



SCOUR COUNTERMEASURE OPTIONS



		Articulated Concrete Block Mattress (ACBM)		Concrete Tetrapod		Riprap / Armorstone		Tensar® Triton® Marine Mattress	
Subgrade Preparation		Extensive preparation of subgrade required including compaction and leveling	PTS: 1	Moderate preparation of subgrade required including leveling	PTS: 3	Minimal to no preparation of subgrade required	PTS: 5	Minimal to no preparation of subgrade required	PTS: 5
Constructability		Installing a layer of geotextile and placing a material (usually an aggregate) on top of it	2	Difficult placement requires specialized equipment due to low headroom	3	Stone is the easiest to install but correctly installing a filtration layer or geotextile separation layer is difficult to impossible	1	Geotextiles may be attached prior to install; projects with low headroom may require specialized equipment	3
Durability		Constructed of resilient concrete elements; toe-in points and scour pockets require monitoring	4	Resilient concrete elements	5	Stones can become dislodged or can sink if filtration layer fails	1	Susceptible to anchoring damage	3
Future Maintenance		Maintenance will be required for inspecting and repairing toe-ins and possible scour pockets.	2	Moderate monitoring	3	Requires regular maintenance to inspect and replace stone that has become dislodged	1	Minimal monitoring	4
Environmental Impact		Will require some excavation for toe-ins and requires subgrade leveling and compaction for the extents of the project site	1	Excavation required over extents of project area usually 2 times the amount for ACBM	2	Most excavation required of all solutions; typically requires 3 to 4 times the depth of ACBM or marine mattresses	1	No excavation typically required; if conditions exist, SAV and oyster grown probable	5
Adaptability to Future Conditions		Vulnerable to subgrade condition changes	1	Somewhat vulnerable to subgrade changes	2	Good performance with changed subgrade conditions	4	Good performance with changed subgrade conditions	4
Cost* \$/SY		\$160	4	\$350	1	\$120	5	\$180	3
TOTAL (35 possible points)		15	=	19		18		27	

*Cost calculations based on New Jersey DOT project.

WHATEVER YOUR PROJECT, WE CAN HELP

For more than 30 years, Tensar's innovative geosynthetic solutions have proven ideal for many kinds of construction projects. We have assisted coastal engineers in a variety of coastal and waterway applications. Our expertise has provided durable solutions that reduce costs, even the most difficult conditions.

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