

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	2	Identifying Road/Intersection	400 S over rail road tracks (West side)
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MSE WALL CHARACTERISTICS

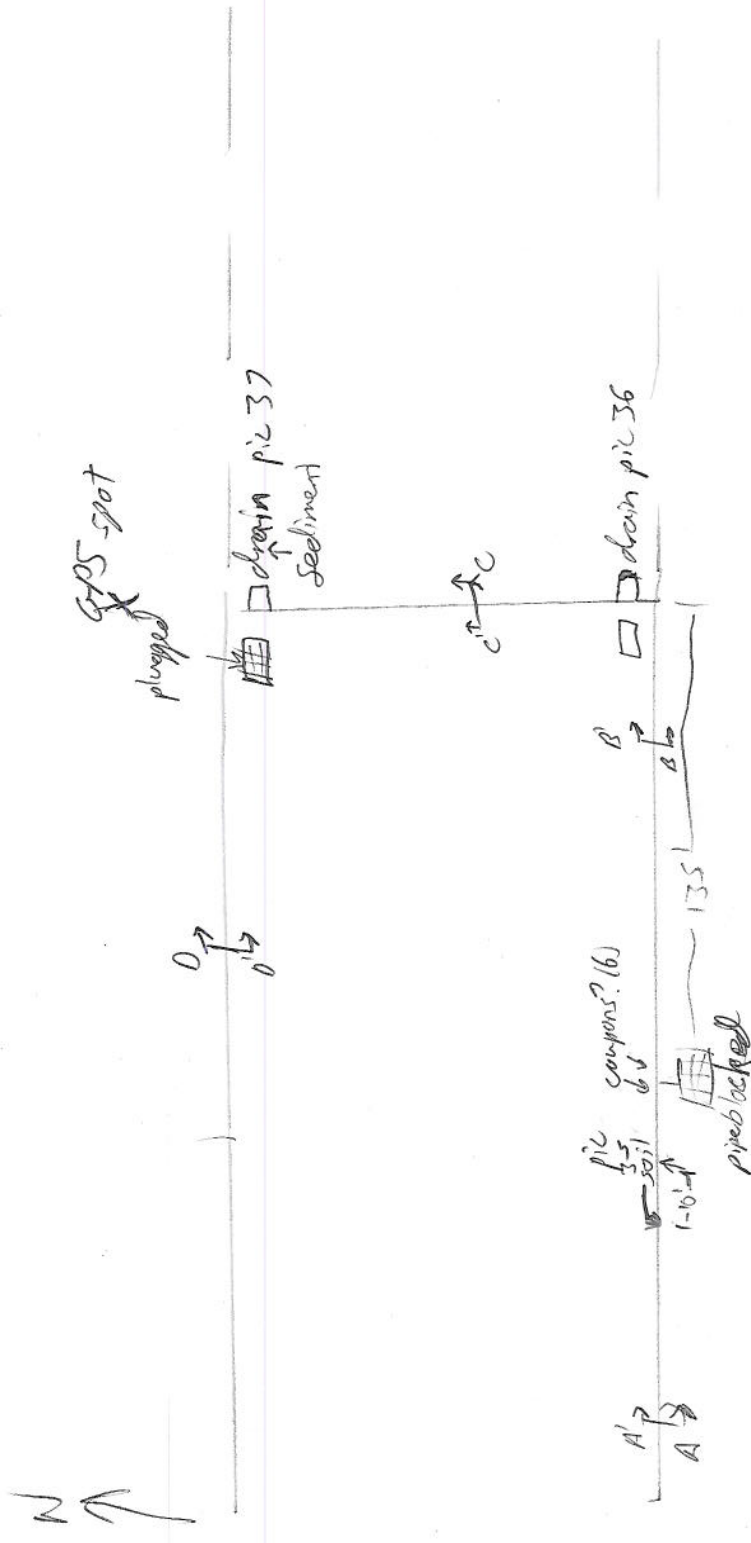
MSE Wall at Bridge	(Y) N	Bridge Number if applicable:	C-204	Wall Number	351-34
Surrounding Structures				Maximum Height of Wall (ft)	23.5'
Distance to Each Structure				One Stage, Two Stage or Block Wall	2 stage
State Route Number				Estimated Max Length of Wall Abutment:	250+ = 465 FT
Approximate Mile 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:	Unknown
MSE Wall GPS Coordinates (Location of Measurement shown on plan view)	40° 45' 39.25" N, 111° 54' 38.56" W				
If known, Panel or System Manufacturer					



Summary of Key Observations:

most all fractures are result of construction and not post-construction
 drains are mostly plugged
 some backfill coming from joints on south side
 minor offsets in panel faces

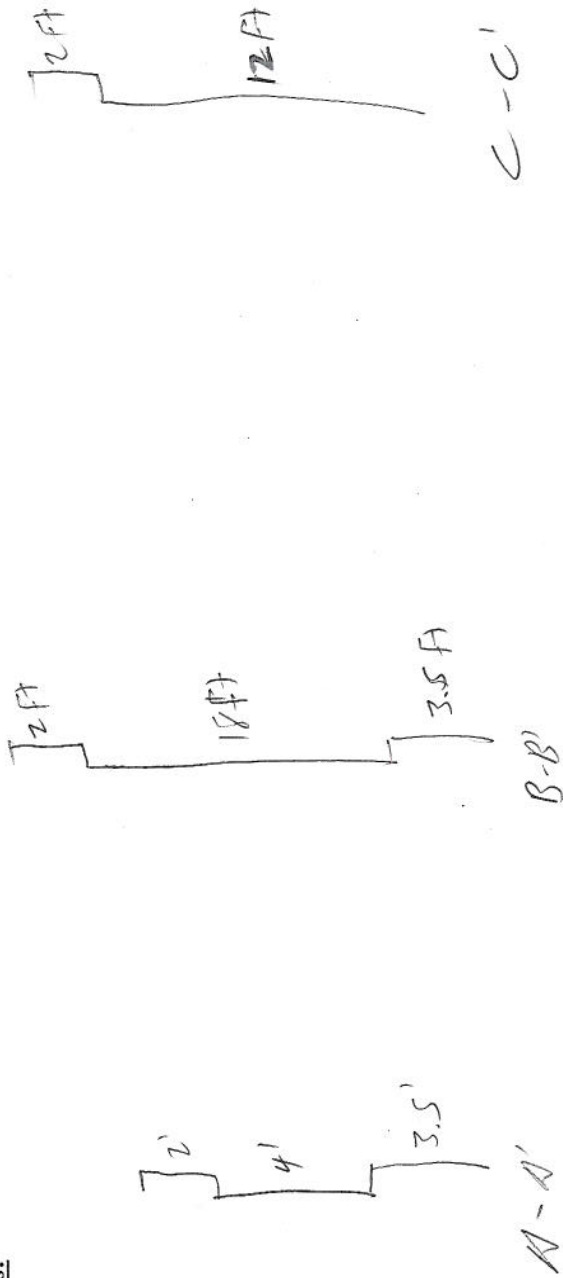
Plan View/Drainage:



Cross Sections:



Cross Sections:



Required Tests:			N/A			UNK			Y		
N/A			UNK			Y			N/A		
N/A			UNK			Y			N/A		
N/A			UNK			Y			N/A		
1-Is there an active water source near the toe of the wall (in the wall near a body of water with sewer potential)?	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK
2-If applicable, are the catch basins at the base of the wall blocked?	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK
3-Are there culverts protruding through the wall?	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK
4-Are there vertical drains that extend through the backfill?	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK
5-Is there erosion at the base of the wall or leveling pad? (Photo 13)	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK
6-Is there erosion along the wing wall?	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK
7-Are there any signs of water flow along the base of the wall?	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK
8-Is there less than 14 feet between irrigation sprinklers and wall?	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK
9-Does the backfill or joint fabric appear to be saturated?	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK
10-Is there vegetation growing in panel joints? (Photo 9)?	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK
11-Are the deck, drains and outlets at the top of the wall blocked? (Photo 14)	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK
12-Can water enter the wall between coping and slab (i.e., Drain appropriate)?	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK
13-Is there evidence at discharge points of fill washing through drain pipes?	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK

MSK WALL DRAINAGE

South side (on road)

5 feet

Required Tests:			N/A			UNK			Y		
N/A			UNK			Y			N/A		
N/A			UNK			Y			N/A		
N/A			UNK			Y			N/A		
1-Is backfill coming out of joints or are there piles of backfill at the base of the wall? (Photos 2 & 3)	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK
2-Are the joints wide enough to see fabric or backfill behind panels when looking into joints? (Photo 5) If yes, record the approximate maximum joint width in inches.	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK
3-Is exposed backfill visible in the horizontal joints? (Photo 4)	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK
4-Are there visible signs of fabric? Is there evidence of backfill or water leaking through joints? (Do not include fabric that is a non-uniform horizontal spacing) Are some horizontal joints larger/smaller than others? (Photo 6)	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK
5-Do the joints have a non-uniform vertical spacing? Are some vertical joints larger/smaller than others? (Photo 6)	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK
6-Are the panels offset at the joints either in or out of the wall? (Photo 7) If yes, record the approximate maximum offset.	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK
7-Does the fabric appear brittle, or appear as if it has undergone excessive UV exposure?	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK

MSK WALL JOINTS

Required Tests:			N/A			UNK			Y		
N/A			UNK			Y			N/A		
N/A			UNK			Y			N/A		
N/A			UNK			Y			N/A		
1-Does the panel corners "pop-out" or chipped from contact with an adjacent panel? If yes, record the number in the wall.	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK
2-Does the overlying coping exhibit Vertical Offset?	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK
3-Are the coping and parapets loose or discharging? If yes, it may be appropriate to conduct UDOT if detachment seems evident.	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK
4-Are the panels in danger of falling off? (If potential exists contact appropriate UDOT regions).	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK
5-Are the panels bulging (bowing horizontally)? If so, record maximum deformation from acceptable coping to leveling pad. (Photo 11)	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK
6-Is there tipping at the top or bottom of the wall? (Record maximum degree of tipping from vertical using vertical level line reference only)	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK

MSK WALL FACING

Slight bowing at top

Required Tests:			N/A			UNK			Y		
N/A			UNK			Y			N/A		
N/A			UNK			Y			N/A		
N/A			UNK			Y			N/A		
1-Is there evidence of settlement at the top of the wall? (Examine cracking, etc.)	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK
2-Are there any open cracks in the concrete coping (not hairline)? If yes, record the approximate maximum crack width.	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK
3-Do the construction joints in the concrete coping appear open? (Photo 8). If yes, record the maximum joint width.	N/A	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK	UNK

MSK TOP OF WALL OBSERVATIONS

Y	N/A	UNSN	56-Is there a large gap between the approach slab and the approach pavement? (Photo 15) Often this produces a bumping sensation as the overlap is crossed. Record the approximate maximum gap size.	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N	UNSN	57-At the abutment, 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	UNSN	58-Is coping wall pulling away from pavement/abutment section? Please record maximum displacement for wall.	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /

ASSESS STABILITY

Required Note: Structural Integrity				
Y	N	N/A	UNSN	39-What is the location depth of leveling pad? Found One Probe into wall located 2 inches from wall to a maximum depth of 24 inches (24 inches is the minimum depth for ASSE Wall)
Y	N	N/A	UNSN	40-Is leveling pad exposed?
Y	N	N/A	UNSN	41-Is there cracking in the leveling pad? If so, record maximum crack size with page.
Y	N	N/A	UNSN	42-Is there a four foot 'bench' (level slope) directly along the wall before the slope changes (Record Width)?
Y	N	N/A	UNSN	43-Is there a slope steeper than V: 1.5 to H: 1 in front of the wall? Please record slope and height of bench above top of wall.
Y	N	N/A	UNSN	44-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	N/A	UNSN	45-Is there excessive degradation of panel face?

Required Note: Visual Inspection of Cracks (VISC) Log (see Form)				
Y	N	N/A	UNSN	46-Is there excessive corrosion on guardrails or other exposed metal that might indicate concrete condition?
Y	N	N/A	UNSN	47-Are there major rust stains on the face panels? Along joints? If so, record total number.
Y	N	N/A	UNSN	48-Are any internal strips exposed? Does there appear to be corrosion on these strips? If applicable please record the total number of strips affected.
Y	N	N/A	UNSN	49-Was a reliability sample taken of exposed steel? If so, please indicate depth in inches.
Y	N	N/A	UNSN	50-Is there any indication of fabric corrosion (weaving bars, rust, exposed metal inside epoxy coating)? If so please record total number of panels affected.

ASSESS IMPACT COLLISION PROTECTION

Required Note: Concrete Cracks				
Y	N	N/A	UNSN	51-Are guardrails/wall protrusions in place at the base of the wall (to protect it from potential traffic hazard)?
Y	N	N/A	UNSN	52-Does it appear that the wall has been involved in an accident (upholed panel, recent damage to the wall)?
Y	N	N/A	UNSN	53-Does it appear the wall's functionality and integrity has been compromised by a collision or accident?

ASSESS OBSTRUCTIONS IN REINFORCEMENT GEOMETRY

Required Note: Drawings				
Y	N	N/A	UNSN	Obstructions in Reinforcement Geometry
Y	N	N/A	UNSN	54-Are there acute wall angles (<90°)

ASSESS AS BUILT DIFFERENT FROM DESIGN

Required Note: Drawings-Compare				
Y	N	N/A	UNSN	55-Is there available drawing for the wall? Please indicate type (Situation and Layout, Design, As Built, etc.)
Y	N	N/A	UNSN	56-Is the layout in general accordance with drawing?
Y	N	N/A	UNSN	57-Are the panels CIP (Cast in Place)? Does there appear to be excessive cracking in the panels?
Y	N	N/A	UNSN	58-Was OBEOP (used in the construction of the wall)
Y	N	N/A	UNSN	59-Are there any structures on or near wall that were not included in initial drawings?
Y	N	N/A	UNSN	60-Are there any irregularities, utilities, or obstructions that are not part of the initial drawings?
Y	N	N/A	UNSN	61-Have there been any excavations or evidence of excavations near the wall?
Y	N	N/A	UNSN	62-Has local property owner changed the dynamics of the wall (additional structures, irrigation, vegetation, etc.)
Y	N	N/A	UNSN	63-Are there piles located in the wall (bridge abutment)?

Design, layout

N

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