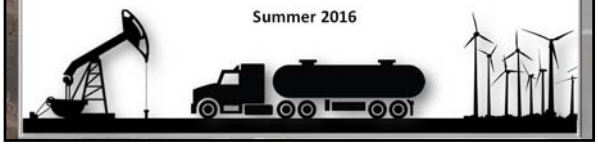
Shoulder Width

PP-16-08

Repair of Roadway Damage Associated with Energy Development

Summer 2016



Importance of Shoulder Width

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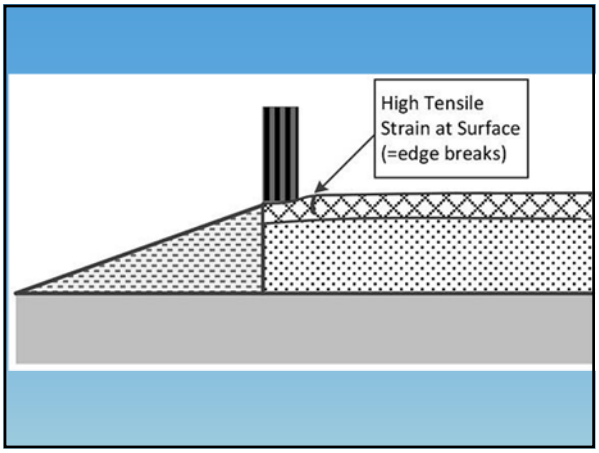
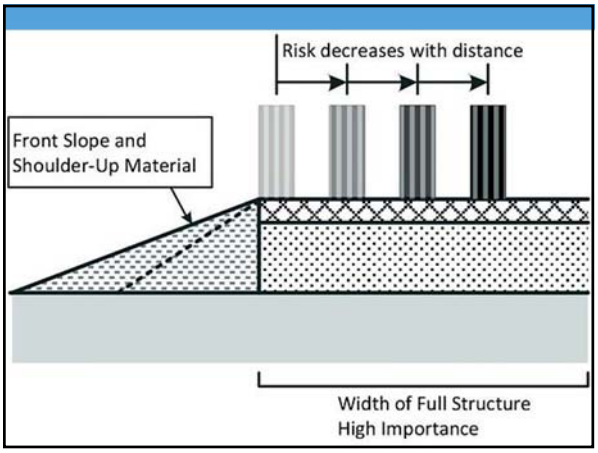
- Pavement structure performance
- Safety

Structural Design Considerations

Subgrade	Shoulder Widths, Ft	
	Recommended	Minimum
Soft	6	4
Stiff	4	2





Reduce Shoulder Width

- Thickness of base course
- Stiffness of base course
- Use of HMA
- Thickness of HMA

Shoulder Width - Sensitivity

- Subgrade strength most important
- Base course thickness more important than base stiffness
- Base course stiffness loss of strength when wet important (particularly with weak subgrade)
- Not sensitive to side slope steepness
- Higher/heavier traffic volumes increase width of shoulder

HMA Thickness

- Thin layers (2 inches) – expect marginal performance
- Thick layers (4 inches plus) – expect improved performance

Structural Design Considerations

Subgrade	Shoulder Widths, Ft	
	Recommended	Minimum
Soft	6	4
Stiff	4	2

Shoulder Width Documents

Document Number	Title
ESB-14-02	Recommended Shoulder Widths
RR-14-01	Maintenance and Rehabilitation Strategies for Repair of Road Damage Associated with Energy Development and Production

Documents available on TxDOT Maintenance Division SharePoint site at https:/txdot.sharepoint.com/sites/division-mnt/site pages/home.aspx