, dependent on type of base (ctb or asphalt)**

**Q11**

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

**Granular Subbase (unstabilized),**

**Cement treated/stabilized,**

**Geogrid,**

Please describe:

8"

Page 3: Concrete Overlays

**Q12**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

**Other,**

Comments - Please explain if you use multiple designs for overlays.:

DARWin, Concrete overlays are not a common practice.

---

**Q13**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

**Other (please describe),**

Please provide any additional information regarding joint spacing.:

Concrete overlays are not a common practice.

---

**Q14**

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

**Other (please describe),**

Please provide any additional information regarding joint spacing.:

Concrete overlays are not a common practice.

---

**Q15**

Does your Agency have a minimum overlay thickness?

**No**

---

**Q16**

What is your typical overlay thickness?

N/A

---

**Q17**

What types of shoulders does your Agency use with concrete overlays?

N/A

---

**Q18**

Does your Agency use fibers in concrete overlays?

**No**

---

---

Page 4: Roundabouts

**Q19**

Does your Agency utilize concrete roundabouts?

**Yes, concrete roundabouts and truck aprons**

---

**Q20**

What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

Concrete Roundabouts	<b>8" to 12"</b>
Concrete Truck Aprons	<b>8" to 12"</b>

---

**Q21**

Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

**Reinforcing steel,**  
Please provide any additional relevant information:  
Currently, the roundabouts are done with continuously reinforced concrete pavement.

---

**Q22**

Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

Not available by link, can provide a copy if needed.

---

Page 5: General Pavement Questions

**Q23**

Has your Agency experienced longitudinal cracking? If yes, please explain in comments.

**No**

---

**Q24**

What is the maximum number of lanes your Agency allows to be tied together?

**Respondent skipped this question**

---

**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

	Yes/No
Shorten Joint Spacing	No
Change Shoulder Design (Use Tied Shoulders)	Yes
Change Shoulder Design (Concrete vs AC vs RCC)	No
Use Dowel Bars	Yes
Use Widened Lanes	Yes
Change Base Type	Yes
Higher PCC Strength (Increased Concrete Strength)	No
Optimized Mix Design/Optimized Gradation	Yes

**Q26**

Yes, concrete and asphalt

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

**Q27**

Respondent skipped this question

Any other comments?

# #23

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Thursday, August 28, 2025 4:15:46 PM  
**Last Modified:** Thursday, August 28, 2025 4:22:36 PM  
**Time Spent:** 00:06:50  
**IP Address:** 161.7.26.128

---

Page 1

## Q1

Your contact information:

Name	<b>Wesley Dess</b>
State Agency	<b>Montana DOT</b>
Email Address	<b>wdess@mt.gov</b>

---

## Q2

What types of concrete applications does your state use?  
Select all that apply.

**Full Depth Concrete Pavement,**

Additional Comments:

We have done a thin concrete overlay (Whitetopping) with success but have not had the opportunity to perform another one

---

## Q3

Please provide a link to your Pavement Design Process and Standards.

<https://www.mdt.mt.gov/other/webdata/external/pavementanalysis/pavementdesignmanual.pdf>

---

Page 2: Full-Depth Concrete Pavement

## Q4

**AASHTO Empirical (93, 86, 72)**

What is the primary design software your Agency uses for full-depth concrete pavement design?

---

## Q5

**14 ft**

Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

---

**Q6**

Does your Agency have a minimum required full depth concrete thickness?

**Yes,**

If yes, what is the minimum required thickness?:  
8 inches (0.65 ft)

---

**Q7**

What is your Agency's typical full depth pavement width?

full lane width

---

**Q8**

What types of shoulders does your Agency use with full depth concrete pavements?

concrete

---

**Q9**

Does your Agency require a subgrade treatment, and if so, what kind?

**Our agency does not regularly use subgrade treatments.**

---

**Q10**

What is the typical subgrade support value for pavement design input?

Resilient Modulus

**3500 psi**

---

**Q11**

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

---

**Granular Subbase (unstabilized)**

---

Page 3: Concrete Overlays

**Q12**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

Comments - Please explain if you use multiple designs for overlays.:

We do not currently perform concrete overlays

---

**Q13**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

**Other (please describe),**

Please provide any additional information regarding joint spacing.:

N/A

---

**Q14**

**Other (please describe)**

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

---

**Q15**

**No**

Does your Agency have a minimum overlay thickness?

---

**Q16**

What is your typical overlay thickness?

N/A

---

**Q17**

What types of shoulders does your Agency use with concrete overlays?

N/A

---

**Q18**

**No**

Does your Agency use fibers in concrete overlays?

---

Page 4: Roundabouts

**Q19**

**Yes, concrete roundabouts and truck aprons,**

Does your Agency utilize concrete roundabouts?

Additional Comments?:

This is very dependent on budget. Some projects are fully concrete while others are only the roundabout and plant mix approaches.

---

**Q20**

What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

Concrete Roundabouts

**0.65-0.85 ft**

Concrete Truck Aprons

**0.65-0.85 ft**

---

**Q21**

**Dowel bars,**

Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

**Reinforcing steel**

---

**Q22**

Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

N/A

Page 5: General Pavement Questions

**Q23**

Has your Agency experienced longitudinal cracking? If yes, please explain in comments.

**Yes,**

If yes, please explain what the pavement type was and if you made any design or specification adjustments to correct it?:

Concrete is less than 5% of our 25000 mile system. We have not made adjustments to our designs for longitudinal cracking. It is also rare but has occurred in the past.

**Q24**

What is the maximum number of lanes your Agency allows to be tied together?

Do not know

**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

	Yes/No
Shorten Joint Spacing	
Change Shoulder Design (Use Tied Shoulders)	<b>Yes</b>
Change Shoulder Design (Concrete vs AC vs RCC)	
Use Dowel Bars	<b>Yes</b>
Use Widened Lanes	
Change Base Type	
Higher PCC Strength (Increased Concrete Strength)	
Optimized Mix Design/Optimized Gradation	<b>Yes</b>

**Q26**

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

**No,**

Provide additional information or a link to the guidance you provide.:

We have maybe provided some guidance but it is rare.

---

**Q27**

Any other comments?

None

---

# #24

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Thursday, August 28, 2025 4:30:50 PM  
**Last Modified:** Thursday, August 28, 2025 4:44:57 PM  
**Time Spent:** 00:14:07  
**IP Address:** 165.234.252.170

Page 1

## Q1

Your contact information:

Name	<b>Adam Berglund</b>
State Agency	<b>North Dakota</b>
Email Address	<b>aberglund@nd.gov</b>

## Q2

What types of concrete applications does your state use?  
 Select all that apply.

