



**Materials & Tests Division**  
**Materials & Pavements Section**

## PAVEMENT DESIGN REPORT

### Marion County

I-24

I-24 WESTBOUND BRIDGE OVER SHELLMOUND ROAD @ L.M. 22.65

PIN:130900

Submitted to:

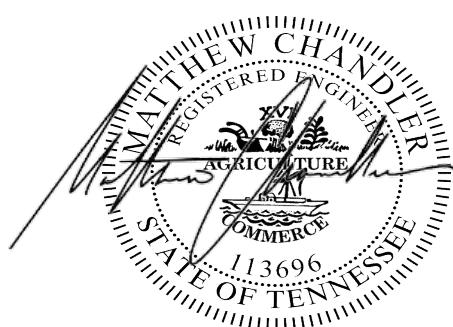
Chanel Hippix, PMP | Project Manager  
Region 2 Alternative Delivery

Pavement Designer:

Md Wasif Zaman TES 3  
Pavement Engineering Team  
Materials & Tests Division

Quality Control Reviewer:

Ulises Martinez Team Lead  
Pavement Engineering Team  
Materials & Tests Division



12/10/2025

County Marion

PIN 130900.00

Route I-24

Design YR 2026

Description I-24 WESTBOUND BRIDGE OVER SHELLMOUND ROAD @ L.M. 22.65

Road I-24 Westbound bridge over Shellmound Road @ L.M. 22.65

**Pavement Schedule**

<b>Mainline</b>			
	Item #	Description	Depth (in)
Pavement	411-03.10	ACS MIX(PG 76-22)Grading D	1.25
	307-03.08	Asphalt Conc Mix(PG 76-22)(BPMB-HM) GR B-M2	2.5
	307-03.01	Asphalt Conc Mix(PG 76-22)(BPMB-HM) GR A	6
	307-01.22	Asphalt Conc Mix(PG 76-22)(BPMB-HM) GR A-S	3
Base	303-01	Mineral Aggregate, Type A	12
Subgrade	0		

<b>Shoulder</b>			
	Item #	Description	Depth (in)
Pavement	411-01.07	ACS MIX(PG 64-22)Grading E	1.25
	307-01.08	Asphalt Conc Mix(PG 64-22)(BPMB-HM) GR B-M2	2.5
Base	303-01	Mineral Aggregate, Type A	21
Subgrade	0		

## Note:

- 1 Add Tack Coat Per Standard Specification 403.05 between each pavement layer
- 2 Use Prime Coat @ 0.35 Gal/SY between base and pavement
- 3 Do not apply Tack Coat above A-S layer
- 4 Subsurface drainage: aggregate underdrain w/pipe
- 5 For Super-elevated section, Replace the "A-S mix" with "A mix" on the higher side, while widening.  
For new construction, use both "A-S" & "A" mix whether it's in super-elevation or not
- 6 Use 411-03.10 ACS MIX (PG76-22) GRADING D at bridge approaches/departures for a minimum of 100 feet when the bridge is not being overlaid with OGFC.

County	Marion	PIN	130900.00
Route	I-24	Design YR	2026
Description	I-24 WESTBOUND BRIDGE OVER SHELLMOUND ROAD @ L.M. 22.65		
Road	I-24 Westbound bridge over Shellmound Road @ L.M. 22.65		

## Traffic Information

Proj Year	2026	ADL	6127
Design Year	2046	Design ESALs	44,727,100
Traffic Data Provided by	TDOT	Traffic Data Date	8/29/2025
		Design Yr ADT	32880

## Soil Data

CBR	5	Mr	7500 psi
-----	---	----	----------

Geotech Report Number	County Average	Report Date	N/A
Geotech Provided by	per Travis Smith, TDOT		

## Design Inputs

Zr	-1.645	Delta PSI	1.7
So	0.45		

## Proposed Design Data

SN required	6.40	SN proposed	6.48
-------------	------	-------------	------

The proposed design provides The proposed pavement design is designed up to	101% of the required SN 49,476,302 ESALs
--	---