

MSE Wall Shop Drawing Review Checklist

MSE Wall: _____

C-R-S: _____ PID: _____ SFN: _____ Reviewer: _____ Date: _____

ACCEPTED _____ ACCEPTED AS NOTED _____ NOT ACCEPTED _____

1- Does the submission include detailed shop drawings, design calculations and an MSE wall acceptance letter and have all of the above been prepared, sealed and signed by a professional engineer registered in the State of Ohio?	Y N X
2- Are the shop drawings, design calculations and acceptance letter checked, sealed and signed by a second Ohio Registered Professional Engineer?	Y N X
3- Is the MSE wall system an accredited system listed in the current version of SS 840?	Y N X
4- Are the AASHTO specifications used for the wall design the same version as used for the contract plans?	Y N X
5- For a wall located at an abutment, is the design wall height measured from the top of the leveling pad to the profile grade elevation at the face of the wall?	Y N X
6- For a non-abutment wall, is the design wall height measured from the top of the leveling pad to top of the coping?	Y N X
7- Are the soil parameters for internal design equal to: Reinforced zone: $\phi = 34^\circ$ and $\gamma = 120$ pcf Retained soil: $\phi = 30^\circ$ and $\gamma = 120$ pcf	Y N X
8- Do the calculations include a traffic surcharge of at least 250 psf for a retained fill slope flatter than 4:1?	Y N X
9- Is the water level within the reinforced soil at the drain invert elevation?	Y N X
10- For ARES geogrid and RECo GeoMega wall systems, are the reduction factors in Table 840.04-2 used?	Y N X
11- Are soil reinforcement lengths at least 70 percent of the wall height and greater than 8 feet?	Y N X
12- Are soil reinforcement lengths greater than the wall height? If yes, why?	Y N X
13- Do the contract plans specify soil reinforcement length? If yes, do the shop drawings match the contract plans?	Y N X
14- Is the wall designed for a 100 year design life?	Y N X
15- Do the shop drawings include a site plan for the full length of the MSE wall?	Y N X
16- Do the stations and offsets for the wall locations agree with the contract plans?	Y N X
17- For a curved wall, do horizontal curve data agree with the contract plans?	Y N X

18- Are the soil reinforcement lengths shown and do they agree with the calculations?	Y N X
19- Are all obstructions (e.g., pile sleeves) shown within the reinforced soil zone?	Y N X
20- For MSE walls supporting spread footings, does the portion of the wall with full length straps extend beyond the limits of the abutment by half the distance between the bottom of the footing and the top of the leveling pad?	Y N X
21- Do the shop drawings include an elevation view for the full length of the wall showing the location of each individually labeled panel section?	Y N X
22- Are elevations provided for the ends of the wall and any changes in elevation at the top and bottom of the wall?	Y N X
23- Are the wall heights correct on the shop drawings and in the calculations?	Y N X
24- Does the number of layers of soil reinforcement shown on the shop drawings agree with the calculations?	Y N X
25- Is there at least 9 feet of wall between elevation changes in the leveling pad?	Y N X
26- Are vertical steps in the bottom of the wall less than 2.5 feet?	Y N X
27- Is the concrete leveling pad at least 6 inches thick and 24 inches wide?	Y N X
28- Is the distance the panel overhangs the leveling pad 6 inches or less?	Y N X
29- Are the standard panels 5 ft by 10 ft or smaller?	Y N X
30- Are special panels along the top and bottom of the wall less than 7 ft by 10 ft?	Y N X
31- Do the drawings include representative cross-sections at each design change?	Y N X
32- Are the contract plan typical section(s) accurately represented in the shop drawing cross sections?	Y N X
33- Do the shop drawings include project specific design details to avoid obstacles in the reinforced soil zone?	Y N X
34- If the soil reinforcement is splayed, is the splay angle less than or equal to 15° for metal strips or 5° for geosynthetic strips?	Y N X
35- Do the shop drawings provide special design details for structural forms, steel angles or embedments?	Y N X
36- Are panel joints shown and/or noted to be covered by a minimum 18-inch wide, woven monofilament geotextile fabric?	Y N X
37- Do the shop drawings provide coping details or refer to the contract plans?	Y N X
38- Are the coping dowels identified as 2-foot epoxy coated rebar with 12 inches embedded in the panel?	Y N X
39- Is the maximum spacing of the coping dowels less than 2.0 feet?	Y N X
40- Is the precast concrete panel producer identified and certified by the Department?	Y N X

41- Are fabrication shop drawings provided for all panels?	Y N X
42- Are the minimum compressive strengths at 28 days and for form removal shown?	Y N X
43- Do the panel fabrication shop drawings show: dimensions; tolerances; soil reinforcement connection locations; reinforcing steel locations, lengths, sizes and types; and bending diagrams?	Y N X
44- Are aesthetic surface treatment details provided and do they agree with the contract plans?	Y N X
45- If the wall is on a horizontal curve, are details provided for chamfering the back of the panels along the back vertical joint to maintain the front panel joint tolerances of ½ to 1-inch?	Y N X
46- Do the shop drawings provide the locations and elevations of the drainage pipes and outlets obtained from the contract plans?	Y N X
47- Do the shop drawings show the location and details of required facing panel penetrations obtained from the contract plans?	Y N X
48- Do the shop drawings show separate corner elements with attached soil reinforcements for two wall sections meeting at an interior angle of 130° or less?	Y N X
49- If the wall is located at an abutment, is the soil reinforcement attached to the footing designed for the lateral loads indicated in the contract plans?	Y N X
50- Do the shop drawings show slip joint details and slip joint locations as provided in the contract plans?	Y N X
51- Are factored bearing pressures less than or equal to the factored bearing resistances?	Y N X
52- Do the calculations use the correct design loads from the contract documents for the abutment soil reinforcement?	Y N X
53- Does the submittal include the construction manual for the accredited wall system?	Y N X
54- Does the submittal include a revised calculated quantity for select granular backfill and a comparison to the estimated quantity from the contract plans?	Y N X
55- If the shop drawing submittal is accepted, forward a copy of the panel fabrication shop drawings to the Office of Materials Management – Attn: Bryan Struble.	Y N
56- If the shop drawing submittal is accepted, forward one copy of the shop drawings to the Office of Construction Administration – Attn: Stephen Slomski, and one copy of the shop drawings to the Office of Geotechnical Engineering – Attn: Jawdat Siddiqi.	Y N