**Full Depth Concrete Pavement,  
 Concrete Overlays of Asphalt (Conventional 6.5" or greater)**

## Q3

Please provide a link to your Pavement Design Process and Standards.

This is available upon request due to not having our mix design standards published online.

Page 2: Full-Depth Concrete Pavement

## Q4

What is the primary design software your Agency uses for full-depth concrete pavement design?

**AASHTOWare Pavement ME Design (PMED) previously know as MEPDG**

## Q5

Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

**15 ft**

## Q6

Does your Agency have a minimum required full depth concrete thickness?

**Yes,  
 If yes, what is the minimum required thickness?:  
 8.0"**

**Q7**

What is your Agency's typical full depth pavement width?

12.0'-14.0'

---

**Q8**

What types of shoulders does your Agency use with full depth concrete pavements?

We have concrete down currently but are moving to asphalt shoulders

---

**Q9**

Does your Agency require a subgrade treatment, and if so, what kind?

**Our agency does not regularly use subgrade treatments.**

'  
**Other (please describe),**

Please describe:

Subgrade prep and use of geogrid at subgrade/base interface

---

**Q10**

What is the typical subgrade support value for pavement design input?

Resilient Modulus

**5,500**

---

**Q11**

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

**Granular Subbase (unstabilized),**

Please describe:

8.0" for rural and 12.0" for urban

---

Page 3: Concrete Overlays

**Q12**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

**AASHTOWare Pavement ME Design (PMED) previously know as MEPDG**

---

**Q13**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

**7 ft x 7 ft**

---

**Q14**

**7 ft x 7 ft**

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

---

**Q15**

Does your Agency have a minimum overlay thickness?

**Yes,**

If yes, what is the minimum thickness?:

**7.0"**

---

**Q16**

What is your typical overlay thickness?

**7.0"**

---

**Q17**

What types of shoulders does your Agency use with concrete overlays?

**Concrete and asphalt shoulders**

---

**Q18**

Does your Agency use fibers in concrete overlays?

**No**

---

Page 4: Roundabouts

**Q19**

Does your Agency utilize concrete roundabouts?

**Yes, concrete roundabouts and truck aprons**

---

**Q20**

What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

Concrete Roundabouts

**8.0"-10.0"**

Concrete Truck Aprons

**8.0"-10.0"**

---

**Q21**

Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

**Dowel bars**

---

**Q22**

Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

Same as our concrete paving standards with adding additional depth for slow moving trucks.

Page 5: General Pavement Questions

**Q23**

Has your Agency experienced longitudinal cracking? If yes, please explain in comments.

**Yes,**

If yes, please explain what the pavement type was and if you made any design or specification adjustments to correct it?:

Concrete over asphalt and full depth concrete. Concrete over asphalt was cracking on the asphalt joint underneath. CPR and grinding have worked.

**Q24**

What is the maximum number of lanes your Agency allows to be tied together?

Three lanes

**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

	Yes/No
Shorten Joint Spacing	No
Change Shoulder Design (Use Tied Shoulders)	Yes
Change Shoulder Design (Concrete vs AC vs RCC)	No
Use Dowel Bars	Yes
Use Widened Lanes	Yes
Change Base Type	No
Higher PCC Strength (Increased Concrete Strength)	No
Optimized Mix Design/Optimized Gradation	No

**Q26**

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

**No,**

Provide additional information or a link to the guidance you provide.:

We can help answer questions if asked the stakeholders.

---

**Q27**

Any other comments?

**Respondent skipped this question**

---

# #25

**INCOMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Friday, August 29, 2025 5:16:35 AM  
**Last Modified:** Friday, August 29, 2025 5:22:06 AM  
**Time Spent:** 00:05:30  
**IP Address:** 129.222.242.200

---

Page 1

## Q1

Your contact information:

Name	<b>Jim Wild</b>
State Agency	<b>VT</b>
Email Address	<b>jim.wild@vermont.gov</b>

---

## Q2

What types of concrete applications does your state use?  
Select all that apply.

**None of the Above - If possible, please explain why concrete is not considered as a pavement option.**

Additional Comments:

Vermont at this time does not do concrete paving

---

## Q3

Please provide a link to your Pavement Design Process and Standards.

N/A

---

Page 2: Full-Depth Concrete Pavement

## Q4

What is the primary design software your Agency uses for full-depth concrete pavement design?

**Other,**

Comments:

Vermont does not do concrete pavement

---

## Q5

Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

---

**Other (please describe)**

**Q6**

**No**

Does your Agency have a minimum required full depth concrete thickness?

---

**Q7**

What is your Agency's typical full depth pavement width?

Vermont does not do concrete pavement

---

**Q8**

What types of shoulders does your Agency use with full depth concrete pavements?

Vermont does not do concrete pavement

---

**Q9**

Does your Agency require a subgrade treatment, and if so, what kind?

**No subgrade treatment is required, but we will stabilize on a project by project basis**

---

**Q10**

What is the typical subgrade support value for pavement design input?

**Respondent skipped this question**

---

**Q11**

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

**Respondent skipped this question**

---

Page 3: Concrete Overlays

**Q12**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

**Comments - Please explain if you use multiple designs for overlays.:**

Vermont does not do concrete pavement

---

**Q13**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

**Please provide any additional information regarding joint spacing.:**

Vermont does not do concrete pavement

---

**Q14** Please provide any additional information regarding joint spacing.:  
Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)  
Vermont does not do concrete pavement

---

**Q15** **No**  
Does your Agency have a minimum overlay thickness?

---

**Q16**  
What is your typical overlay thickness?  
Vermont does not do concrete pavement

---

**Q17**  
What types of shoulders does your Agency use with concrete overlays?  
Vermont does not do concrete pavement

---

**Q18** If yes, what is the typical addition rate? Do you have an APL/QPL list? Do you allow larger panel sizes when fibers are use?:  
Does your Agency use fibers in concrete overlays?  
Vermont does not do concrete pavement

---

Page 4: Roundabouts

**Q19** **Respondent skipped this question**  
Does your Agency utilize concrete roundabouts?

---

**Q20** **Respondent skipped this question**  
What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

---

**Q21** **Respondent skipped this question**  
Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

---

**Q22** **Respondent skipped this question**  
Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

---

Page 5: General Pavement Questions

**Q23**

Respondent skipped this question

Has your Agency experienced longitudinal cracking? If yes, please explain in comments.

