

# 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.

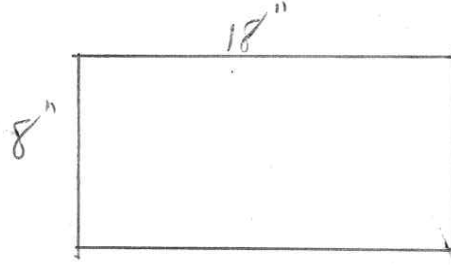
3- Shoot digital photos of the entire wall. This may require the use of a variety of shots and angles on each wall to cover the wall in its entirety.

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

<b>Region</b>	4	<b>Identifying Road/Intersection</b>	Hwy 10 North of Huntington
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## MSE WALL CHARACTERISTICS

MSE Wall at Bridge	Y <input checked="" type="radio"/> N	Bridge Number if applicable:	Wall Number	R-407-B <span style="float: right;">SW</span>
Surrounding Structures			Maximum Height of Wall (ft)	12 ft
Distance to Each Structure			One Stage, Two Stage or Block Wall	Block
State Route Number			Estimated Max Length of Wall Abutment:	200
Approximate Mile Marker			Max Slope of Ground in front of wall:	2:1
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)	39° 20' 57.18" N 110° 56' 08.08" W			
If known, Panel or System Manufacturer	Please draw rough layout of panel with approximate dimensions in space provided below:			



**Summary of Key Observations:**

*Looks like surface finish may be a problem*

3  
 14  
 8  
 14 2  
 11  
 12 14 2  
 12

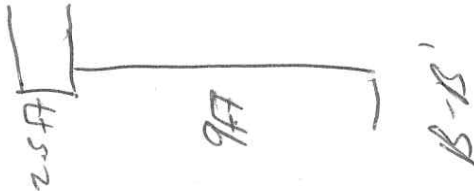
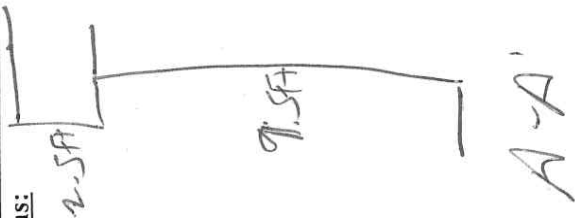
Plan View/Drainage:



GPS  
X



Cross Sections:



Cross Sections:

BASE WALL DRAINAGE

Required Topic	Yes	No	NA	UNS	Drainage	Measurement/Extent of Problem/Location/Photo Numbers
1-Is there an active water source near the base of the wall (i.e. the wall near a body of water with seepage present)?	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
2-If applicable, are the catch basins at the base of the wall blocked?	Y	N	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
3-Are there culverts protruding through the wall?	Y	N	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
4-Are there vertical drains that travel through the backfill?	Y	N	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
5-Is there evidence at the base of the wall of leveling sand? (Photo 12)	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
6-Is there evidence along the wing wall?	Y	N	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
7-Are there any signs of water flow along the base of the wall?	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
8-Is there any evidence of water flow between irrigation sprinklers and wall?	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
9-Does the backfill or joint fabric appear to be saturated?	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
10-Is there vegetation growing in joint joints (Photo 8)?	Y	N/A	UNS			Blocked / 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
11-Are the deck, drains and outlets at the top of the wall blocked? (Photo 14)	Y	N	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
12-Can water enter the wall from roof coping and sills (i.e., drain appropriately)?	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
13-Is there evidence of leakage points of fill washing through drain pipes?	Y	N	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /

BASE WALL JOINTS

Required Topic	Yes	No	NA	UNS	Long Level Slung Concrete Joints	Measurement/Extent of Problem/Location/Photo Numbers
1-Is backfill coming out of joints or are there piles of backfill at the base of the wall? (Pictures 2 & 3)	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
2-Is there evidence of fabric or backfill behind panels when looking into joints? (Photo 5) If yes, record the approximate maximum joint width in inches.	Y	N	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
3-Is there evidence of fabric or backfill in the horizontal joints? (Photo 4)	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
4-Is there evidence of fabric or backfill in the vertical joints? If there is evidence of backfill or water leaking through joint? Do not include additional damage to fabric.	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
5-Do the joints have a non-uniform horizontal spacing size? Are some horizontal joints larger than others? (Photo 6)	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
6-Do the joints have a non-uniform vertical spacing size? Are some vertical joints larger than others? (Photo 6)	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
7-Do the joints have a non-uniform vertical spacing size? Are some vertical joints larger than others? (Photo 6)	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
8-Do the joints have a non-uniform vertical spacing size? Are some vertical joints larger than others? (Photo 6)	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
9-Do the joints have a non-uniform vertical spacing size? Are some vertical joints larger than others? (Photo 6)	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
10-Do the joints have a non-uniform vertical spacing size? Are some vertical joints larger than others? (Photo 6)	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
11-Do the joints have a non-uniform vertical spacing size? Are some vertical joints larger than others? (Photo 6)	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
12-Do the joints have a non-uniform vertical spacing size? Are some vertical joints larger than others? (Photo 6)	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
13-Do the joints have a non-uniform vertical spacing size? Are some vertical joints larger than others? (Photo 6)	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /

BASE WALL FACING

Required Topic	Yes	No	NA	UNS	Wall Facing	Measurement/Extent of Problem/Location/Photo Numbers
1-Is there evidence of excessive cracking in the panel?	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
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.	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
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.	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
4-Are the panel corners rubbing contact with each other? If yes, record the approximate number in the wall.	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
5-Are the panel corners "popped off" or chipped from contact with an adjacent panel? If yes, record the number in the wall.	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
6-Does the coping spacing suggest Differential Settlement?	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
7-Does the coping exhibit "vertical offset"?	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
8-Are the coping and panels loose or detaching? If yes, it may be appropriate to contact UDOT if detachment seems imminent.	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
9-Are the panels in danger of falling off? (If potential, do so contact appropriate UDOT region).	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
10-Are the panels in danger of falling off? (If potential, do so contact appropriate UDOT region).	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
11-Are the panels in danger of falling off? (If potential, do so contact appropriate UDOT region).	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
12-Is there lifting at the top or bottom of the wall? (Record maximum degree of lifting from south using vertical level and affected area).	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /

BASE TOP OF WALL OBSERVATIONS

Required Topic	Yes	No	NA	UNS	Top Of Wall	Measurement/Extent of Problem/Location/Photo Numbers
1-Is there evidence of settlement at the top of the wall? (movement cracking, etc)	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
2-Are there any signs of cracking in the concrete coping (not hairline)? If yes, record the approximate maximum crack width.	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
3-Is there evidence of cracking in the concrete coping (not hairline)? If yes, record the maximum joint width.	Y	N/A	UNS			/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /

