

September 28th, 2023

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Subject: Proposal for Long Rifle Road Stabilization – Blount County, TN
GeoStabilization International - Vendor ID: 0000160610
TDOT Contract Number: 0000000000000000000066906
Title: SWC 191 - Slope Stabilization Services

Chico Messer:

GeoStabilization International® (GSI) is pleased to offer this proposal to provide permanent slope stabilization for the road platform located along Long Rifle Road in Blount County, TN for the Blount County Highway Department (BCHD). The slide area is located near GPS coordinates: 35.738921, -83.720083 (Figure 1).

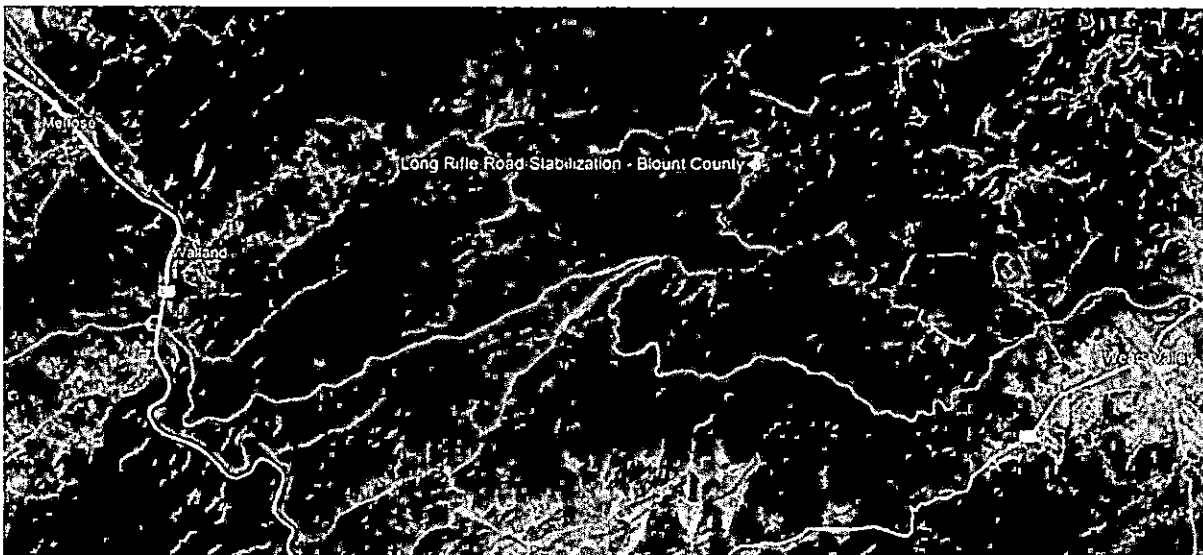


Figure 1 – Approximate location of project

PROJECT OVERVIEW

This proposal addresses installing a combination of self-drilling soil nails, micropiles, reinforced shotcrete, wire mesh treatment, and horizontal drains to provide stabilization for the slide area affecting Long Rifle Road in Blount County, TN. Existing conditions of this repair area, as of the site visit on 9/14/23, are shown in Figure 2. The proposed repair length was observed in the field at 131 LF.



Figure 2 – Conditions near the start of repair along Long Rifle Road

SLIDE REPAIR

BCHD or a BCHD approved excavation contractor shall prepare the slope by excavating and steepening the face of the existing slope to an approximate 0.5H:1V slope or steeper. The excavation shall be performed in multiple 4–5-foot lifts from the roadway platform. GSI will then install self-drilling nails and micropiles, up to 40 feet long into the excavated face to construct our typical soil nail wall, which will have a height of 12 feet. We will leave the nail ends protruding through the soil and cover the repair in these areas with 8-inch-thick steel reinforced shotcrete. Additionally, high-tensioned wire mesh will be added below the soil nail wall to mitigate erosion of the steep slope. We will install horizontal drains on an approximate 10-foot center spacing and as necessary to control ground water along the entire length of the repair. Figures 3 and 4 show the typical profile view and cross section of the proposed repair, respectively.

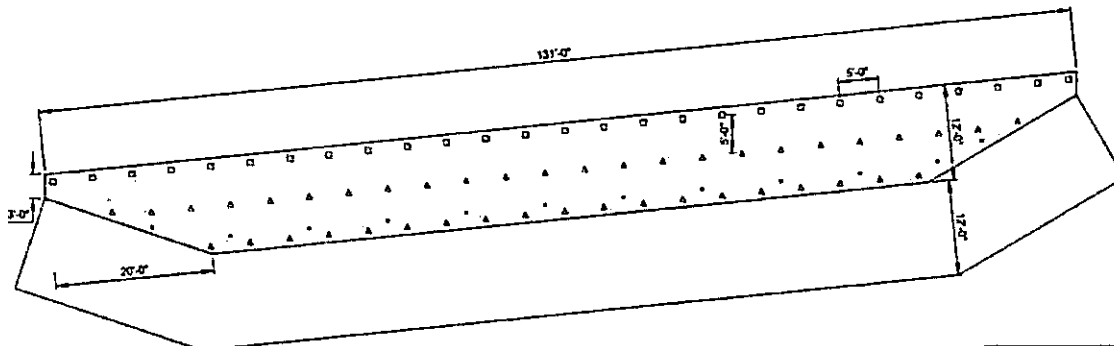


Figure 3 – Profile View of Slope Stabilization (Micropiles Omitted for Clarity)

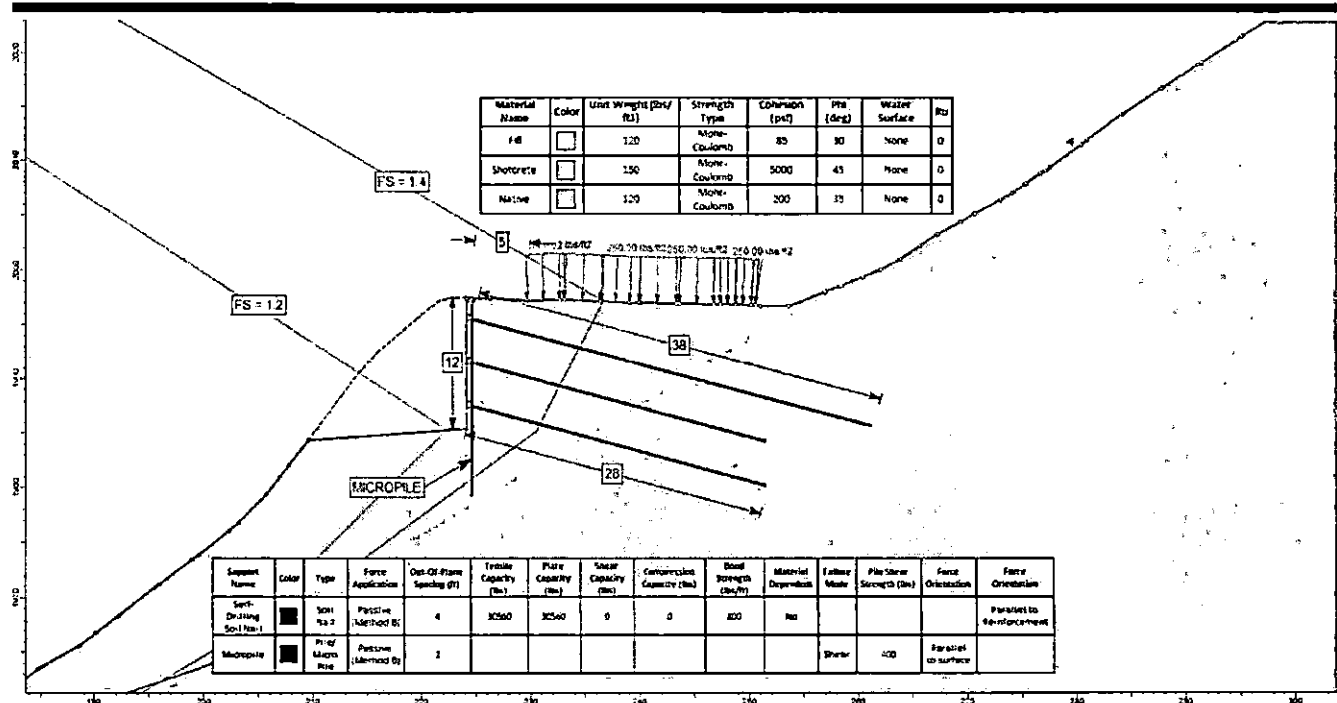


Figure 4 - Cross-Section of proposed slope stabilization for a soil nail wall
(For illustration purposes only, nails may vary in length from what is shown above)