---

**Q24**

Respondent skipped this question

What is the maximum number of lanes your Agency allows to be tied together?

---

**Q25**

Respondent skipped this question

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

---

**Q26**

Respondent skipped this question

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

---

**Q27**

Respondent skipped this question

Any other comments?

---

# #26

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Friday, August 29, 2025 10:47:50 AM  
**Last Modified:** Friday, August 29, 2025 11:06:05 AM  
**Time Spent:** 00:18:15  
**IP Address:** 155.190.17.7

Page 1

## Q1

Your contact information:

Name	<b>Dan Gancarz</b>
State Agency	<b>Illinois Tollway</b>
Email Address	<b>dgancarz@getipass.com</b>

## Q2

**Full Depth Concrete Pavement**

What types of concrete applications does your state use?  
 Select all that apply.

## Q3

Please provide a link to your Pavement Design Process and Standards.

Our pavement design process is not posted online. We have a consultant design our pavements with Pavement ME

Page 2: Full-Depth Concrete Pavement

## Q4

**AASHTOWare Pavement ME Design (PMED) previously know as MEPDG**

What is the primary design software your Agency uses for full-depth concrete pavement design?

## Q5

**15 ft**

Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

## Q6

**Yes,**  
 If yes, what is the minimum required thickness?:  
 10 inches

Does your Agency have a minimum required full depth concrete thickness?

**Q7**

What is your Agency's typical full depth pavement width?

12-foot-wide lanes with a 13-foot widened outside lane

---

**Q8**

What types of shoulders does your Agency use with full depth concrete pavements?

asphalt

---

**Q9**

**Lime-cement stabilization**

Does your Agency require a subgrade treatment, and if so, what kind?

---

**Q10**

What is the typical subgrade support value for pavement design input?

Resilient Modulus

**4000**

---

**Q11**

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

**Open graded subbases (unstabilized),**

**HMA/Asphalt treated,**

Please describe:

Our typical base design is 9" open graded unstabilized aggregate topped with 3" dense graded unstabilized aggregate followed by 3" asphalt stabilized subbase

---

Page 3: Concrete Overlays

**Q12**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

**Other,**

Comments - Please explain if you use multiple designs for overlays.:

We haven't done any concrete overlays and don't have design procedures or standard details.

---

**Q13**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

---

**Respondent skipped this question**

**Q14** Respondent skipped this question

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

---

**Q15** Respondent skipped this question

Does your Agency have a minimum overlay thickness?

---

**Q16** Respondent skipped this question

What is your typical overlay thickness?

---

**Q17** Respondent skipped this question

What types of shoulders does your Agency use with concrete overlays?

---

**Q18** Respondent skipped this question

Does your Agency use fibers in concrete overlays?

---

---

Page 4: Roundabouts

**Q19** No

Does your Agency utilize concrete roundabouts?

---

**Q20** Respondent skipped this question

What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

---

**Q21** Respondent skipped this question

Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

---

**Q22** Respondent skipped this question

Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

---

---

Page 5: General Pavement Questions

**Q23**

Has your Agency experienced longitudinal cracking? If yes, please explain in comments.

**Yes,**

If yes, please explain what the pavement type was and if you made any design or specification adjustments to correct it?:

We occasionally see it with jointed pavement, and it's almost always attributed to a base issue. We used to have longitudinal cracking on jointed ramps with a 16-foot-wide slab. We have since added a tied longitudinal joint down the middle and that has eliminated the longitudinal cracking on ramps.

**Q24**

What is the maximum number of lanes your Agency allows to be tied together?

No hard limit, I think the max we've tied is 6.

**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

	Yes/No
Shorten Joint Spacing	<b>No</b>
Change Shoulder Design (Use Tied Shoulders)	<b>No</b>
Change Shoulder Design (Concrete vs AC vs RCC)	<b>No</b>
Use Dowel Bars	<b>Yes</b>
Use Widened Lanes	<b>Yes</b>
Change Base Type	<b>No</b>
Higher PCC Strength (Increased Concrete Strength)	<b>No</b>
Optimized Mix Design/Optimized Gradation	<b>No</b>

**Q26**

**No**

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

**Q27**

**Respondent skipped this question**

Any other comments?

# #27

**INCOMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, September 02, 2025 5:50:07 AM  
**Last Modified:** Tuesday, September 02, 2025 7:11:22 AM  
**Time Spent:** 01:21:15  
**IP Address:** 169.224.168.155

Page 1

## Q1

Your contact information:

Name	<b>Phillip Snider</b>
State Agency	<b>GADOT</b>
Email Address	<b>psnider@dot.ga.gov</b>

## Q2

What types of concrete applications does your state use? Select all that apply.

**Full Depth Concrete Pavement,**  
**Concrete Overlays of Asphalt (Thin 6" or less),**  
**Roller Compacted Concrete (RCC),**

Additional Comments:

Concrete overlay of concrete has been used rarely in the past but is not in practice today. Typical white-topping is a 6" concrete overlay of the existing asphalt. This practice is normally only done at intersections to address rutting.

## Q3

Please provide a link to your Pavement Design Process and Standards.

<https://www.dot.ga.gov/PartnerSmart/DesignManuals/DesignPolicy/GDOT-DPM.pdf#page=253>  
<https://www.dot.ga.gov/PartnerSmart/DesignManuals/Pavement/Pavement%20Design%20Manual.pdf>

Page 2: Full-Depth Concrete Pavement

## Q4

What is the primary design software your Agency uses for full-depth concrete pavement design?

**AASHTO Empirical (93, 86, 72),**

Comments:

Plans are in place to incorporate PMED for certain high priority routes, however no fixed date of implementation is in place.

**Q5**

Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

**15 ft,**

Please provide any additional information regarding joint spacing.:

A variety of joint spacings have been utilized throughout the state in the past. The current standard is 15-foot square, doweled joints. However, there are existing pavements with 20', 30' and randomized joints, some square some skewed.

---

**Q6**

Does your Agency have a minimum required full depth concrete thickness?

**Yes,**

If yes, what is the minimum required thickness?:

6"

---

**Q7**

What is your Agency's typical full depth pavement width?

12'

---

**Q8**

What types of shoulders does your Agency use with full depth concrete pavements?

HMA, JPCP, and RCCP have all been used.

---

**Q9**

Does your Agency require a subgrade treatment, and if so, what kind?

**No subgrade treatment is required, but we will stabilize on a project by project basis**

**Lime stabilization,**

**Cement treated,**

Please describe:

Lime or cement stabilization will be used based on the recommendations of the soil survey.

---

**Q10**

What is the typical subgrade support value for pavement design input?

Static k-value

**110-420**

Resilient Modulus

**Not currently used**

---

**Q11**

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

**Granular Subbase (unstabilized),**

**HMA/Asphalt treated,**

Please describe:

Typical base for PCC pavement is either 8" Graded Aggregate or 3" HMA on 8" GAB

---

Page 3: Concrete Overlays

**Q12**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

**AASHTOWare Pavement ME Design (PMED) previously know as MEPDG**

,

**Typical Thickness,**

Comments - Please explain if you use multiple designs for overlays.:

White-topping is typically 6". However, in special circumstances, PMED may be utilized.

**Q13**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

**Other (please describe),**

Please provide any additional information regarding joint spacing.:

GDOT does not regularly use full-thickness PCC overlay of asphalt.

**Q14**

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

**6 ft x 6 ft**

**Q15**

Does your Agency have a minimum overlay thickness?

**No,**

If yes, what is the minimum thickness?:

No minimum is specifically stated but 6" is standard.

**Q16**

What is your typical overlay thickness?

6"

**Q17**

What types of shoulders does your Agency use with concrete overlays?

No specific shoulder type is prescribed. Most current examples have curb and gutter.

---

**Q18**

Does your Agency use fibers in concrete overlays?

**It depends, please explain,**

If yes, what is the typical addition rate? Do you have an APL/QPL list? Do you allow larger panel sizes when fibers are use?:

Fiber is permitted, but not required.

---

Page 4: Roundabouts

**Q19**

Does your Agency utilize concrete roundabouts?

**Yes, concrete roundabouts and truck aprons,**

Additional Comments?:

Policy is to provide designs for both flexible and rigid pavement designs in roundabouts. Truck aprons are always concrete.

---

**Q20**

What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

Concrete Roundabouts

**As designed**

Concrete Truck Aprons

**10" unless specified otherwise**

---

**Q21**

Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

**Dowel bars,**

Please provide any additional relevant information:

This construction detail is pending revision.

---

**Q22**

Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

<https://mydocs.dot.ga.gov/info/gdotpubs/ConstructionStandardsAndDetails/RA-2.pdf>

PCC roundabout detail is in review

---

Page 5: General Pavement Questions

**Q23**

Has your Agency experienced longitudinal cracking? If yes, please explain in comments.

**Yes,**

If yes, please explain what the pavement type was and if you made any design or specification adjustments to correct it?:

This has not been examined in detail but is not an uncommon distress and is believed to be fatigue related.

**Q24**

What is the maximum number of lanes your Agency allows to be tied together?

No maximum is specified. In practice, three.

**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

	Yes/No
Shorten Joint Spacing	<b>No</b>
Change Shoulder Design (Use Tied Shoulders)	<b>Yes</b>
Change Shoulder Design (Concrete vs AC vs RCC)	<b>Yes</b>
Use Dowel Bars	<b>No</b>
Use Widened Lanes	<b>Yes</b>
Change Base Type	<b>No</b>
Higher PCC Strength (Increased Concrete Strength)	<b>No</b>
Optimized Mix Design/Optimized Gradation	<b>No</b>

Please explain:

Dowel bars are required in all jointed concrete pavements. Mix optimization is being considered but is not currently implemented.

**Q26**

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

**Yes, concrete and asphalt,**

Provide additional information or a link to the guidance you provide.:

Local projects using state funding use state specifications and guides.

**Q27**

Any other comments?

**Respondent skipped this question**

# #28

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, September 02, 2025 11:17:41 AM  
**Last Modified:** Tuesday, September 02, 2025 11:53:02 AM  
**Time Spent:** 00:35:21  
**IP Address:** 164.119.5.234

Page 1

## Q1

Your contact information:

Name	<b>Bruce Barrett</b>
State Agency	<b>Nebraska</b>
Email Address	<b>bruce.barrett@nebraska.gov</b>

## Q2

What types of concrete applications does your state use? Select all that apply.

**Full Depth Concrete Pavement,**  
**Concrete Overlays of Concrete (Thin 6" or less),**  
**Concrete Overlays of Asphalt (Thin 6" or less),**

Additional Comments:

There is a link below to the pavement design manual, a new version will be coming out in 6 months with many edits to include PMED.

## Q3

Please provide a link to your Pavement Design Process and Standards.

chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://dot.nebraska.gov/media/jjwpyezr/pavdesignmanual.pdf

Page 2: Full-Depth Concrete Pavement

## Q4

What is the primary design software your Agency uses for full-depth concrete pavement design?

**AASHTOWare Pavement ME Design (PMED) previously know as MEPDG**

**Q5** **>16 ft**

Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

**Q6** **Yes,**  
If yes, what is the minimum required thickness?:  
8"

Does your Agency have a minimum required full depth concrete thickness?

**Q7**

What is your Agency's typical full depth pavement width?

12' is typical, 10"and less thickness limit width max to 14'.

**Q8**

What types of shoulders does your Agency use with full depth concrete pavements?

Tapered depth thickness, to provide a 4% slope starting with a thickness matching the mainline

**Q9** **Lime stabilization,**  
**Other (please describe),**  
**Cement treated,**  
Please describe:  
Fly Ash

Does your Agency require a subgrade treatment, and if so, what kind?

**Q10**

What is the typical subgrade support value for pavement design input?

Resilient Modulus **30,000 psi**

**Q11** **Cement treated/stabilized,**  
Please describe:  
8" thickness

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

**Q12**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

**AASHTOWare Pavement ME Design (PMED) previously know as MEPDG**

**Typical Thickness,**

Comments - Please explain if you use multiple designs for overlays.:

We have used 5" in the past but had cracking issues, we are currently only scoping 6" concrete overlays due to cracking concerns.

**Q13**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

**Respondent skipped this question**

**Q14**

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

Please provide any additional information regarding joint spacing.:

9'x12'

**Q15**

Does your Agency have a minimum overlay thickness?

**Yes,**

If yes, what is the minimum thickness?:

6"

**Q16**

What is your typical overlay thickness?

6"

**Q17**

What types of shoulders does your Agency use with concrete overlays?

Asphalt

**Q18**

Does your Agency use fibers in concrete overlays?

**No**

**Q19** **Yes, concrete roundabouts and truck aprons**

Does your Agency utilize concrete roundabouts?

---

**Q20**  
What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

Concrete Roundabouts	<b>10"</b>
Concrete Truck Aprons	<b>10" with a thickened haunch at the joint</b>

---

**Q21** **None of the above**

Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

---

**Q22**  
Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

no linkable source

---

#### Page 5: General Pavement Questions

<b>Q23</b> Has your Agency experienced longitudinal cracking? If yes, please explain in comments.	<b>Yes,</b> If yes, please explain what the pavement type was and if you made any design or specification adjustments to correct it?: Concrete thicknesses less than 10" with widths greater than 14'. We now have a policy that limits 10" or less to a 14' width.
--	---

---

**Q24**  
What is the maximum number of lanes your Agency allows to be tied together?

No limit has been considered.

---

**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

Yes/No

Shorten Joint Spacing

Change Shoulder Design (Use Tied Shoulders)

Change Shoulder Design (Concrete vs AC vs RCC)

Use Dowel Bars

Use Widened Lanes

Change Base Type

Higher PCC Strength (Increased Concrete Strength)

Optimized Mix Design/Optimized Gradation

Please explain:

No optimization.

**Q26**

No

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

**Q27**

Respondent skipped this question

Any other comments?

# #29

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, September 02, 2025 1:57:58 PM  
**Last Modified:** Tuesday, September 02, 2025 2:59:55 PM  
**Time Spent:** 01:01:56  
**IP Address:** 73.249.150.193

Page 1

## Q1

Your contact information:

Name	<b>Richard F Mulcahy Jr</b>
State Agency	<b>MassDOT</b>
Email Address	<b>richard.mulcahy@dot.state.ma.us</b>

## Q2

What types of concrete applications does your state use?  
 Select all that apply.

### Full Depth Concrete Pavement,

Additional Comments:

MassDOT is just beginning to implement a concrete pavement program. Only one concrete pavement/intersection project (2024) in the past 23 years. One more concrete pavement/intersection project set to break ground in 2026.

## Q3

Please provide a link to your Pavement Design Process and Standards.

Section 476 Cement Concrete Pavement

<https://www.mass.gov/doc/2025-standard-specifications-for-highways-and-bridges-division-ii-construction-details/download>

Section M4.06.8 Pavement Concrete:

<https://www.mass.gov/doc/2025-standard-specifications-for-highways-and-bridges-division-iii-materials-specifications/download>

Page 2: Full-Depth Concrete Pavement

## Q4

What is the primary design software your Agency uses for full-depth concrete pavement design?

### Other,

Comments:

The design of the concrete pavement is up to the MassDOT design consultant assigned to the Contractor and then peer reviewed by MassDOT staff.

**Q5**

Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

**Other (please describe),**

Please provide any additional information regarding joint spacing.:

The design of the concrete pavement is up to the MassDOT design consultant assigned to the Contractor and then peer reviewed by MassDOT staff.

---

**Q6**

Does your Agency have a minimum required full depth concrete thickness?

**Yes,**

If yes, what is the minimum required thickness?:

The design of the concrete pavement is up to the MassDOT design consultant assigned to the Contractor and then peer reviewed by MassDOT staff.

---

**Q7**

What is your Agency's typical full depth pavement width?

9-inch depth was used on the Newburyport, MA contract.

---

**Q8**

What types of shoulders does your Agency use with full depth concrete pavements?

Not known as we just don't have enough concrete paving contracts at this time.

---

**Q9**

Does your Agency require a subgrade treatment, and if so, what kind?

**Asphalt treated,**

**No subgrade treatment is required, but we will stabilize on a project by project basis**

,

**Cement treated**

---

**Q10**

What is the typical subgrade support value for pavement design input?

Static k-value

**The design of the concrete pavement is up to the MassDOT design consultant assigned to the Contractor and then peer reviewed by MassDOT staff.**

Resilient Modulus

**The design of the concrete pavement is up to the MassDOT design consultant assigned to the Contractor and then peer reviewed by MassDOT staff.**

---

**Q11**

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

- Granular Subbase (unstabilized),**
- Cement treated/stabilized,**
- HMA/Asphalt treated,**
- Stabilized open graded subbases,**
- Other (please describe),**

Please describe:

Unstablized bases shall be comprised of crushed stone, crushed concrete, bank-run sand-gravels, sands, soil-stabilized gravels, slag, crushed mine waste, or sand-shell mixtures. Stabilized bases shall be comprised of hydraulic cement, blended hydraulic cement, or asphalt. Types of stabilized bases include cement treated, asphalt treated, lean concrete, asphalt treated open graded, and cement treated open graded

Page 3: Concrete Overlays

**Q12**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

**Other,**

Comments - Please explain if you use multiple designs for overlays.:  
The design of the concrete pavement is up to the MassDOT design consultant assigned to the Contractor and then peer reviewed by MassDOT staff.

**Q13**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

**Other (please describe),**

Please provide any additional information regarding joint spacing.:  
Not Applicable.

**Q14**

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

**Other (please describe),**

Please provide any additional information regarding joint spacing.:  
Not Applicable.

**Q15**

Does your Agency have a minimum overlay thickness?

**No**

**Q16**

What is your typical overlay thickness?

Not Applicable.

---

**Q17**

What types of shoulders does your Agency use with concrete overlays?

Not Applicable.

---

**Q18**

Does your Agency use fibers in concrete overlays?

**It depends, please explain,**

If yes, what is the typical addition rate? Do you have an APL/QPL list? Do you allow larger panel sizes when fibers are use?:

Currently, we do not do concrete overlays. However, I'm sure we will in the future as our concrete pavement program grows.

---

Page 4: Roundabouts

**Q19**

Does your Agency utilize concrete roundabouts?

**Concrete truck aprons only,**

Additional Comments?:  
Stamped (Brick) Color Concrete.

---

**Q20**

What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

Concrete Roundabouts

**Not Applicable**

Concrete Truck Aprons

**4 to 6 inches**

---

**Q21**

Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

**Wire Mesh,**

Please provide any additional relevant information:

I wish we didn't keep specifying wire mesh...I am working to remove that requirement.

---

**Q22**

Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

The design of the concrete pavement is up to the MassDOT design consultant assigned to the Contractor and then peer reviewed by MassDOT staff.

---

Page 5: General Pavement Questions

**Q23**

**No**

Has your Agency experienced longitudinal cracking? If yes, please explain in comments.

