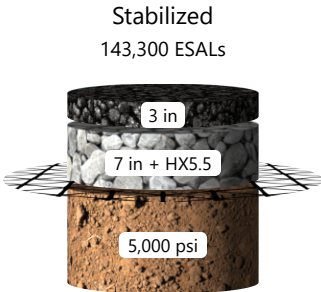


Asphalt Pavement
Design Analysis

Design	Starlight Subdivision- Geogrid Options	Reference	
Project	Starlight Subdivision	Location	Show Low, AZ 85901, USA
Customer		Designer	Aaron Schlessinger
Company	Tensar	Date	April 23, 2024

Results



	Thickness	Coeff.	SN
HMA layer 1	3 in	0.420	1.260
Aggregate base (HX5.5)	7 in	0.262	1.834
Structural number (SN)			3.094

	Thickness	Coeff.	SN
HMA layer 1	4 in	0.420	1.680
Aggregate base	10 in	0.140	1.400
Structural number (SN)			3.080

Parameters

Project Information

Target ESALs	Subgrade resilient modulus	Reliability	Standard deviation	Serviceability	
				Initial	Terminal
100,000	5,000 psi	95%	0.49	4.2	2

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Asphalt Pavement
Cost Analysis



Design	Starlight Subdivision- Geogrid Options	Reference	
Project	Starlight Subdivision	Location	Show Low, AZ 85901, USA
Customer		Designer	Aaron Schlessinger
Company	Tensar	Date	April 23, 2024

Results

Construction Cost

	Stabilized	Unstabilized
HMA layer 1	\$115,638	\$154,184
Aggregate base	\$61,509	\$87,871
Geogrid	\$25,903	
Excavation	\$19,795	\$27,713
Total cost	\$222,845	\$269,767
Unit cost	\$32.09/yd ²	\$38.85/yd ²
Savings	\$46,922 (17%)	

Additional Considerations

	Stabilized	Unstabilized
Construction time	9.8 days	12 days
Dump truck visits	400	557
Fuel required	2,133 gal	2,971 gal
Water required	33,764 gal	48,234 gal

Parameters

Dimensions

Project area	62,500 ft ²
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Grading Requirements

Grade offset	Meet existing grade
Excavation cost	\$8/ton

Stabilized Pavement Section Costs (Installed)

HMA layer 1	\$100/ton
Aggregate base	\$25/ton

Geosynthetic Costs (Installed)

HX5.5	\$3.73/yd ²
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Unstabilized Pavement Section Costs (Installed)

HMA layer 1	\$100/ton
Aggregate base	\$25/ton

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