

South Walls

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

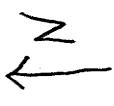
Inspector Information

Inspection Date	7/26/07	Names Of Inspectors Ryan Maw, Holly Griffin
Region	1	

MSE WALL CHARACTERISTICS

MSE Wall at Bridge	(Y) N	Bridge Number if applicable:		Wall Number	R-359
Surrounding Structures	Cast-in-place wall			Maximum Height of Wall (ft)	
Distance to Each Structure	50 ft			One Stage, Two Stage or Block Wall	one
State Route Number	89/91			Estimated Max Length of Wall Abutment:	
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:	
MSE Wall GPS Coordinates (Location of Measurement shown on plan view)					
If known, Panel or System Manufacturer					
			Please draw rough layout of panel with approximate dimensions in space provided below:		
			<div style="border: 1px solid black; width: 100px; height: 80px; margin: 0 auto;"></div> <p style="text-align: right; margin-right: 20px;">5 ft</p>		

Summary of Key Observations:

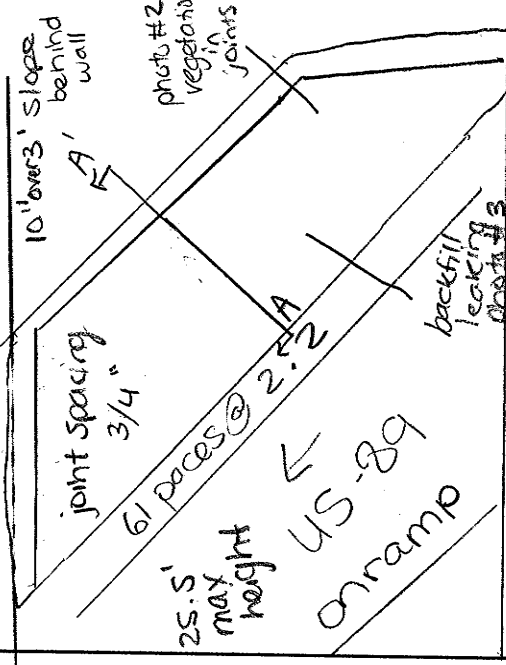


drains into pipe which drains back into gutter along west

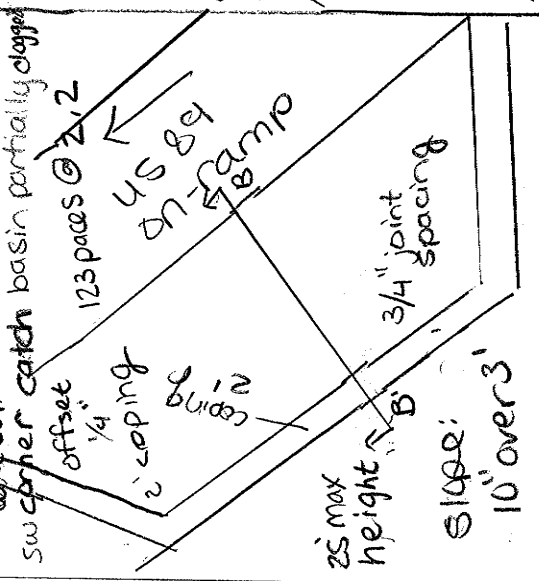
over pass

Plan View/Drainage:

