

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	Hwy 6 between Helper & Sol. Summit
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MSE WALL CHARACTERISTICS

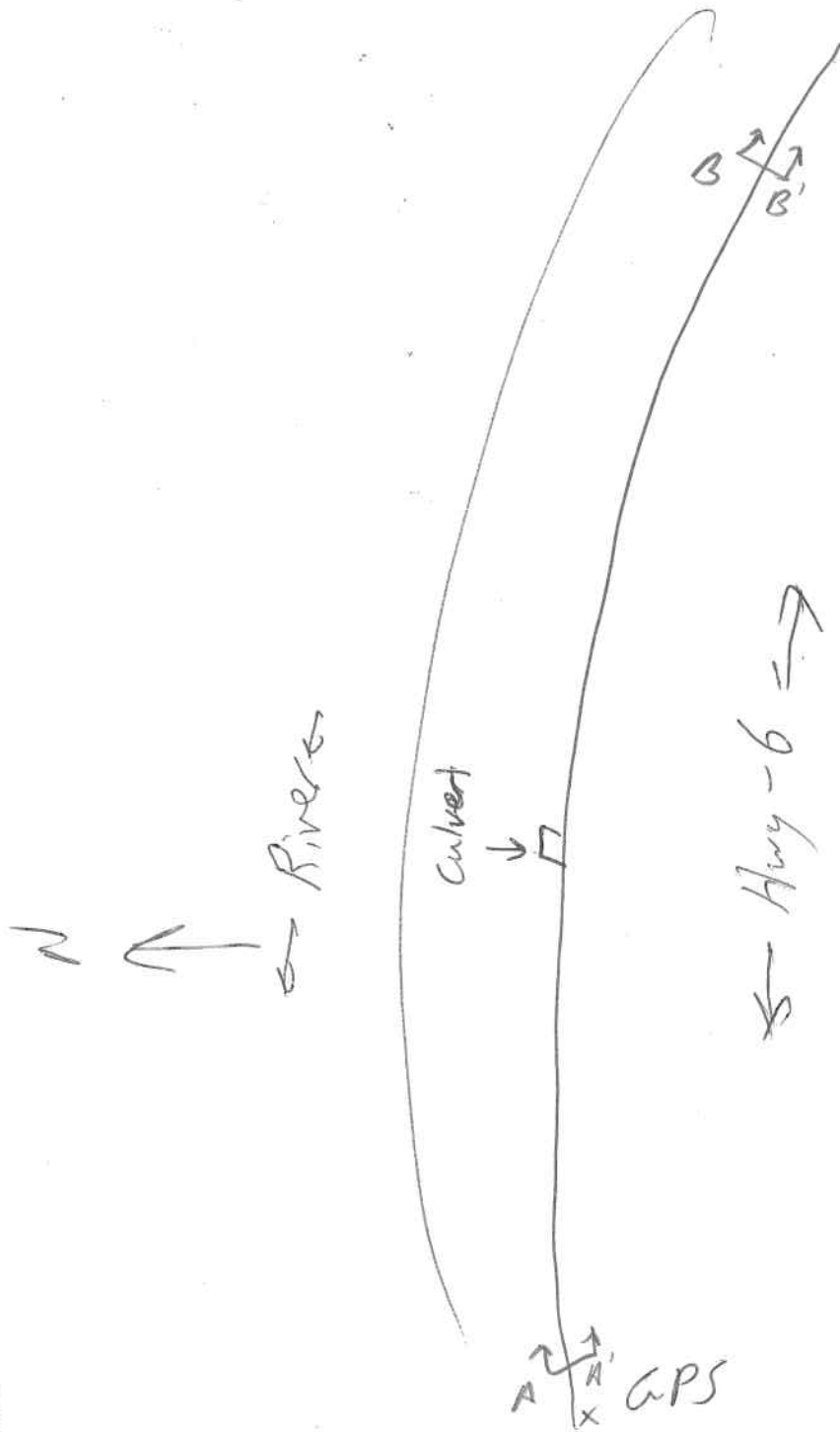
MSE Wall at Bridge	Y	(N)	Bridge Number if applicable:	Wall Number	R-428
Surrounding Structures				Maximum Height of Wall (ft)	13 ft
Distance to Each Structure				One Stage, Two Stage or Block Wall	Block
State Route Number				Estimated Max Length of Wall Abutment:	270 ft
Approximate Mile Marker				Max 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:	10 ft
MSE Wall GPS Coordinates (Location of Measurement shown on plan view)	39 45 49.24		110 53 54.05		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: 200px; height: 100px; margin: 0 auto; position: relative;"> 18' 8' </div>				

Summary of Key Observations:

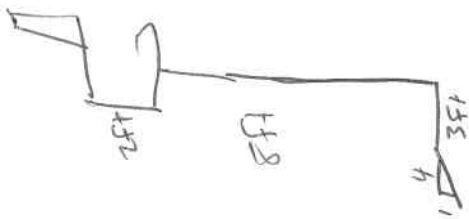
spring Flood may be a problem

10
 13
 5
 124
 177

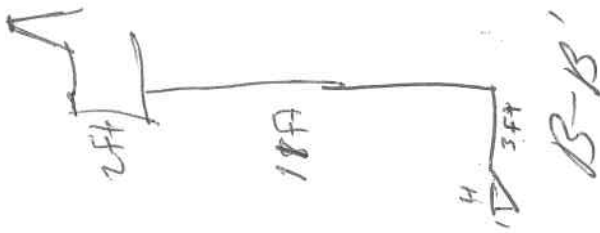
Plan View/Drainage:



Cross Sections:



A-A'



Cross Sections:

BASE WALL UNAVAILABLE

Req'd	Obs	Notes	Measurement/Extent of Problem/Location/Photo Numbers
Y	N/A	1. Is there an active water source near the base of the wall (in the wall near a body of water with source)?	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	2. If applicable, are the cracks located at the base of the wall blocked?	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	3. Are there obstructions protruding through the wall?	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	4. Are there vertical drains that travel through the backfill?	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	5. Is there erosion at the base of the wall or leveling pad? (Photo 12)	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	6. Is there erosion along the wing walls?	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	7. Are there any signs of water flow along the base of the wall?	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	8. Are there fine fibers 1/4" from impurities/spiders and soil?	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	9. Does the backfill or joint fabric appear to be water-soaked?	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	10. Is there vegetation growing in joint joints (Photo 8)?	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	11. Are the deck, abutment and outlets at the top of the wall blocked? (Photo 14)	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	12. Can water enter the wall between coping and deck (i.e. Details appropriately)?	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	13. Is there evidence of discharge points of effluent through drain pipes?	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /

rocks along base

BASE WALL JOINTS

Req'd	Obs	Notes	Measurement/Extent of Problem/Location/Photo Numbers
Y	N/A	1. Is backfill coming out of joints or are there piles of backfill at the base of the wall? (Pictures 2 & 3)	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	2. Are the joints wide enough to see fabric or backfill behind panels when backing joint? (Photo 2) If yes, record the approximate maximum joint width in inches.	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	3. Is exposed backfill visible in the horizontal joints? (Photo 3)	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	4. Are there visible tears in the fabric? Is there evidence of backfill or water backing through joint? (Do not include damage to fabric)	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	5. Do the joints have a non-form lubricant applied? Are some horizontal joints larger/wider than others? (Photo 6)	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	6. Do the joints have a non-form wet/dry? Are some vertical joints larger/wider than others? (Photo 6)	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	7. Are the panels offset at the joints either in or out of the wall? (Photo 7) If yes, record the approximate maximum offset.	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	8. Does the fabric appear brittle, or appear as if it has undergone excessive UV exposure?	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /

BASE WALL FACING

Req'd	Obs	Notes	Measurement/Extent of Problem/Location/Photo Numbers
Y	N/A	1. Is there cracking in the panel?	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	2. Are there cracks that continue vertically through adjacent panels (Photos 9 & 10)? If yes, record the approximate number of panels in the wall with cracking.	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	3. Are there cracks that continue horizontally through adjacent panels? (Photos 9 & 10) If yes, record the approximate number of panels in the wall with cracking.	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	4. Are the panel corners making contact with each other? If yes, record the approximate number in the wall.	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	5. Are the panel corners "propped up" or chipped from contact with an adjacent panel? If yes, record the number in the wall.	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	6. Does the overlying coping exhibit Vertical Offset?	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	7. Are the coping and panels loose or delaminating? If yes, it may be appropriate to conduct UDOT if delamination were evident.	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	8. Are the panels in danger of falling off? (If possible, collect appropriate UDOT region)	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	9. Are there any open cracks in the concrete coping (not hairline)? If yes, record the approximate maximum crack width.	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	10. Is there lifting at the top or bottom of the wall? (Record maximum degree of lifting from abutment using vertical level and reference area)	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /

BASE WALL OBSERVATIONS

Req'd	Obs	Notes	Measurement/Extent of Problem/Location/Photo Numbers
Y	N/A	1. Is there evidence of settlement at the top of the wall? (prevent cracking, etc)	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	2. Are there any open cracks in the concrete coping (not hairline)? If yes, record the approximate maximum crack width.	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	3. Is there the construction joint in the concrete coping opened up? (Photo 6). If yes, record the maximum joint width.	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /

Y	N	U	NA	UNK	Req'd	Issue	Measure/Extent of Problem/Location/Photo Numbers	100%	95%	90%	75%	50%	25%	10%	5%	100%
							16-1: Is the location depth of casting and/or post (Grip) into wall less than 2 inches from wall to maximum depth of 24 inches (24 inches is the minimum depth for MSE wall)?	95%	90%	85%	75%	50%	25%	10%	5%	100%
							16-2: Is the location depth of casting and/or post (Grip) into wall less than 2 inches from wall to maximum depth of 24 inches (24 inches is the minimum depth for MSE wall)?	95%	90%	85%	75%	50%	25%	10%	5%	100%
							16-3: Is the location depth of casting and/or post (Grip) into wall less than 2 inches from wall to maximum depth of 24 inches (24 inches is the minimum depth for MSE wall)?	95%	90%	85%	75%	50%	25%	10%	5%	100%

MSE STABILITY

Y	N	U	NA	UNK	Req'd	Issue	Measure/Extent of Problem/Location/Photo Numbers	100%	95%	90%	75%	50%	25%	10%	5%	100%
							17-1: Are there any major cracks in the facing panel? If so, record maximum crack size with photo.	95%	90%	85%	75%	50%	25%	10%	5%	100%
							17-2: Are there any major cracks in the facing panel? If so, record maximum crack size with photo.	95%	90%	85%	75%	50%	25%	10%	5%	100%
							17-3: Are there any major cracks in the facing panel? If so, record maximum crack size with photo.	95%	90%	85%	75%	50%	25%	10%	5%	100%

MSE METAL CORROSION

Y	N	U	NA	UNK	Req'd	Issue	Measure/Extent of Problem/Location/Photo Numbers	100%	95%	90%	75%	50%	25%	10%	5%	100%
							18-1: Are there any indications of corrosion (rusting, staining, or other signs) on the metal mesh or reinforcement? If so, please record the total number of panels affected.	95%	90%	85%	75%	50%	25%	10%	5%	100%
							18-2: Are there any indications of corrosion (rusting, staining, or other signs) on the metal mesh or reinforcement? If so, please record the total number of panels affected.	95%	90%	85%	75%	50%	25%	10%	5%	100%

MSE IMPACT COLLISION PROTECTION

Y	N	U	NA	UNK	Req'd	Issue	Measure/Extent of Problem/Location/Photo Numbers	100%	95%	90%	75%	50%	25%	10%	5%	100%
							19-1: Are there any indications of impact damage (denting, cracking, or other signs) to the wall or reinforcement? If so, please record the total number of panels affected.	95%	90%	85%	75%	50%	25%	10%	5%	100%
							19-2: Are there any indications of impact damage (denting, cracking, or other signs) to the wall or reinforcement? If so, please record the total number of panels affected.	95%	90%	85%	75%	50%	25%	10%	5%	100%

MSE OBSTRUCTIONS IN REINFORCEMENT GEOMETRY

Y	N	U	NA	UNK	Req'd	Issue	Measure/Extent of Problem/Location/Photo Numbers	100%	95%	90%	75%	50%	25%	10%	5%	100%
							20-1: Are there any obstructions (rebar, conduits, or other items) that interfere with the placement or function of the reinforcement? If so, please record the total number of panels affected.	95%	90%	85%	75%	50%	25%	10%	5%	100%
							20-2: Are there any obstructions (rebar, conduits, or other items) that interfere with the placement or function of the reinforcement? If so, please record the total number of panels affected.	95%	90%	85%	75%	50%	25%	10%	5%	100%

MSE AS BUILT DIFFERENT FROM DESIGN

Y	N	U	NA	UNK	Req'd	Issue	Measure/Extent of Problem/Location/Photo Numbers	100%	95%	90%	75%	50%	25%	10%	5%	100%
							21-1: Are there any deviations from the design drawings (e.g., material substitutions, dimensions, or details)? If so, please record the total number of panels affected.	95%	90%	85%	75%	50%	25%	10%	5%	100%
							21-2: Are there any deviations from the design drawings (e.g., material substitutions, dimensions, or details)? If so, please record the total number of panels affected.	95%	90%	85%	75%	50%	25%	10%	5%	100%
							21-3: Are there any deviations from the design drawings (e.g., material substitutions, dimensions, or details)? If so, please record the total number of panels affected.	95%	90%	85%	75%	50%	25%	10%	5%	100%

MSE AS BUILT DIFFERENT FROM DESIGN

Y	N	U	NA	UNK	Req'd	Issue	Measure/Extent of Problem/Location/Photo Numbers	100%	95%	90%	75%	50%	25%	10%	5%	100%
							22-1: Are there any deviations from the design drawings (e.g., material substitutions, dimensions, or details)? If so, please record the total number of panels affected.	95%	90%	85%	75%	50%	25%	10%	5%	100%
							22-2: Are there any deviations from the design drawings (e.g., material substitutions, dimensions, or details)? If so, please record the total number of panels affected.	95%	90%	85%	75%	50%	25%	10%	5%	100%
							22-3: Are there any deviations from the design drawings (e.g., material substitutions, dimensions, or details)? If so, please record the total number of panels affected.	95%	90%	85%	75%	50%	25%	10%	5%	100%