---

**Q24**

What is the maximum number of lanes your Agency allows to be tied together?

The design of the concrete pavement is up to the MassDOT design consultant assigned to the Contractor and then peer reviewed by MassDOT staff.

---

**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

Yes/No

Shorten Joint Spacing

---

Change Shoulder Design (Use Tied Shoulders)

---

Change Shoulder Design (Concrete vs AC vs RCC)

---

Use Dowel Bars

---

Use Widened Lanes

---

Change Base Type

---

Higher PCC Strength (Increased Concrete Strength)

---

Optimized Mix Design/Optimized Gradation

---

Please explain:

The design of the concrete pavement is up to the MassDOT design consultant assigned to the Contractor and then peer reviewed by MassDOT staff.

---

**Q26**

**Yes, asphalt only**

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

---

**Q27**

Any other comments?

MassDOT is working to increase cement concrete paving in this state, but it is taking some time.

---

# #30

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, August 19, 2025 3:37:50 PM  
**Last Modified:** Wednesday, September 03, 2025 1:26:07 PM  
**Time Spent:** Over a week  
**IP Address:** 165.201.162.178

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Page 1

## Q1

Your contact information:

Name	Nat Velasquez Jr
State Agency	Kansas DOT
Email Address	nat.velasquez@ks.gov

---

## Q2

What types of concrete applications does your state use?  
Select all that apply.

**Full Depth Concrete Pavement,**  
**Concrete Overlays of Asphalt (Conventional 6.5" or greater)**  
,  
**Concrete Overlays of Asphalt (Thin 6" or less),**  
**Roller Compacted Concrete (RCC),**  
Additional Comments:  
We use RCC mainly for shoulders.

---

## Q3

Please provide a link to your Pavement Design Process and Standards.

1 Analysis and Design of Pavements

KDOT Standard Drawings - Standards Browser - <https://kart.ksdot.gov/login.aspx?ReturnUrl=%2fStandardDrawings%2fStandardDetail.aspx>

---

Page 2: Full-Depth Concrete Pavement

**Q4**

What is the primary design software your Agency uses for full-depth concrete pavement design?

**AASHTOWare Pavement ME Design (PMED) previously know as MEPDG**

Comments:

We use PMED for rigid pavement. We use AASHTO 93 for flexible pavement.

**Q5**

Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

**15 ft**

**Q6**

Does your Agency have a minimum required full depth concrete thickness?

**Yes,**

If yes, what is the minimum required thickness?:  
8" on minor highways (lower traveled routes) 9" on higher traveled highways (higher traveled routes)

**Q7**

What is your Agency's typical full depth pavement width?

24 feet

**Q8**

What types of shoulders does your Agency use with full depth concrete pavements?

We now use a full-depth variable thickness

**Q9**

Does your Agency require a subgrade treatment, and if so, what kind?

**No subgrade treatment is required, but we will stabilize on a project by project basis**

**Lime stabilization,**

**Cement treated,**

Please describe:

Fly ash treated, lime kiln dust treated

**Q10**

What is the typical subgrade support value for pavement design input?

Static k-value

**180 psi/in**

Resilient Modulus

**3,500 psi**

**Q11**

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

**Granular Subbase (unstabilized),  
Cement treated/stabilized,  
HMA/Asphalt treated,**

Please describe:  
The thickness is normally 4".

Page 3: Concrete Overlays

**Q12**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

**AASHTO Empirical (93),  
Other,**

Comments - Please explain if you use multiple designs for overlays.:  
Colorado DOT concrete overlay method

**Q13**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

**6 ft x 6 ft**

**Q14**

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

**6 ft x 6 ft,  
4 ft x 4 ft,**

Please provide any additional information regarding joint spacing.:  
6' x 6' for 5" ≤ D ≤ 6" 4' x 4' for 3" < D < 5" 3' x 3' for D ≤ 3"

**Q15**

Does your Agency have a minimum overlay thickness?

**Yes,**  
If yes, what is the minimum thickness?:  
2"

**Q16**

What is your typical overlay thickness?

6"

**Q17**

What types of shoulders does your Agency use with concrete overlays?

The same overlay as on the mainline.

**Q18**

**No**

Does your Agency use fibers in concrete overlays?

---

Page 4: Roundabouts

**Q19**

**Yes, concrete roundabouts and truck aprons**

Does your Agency utilize concrete roundabouts?

---

**Q20**

What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

Concrete Roundabouts **9"**

Concrete Truck Aprons **9"**

---

**Q21**

**None of the above,**

Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

Please provide any additional relevant information:  
The concrete is plain.

---

**Q22**

Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

Kansas Roundabout Guide, Second Edition 2014 A  
companion to NCHRP Report 672: Roundabouts an Informational Guide, Second Edition - <https://www.ksdot.gov/doing-business/design-consultants/design-resources>

---

Page 5: General Pavement Questions

**Q23**

Has your Agency experienced longitudinal cracking? If yes, please explain in comments.

**Yes,**

If yes, please explain what the pavement type was and if you made any design or specification adjustments to correct it?:  
Mainly in asphalt. Some in concrete. Need to make sure that the subgrade is uniformly compacted. Need to check if the vibrator rod is functioning properly for concrete.

---

**Q24**

What is the maximum number of lanes your Agency allows to be tied together?

---

**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

	Yes/No
Shorten Joint Spacing	No
Change Shoulder Design (Use Tied Shoulders)	No
Change Shoulder Design (Concrete vs AC vs RCC)	No
Use Dowel Bars	No
Use Widened Lanes	No
Change Base Type	No
Higher PCC Strength (Increased Concrete Strength)	No
Optimized Mix Design/Optimized Gradation	No

**Q26**

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

**Yes, concrete and asphalt,**

Provide additional information or a link to the guidance you provide.:

Mainly through checking their plans and suggesting changes.

**Q27**

Any other comments?

**Respondent skipped this question**

# #31

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, August 20, 2025 1:50:15 PM  
**Last Modified:** Sunday, September 07, 2025 1:08:38 PM  
**Time Spent:** Over a week  
**IP Address:** 151.111.143.1

Page 1

## Q1

Your contact information:

Name	<b>Robert Golish</b>
State Agency	<b>MN</b>
Email Address	<b>robert.golish@state.mn.us</b>

## Q2

What types of concrete applications does your state use? Select all that apply.

**Full Depth Concrete Pavement,**  
**Concrete Overlays of Concrete (Thin 6" or less),**  
**Concrete Overlays of Concrete (Conventional 6.5" or greater)**  
 ,  
**Concrete Overlays of Asphalt (Conventional 6.5" or greater)**  
 ,  
**Concrete Overlays of Asphalt (Thin 6" or less)**

## Q3

Please provide a link to your Pavement Design Process and Standards.

<https://www.dot.state.mn.us/design/design-standards/facility-design-guide.html>  
<https://www.dot.state.mn.us/materials/pvmtdesign/index.html>  
<https://www.dot.state.mn.us/pre-letting/spec/index.html>  
<https://www.dot.state.mn.us/design/design-standards/standard-plans.html>

Page 2: Full-Depth Concrete Pavement

## Q4

What is the primary design software your Agency uses for full-depth concrete pavement design?

**Other,**  
 Comments:  
 MnPAVE 7 - state owned software

**Q5**

Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

**Depends on thickness,**

Please provide any additional information regarding joint spacing.:

7" to 7.5" pavement thickness - 12 ft > 7.5" pavement thickness - 15 ft

**Q6**

Does your Agency have a minimum required full depth concrete thickness?

**Yes,**

If yes, what is the minimum required thickness?:

7 inches

**Q7**

What is your Agency's typical full depth pavement width?

12 ft

**Q8**

What types of shoulders does your Agency use with full depth concrete pavements?

Inside - Concrete, Outside - HMA

**Q9**

Does your Agency require a subgrade treatment, and if so, what kind?

Please describe:

Mix and Recompact

**Q10**

What is the typical subgrade support value for pavement design input?

Static k-value

**180**

Resilient Modulus

**9000**

**Q11**

**Granular Subbase (unstabilized)**

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

**Q12**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

**State Built,**

**Bonded Concrete Overlay of Asphalt - Mechanistic Empirical (BCOA-ME)**

,

Comments - Please explain if you use multiple designs for overlays.:

7" Min. thickness - MnPAVE 7 4" to 6" thickness - Whitetopping

**Q13**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

**Other (please describe),**

Please provide any additional information regarding joint spacing.:

6.5" thickness - 6 ft x 6 ft 7" to 7.5" thickness - 12 ft x 12 ft > 7.5" thickness - 15 ft x 12 ft

**Q14**

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

**6 ft x 6 ft**

**Q15**

Does your Agency have a minimum overlay thickness?

**Yes,**

If yes, what is the minimum thickness?:

4" - whitetopping

**Q16**

What is your typical overlay thickness?

7"

**Q17**

What types of shoulders does your Agency use with concrete overlays?

Inside - concrete, Outside - HMA

**Q18**

Does your Agency use fibers in concrete overlays?

**No**

Page 4: Roundabouts

**Q19**

Does your Agency utilize concrete roundabouts?

**Yes, concrete roundabouts and truck aprons**

**Q20**

What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

Concrete Roundabouts	8"
Concrete Truck Aprons	7"

---

**Q21**

Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

**Dowel bars,**

**Reinforcing steel,**

Please provide any additional relevant information:

MnDOT constructed a jointless fiber reinforced concrete roundabout several years ago.

---

**Q22**

Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

<https://www.dot.state.mn.us/design/design-standards/facility-design-guide.html>

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Page 5: General Pavement Questions

**Q23**

Has your Agency experienced longitudinal cracking? If yes, please explain in comments.

**Yes,**

If yes, please explain what the pavement type was and if you made any design or specification adjustments to correct it?:

6" PCC - go thicker 7" or greater

---

**Q24**

What is the maximum number of lanes your Agency allows to be tied together?

5

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**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

	Yes/No
Shorten Joint Spacing	<b>Yes</b>
Change Shoulder Design (Use Tied Shoulders)	<b>Yes</b>
Change Shoulder Design (Concrete vs AC vs RCC)	<b>No</b>
Use Dowel Bars	<b>Yes</b>
Use Widened Lanes	<b>Yes</b>
Change Base Type	<b>No</b>
Higher PCC Strength (Increased Concrete Strength)	<b>No</b>
Optimized Mix Design/Optimized Gradation	<b>Yes</b>

**Q26**

**Yes, concrete and asphalt**

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

**Q27**

**Respondent skipped this question**

Any other comments?

# #32

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Friday, August 29, 2025 12:34:54 PM  
**Last Modified:** Tuesday, September 16, 2025 5:59:56 PM  
**Time Spent:** Over a week  
**IP Address:** 136.181.197.188

Page 1

## Q1

Your contact information:

Name	<b>Justin Schenkel</b>
State Agency	<b>Michigan DOT</b>
Email Address	<b>schenkelj@michigan.gov</b>

## Q2

What types of concrete applications does your state use?  
 Select all that apply.

**Full Depth Concrete Pavement,**  
**Concrete Overlays of Concrete (Thin 6" or less),**  
**Concrete Overlays of Concrete (Conventional 6.5" or greater)**  
 ,  
**Concrete Overlays of Asphalt (Conventional 6.5" or greater)**  
 ,  
**Concrete Overlays of Asphalt (Thin 6" or less)**

## Q3

Please provide a link to your Pavement Design Process and Standards.

- a. <https://www.michigan.gov/mdot/business/construction/pavement-operations/me-pavement-design>
- b. <https://www.michigan.gov/mdot/-/media/Project/Websites/MDOT/Business/Construction/Pavement-Operations/ME-Pavement-Design/User-Guide-for-ME-Pavement-Design.pdf?rev=521090cecf3a4af48b71cea1f3c1304f&hash=BC7B9F12589B7D9C9172DCE96184CB8E>

Page 2: Full-Depth Concrete Pavement

**Q4**

What is the primary design software your Agency uses for full-depth concrete pavement design?

**AASHTOWare Pavement ME Design (PMED) previously know as MEPDG**

,

**AASHTO Empirical (93, 86, 72)**

**Q5**

Please select your agency's typical joint spacing(s) for full-depth concrete pavements?

**14 ft,**

**16 ft,**

**12 ft,**

**Other (please describe),**

**Depends on thickness,**

Please provide any additional information regarding joint spacing.:

6'x6', 5.5'x5.5', or 5'x5' square slabs (as per the lane width) used for full-depth concrete with thickness of 6.5" or less.

**Q6**

Does your Agency have a minimum required full depth concrete thickness?

**Yes,**

If yes, what is the minimum required thickness?:

Typically, full-depth concrete pavement is 8" or 9" if non-freeway or freeway route, respectively. However, if widened slab, the minimum thickness is 9.5" and for some non-freeway routes it is 6". For further details, see the 'Michigan DOT User Guide for Mechanistic-Empirical Pavement Design', section "14.3 – Assessing the Design Results (Final Design Requirements)".

**Q7**

What is your Agency's typical full depth pavement width?

Most are 12' but freeways can be widened slab of 14' width. In special instances, where 14' slab width is not applicable, 13' slab width may be used. Also as previously noted, for concrete with thickness of 6.5" or less, the width is half of the lane width (made up of 2 square slabs).

**Q8**

What types of shoulders does your Agency use with full depth concrete pavements?

Almost always full-depth concrete, but in special instances, asphalt may be used.

**Q9**

Does your Agency require a subgrade treatment, and if so, what kind?

**No subgrade treatment is required, but we will stabilize on a project by project basis**

**Lime stabilization,  
Cement treated,  
Lime-cement stabilization**

**Q10**

What is the typical subgrade support value for pavement design input?

Static k-value

**K-value = 170 to 230 pci (per AASHTO 1993 standards)**

Resilient Modulus

**Resilient modulus = 3000 to 5000 psi (per AASHTO 1993 standards – see MDOT PMED Guide for PMED range)**

**Q11**

If your agency has a typical subbase type, please select it (them) from the list below? If there's also a standard thickness, please provide details in the comments.

**Granular Subbase (unstabilized),  
Open graded subbases (unstabilized),  
Cement treated/stabilized,  
Stabilized open graded subbases,**

Please describe:

Typically, base and subbase are 6" open-graded over 18" sand or 16" open-graded.

Page 3: Concrete Overlays

**Q12**

What is the primary design software your Agency uses for concrete overlay design? If you use multiple overlay designs, please explain in comments.

**AASHTO Empirical (93),**

**Other,**

Comments - Please explain if you use multiple designs for overlays.:

Corps of Engineers empirical equation (similar to AASHTO 1993).

**Q13**

Please select all panel sizes that your agency regularly uses for conventional (6.5" and greater) concrete overlays. (all listed as length x width)

**12 ft x 12 ft,**

Please provide any additional information regarding joint spacing.:

14 ft x 12 ft and 16 ft x 12 ft also used as per concrete overlay thickness.

**Q14**

Please select all panel sizes that your agency regularly uses for thin (6" or less) concrete overlays. (all listed as length x width)

**12 ft x 12 ft,**

**6 ft x 6 ft,**

Please provide any additional information regarding joint spacing.:

6'x6', 5.5'x5.5', or 5'x5' square slabs (as per the lane width) used for full-depth concrete with thickness of 5.5" or less.

---

**Q15**

Does your Agency have a minimum overlay thickness?

**Yes,**

If yes, what is the minimum thickness?:

4"

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**Q16**

What is your typical overlay thickness?

6"

---

**Q17**

What types of shoulders does your Agency use with concrete overlays?

Full-depth concrete pavement

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**Q18**

Does your Agency use fibers in concrete overlays?

**It depends, please explain,**

If yes, what is the typical addition rate? Do you have an APL/QPL list? Do you allow larger panel sizes when fibers are use?:

Only used if short-panel square slabs are used. MDOT has not implemented a recent short-panel square slab concrete pavement within the last 20 years, so fiber specs have not been formalized. Therefore, there are no formal/finalized specs or products for fibers at this time. Still, estimated fiber specs are as follows: 1. Aspect Ratio – Length/Equivalent Diameter = 70 (min) to 100 (max) 2. Length = 1.5 to 2.25 inches 3. Tensile Strength (min.) = 70 ksi 4. Modulus of Elasticity (min.) = 800 ksi 5. Dosage Rate Range = 4.0 to 6.0 lbs/cyd 6. Equivalent Residual Flexural Strength\* = ASTM C 1609, Minimum of 150 psi a. \* The specimens shall be tested when the concrete ultimate flexural strength at peak stress (fp) is a minimum of 650 psi. For 6 by 6 by 20 in. FRC beam the maximum required net deflection value of 1/150 of the 18 in. span length is 0.12 in.

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**Q19** **Yes, concrete roundabouts and truck aprons**

Does your Agency utilize concrete roundabouts?

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**Q20**  
What are your typical thicknesses for concrete roundabouts and roundabout concrete truck aprons?

Concrete Roundabouts	<b>8" to 9" (or per design requirements)</b>
Concrete Truck Aprons	<b>Concrete Truck Aprons = 9"</b>

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**Q21** **Dowel bars**

Does your Agency use any of the following in roundabout concrete truck aprons? Select all that apply.

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**Q22**  
Please share a link to your Agency's standard guidance and/or design details for roundabouts and truck aprons.

Reference NCHRP Report 672

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Page 5: General Pavement Questions

<b>Q23</b> Has your Agency experienced longitudinal cracking? If yes, please explain in comments.	<b>Yes,</b> If yes, please explain what the pavement type was and if you made any design or specification adjustments to correct it?: Occasionally occurs for various concrete pavement types and widths. One change for overlays included moving to an open graded separator layer with anti-strip additive.
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**Q24**  
What is the maximum number of lanes your Agency allows to be tied together?

No maximum

---

**Q25**

Does your agency consider pavement design optimizations? If yes, please select optimizations considered and explain below if necessary.

	Yes/No
Shorten Joint Spacing	<b>Yes</b>
Change Shoulder Design (Use Tied Shoulders)	<b>Yes</b>
Change Shoulder Design (Concrete vs AC vs RCC)	<b>Yes</b>
Use Dowel Bars	<b>Yes</b>
Use Widened Lanes	<b>Yes</b>
Change Base Type	<b>Yes</b>
Higher PCC Strength (Increased Concrete Strength)	
Optimized Mix Design/Optimized Gradation	<b>Yes</b>

Please explain:

It depends on what is meant by "optimization", but technically, these features can be adjusted in MDOT pavement design to impact results. However, these items are largely standardized or typical for concrete design, so while these inputs will be changed to meet the project conditions and standards, these are not features that are adjusted by the pavement designer to improve design outcomes.

**Q26**

Does your Agency provide design guidance/assistance to cities, counties, municipalities, etc.?

**No,**

Provide additional information or a link to the guidance you provide.:

Typically, MDOT does not directly provide local agency pavement design assistance, but MDOT may collaborate with local agencies on project basis as needed.

**Q27**

Any other comments?

**Respondent skipped this question**