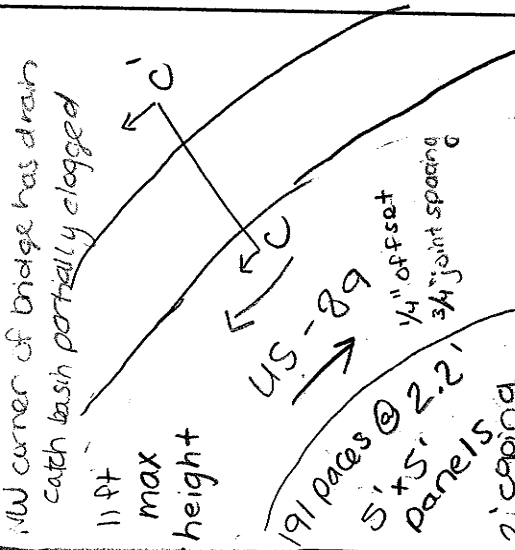
Wall #4



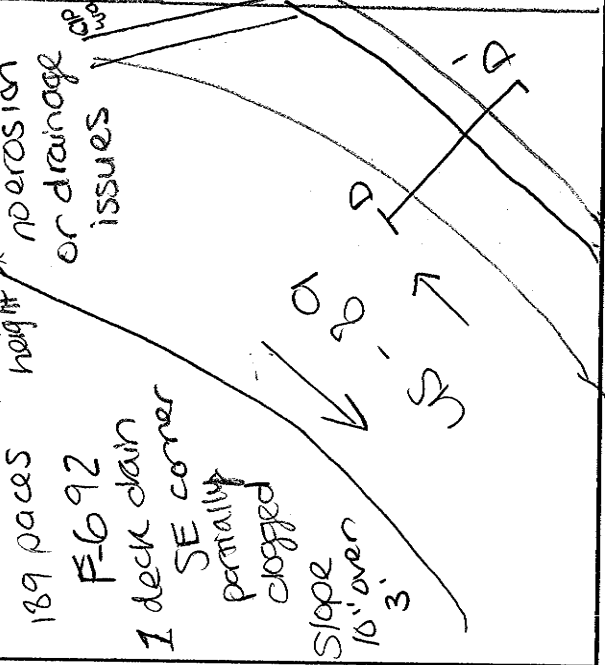
Wall #5



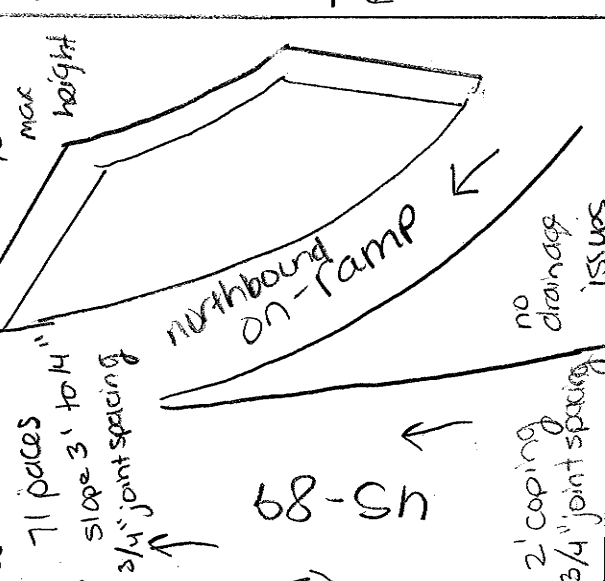
Wall #6 F-691



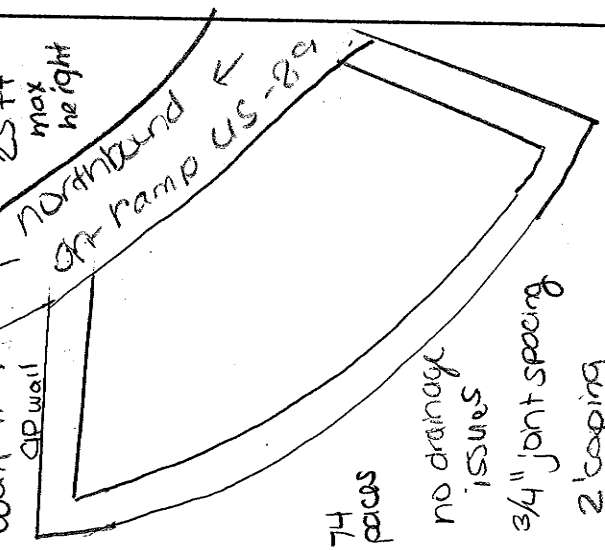
Wall #7



Wall #8



Wall #9



Cross Sections:

Cross Sections:

MSE WALL DRAINAGE

Requirement No.	Yes	No	NA	UNKN	Drainage	Measurement/Extent of Problem/Locality/Photo Numbers
1	Y	N	N/A	UNKN	1-Is there an active water source near the line of this wall (e.g. will water seep through)?	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
2	Y	N	N/A	UNKN	2-If applicable, are the catch basins at the base of the wall blocked?	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
3	Y	N	N/A	UNKN	3-Are there obstructions preventing flow through the wall?	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
4	Y	N	N/A	UNKN	4-Are there vertical drains that lined through the backfill?	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
5	Y	N	N/A	UNKN	5-Is there evidence at the base of the wall of "leaking soil"? (Photo 12)	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
6	Y	N	N/A	UNKN	6-Is there evidence along the wall of "leaking soil"? (Photo 12)	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
7	Y	N	N/A	UNKN	7-Are there any signs of water flow along the base of the wall?	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
8	Y	N	N/A	UNKN	8-Is there less than 14 feet between adjacent spigons and walls?	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
9	Y	N	N/A	UNKN	9-Does the backfill or joint failure appear to be uniform?	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
10	Y	N	N/A	UNKN	10-Is there vegetation growing in panel joints (Photo 8)?	Partial / 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
11	Y	N	N/A	UNKN	11-Are the block drains and outlets at the top of the wall blocked? (Photo 14)	Clear / 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
12	Y	N	N/A	UNKN	12-Can water enter the wall between coping and slab (i.e. Drain appropriately)?	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
13	Y	N	N/A	UNKN	13-Is there evidence of discharge points of fill washing through drain pipes?	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /

erosion along top of walls

see drawing

MSE WALL JOINTS

Requirement No.	Yes	No	NA	UNKN	Joint	Measurement/Extent of Problem/Locality/Photo Numbers
1	Y	N	N/A	UNKN	1-Is backfill coming out of joints or are there piles of backfill at the base of the wall? (Photos 2 & 3)	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
2	Y	N	N/A	UNKN	2-Are the joints wide enough to see fabric or backfill behind panels when looking into joint? (Photo 5) If yes, record the approximate maximum joint width in inches.	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
3	Y	N	N/A	UNKN	3-Is there evidence of backfill or water leaking through joints? (Photo 5)	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
4	Y	N	N/A	UNKN	4-Do the joints have a non-uniform horizontal spacing? Are some horizontal joints deeper/wider than others? (Photo 6)	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
5	Y	N	N/A	UNKN	5-Do the joints have a non-uniform vertical spacing? Are some vertical joints deeper/wider than others? (Photo 6)	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
6	Y	N	N/A	UNKN	6-Are the panels offset at the joints either in or out of the wall? (Photo 7) If yes, record the approximate maximum offset.	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
7	Y	N	N/A	UNKN	7-Does the fabric appear brittle, or appear as if it has undergone excessive UV exposure?	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /

3/4"

3/4"

MSE WALL FINISH

Requirement No.	Yes	No	NA	UNKN	Wall Finishing	Measurement/Extent of Problem/Locality/Photo Numbers
1	Y	N	N/A	UNKN	1-Are the panels "Tilt-Up"? Is there excessive cracking in the panels?	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
2	Y	N	N/A	UNKN	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-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
3	Y	N	N/A	UNKN	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-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
4	Y	N	N/A	UNKN	4-Do the panel corners end up together with each other? If yes, record the approximate number in the wall.	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
5	Y	N	N/A	UNKN	5-Are the panel corners "popped-out" or shaped from contact with an adjacent panel? If so, record the number in the wall.	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
6	Y	N	N/A	UNKN	6-Does the coping exhibit Vertical Offset?	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
7	Y	N	N/A	UNKN	7-Are the coping and parapets loose or delimiting? If yes, it may be appropriate to contact UDOT if delimitation seems eminent.	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
8	Y	N	N/A	UNKN	8-Are the panels in danger of falling off? If potential exists contact appropriate UDOT region.	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
9	Y	N	N/A	UNKN	9-Are the panels bulging (bowing horizontally)? If so, record maximum deflection from accessible coping in coping pad (Photo 11)	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
10	Y	N	N/A	UNKN	10-Is there tipping at the top portions of the wall? (Record maximum degree of tipping from adjacent panels in the wall)	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /

MSE TOP OF WALL OBSERVATIONS

Requirement No.	Yes	No	NA	UNKN	Top Of Wall	Measurement/Extent of Problem/Locality/Photo Numbers
1	Y	N	N/A	UNKN	1-Is there evidence of settlement at the top of the wall? (permanent cracking, etc)	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
2	Y	N	N/A	UNKN	2-Are there any open cracks in the concrete coping (not hairline)? If so, record the approximate maximum crack width.	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
3	Y	N	N/A	UNKN	3-Do the construction joints in the concrete coping appear up? (Photo 6). If yes, record the maximum joint width.	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
4	Y	N	N/A	UNKN	4-Is there a large gap between the approach slab and the approach pavement? (Photo 15) Often this produces a bumping sensation as the approach is crossed. Record the approximate maximum gap size.	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /

Y	N	UN	17-At the abutments, has the joint between the wall coping and the abutment opened up significantly? If so, record maximum distance.	0-No	1%	5%	10%	25%	50%	75%	90%	95%	100%
Y	N	UN	18-Is the coping wall pulling away from pavement/roadway sections? Please record maximum displacement for wall.	0-No	1%	5%	10%	25%	50%	75%	90%	95%	100%

MSI STABILITY

Required Item	Yes	No	UN	Measure/Extent of Problem/Location/Photo Numbers
19-What is the location depth of existing post? Please check back side and insert 2 inches from wall to a minimum depth of 24 inches (24 inches is the minimum depth for MSI Wall).	Y	N	UN	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
20-Is existing post exposed?	Y	N	UN	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
21-Is there cracking in the leveling panel? If so, record maximum crack size with page.	Y	N	UN	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
22-Is there 4 to 6 inch 'beard' (level slope) directly along the wall before the slope changes (Record Width)?	Y	N	UN	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
23-Is there a slope greater than V: 1.5 to H: 1 in front of the wall? Please record slope and height of backfill above top of wall.	Y	N	UN	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
24-Is there a slope greater than V: 1.5 to H: 1 below the wall? Please record slope and height of backfill below the wall.	Y	N	UN	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
25-Is there excessive degradation of found face?	Y	N	UN	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /

MSI METAL CORROSION

Required Item	Yes	No	UN <th>Measure/Extent of Problem/Location/Photo Numbers</th>	Measure/Extent of Problem/Location/Photo Numbers
26-Is there excessive corrosion on guardrails or other exposed metal that might indicate corrosion conditions?	Y	N	UN	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
27-Are there major rust stains on the face panels? Along joints? If so, record total number.	Y	N	UN	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
28-Are any internal straps exposed? Does there appear to be corrosion on these straps? If applicable please record the total number of straps affected.	Y	N	UN	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
29-Are there any indications of other corrosion (swelling bars, rust, exposed metal inside epoxy coating)? If so, please record the total number of panels affected.	Y	N	UN	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /

MSI IMPACT/COLLISION PROTECTION

Required Item	Yes	No	UN <th>Measure/Extent of Problem/Location/Photo Numbers</th>	Measure/Extent of Problem/Location/Photo Numbers
30-Is any potentially wall protrusions in place at the base of the wall (to prevent it from potential failure)?	Y	N	UN	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
31-Does it appear that the wall has been involved in an accident (replaced panel, recent dips in the wall)?	Y	N	UN	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
32-Does it appear the walls functionality and integrity has been compromised by a collision or accident?	Y	N	UN	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /

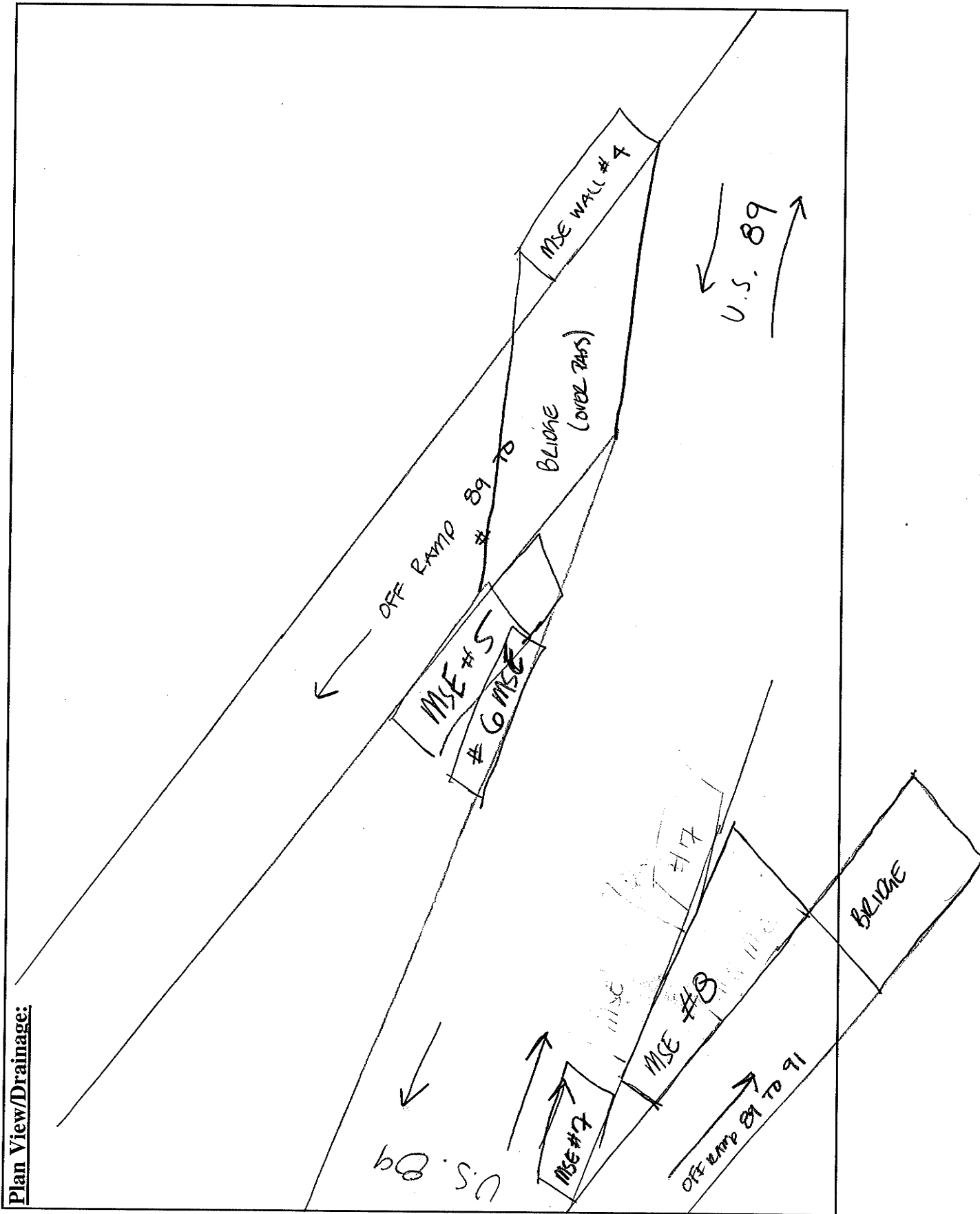
MSI OBSTRUCTIONS IN REINFORCEMENT GEOMETRY

Required Item	Yes	No	UN <th>Measure/Extent of Problem/Location/Photo Numbers</th>	Measure/Extent of Problem/Location/Photo Numbers
33-Obstructions in Reinforcement Geometry	Y	N	UN	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /

MSI AS BUILT DEFICIENT FROM DESIGN

Required Item	Yes	No	UN <th>Measure/Extent of Problem/Location/Photo Numbers</th>	Measure/Extent of Problem/Location/Photo Numbers
34-Are there any different than design	Y	N	UN	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
35-Are there available drawings for the wall? Please indicate type (Situation and Layout, Design, As Built, etc.)	Y	N	UN	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
36-Is the layout in general accordance with drawings?	Y	N	UN	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
37-Are the panels CIP (Cast in Place)? Does there appear to be excessive cracking in the panels?	Y	N	UN	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
38-Are any OED (Open End) used in the construction of the wall?	Y	N	UN	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
39-Are there any structures on or near wall that were not included in initial drawings?	Y	N	UN	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
40-Are there any irregular, utilities, or structures that are not part of the initial drawings?	Y	N	UN	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
41-Is there any evidence of excessive or evidence of over excavation near the wall?	Y	N	UN	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
42-Has local property owners changed the dynamics of the wall (additional structures, impaction, vegetation, etc.)	Y	N	UN	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
43-Are there piles located in the wall (bridge abutment)?	Y	N	UN	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /

South Walls



Plan View/Drainage: