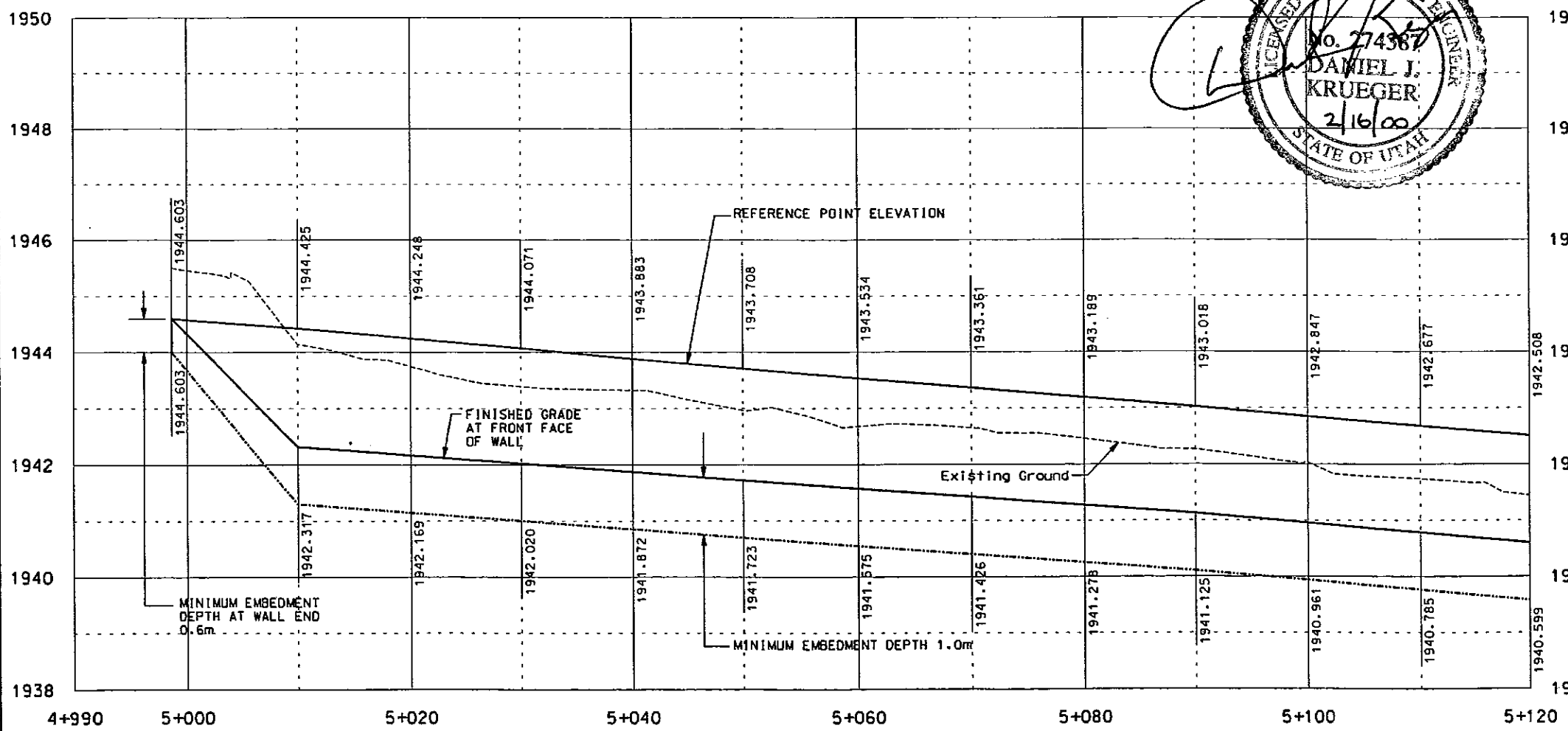
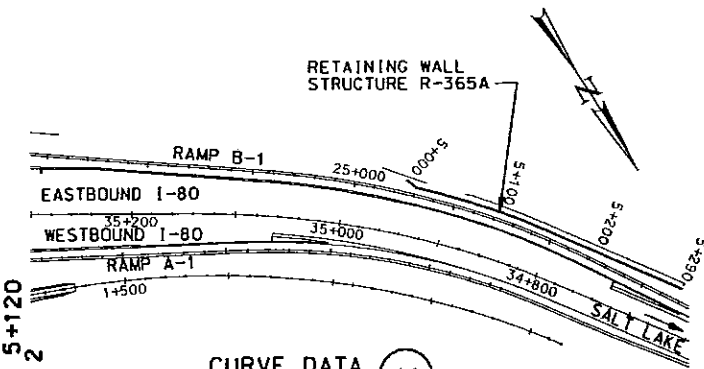


BEGIN RETAINING WALL R-365A  
 STA 4+998.636 =  
 RAMP B-1 STA 24+950.000 14.343 RT  
 N = 2266676.295  
 E = 496002.562

**RETAINING WALL R-365A PLAN**  
 STA 4+998.636 TO STA 5+120.000



**RETAINING WALL R-365A ELEVATION**  
 STA 4+998.636 TO STA 5+120.000



**CURVE DATA (A1)**  
 SEE SHEET 2

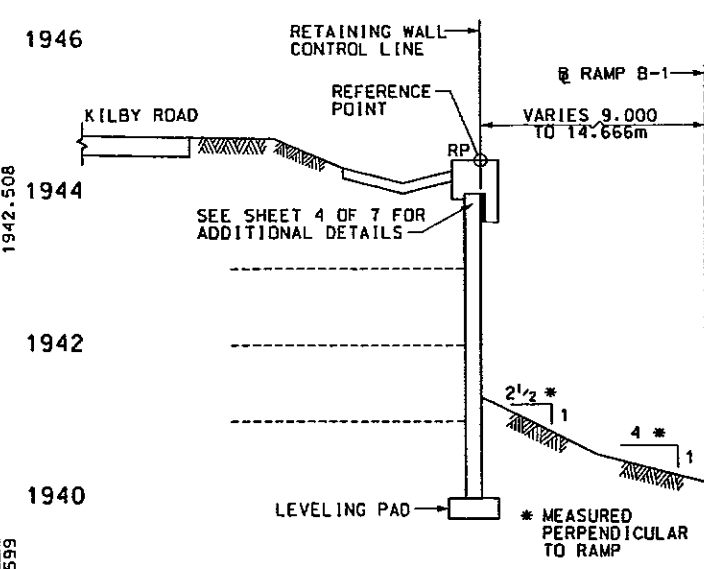
**GENERAL NOTES**

1. ALL REINFORCING STEEL SHALL BE COATED DEFORMED BILLET-STEEL BARS CONFORMING TO AASHTO M 284, M 111 AND M 31M GRADE 400, RESPECTIVELY.
2. EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 19 mm EXCEPT WHERE NOTED OTHERWISE.
3. ALL CONCRETE SHALL BE CLASS AA(AE) EXCEPT WHERE NOTED OTHERWISE.
4. ALL DIMENSIONS ARE METERS UNLESS NOTED OTHERWISE.
5. SEE SHEET 4 OF 4 FOR ADDITIONAL DETAILS.

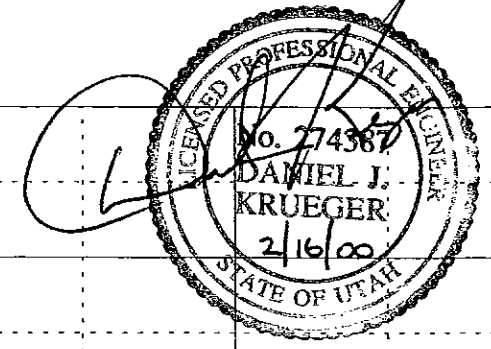
QUANTITIES		
ITEM	QUANTITY	UNIT
MSE RETAINING WALL (R-365A) (EST. QUANTITY 528 M2)	1	LUMP

**DESIGN DATA**

REINFORCING STEEL:  $f_s = 160 \text{ MPa}$ ;  $F_y = 400 \text{ MPa}$   
 CAST-IN-PLACE CONCRETE:  $f_c = 25 \text{ MPa}$



**RETAINING WALL R-365A SECTION**



UTAH DEPARTMENT OF TRANSPORTATION  
**URS Greiner Woodward Clyde**

KIMBALL JUNCTION INTERCHANGE  
 RETAINING WALL R-365A

SITUATION & LAYOUT

PROJECT NUMBER: \*IM-C-41801144

SUMMIT COUNTY  
 R-365A  
 DWG. NO.

SHEET NO. 1 OF 4

NO.	DATE	DESIGN	REVISIONS

18/57:20  
 15 FEB 100  
 J:\1910\_00\sheet\1910\_wall02a.dgn

MATCH LINE STA 5+120  
SEE SHEET 1

BEGIN FUTURE WALL  
STA 5+126 ± 1.8 ± LT RWCL

**CURVE DATA** (A1)  
 $\Delta = 9^\circ 48' 28''$  R  
 $R = 909.000$   
 $L = 77.991$   
 $PI = 5+087.911$   
 $N = 2266742.899$   
 $E = 495944.729$

FUTURE MODULAR BLOCK  
RETAINING WALL (BY OTHERS)  
SEE SHEET 4 OF 4 FOR  
ADDITIONAL INFORMATION

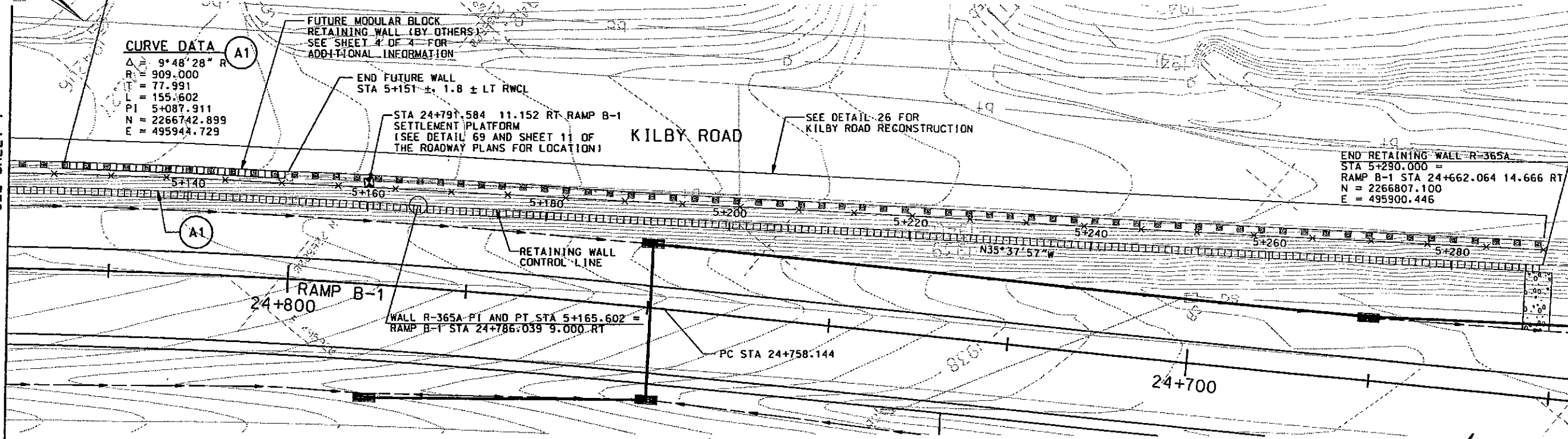
END FUTURE WALL  
STA 5+151 ± 1.8 ± LT RWCL

STA 24+791.584 11.152 RT RAMP B-1  
SETTLEMENT PLATFORM  
(SEE DETAIL 69 AND SHEET 11 OF  
THE ROADWAY PLANS FOR LOCATION)

KILBY ROAD

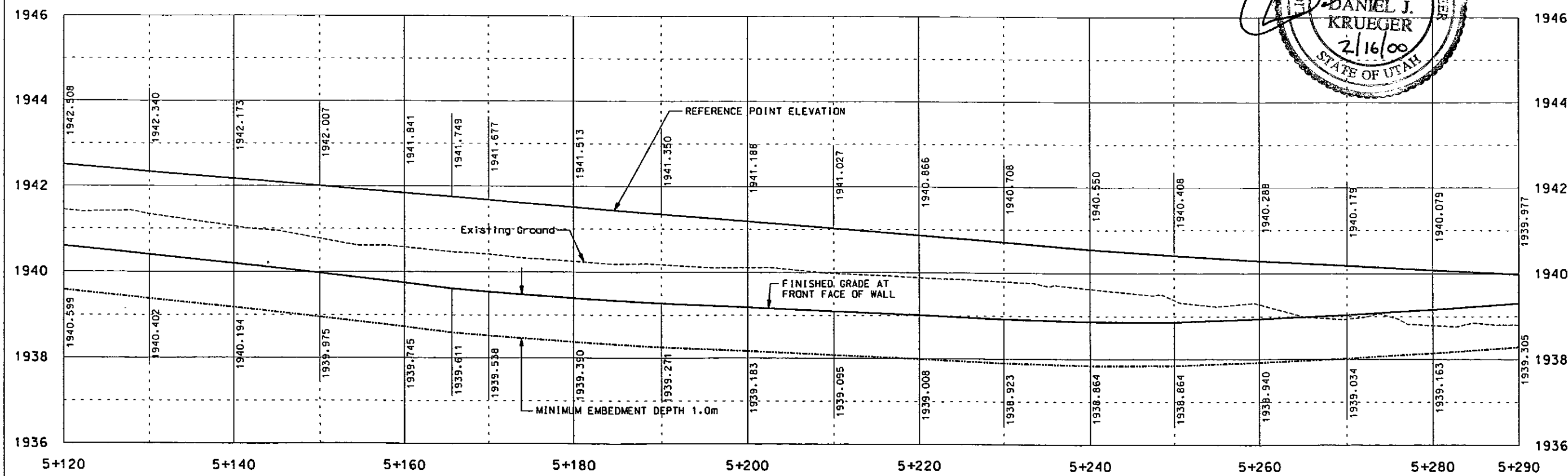
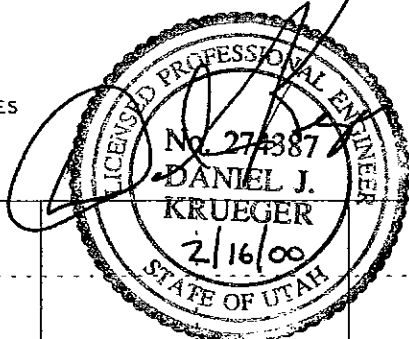
SEE DETAIL 26 FOR  
KILBY ROAD RECONSTRUCTION

END RETAINING WALL R-365A  
 STA 5+290.000 =  
 RAMP B-1 STA 24+662.064 14.666 RT  
 $N = 2266807.100$   
 $E = 495900.446$



**RETAINING WALL R-365A PLAN**  
STA 5+120.000 TO STA 5+290.000

NOTES:  
1. SEE SHEET 1 OF 4 FOR GENERAL NOTES



**RETAINING WALL R-365A ELEVATION**  
STA 5+120.000 TO STA 5+290.000

19:57:52  
15 FEB 00  
J:\1910\_00\sheet...files\walls\1910\_walr02b.dgn

UTAH DEPARTMENT OF TRANSPORTATION		DESIGN	CJT	10/99	CHECK	DJK	01/00	REVIEW	
URS Greiner Woodward Clyde		DRAWN	PRV	11/99	CHECK	DJK	01/00	DATE	
KIMBALL JUNCTION INTERCHANGE		APPROVAL	2/00	DATE	2/16/00	PROJECT DESIGN ENGINEER			
RETAINING WALL R-365A		APPROVED	2/00	DATE	2/16/00	ROADWAY DESIGN ENGINEER			
SITUATION & LAYOUT		PROJECT NUMBER	*IM-80-41801144						
SUMMIT COUNTY		R-365A							
DWC NO.		2 OF 4							
SHEET NO.		2 OF 4							

Log of Boring WB-2

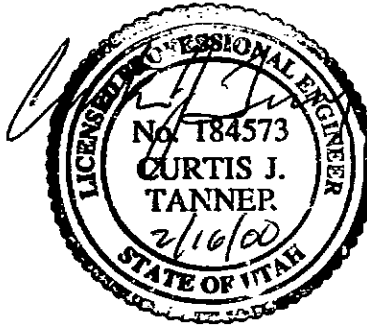
Date(s) Drilled	1/12/99 - 1/12/99	Logged By	Curtis Tanner	Checked By	JLL
Drilling Method	Hollow-Stein Auger	Drill Bit Size/Type	8-1/2" OD x 4-1/4" ID	Total Depth (feet)	25.5
Drill Rig Type	CME-75	Drilling Contractor	Doug Badke	Sampler Type(s)	Col. Split (2.5" OD)
Groundwater Level and Date Measured	Not Encountered	Hammer Data	140 lbs / 30 inches	Approximate Surface Elevation	6371.5 feet
Comments		Borehole Backfill	backfill with cuttings	Approximate Surface Elevation	1942.0 meters

Elevation, meters	Depth, feet	SAMPLES				MATERIAL DESCRIPTION	Water Content, %	Dry Density (pcf)	REMARKS/ OTHER TESTS
		Type	Number	Percent Recovery	Blow Count (Blows / 6")				
-1942	0							Automatic hammer	
-1941	5		1	100	6 16 49			Lean CLAY (CL), with sand and gravel, brown, medium stiff, moist, low plastic fines	
-1940	10		2	100	32 50-4"			Clayey GRAVEL (GC), with sand; Poorly Graded GRAVEL with Clay (GP-GC), with sand; brown, dense, moist, low plastic fines; pockets or lenses of clay and sand; occasional cobble-sized, very weak to medium strong (very soft to hard) rock fragments	
-1939	15		3	100	35 50-4"		8	silt/clay=15%	
-1938	20		4	100	18 41 25-2"			Becoming clayey	
-1937	25		5	100	7 13 19		17	gravel=1%, sand=35%, silt/clay=61%, LL=36%, PI=25%	
-1936	30		6	100	50-4"			Clayey GRAVEL (GC), with sand; Poorly Graded GRAVEL with Clay (GP-GC), with sand; brown, dense, moist, low plastic fines; pockets or lenses of clay and sand; occasional cobble-sized, very weak to medium strong (very soft to hard) rock fragments total depth= 25.5 ft	
-1935	35							#6 disturbed	
-1934	40								
-1933	45								
-1932	50								
-1931	55								
-1930	60								
-1929	65								
-1928	70								
-1927	75								
-1926	80								

Log of Boring WB-1

Date(s) Drilled	1/12/99 - 1/12/99	Logged By	Curtis Tanner	Checked By	JLL
Drilling Method	Hollow-Stein Auger	Drill Bit Size/Type	8-1/2" OD x 4-1/4" ID	Total Depth (feet)	16.5
Drill Rig Type	CME-75	Drilling Contractor	Doug Badke	Sampler Type(s)	Col. Split (2.5" OD)
Groundwater Level and Date Measured	Not Encountered	Hammer Data	140 lbs / 30 inches	Approximate Surface Elevation	6363.9 feet
Comments		Borehole Backfill	backfill with cuttings	Approximate Surface Elevation	1939.7 meters

Elevation, meters	Depth, feet	SAMPLES				MATERIAL DESCRIPTION	Water Content, %	Dry Density (pcf)	REMARKS/ OTHER TESTS
		Type	Number	Percent Recovery	Blow Count (Blows / 6")				
-1939	0							Automatic hammer	
-1938	5		1	100	27 50-3"		12	Lean CLAY (CL), with sand and gravel, brown, medium stiff, moist, low plastic fines	
-1937	10		2	100	50-2"			Clayey GRAVEL (GC), with sand; Poorly Graded to Well-graded GRAVEL with Clay (GP-GC, GW-GC), with sand; brown, dense, moist, low plastic fines; pockets or lenses of clay and sand; occasional cobble-sized, very weak to medium strong (very soft to hard) rock fragments	
-1936	15		3	100	25-2"			#2 disturbed	
-1935	20		4	100	13 41 58			#1 disturbed	
-1934	25							CLAYSTONE, highly to extremely weathered, very weak	
-1933	30							Total Depth= 16.5 ft	
-1932	35								
-1931	40								
-1930	45								
-1929	50								
-1928	55								
-1927	60								
-1926	65								
-1925	70								
-1924	75								



KEY TO BORING LOG

GRAPHIC LOG SYMBOLS


SAMPLE TYPE AND OTHER SYMBOLS

--	--	--	--	--

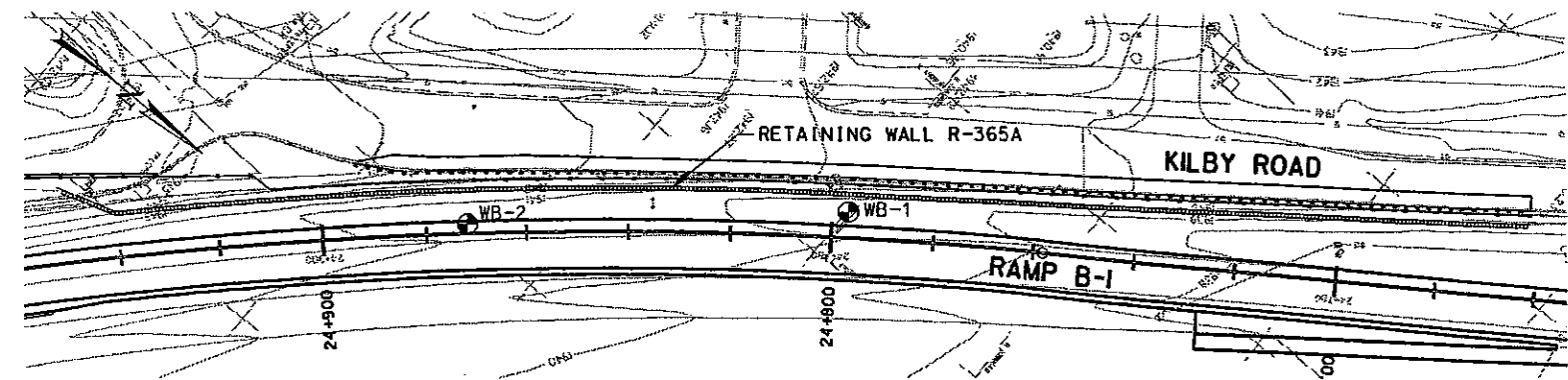
Water level measured in boring at specified date and time

NOTES

- Soil classifications are based on the Unified Soil Classification System (USCS).
- Descriptions and stratum lines are interpretive; Transitions may be gradational.
- Field logs may have been modified to reflect lab test results.
- Classifications and descriptions provided apply only at the specific location of the boring and at the time the boring was advanced; they are not warranted to be representative of subsurface conditions at other locations or times.
- Refer to the Geotechnical Report containing these boring logs for addition information and explanation.

ABBREVIATIONS / DEFINITIONS

- LL = Liquid Limit (in percent)
  - PI = Plasticity Index
  - NP = Non-plastic
  - w = Natural Moisture Content (in percent)
  - DD = Dry Density (in pounds per cubic foot)
  - WSS = Water Soluble Sulfates (in parts per million)
  - Fines = Fine-grained portion of soil passing No. 200 Sieve (3-inch minus wash/gradation analysis result in percent)
  - Silt/Clay = See "Fines"
  - Sand = Rock particles passing No. 4 Sieve & retained on No. 200 Sieve (3-inch minus gradation analysis result in percent)
  - Gravel = Rock particles passing 3-inch Sieve & retained on No. 4 Sieve (3-inch minus gradation analysis test in percent)
  - Cobble = Rock particles retained on 3-inch Sieve, 12-inch maximum dimension
  - Boulder = Rock particles greater than 12-inch maximum dimension
  - ATD = At Time of Drilling
  - OD = Outside Diameter
- Blows per 6" is the number of blows required to advance sampler 6 inches, or the distance indicated (in inches); Standard penetration number, N, is the sum of the number of blows for the second and third 6-inch intervals (i.e., 6" to 18")
- Sieve sizes are USA Standard; Sieve openings are as follows: 3-inch = 75mm, No.4 = 4.75mm, No.200 = 0.075mm



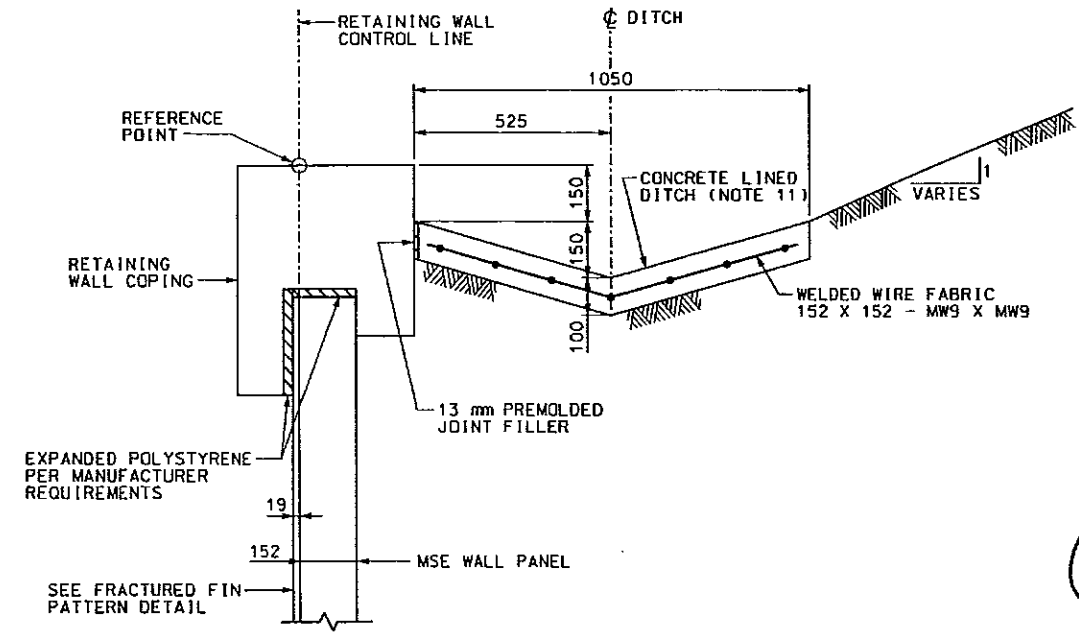
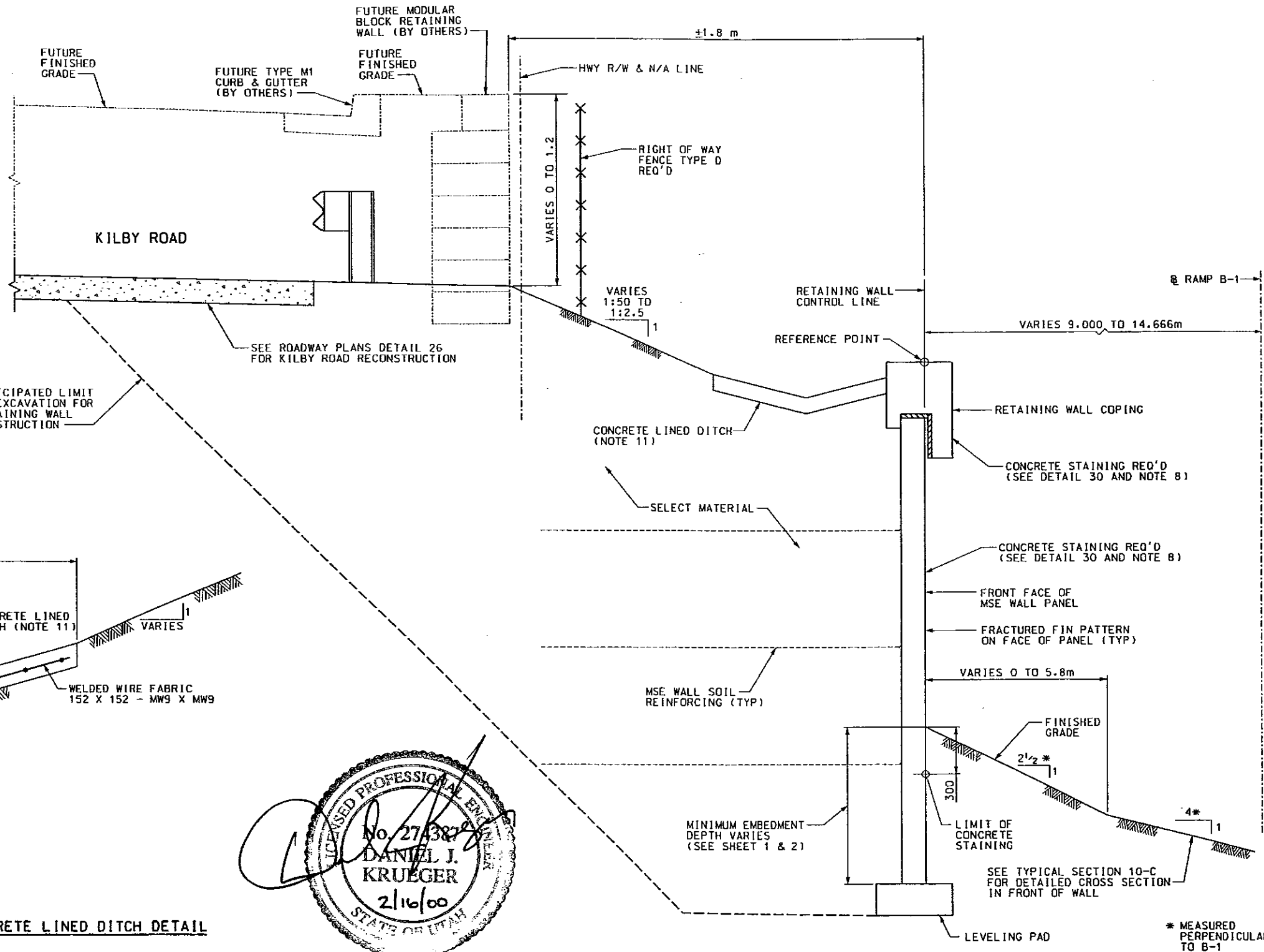
WALL GEOTECH LOGS  
WB-1 & WB-2

UTAH DEPARTMENT OF TRANSPORTATION  
Uns Greiner Woodward Clyde

KIMBALL JUNCTION INTERCHANGE  
RETAINING WALL R-365A  
SOIL DATA SHEET

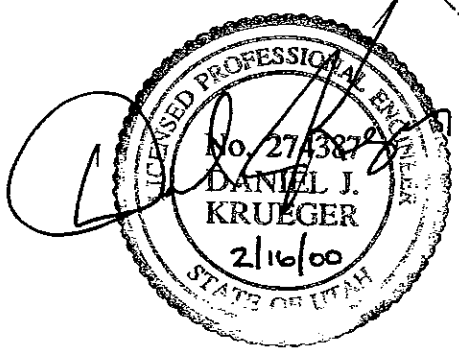
APPROVED: [Signature]  
DATE: 2-16-00  
PROJECT DESIGN ENGINEER

SUMMIT COUNTY  
R-365A  
OWG. NO.  
SHEET NO. 3 OF 4



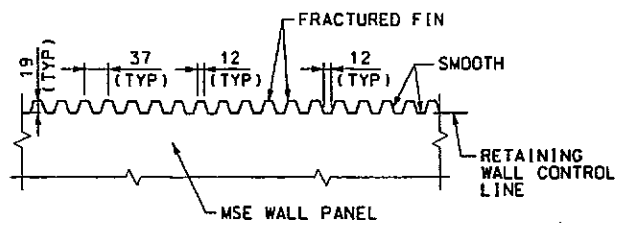
**RETAINING WALL COPING AND CONCRETE LINED DITCH DETAIL**

**TYPICAL WALL SECTION  
RETAINING WALL R-365A**



**NOTES**

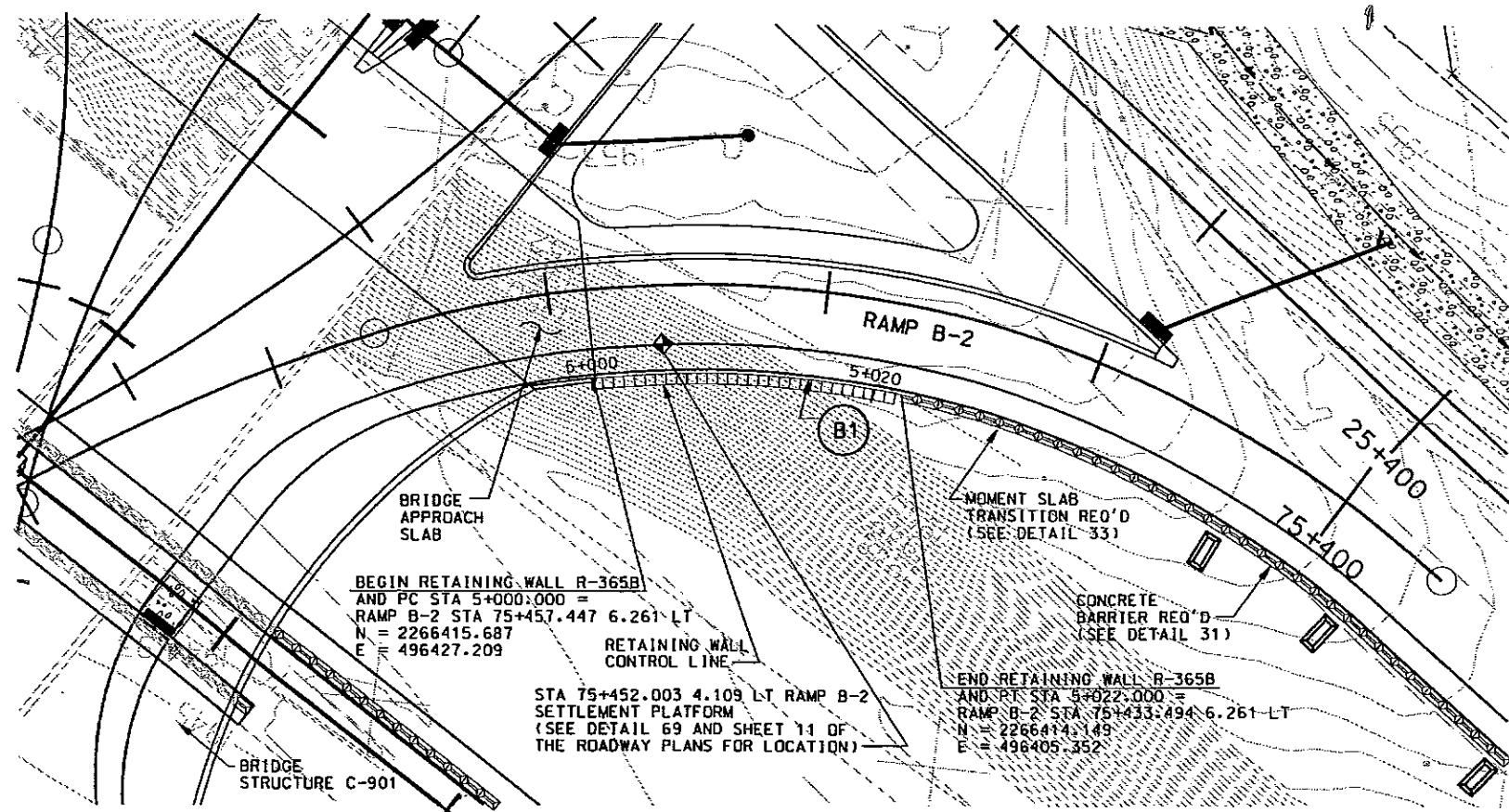
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
- ALTERNATE ALL REINFORCING STEEL SPLICES. SPLICES IN #15 BARS SHALL BE 600 mm.
- SEE WALL SITUATION & LAYOUT SHEET 1 FOR LOCATION OF RETAINING WALL CONTROL POINT AND ELEVATION OF REFERENCE POINT.
- MINIMUM COVER TO REINFORCING STEEL SHALL BE 50 mm EXCEPT WHERE NOTED OTHERWISE.
- SEE WALL SITUATION & LAYOUT FOR LIMITS OF CONSTRUCTION.
- ALL CAST IN PLACE CONCRETE SHALL BE CLASS AA(AE) EXCEPT WHERE NOTED OTHERWISE.
- ALL REINFORCING STEEL SHALL BE COATED DEFORMED BILLET STEEL BARS CONFORMING TO AASHTO M 284, M 111, AND M 31M GRADE 400.
- CONCRETE STAINING IS REQUIRED ON EXPOSED SURFACES OF WALL AND MOMENT SLAB AND 300 mm BELOW FINISHED GRADE. THE STAINING REQUIREMENTS ARE AS FOLLOWS:  
RETAINING WALL COPING: CONCRETE STAINING REQ'D (COLOR NO. 30227)  
WALL FACE: CONCRETE STAINING REQ'D (COLOR NO. 30227)
- BARRIER REFLECTORS SHALL BE MOUNTED ON THE ENTIRE BARRIER LENGTH. REFLECTOR SPACING SHALL BE 15 m. REFLECTOR COLOR SHALL BE THE SAME AS THE PAINT STRIPE. SEE STD. DWG. 726-2 FOR ADDITIONAL INFORMATION.
- THE MOMENT SLAB SHALL NOT BE CONSTRUCTED UNTIL THE RETAINING WALL PRIMARY SETTLEMENT HAS BEEN COMPLETED.
- CONCRETE DITCH LINING WILL BE INCLUDED IN THE PRICE OF RETAINING WALL R-365A.
- THE "FUTURE MODULAR BLOCK WALL" WILL BE LOCATED BETWEEN WALL STA. 5+110 AND STA 5+170. THE RETAINING WALL MUST BE DESIGNED TO ACCOMMODATE THE ADDITIONAL LOADS CREATED BY THE FUTURE WALL. THE DESIGN SHALL BE BASED ON THE FULL 1.2m WALL HEIGHT BETWEEN THOSE STATIONS.



**FRACTURED FIN PATTERN DETAIL**

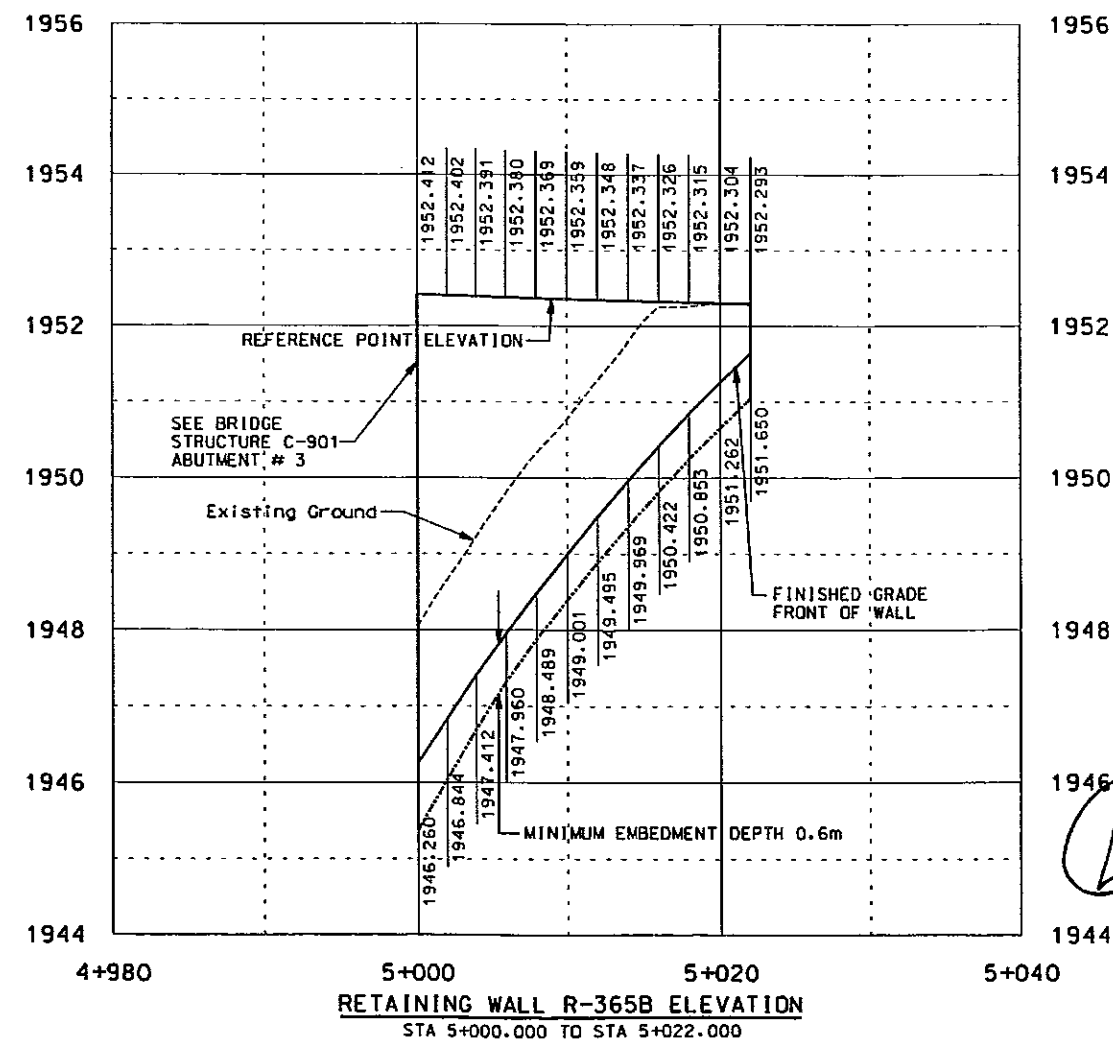
UTAH DEPARTMENT OF TRANSPORTATION		REVIEW		NO.		DATE		REMARKS	
URS Greiner Woodward Clyde		CEL	01/00	DESIGN	REV. BY	DATE	NO.	DATE	REVISIONS
KIMBALL JUNCTION INTERCHANGE		DJK	10/99	CHK	DJK	01/00	DESIGN	REV. BY	DATE
RETAINING WALL R-365A		CER	10/99	CHK	DJK	01/00	DESIGN	REV. BY	DATE
DETAILS		DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
PROJECT NUMBER		2/00	2/00	2/00	2/00	2/00	2/00	2/00	2/00
PROJECT NUMBER		IM-80-4(80)144							
SUMMIT COUNTY		R-365A							
DWC NO.		4 OF 4							

18:58:00  
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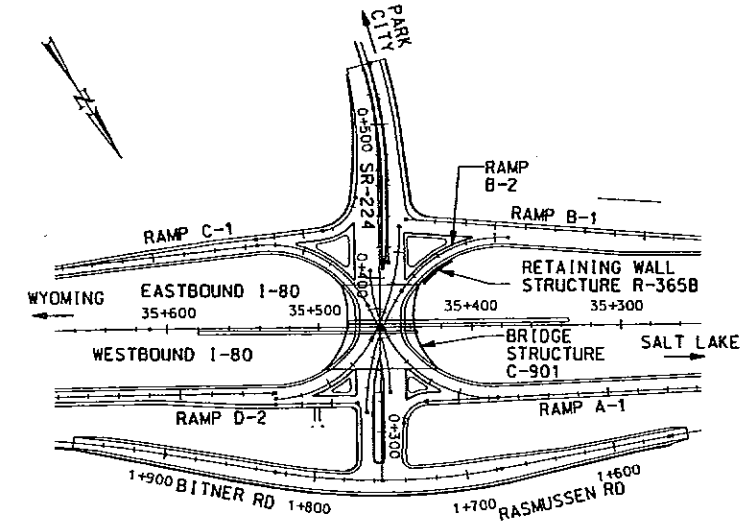


**RETAINING WALL R-365B PLAN**  
STA 5+000.000 TO STA 5+022.000

**CURVE DATA** (B1)  
 $\Delta = 17^\circ 52' 19''$  R  
 $R = 70.530$   
 $T = 11.090$   
 $L = 22.000$   
 $PI = 5+011.090$   
 $N = 2266413.200$   
 $E = 496416.401$



**RETAINING WALL R-365B ELEVATION**  
STA 5+000.000 TO STA 5+022.000



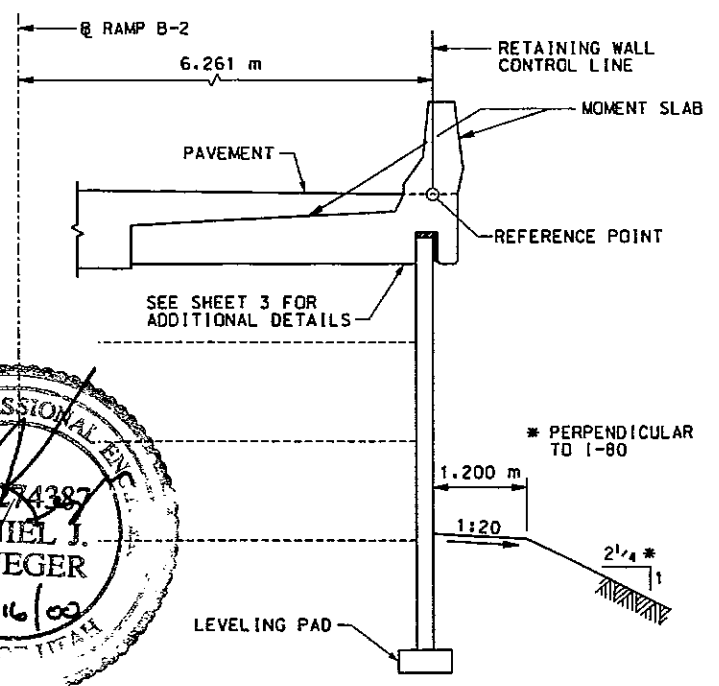
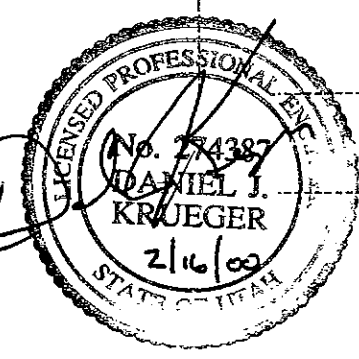
**LOCATION PLAN**  
**GENERAL NOTES**

1. ALL REINFORCING STEEL SHALL BE COATED DEFORMED BILLET-STEEL BARS CONFORMING TO AASHTO M 284, M 111 AND M 31M GRADE 400, RESPECTIVELY.
2. EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 19 mm EXCEPT WHERE NOTED OTHERWISE.
3. ALL CONCRETE SHALL BE CLASS AA(AE) EXCEPT WHERE NOTED OTHERWISE.
4. ALL DIMENSIONS ARE METERS UNLESS NOTED OTHERWISE.
5. SEE SHEET 3 OF 5, 4 OF 5, AND 5 OF 5 FOR ADDITIONAL DETAILS.
6. SEE BRIDGE STRUCTURE C-901 SHEETS FOR ADDITIONAL DETAILS.

QUANTITIES		
ITEM	QUANTITY	UNIT
MSE RETAINING WALL (R-365B) (EST. QUANTITY 70 M2)	1	LUMP

**DESIGN DATA**

REINFORCING STEEL:  $f_s = 160 \text{ MPa}$ ;  $F_y = 400 \text{ MPa}$   
 CAST-IN-PLACE CONCRETE:  $f_c = 25 \text{ MPa}$



**RETAINING WALL R-365B SECTION**

UTAH DEPARTMENT OF TRANSPORTATION  
**URS Greiner Woodward Clyde**

KIMBALL JUNCTION INTERCHANGE  
 RETAINING WALL R-365B  
 SITUATION & LAYOUT

DESIGN: C.J.T. 10/99  
 CHECK: D.J.K. 01/00  
 REVIEW: [ ]  
 DRAWN: P.V. 11/99  
 CHECK: D.J.K. 01/00  
 QUANT.: M.J.E. 11/99  
 CHECK: D.J.K. 01/00

APPROVAL REGIONAL: 2/00  
 PROJECT DESIGN ENGINEER: [Signature]  
 DATE: 2/16/00  
 APPROVED: 2/16/00  
 ROADWAY DESIGN ENGINEER: [Signature]

SUMMIT COUNTY  
 R-365B  
 DWG. NO.

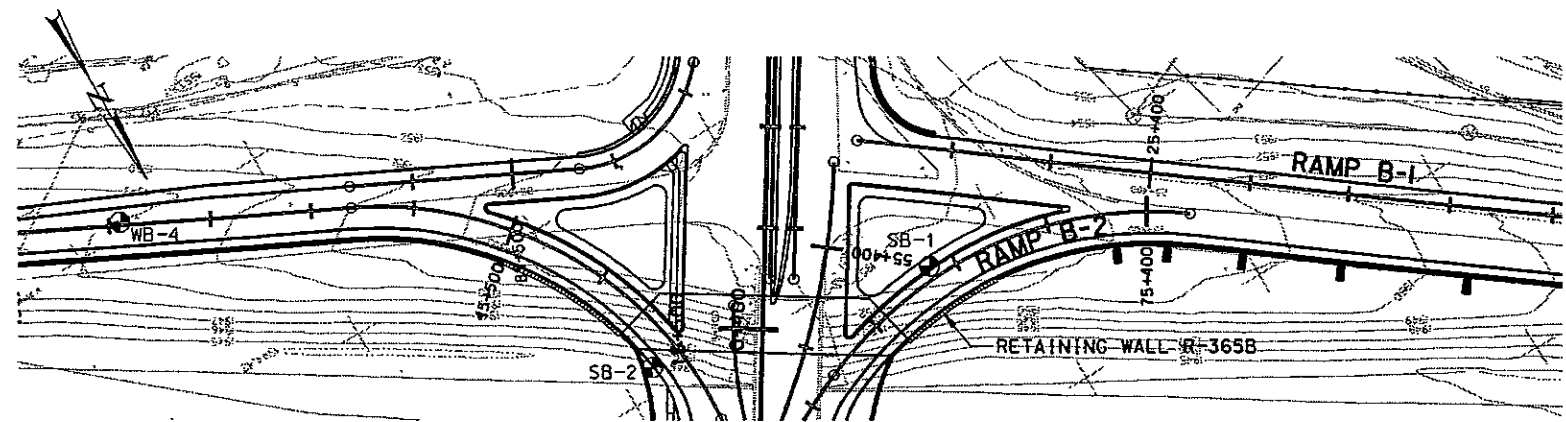
PROJECT NUMBER: \*IM-4(80)144

SHEET NO. 1 OF 5

Log of Boring SB-1

Date(s) Drilled	1/13/99 - 1/13/99	Logged By	Curtis Tanner	Checked By	JUL
Drilling Method	Hollow-Stem Auger	Drill Bit Size/Type	8-1/2" OD x 4-1/4" ID	Total Depth (feet)	50.8
Drill Rig Type	CME-75	Drilling Contractor	Doug Bedke	Sampler Type(s)	Cal. Split 12.5" OD
Groundwater Level and Date Measured	Not Encountered	Hammer Data	140 lbs / 30 inches	Approximate Surface Elevation	6406.2 feet 1952.6 meters
Comments	Borehole backfill backfill with cuttings				

Elevation, meters	Depth, feet	SAMPLES				MATERIAL DESCRIPTION	Water Content, %	Dry Density (pcf)	REMARKS/ OTHER TESTS
		Type	Number	Percent Recovery	Blow Count (Blows / 6")				
0								Automatic hammer	
-1952									
-1951	5	1	100	17	14		11	113	gravel=44%, sand=34%, silt/clay=22%
-1950	10	2	100	17	26				WSS=10 ppm
-1948	15	3	100	20	41		6	129	silt/sand=44%
-1947	20	4	100	23	43				
-1946	25	5	100	22	26		10	116	gravel=51%, sand=36%, silt/clay=13% 27 ft: smoother drilling 28 ft: rougher drilling
-1944	30	6	100	25	63				
-1942	35	7	100	27	46				
-1941	40	8	100	19	41		7	121	gravel=47%, sand=40%, silt/clay=13%
-1939	45	9	100	23	52				
-1937	50	10	100	40	50				Total Depth= 50.8 ft



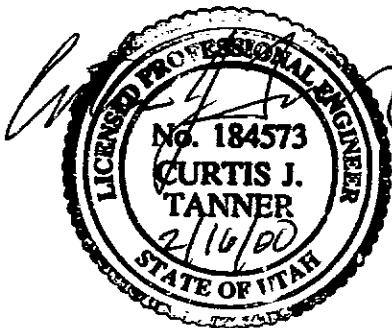
WALL GEOTECH LOGS  
SB-1

KEY TO BORING LOG

**GRAPHIC LOG SYMBOLS**


**SAMPLE TYPE AND OTHER SYMBOLS**

--	--	--	--	--



ABBREVIATIONS / DEFINITIONS

- LL = Liquid Limit (in percent)
  - PI = Plasticity Index
  - NP = Non-plastic
  - w = Natural Moisture Content (in percent)
  - DD = Dry Density (in pounds per cubic foot)
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  - Fines = Fine-grained portion of soil passing No. 200 Sieve (3-inch minus wash/gradation analysis result in percent)
  - Silt/Clay = See "Fines"
  - Sand = Rock particles passing No. 4 Sieve & retained on No. 200 Sieve (3-inch minus gradation analysis result in percent)
  - Gravel = Rock particles passing 3-inch Sieve & retained on No. 4 Sieve (3-inch minus gradation analysis test in percent)
  - Cobble = Rock particles retained on 3-inch Sieve, 12-inch maximum dimension
  - Boulder = Rock particles greater than 12-inch maximum dimension
  - ATD = At Time of Drilling
  - OD = Outside Diameter
- Blows per 6" is the number of blows required to advance sampler 6 inches, or the distance indicated (in inches); Standard penetration number, N, is the sum of the number of blows for the second and third 6-inch intervals (i.e., 6" to 18")
- Sieve sizes are USA Standard; Sieve openings are as follows: 3-inch = 75mm, No.4 = 4.75mm, No.200 = 0.075mm

Water level measured in boring at specified date and time

NOTES

1. Soil classifications are based on the Unified Soil Classification System (USCS).
2. Descriptions and stratum lines are interpretive; Transitions may be gradational.
3. Field logs may have been modified to reflect lab test results.
4. Classifications and descriptions provided apply only at the specific location of the boring and at the time the boring was advanced; they are not warranted to be representative of subsurface conditions at other locations or times.
5. Refer to the Geotechnical Report containing these boring logs for addition information and explanation.

UTAH DEPARTMENT OF TRANSPORTATION  
**URS Greiner Woodward Clyde**

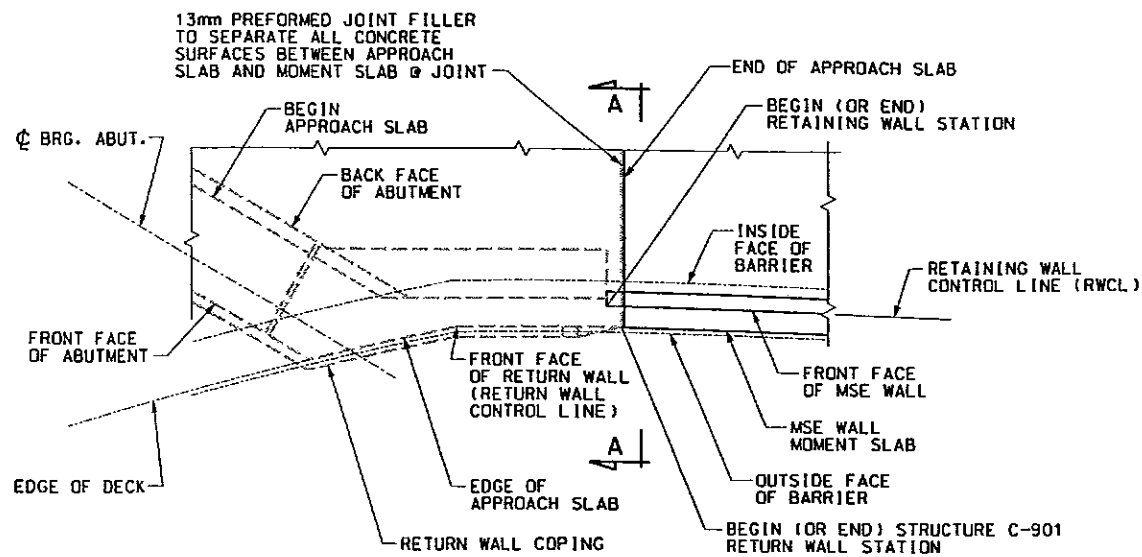
KIMBALL JUNCTION INTERCHANGE  
RETAINING WALL R-365B  
SOIL DATA SHEET

PROJECT NUMBER: IM-80-4(80)144

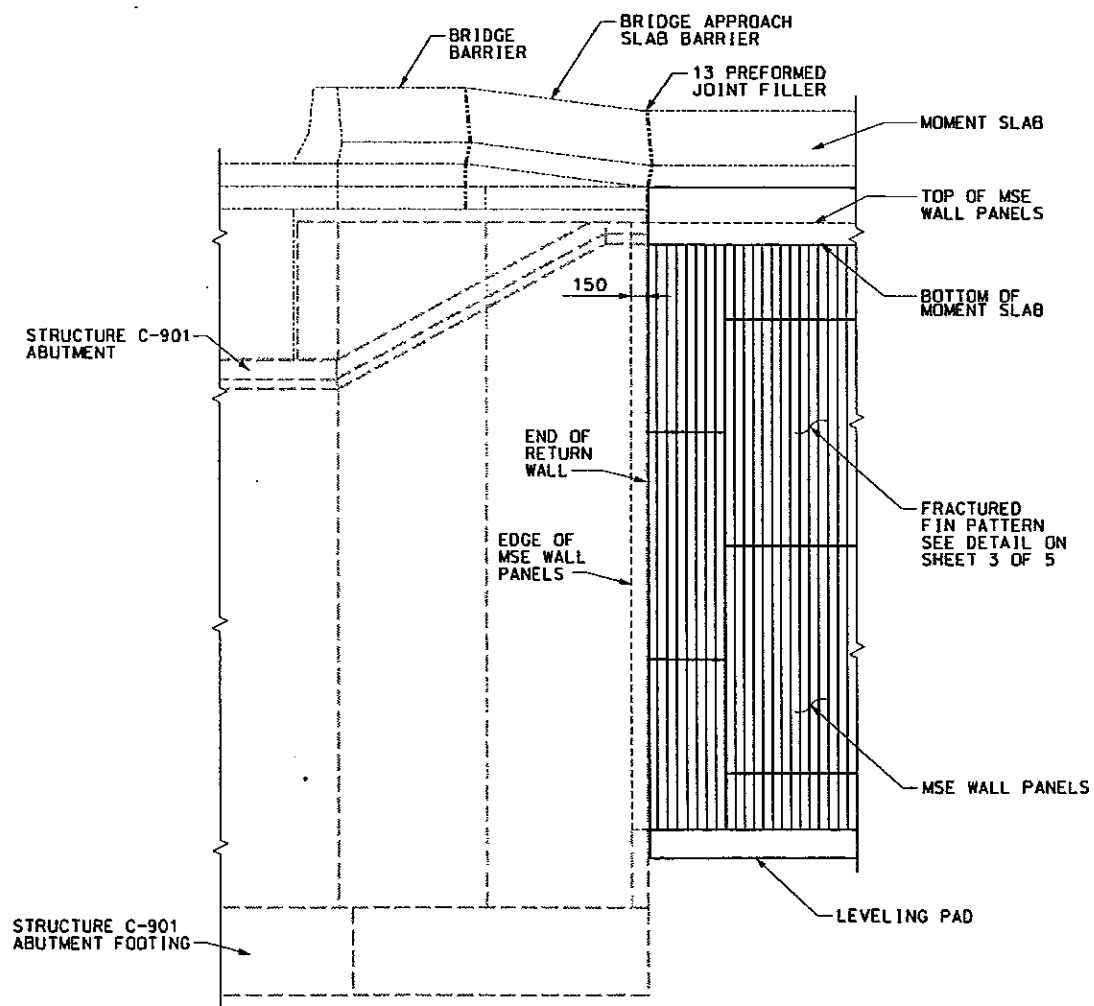
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DRAWN	SVD	11/98	CHECK	CJT	11/98	DATE	
APPROVED						DATE	

SHEET NO. 2 OF 5

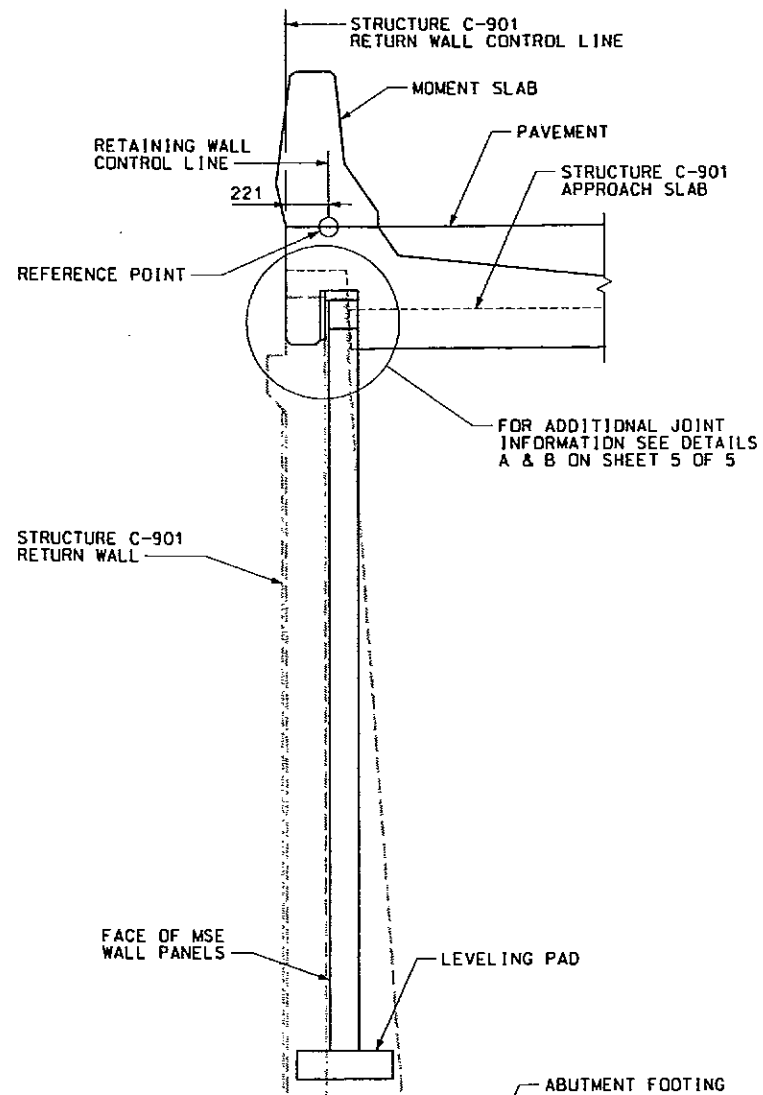




PLAN



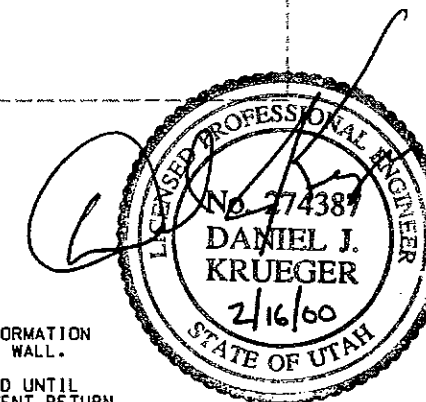
ELEVATION



SECTION A-A

NOTES:

1. SEE STRUCTURE C-901 PLANS FOR ADDITIONAL INFORMATION CONCERNING APPROACH SLAB AND ABUTMENT RETURN WALL.
2. THE RETAINING WALL PANELS SHALL NOT BE PLACED UNTIL AT LEAST 14 DAYS AFTER STRUCTURE C-901 ABUTMENT RETURN WALL POUR.
3. THE STRUCTURE C-901 APPROACH SLAB SHALL NOT BE PLACED UNTIL THE RETAINING WALL PRIMARY SETTLEMENT HAS BEEN COMPLETED.
4. THE MOMENT SLAB SHALL NOT BE CONSTRUCTED UNTIL AT LEAST 7 DAYS AFTER THE APPROACH SLAB POUR.



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RETAINING WALL / STRUCTURE C-901 JOINT DETAILS

UTAH DEPARTMENT OF TRANSPORTATION		REVIEW		DATE	
URS Greiner Woodward Clyde		DESIGN	CHECK	CEL	DATE
APPROVAL	DATE	DESIGN	CHECK	CEL	DATE
RECORDED	2/00	DRAWN	CER	01/00	01/00
PROJECT DESIGN ENGINEER	DATE	QUANT.	N/A	CHECK	N/A
ROADWAY DESIGN ENGINEER	DATE	QUANT.	N/A	CHECK	N/A
KIMBALL JUNCTION INTERCHANGE		RETAINING WALL R-365B		DETAILS	
SUMMIT COUNTY		R-365B		DWG. NO.	
PROJECT NUMBER		*IM-80-4(80)144		SHEET NO.	
		4 OF 5			