COST TABLE FOR LONG RIFLE ROAD STABILIZATION

Line #	Description	~ Qty	Unit	Unit Price	Total	Comments
17	Primary Mobilization-Soil Nailing (mobilization to initial site)	1	EA	\$11,580.00	\$11,580.00	
1	Nails, Self-Drilling, up to 20 ft (Vertical/Micropiles)	66	EA	\$722.00	\$47,652.00	2' C/C Spacing
2	Nails, Self-Drilling, up to 30 ft	63	EA	\$979.00	\$61,677.00	
3	Nails, Self-Drilling, up to 40 ft	33	EA	\$1,273.00	\$42,009.00	
19	Shotcrete, Nominal 8-in thickness (std weather)	1400	SF	\$38.50	\$53,900.00	
15	Wire Mesh and steel plate surface treatment	1500	SF	\$16.00	\$24,000.00	125 LF x 12-FT Slope Distance
53	Horizontal Drains, 0 to 50 ft	260	FT	\$35.30	\$9,178.00	
Total					\$249,996.00	

BCHD will need to provide the items listed below in the yellow highlighted area under Resources. The excavation for the slide repair will be performed by a BCHD approved excavation contractor from the road platform. It is anticipated that BCHD will need to shut down one lane of traffic for the proposed repair. GSI will work with excavation contractor to achieve the appropriate slope geometry for the repair area.

RESOURCES

Items to be Provided By BCHD:

- Right-of-way space where available to receive and unload materials shipped by GSI, and an area to park our equipment.
- Installation/Removal of Guardrail if required.
- Erosion Control, Vegetation / Tree Removal, Clearing, Grubbing, Excavation, Temporary Access Construction Roads, & haul off along Work Area as directed by GSI. The excavation will have a slope slightly steeper than a 0.5H:1V for up to a 12 foot slope distance for shotcrete areas and will be daylighted to provide positive drainage away from the road.
- A supply of water suitable for construction use.
- The resulting disturbed soil areas should be seeded and covered with straw matting by BCHD or others.
- Once the slide area has been stabilized, BCHD should assess milling, pavement resurfacing, and first phase and permanent striping in the repair area.
- Traffic Control and Traffic Control Barriers

NOTE: IF GSI IS REQUESTED TO COORDINATE OR IMPLEMENT WORK OUTSIDE OF OUR CONTRACT PAY ITEMS, GSI WILL BILL PER OUR CONTRACT AT COST PLUS 15%. INVOICE FROM SUBCONTRACTOR WILL BE SHOWN ALONG WITH GSI MARKUP.

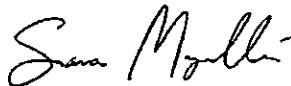
SCHEDULE

Barring unforeseen delays, the project duration is estimated at 2.5 to 3 weeks to complete. The schedule is based on GSI working 5 day work weeks during daylight hours for the slide repair, and Monday – Friday. Saturday work can be arranged upon request.

OTHER

Our price also includes design and we will supply a Tennessee P.E. stamped typical section. Our work also carries a **seven-year warranty** commencing after GSI project completion for permanent installation. This warranty is void absent GSI receiving mutually agreed project payment. If at any point within the warranty period the repaired section becomes unstable, GSI will, in a timely manner, remedy the situation with a design/construction solution at no cost to the owner. This warranty does not cover work completed by others or shallow surface erosion problems that may develop in the future. Exceptions to the warranty include catastrophic seismic, weather, or other events outside reasonable accounting in design (including earthquakes and weather events exceeding expectation for the region) or further construction by third parties that destabilizes the repair (including utility trenches dug into or through any soil nails, deep excavations in the area, etc). Extreme storm water volumes may cause erosion which could undermine the repaired area which may void this warranty. After such an event these areas should be checked for erosion.

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