

STATE OF UTAH MSE WALL INSPECTION FORM

Compiled As Part of Research By The Utah Department of Transportation

Instructions:

1-Fill out required sections for MSE Wall Inspector and Wall Characteristics.

2-Inspect the wall using the attached form. Questions that require a 'Yes' answer should be documented by noting the extent of the problem in the right most column and photo documentation. Photo documentation should consist of wall or bridge number, nature of problem, date, photo number for wall, and a size reference, which should be indicated in the photo (white board/paper). Photos taken should be placed on the Top View layout and indicated with the appropriate number. Note should be taken by the inspector that often anomalies are due to construction and should be distinguished from those that are a result of post-construction. If it is observable that they existed at the time of construction note should be taken in the space provided for drawings.

3- Shoot digital photos of the entire wall. This may require the use of a variety of shots and angles on each wall to cover the wall in its entirety.

4- Indicate Layout of MSE Wall in respect to major intersections, roadways, potential hazards, irrigation, vegetation, locations of conditions for which 'Yes' was marked, etc. in space provided below. Also indicate approximate GPS Coordinates of Site of Interest in space provided below

Region	4	Identifying Road/Intersection	SR-9, Hurricane

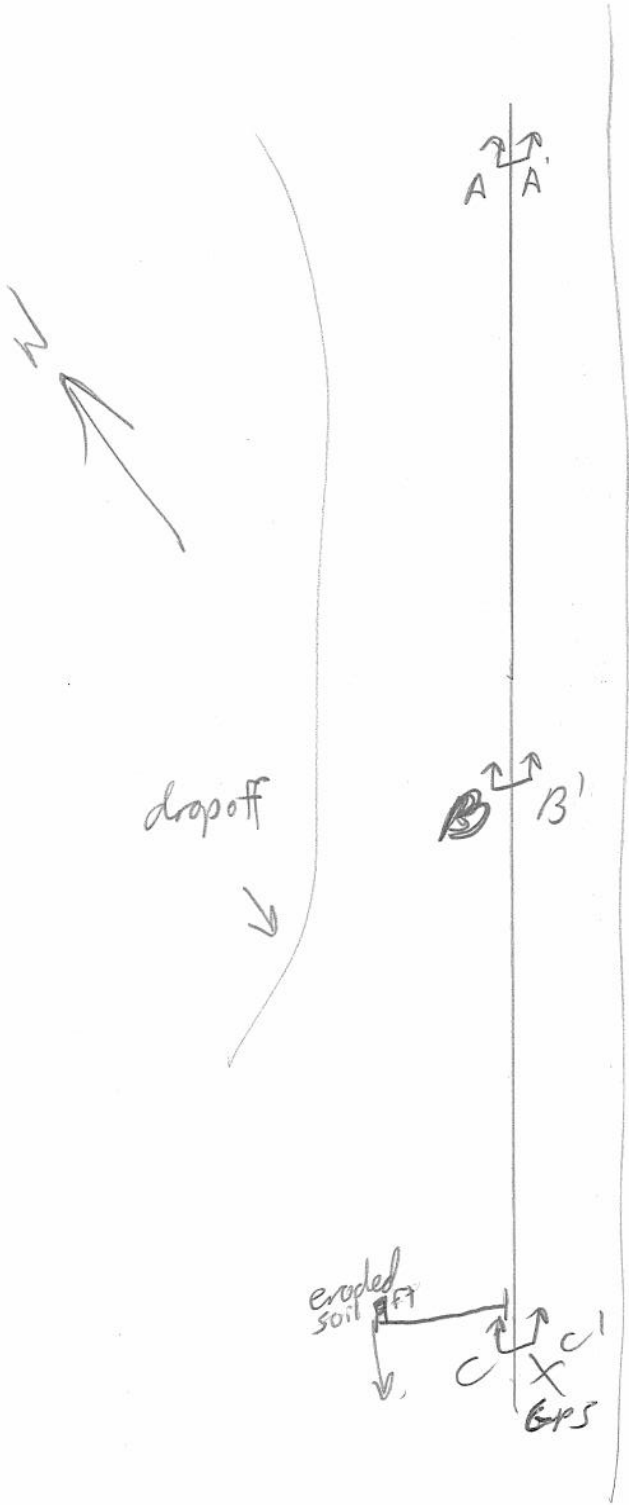
MSE WALL CHARACTERISTICS

MSE Wall at Bridge	Y <input checked="" type="radio"/> N	Bridge Number if applicable:		Wall Number	R+274
Surrounding Structures				Maximum Height of Wall (ft)	5
Distance to Each Structure				One Stage, Two Stage or Block Wall	modular block
State Route Number				Estimated Max Length of Wall Abutment:	400
Approximate Mile Marker				Max Slope of Ground in front of wall:	0
GPS Datum	WGS/84, NAD/83, or NAD/27			Max Height of wall burial line above surrounding level ground:	0
MSE Wall GPS Coordinates (Location of Measurement shown on plan view)	37° 9' 47.07" N 113° 23' 14.90" W		Please draw rough layout of panel with approximate dimensions in space provided below:		
If known, Panel or System Manufacturer			<div style="border: 1px solid black; width: 150px; height: 80px; margin: 0 auto; position: relative;"> <div style="position: absolute; top: -15px; left: 50%; transform: translate(-50%, -50%);">18"</div> <div style="position: absolute; right: -15px; bottom: -15px; transform: rotate(90deg);">8"</div> </div>		

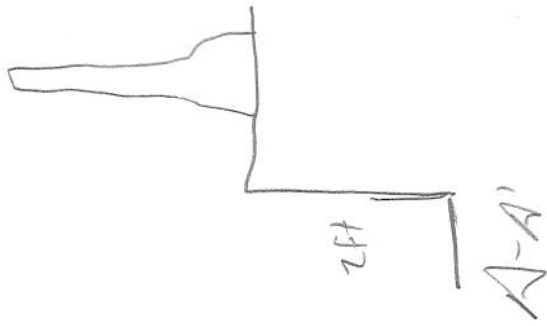
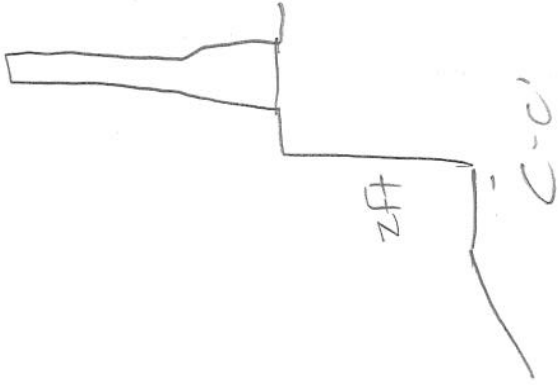
Summary of Key Observations:

soil slopes off to a lava rock drop-off
 wall condition looks good
 drains on west end, soil erosion on west end

Plan View/Drainage:



Cross Sections:



Cross Sections:

NISE WALL DRAINAGE

Required Item:		Yes	No	NA	UKN	Measurement/Extent of Problem/Location/Photo Numbers
N15a: Main Water Inlet/GPS Camera		Y	N	NA	UKN	Drainage
Y	1-Is there an active water source near the top of the wall (or the wall near a body of water with seepage potential)?	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	2-If applicable, are the catch basins at the base of the wall blocked?	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	3-Are there culverts protruding through the wall?	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	4-Are there vertical drains that travel through the backfill?	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	5-Is there evidence at the base of the wall or leveling pad? (Photo 12)	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	6-Is there evidence along the side wall?	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	7-Are there any signs of water flow along the base of the wall?	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	8-Does the backfill or joint fabric appear to be saturated?	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	9-Does the vegetation growing in paved joints (Photo 8)?	Y	N	NA	UKN	Partial / 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	10-Is there vegetation growing in paved joints (Photo 9)?	Y	N	NA	UKN	Blocked / 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	11-Can water enter the wall between coping and slab (i.e., drain appropriately)?	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	12-Is there evidence of discharge point of fill washing through drain pipe?	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /

NISE WALL JOINTS

Required Item:		Yes	No	NA	UKN	Measurement/Extent of Problem/Location/Photo Numbers
Long Level/Slab/Concrete/GPS		Y	N	NA	UKN	Joints
Y	14-Is backfill coming out of joints or are there piles of backfill at the base of the wall? (Pictures 2 & 3)	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	15-Are the joints wide enough to see fabric or backfill behind panels when looking into joints? (Photo 2) If yes, record the approximate maximum joint width in inches.	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	16-Is exposed backfill visible in the horizontal joints? (Photo 3)	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	17-Are there visible tears in the fabric? Is there evidence of backfill or water leaking through wall? (Do not include additional damage to fabric)	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	18-Do the joints have a non-uniform horizontal spacing size? Are some horizontal joints larger/smaller than others? (Photo 6)	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	19-Do the joints have a non-uniform vertical spacing size? Are some vertical joints larger/smaller than others? (Photo 6)	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	20-Are the panels offset at the joints either in or out of the wall? (Photo 7) If yes, record the approximate maximum offset.	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	21-Does the fabric appear brittle, or appear as if it has undergone excessive UV exposure?	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /

NISE WALL FACING

Required Item:		Yes	No	NA	UKN	Measurement/Extent of Problem/Location/Photo Numbers
Long Level/Slab/Concrete/GPS Camera		Y	N	NA	UKN	Wall Facing
Y	22-Are there cracks that continue vertically through adjacent panels? (Photos 8 & 10) If yes, record the approximate number of panels in the wall with cracking.	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	23-Are there cracks that continue horizontally through adjacent panels? (Photos 8 & 10) If yes, record the approximate number of panels in the wall with cracking.	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	24-Are the panels making contact with each other? If yes, record the approximate number in the wall.	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	25-Are the panels "popped-out" or clipped from contact with an adjacent panel? If yes record the number in the wall.	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	26-Does the existing coping exhibit Differential Settlement?	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	27-Are the coping and parapets loose or detaching? If yes, it may be appropriate to contact UDOT if detachment seems imminent.	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	28-Are the panels in danger of falling off? (If potential exists contact appropriate DOT regions)	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	29-Are there any open cracks in the concrete coping (see building)? If so, record maximum deformation from accessible coping to leveling pad. (Photo 11)	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	30-Is there tilting at the top or bottom of the wall? (Record maximum degree of tilting from azimuth using vertical level and different areas)	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /

NISE TOP OF WALL OBSERVATIONS

Required Item:		Yes	No	NA	UKN	Measurement/Extent of Problem/Location/Photo Numbers
Long Level/Slab/Concrete/GPS Camera		Y	N	NA	UKN	Top Of Wall
Y	31-Is there evidence of settlement at the top of the wall? (Government cracking, etc)	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	32-Are there any open cracks in the concrete coping (see building)? If yes record the approximate maximum crack width.	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	33-Do the connection joints in the connecting coping appear up? (Photo 6) If yes, record the maximum joint width.	Y	N	NA	UKN	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /

Y		N		UNS		/		0-Nb		1%		5%		10%		25%		50%		75%		90%		95%		100%	
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									

RISE STABILITY

Requires Tests:		Structural Integrity		Measurement/Extent of Problems/Locations/Photo Numbers																							
Yes	No	Y	N	Y	N																						
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									

RISE METAL CORROSION

Requires Tests:		Metal Corrosion		Measurement/Extent of Problems/Locations/Photo Numbers																							
Yes	No	Y	N	Y	N																						
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									

RISE IMPACT/COLLISION PROTECTION

Requires Tests:		Impact/Collision		Measurement/Extent of Problems/Locations/Photo Numbers																							
Yes	No	Y	N	Y	N																						
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									

RISE OBSTRUCTIONS IN REINFORCEMENT GEOMETRY

Requires Tests:		Obstructions in Reinforcement Geometry		Measurement/Extent of Problems/Locations/Photo Numbers																							
Yes	No	Y	N	Y	N																						
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									

RISE AS BUILT DIFFERENT FROM DESIGN

Requires Tests:		Drawings/Concrete/PS		Measurement/Extent of Problems/Locations/Photo Numbers																							
Yes	No	Y	N	Y	N																						
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									
Y	N	N/A	UNS	Y	N	N/A	UNS	Y	Nb	1%	5%	10%	25%	50%	75%	90%	95%	100%									

steps off after 12 ft.