Inspector Quantlist Report 20251210

Diary Number: _____ Inspector Name: _____

TRACS Number: _____ Date: _____

Division VI: Structures
Title: Soil Nail Walls

Route:	Wall Number:
Start Station:	End Station:
Offset:	

Attribute Numbers	Yes, No N/A	Narratives	References
0.		Have all stakeholders participated in the pre-activity meeting?	See Project Special Provisions for pre-activity meeting requirements
1.		Have certificates of compliance been submitted and approved for the soil nail tendons, bearing plates, nuts, washers, welded wire mesh and rebar materials?	2021 Standard Specifications 106.05 pg. 89
2.		For ferrous and non-ferrous metals, has the contractor furnished a BABA Certificate of Compliance conforming to the requirements of Subsection 106.05? (If a waiver has been granted use the NA option)	2021 Standard Specifications 106.05 pg. 89 FHWA's BABA requirements: 23 CFR Part 635
3.		Has the contractor submitted a Certificate of Compliance or Certificate of Analysis for other materials such as centralizers, coatings, grout additives, sheathing, geocomposite drainage material, piping, etc?	2021 Standard Specifications 106.05 pg. 89 1014-1 pg. 1237
4.		Has the contractor submitted shop drawings for review by the Engineer that include all details, dimensions, quantities, ground profiles, and cross-sections necessary to construct the soil nail wall?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
5.		Has the contractor's construction plan been reviewed and approved by the Project Engineer prior to any soil nail work starting?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
6.		Was Arizona 811 contacted 2 working days prior but not more than 15 working days prior for locating utility lines, pipes, box culverts, sleeves etc?	2021 Standard Specifications 107.15 pg. 115
7.		Has the contractor's grout mix design been reviewed and approved by the Project Engineer?	2021 Standard Specifications 1006-2.01 pg. 1150

8.		Has the contractor's shotcrete mix design been reviewed and approved by the Project Engineer?	2021 Standard Specifications 1006-2.01 pg. 1150
9.		Has the contractor submitted a certification of analysis for the liquid membrane-forming curing compound? (if liquid membrane-forming compound is used it is Type I)	2021 Standard Specifications 912-3.09 pg. 1067
10.		Has the contractor provided the necessary survey and alignment control during the excavation for each lift, locating drill holes and verifying limits of the soil nail wall installation?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
11.		Is the contractor protecting materials by keeping them in a suitable location and protected per the manufacturers recommendations, to prevent deterioration by the elements and construction activities?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
12.		Are all steel components and drainage materials stored in suitable containers and being protected from damage?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
13.		Are staged tendons placed on supports to prevent direct contact with the ground and ground moisture?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
14.		If the bars/tendons are epoxy coated, is the thickness of the epoxy coating 7 to 12 mils as specified?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
15.		Are the epoxy coated bars/tendons visually examined for damage and inconsistencies from the factory? (nicks and dents are only repaired using repair kits provided by the manufacturer)	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
16.		If bars/tendons are to be zinc galvanized they are coated according to AASHTO specifications?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
17.		Have the zinc galvanized bars/tendons been visually examined for damage and inconsistencies from the factory, handling and construction? (any damaged coating should be field repaired as per the manufacturers recommendations)	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
18.		If the bars/tendons are to be encapsulated, are the bars/tendons fitted with a corrugated sheathing of 0.04-in PVC, or 0.06-in HDPE?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
19.		Unless otherwise supported, has the contractor established the height of the exposed, unsupported final excavation facecut?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual 1994 U.S. Department of Transportation FHWA Soil Nailing Field Inspector's Manual

20.		Has the contractor completed the final wall excavation line and shotcrete application in the same work shift, unless otherwise approved by the Engineer?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
21.		Has the nail grout and shotcrete cured for at least 72 hours, or attained their specified 3-day compressive strength; not less than 1,500 psi before excavating the next underlying lift?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
22.		The contractor has not proceeded with the excavation of the next-lower lift until: soil nail installation, initial reinforced shotcrete placement, attachment of bearing plates and nuts, and the nail testing has been completed and accepted on the current lift?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
23.		Is the contractor using the correct method of drilling specified by the design engineer?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
24.		Is the soil nail spacing pattern being followed per the approved plan drawings?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
25.		Is the drill bit size matching the specified diameter listed in the plan drawings?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
26.		Is the drilling equipment equipped with an angle tool placed directly on the drill mast?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
27.		While drilling, the contractor is not causing excessive ground mining, caving into the drill hole, or ground surface heaving?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
28.		Does the drill masts angle match the tendon angle as it enters the excavation face?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
29.		Is the contractor cleaning out all the spoils from the drilled hole so as not to affect the bonding strength?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
30.		Do the tendons/bars meet the requirements of AASHTO M31/ASTM A615, ASTM A722 and are the correct type, length, have the correct coating, are continuous without splices or welds, new and straight per the approved plan drawings?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
31.		If tendon/bar couplers are required, the couplers meet full nominal tensile capacity of the tendon as certified by the manufacturer?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual

32.		Were each of the tendons/bars fitted with centralizers as shown in the approved plan drawings and inserted to the required depth without damaging the drilled hole?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
33.		Do grout pumps have a minimum of 250 psi pressure capability for sand and gravel and 1,500 psi capability for clays and silts? (to record the grout volume and pressure, an automated monitoring system may be used)	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
34.		Do grout pumps have a flow rate of at least 15 gal/minute for bars less than 2 inches and 45 gal/minute for bars 2 inches and greater?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
35.		After installation of the soil tendons/bars, are the drill holes being grouted within 2 hours of drilling completion?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
36.		After the nail holes have been drilled, did the contractor start at the lowest point to inject grout?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
37.		Were the drill holes filled in one continuous operation so as to prevent cold joints in the grout column? (except at the top of the test bond length of proof-tested production nails)	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
38.		Was the approved grout used to backfill the entire soil nail hole? (shotcrete mixes should not be used in lieu of grout)	1994 U.S. Department of Transportation FHWA Soil Nailing Field Inspector's Manual
39.		Have grout cubes been cast and tested in accordance with at a frequency established by the project specifications?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
40.		Was soil nail testing performed only after the nail grout and shotcrete facing have cured for at least 72 hours, or attained their specified 3-day compressive strength, or at least 1,500 psi?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
41.		Has the specified testing for soil nails been completed, according to the project specifications?	1994 U.S. Department of Transportation FHWA Soil Nailing Field Inspector's Manual
42.		Were all elements of the wall's drainage network installed and secured as shown on the plan drawings? (geocomposite drain strips, PVC connection pipes, soil nail wall footing drains, and weepholes, etc.)	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual

43.		Were the geocomposite drain strips correctly installed per Appendix E: Part 1? (centered between columns of soil nails, 12 inches wide, vertically continuous, and the geotextile side is against and secured to the excavation face)	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
44.		Were footing drains installed at the bottom of the wall, as shown on the plan drawings?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
45.		Does the drainage geotextile envelope the footing drain aggregate and pipe and conform to the dimensions of the trench?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
46.		Does the drainage geotextile overlap on top of the drainage aggregate as shown on the plan drawings?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
47.		Were damaged or defective drainage geotextile fabric repaired or replaced?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
48.		Contractor Experience: Prior to beginning shotcrete work, has the contractor submitted proof of certification by the ACI or the American Shotcrete Association (ASA) for all Nozzlemen?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
49.		Was the initial shotcrete facing and final shotcrete facing placed as shown on the plan drawings?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
50.		For permanent walls, have shotcrete cores been taken for strength testing at the frequency established by the project specifications?	1994 U.S. Department of Transportation FHWA Soil Nailing Field Inspector’s Manual
51.		If the shotcrete was troweled or screeded, was the specified thickness within 9/16 inches and the planeness of the finished face within 9/16 inches when using a 10-ft straightedge?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
52.		If the shotcrete was left as is, was the specified thickness within 1 and 1/8 inches and the planeness of the finished face within 1 and 1/8 inches when using a 10-ft straightedge?	2015 U.S. Department of Transportation FHWA Soil Nail Walls Reference Manual
53.		Is the Quantlist Minimum Frequency being followed? (one per structure)	Construction Bulletin 07-01