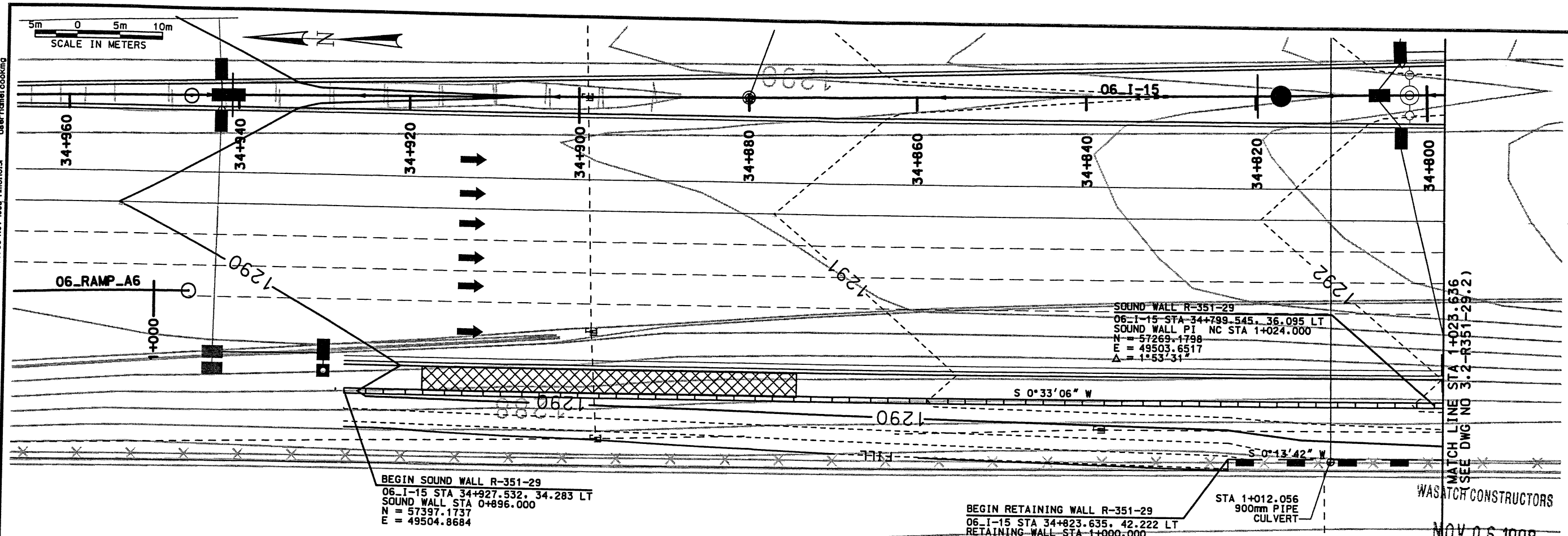
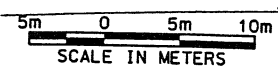


03-NOV-98 11:05:11 User: name.cooking



BEGIN SOUND WALL R-351-29
 06_I-15 STA 34+927.532, 34.283 LT
 SOUND WALL STA 0+896.000
 N = 57397.1737
 E = 49504.8684

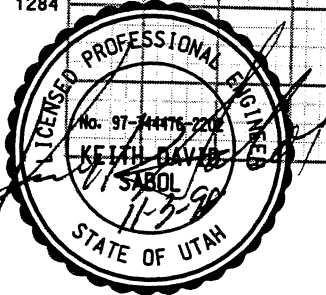
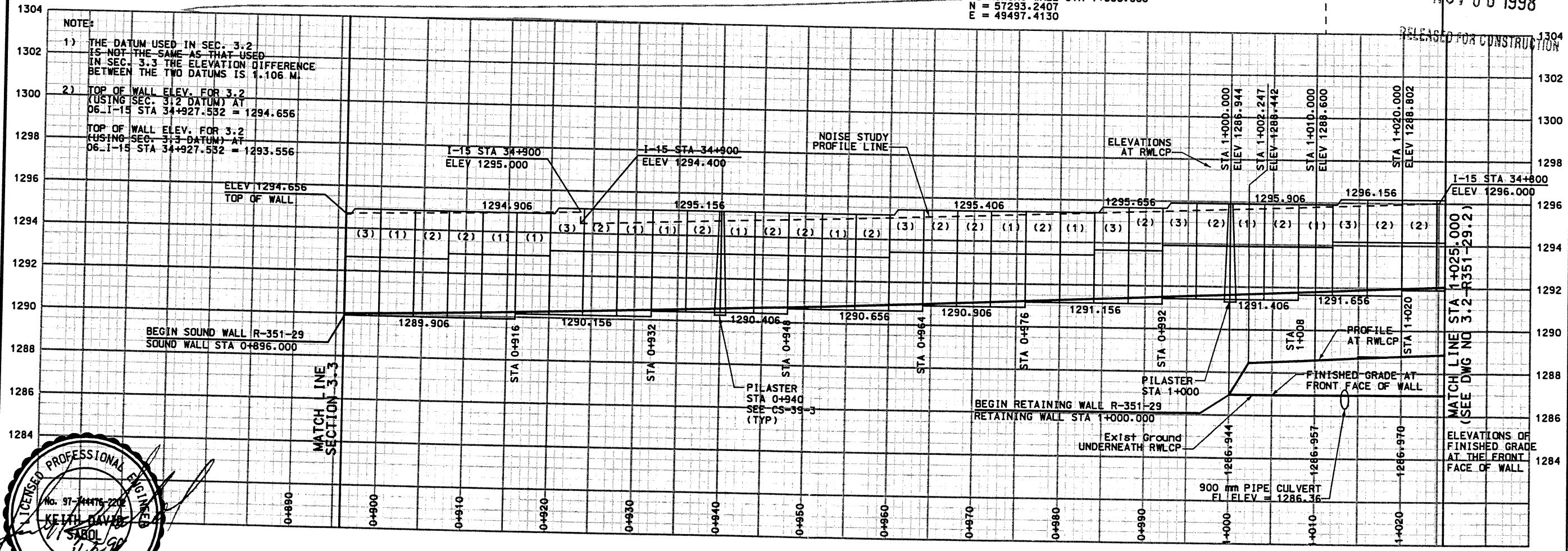
BEGIN RETAINING WALL R-351-29
 06_I-15 STA 34+823.635, 42.222 LT
 RETAINING WALL STA 1+000.000
 N = 57293.2407
 E = 49497.4130

STA 1+012.056
 900mm PIPE
 CULVERT

MATCH LINE STA 1+025.636
 (SEE DWG NO 3.2-R351-29.2)

NOV 06 1998
 WASATCH CONSTRUCTORS

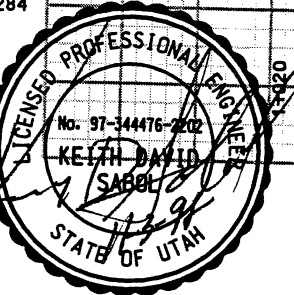
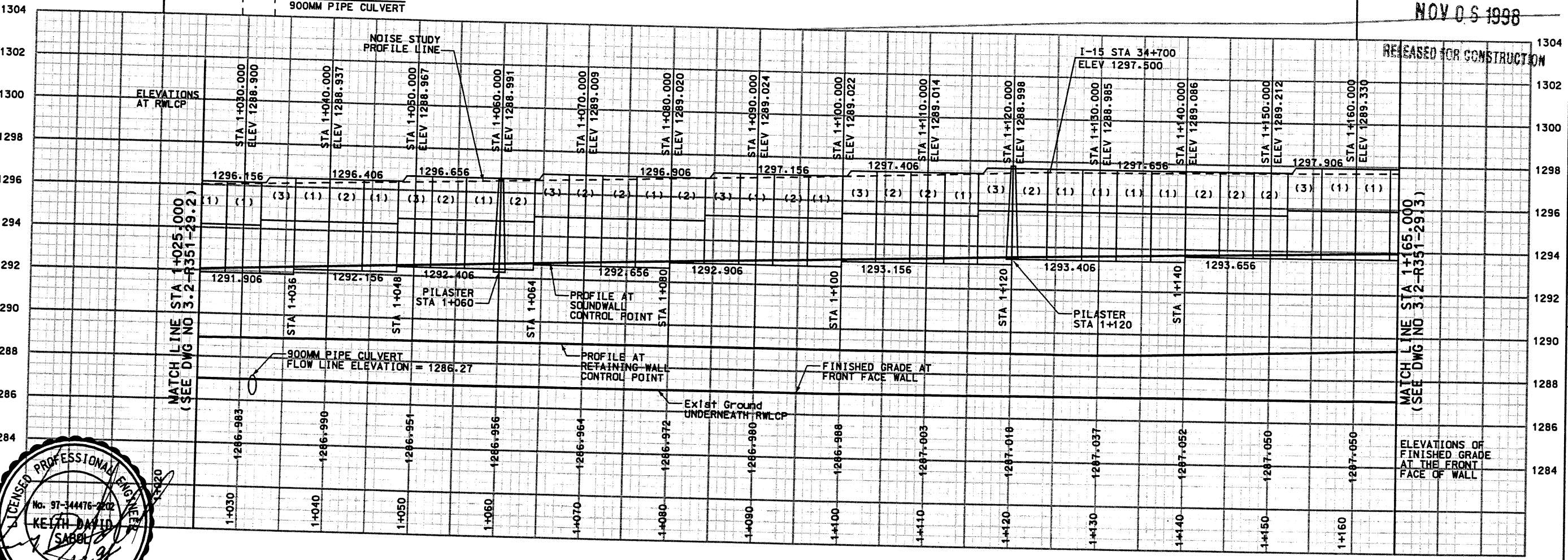
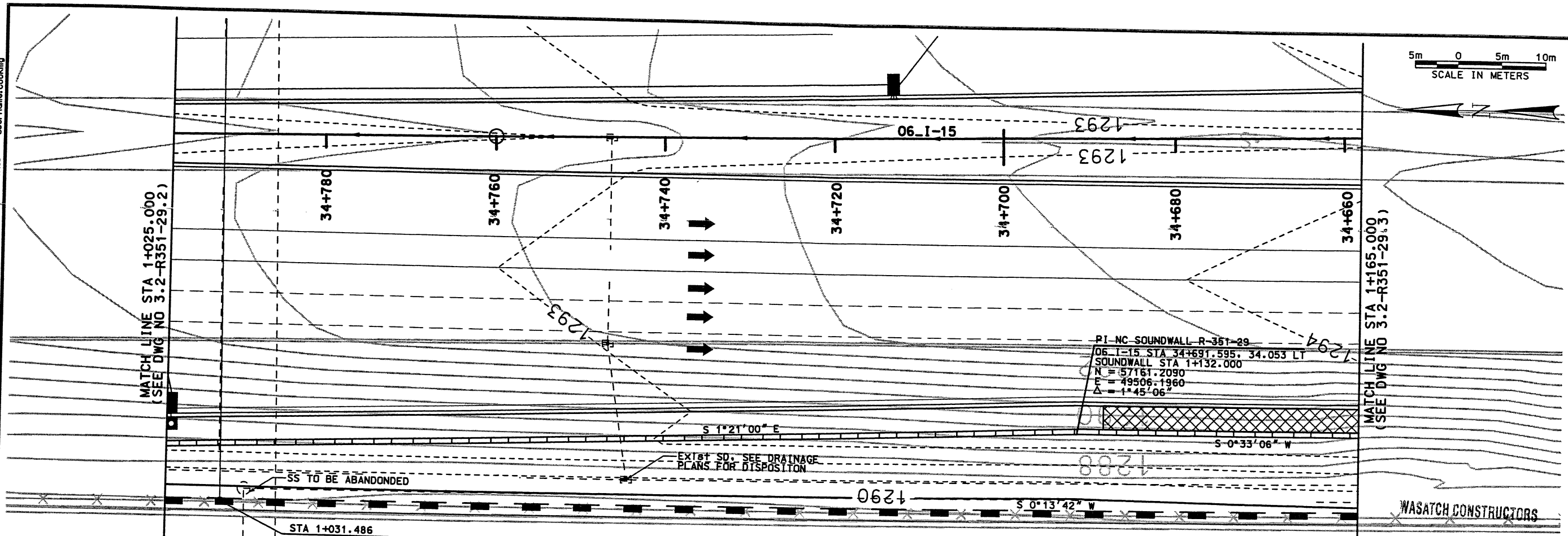
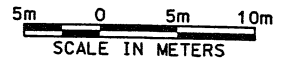
- NOTE:
- 1) THE DATUM USED IN SEC. 3.2 IS NOT THE SAME AS THAT USED IN SEC. 3.3 THE ELEVATION DIFFERENCE BETWEEN THE TWO DATUMS IS 1.106 M.
 - 2) TOP OF WALL ELEV. FOR 3.2 (USING SEC. 3.2 DATUM) AT 06_I-15 STA 34+927.532 = 1294.656
 TOP OF WALL ELEV. FOR 3.2 (USING SEC. 3.3 DATUM) AT 06_I-15 STA 34+927.532 = 1293.556



WALL R-351-29
 VIEW IS FRONT FACE OF WALL

APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	NO.	DATE
1	11/03/98	1	11/03/98
RELEASED FOR CONSTRUCTION		RELEASED FOR CONSTRUCTION	
UTAH DEPARTMENT OF TRANSPORTATION		SVERDRUP/DE LEUIW	
I-15 CORRIDOR RECONSTRUCTION		SECTION 3.2	
1+100 SITUATION & LAYOUT		SECTION 3.2	
PROJECT NUMBER #SP-15-7(135)296		PROJECT NUMBER #SP-15-7(135)296	
SALT LAKE COUNTY		SALT LAKE COUNTY	
DWG. NO. 3.2-R351-29.1		DWG. NO. 3.2-R351-29.1	
SHT. 1 OF 12		SHT. 1 OF 12	

Date: 03-NOV-98 Time: 10:55 User: name.cooking



WALL R-351-29
VIEW IS FRONT FACE OF WALL

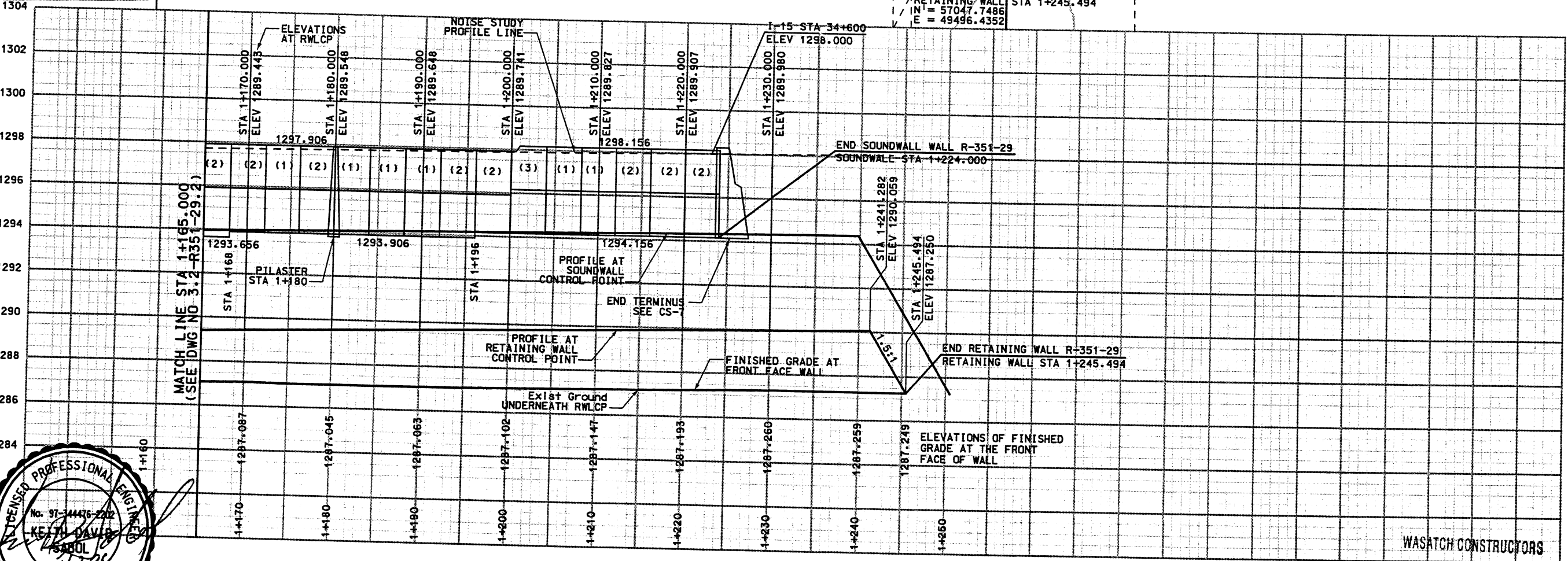
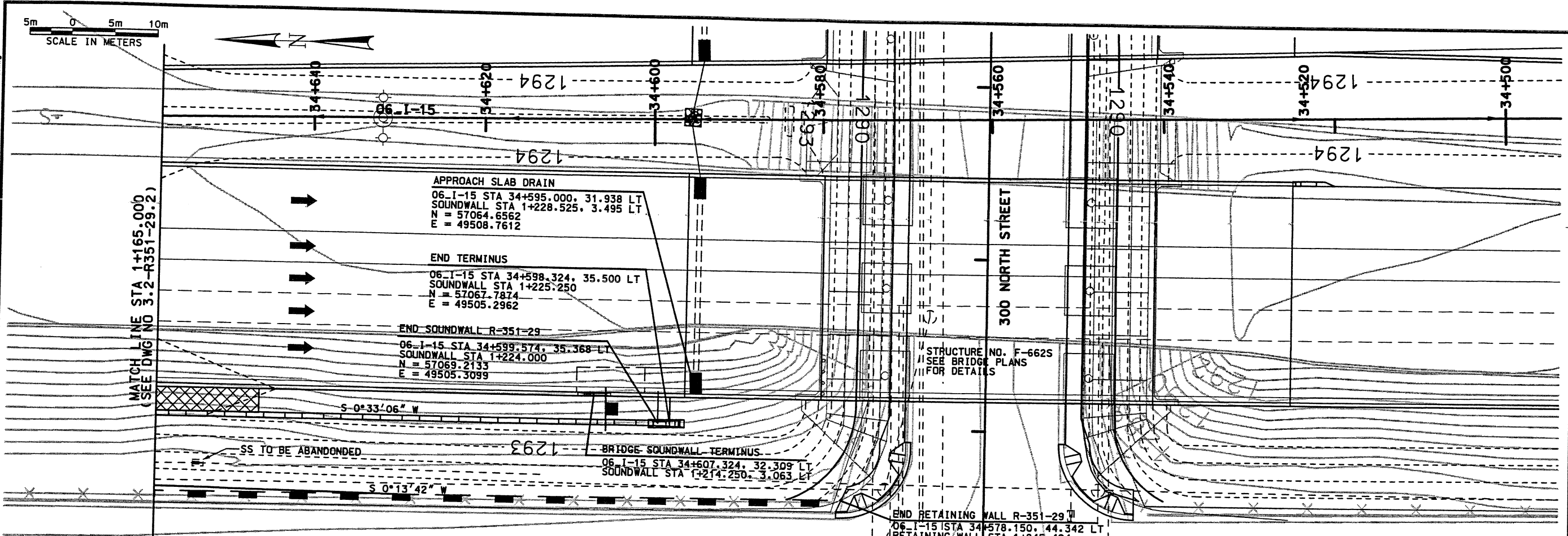
APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	11/03/98 RELEASE FOR CONSTRUCTION	
I-15 CORRIDOR RECONSTRUCTION		SVERDRUP/DE LEUW	
SITUATION & LAYOUT		SECTION 3.2	
PROJECT NUMBER *SP-15-7(135)296		QUANT.	
SALT LAKE COUNTY		3213411	
DWG. NO. 3.2-R351-29.2		CHECK MC 11/03/98	
APPROVAL DATE 11/03/98		DESIGN PLC 11/03/98	
PROJECT DESIGN ENGINEER MARVIN COOK		CHECK PLC 11/03/98	
APPROVED DATE 11/03/98		DRAWN SVD 11/03/98	
SECTION MANAGER KEITH SABOL		CHECK PLC 11/03/98	

NOV 05 1998
RELEASED FOR CONSTRUCTION
WASATCH CONSTRUCTORS

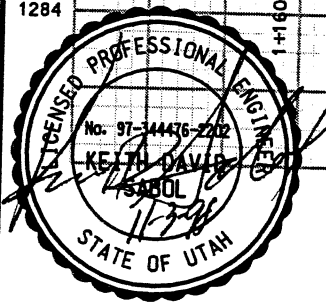
Filename: g:\dgn\115_cood\106_97\atheet_files\wdr\106_wal_29b.dgn

Date: 03-NOV-1998 Time: 09:30 User: rname: cooking

SCALE IN METERS
0 5m 10m



File name: o:\dgn\115_cadd\06_97\sheet_files\wall_06_wall_29.dgn

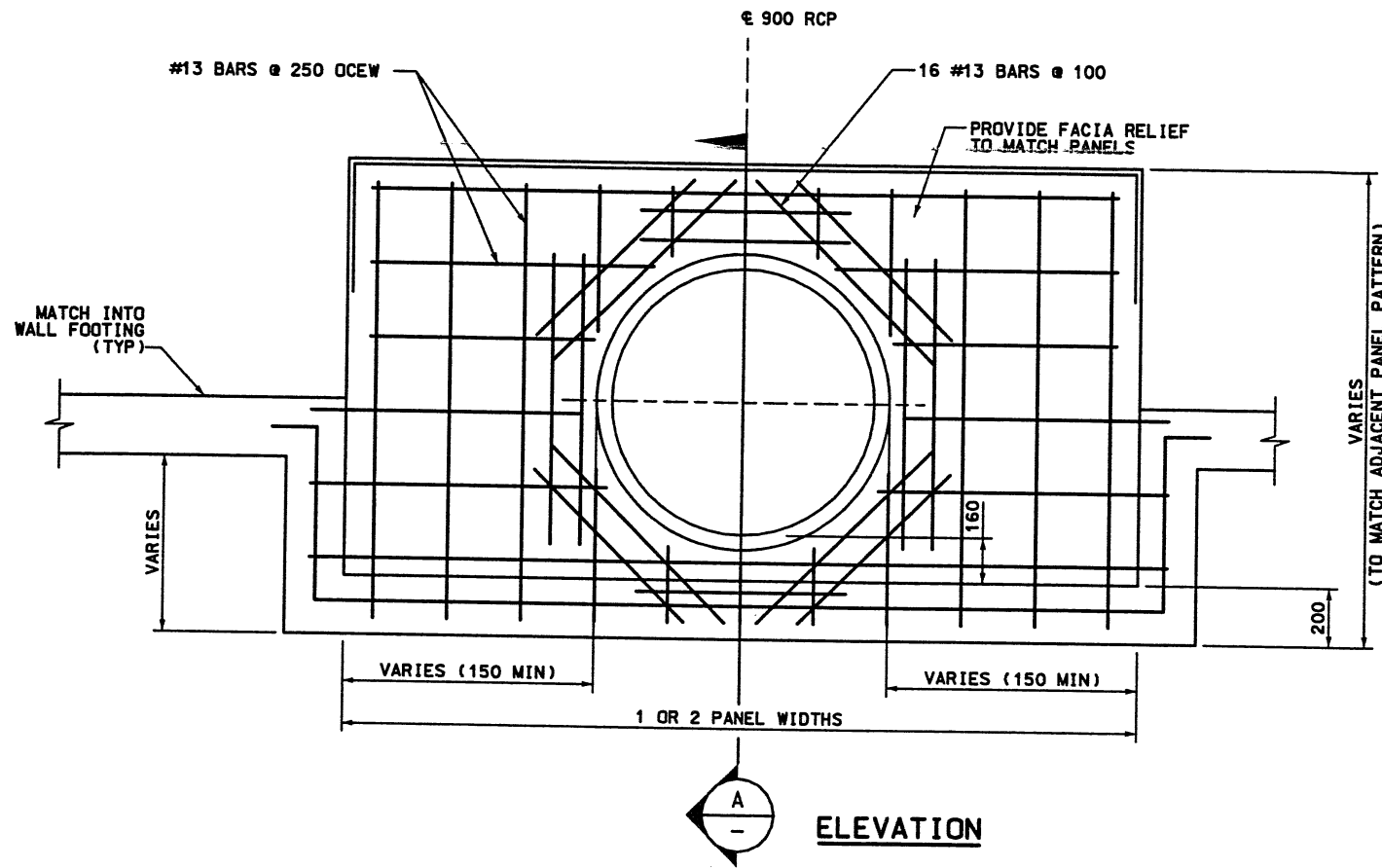


WALL R-351-29
VIEW IS FRONT FACE OF WALL

NOV 06 1998

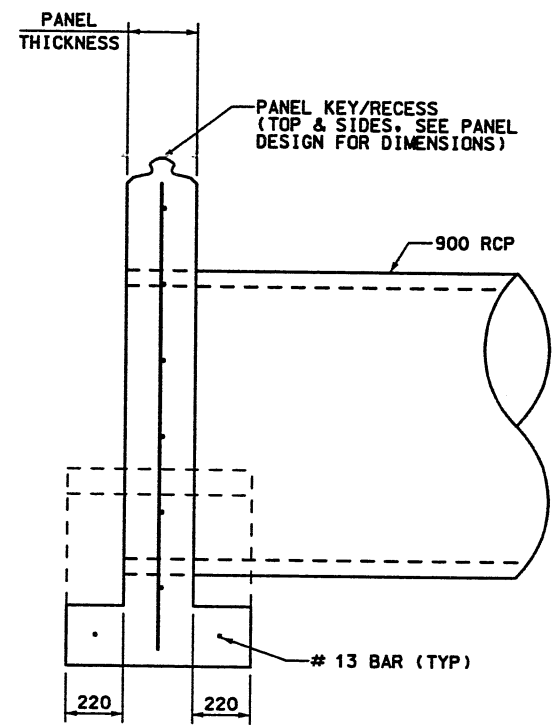
RELEASED FOR CONSTRUCTION

APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	NO.	DATE
1	11/03/98		
		RELEASE FOR CONSTRUCTION	
UTAH DEPARTMENT OF TRANSPORTATION		SVERDRUP/DE LEUW	
I-15 CORRIDOR RECONSTRUCTION		SECTION 3.2	
SITUATION & LAYOUT		PROJECT NUMBER *SP-15-7(135)296	
DESIGNER		CHECKER	
MARVIN COOK	MC	11/03/98	11/03/98
PROJECT DESIGN ENGINEER	PLC	11/03/98	11/03/98
DATE	DATE	QUANT.	QUANT.
11/03/98	11/03/98	3213411	
APPROVED 11/03/98	DATE	SECTION MANAGER	CHECK
		KEITH SABOL	
WASATCH CONSTRUCTORS			
SALT LAKE COUNTY			
DWG. NO. 3.2-R351-29.3			



ELEVATION

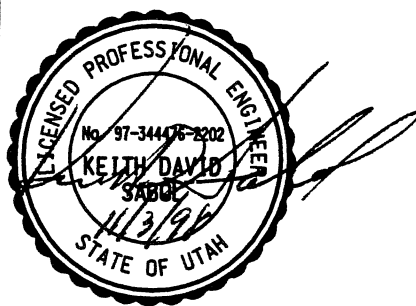
HEADWALL FOR 900mm CULVERT
NTS



SECTION A

- NOTE:**
- 1) ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE INDICATED.
 - 2) FORTY SIX KILOGRAMS OF STEEL REQUIRED PER HEADWALL.
 - 3) ONE AND SIX TENTHS CUBIC METERS OF CONC REQD PER HEADWALL.

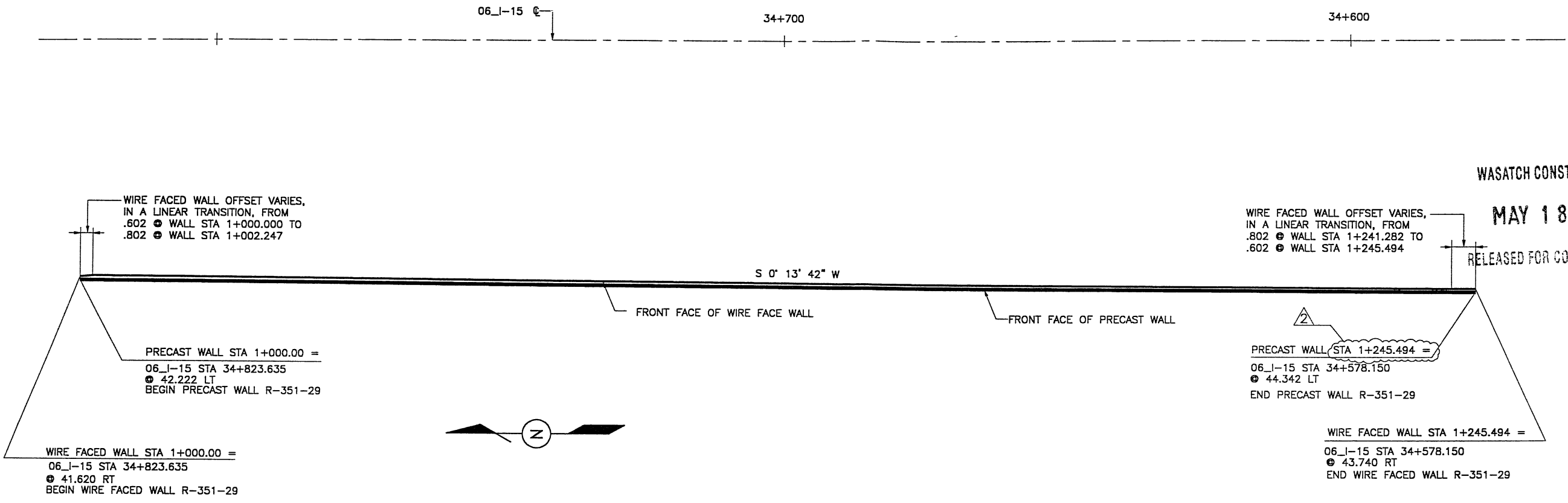
WASATCH CONSTRUCTORS
NOV 05 1998
RELEASED FOR CONSTRUCTION



APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	NO.	DATE
A	11/03/98		RELEASE SOUNDWALL
UTAH DEPARTMENT OF TRANSPORTATION		SVERDRUP/DE LEUW	
STANDARD SINGLE HEADWALL		DESIGN EJD	CHECK KT
SECTION 3.2		11/03/98	11/03/98
PROJECT NUMBER #SP-15-7(135)296		DRAWN RL	CHECK EGN
		11/03/98	11/03/98
		QUANT.	CHECK
		3213411	
I-15 CORRIDOR RECONSTRUCTION		APPROVED 11/03/98	
DATE		DATE	
11/03/98		11/03/98	
EVAN G. NIXON		KEITH SABOL	
PROJECT DESIGN ENGINEER		SECTION MANAGER	
SALT LAKE COUNTY		DWG. NO.	
3.2-3351-29-4A		SHT. 5 OF 12	

FINAL PLT 04-10-00
 H:\RE_EARTH\PROJECT\239-0007\1998\65-
 S\65-29\SUBMITL-1\RE-1
 E (X-UTAH.DWG)
 XRET

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲	10-19-98	RELEASE FOR 1ST STAGE CONST. ONLY
▲	04-07-00	RELEASE FOR 2nd. STAGE CONSTRUCTION



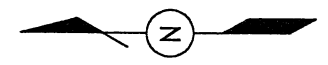
WASATCH CONSTRUCTORS
 MAY 18 2000
 RELEASED FOR CONSTRUCTION

DES.	DRN.	CHK.	RETAINED EARTH™
MM	RSW	MM	
10-02-98	10-02-98	10-02-98	

VSL CORPORATION
 2940 Plaza Place, Suite 200
 Raleigh, NC 27617
 Telephone: (919) 781-6372
 Fax: (919) 781-4889



ATLANTA, GA / DALLAS, TX / RALEIGH, NC (CORPORATE OFFICE)
 MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA



PLAN VIEW MSE WALL "R-351-29"

SCALE: 1:400 (FULL SIZE)
 SCALE: 1:800 (HALF SIZE)

DESIGN PARAMETERS
ANGLE OF INTERNAL FRICTION (SELECT) = 34°
ANGLE OF INTERNAL FRICTION (BASE) = 34°
ANGLE OF INTERNAL FRICTION (RANDOM) = 34°
UNIT WEIGHT BACKFILL = 135 PCF. (21.2 KN/M ³)
TRAFFIC SURCHARGE = 250 PSF
SEISMIC ACCELERATION COFF. = 0.27g 50 YR
DESIGN CRITERIA
SAFETY FACTOR (OVERTURNING) = 2.0
SAFETY FACTOR (SLIDING) = 1.5
SAFETY FACTOR (PULLOUT) = 1.5
DESIGN LIFE = 75 YEARS

RETAINED EARTH INDEX	
RE-1	PLAN WIRE FACED WALL R-351-29, NOTES & DESIGN CRITERIA
RE-2	TYPICAL CROSS SECTION
RE-3	TYPICAL CROSS SECTION @ WIRE FACE WALL
RE-4	WIRE FACED WALL R-351-29
RE-5	WIRE FACED WALL R-351-29
RE-6	WIRE FACED WALL R-351-29
RE-7	WIRE FACED WALL R-351-29
RE-8	PRECAST WALL R-351-29
RE-9	PRECAST WALL R-351-29
RE-10	SPECIAL PANEL DETAILS
RE-11	SPECIAL PANEL DETAILS

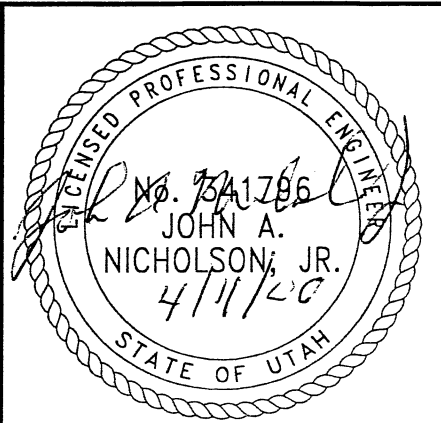
NOTE
 THE WALL CONNECTIONS ON WALL 351-29 MAY BE ROTATED A MAXIMUM OF 55° VERTICALLY (COL 1 - 81). SEE DETAIL "SECTION ROTATED" ON VSL STANDARD DRAWING NO. 18 FOR MORE INFORMATION.

NOTE
 BACKFILL THE WALL GAP TO AN ELEVATION EQUAL TO 1.5m ABOVE FINISHED GRADE DUE TO THE POTENTIAL FOR TRAFFIC IMPACT ON THE PRECAST WALL PANELS FROM THE ADJACENT ROADWAY. SEE VSL STANDARD DRAWING STD-20 FOR ADDITIONAL DETAILS.

2ND STAGE DESIGN
 BASED ON POST SETTLEMENT SURVEY OF THE WIRE FACE, LATERAL OUTWARD DISPLACEMENTS RANGED FROM 16mm TO 175mm MEASURED AT THE BASE OF THE WALL.

METRIC

CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS TO BE VERIFIED BY OTHERS. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

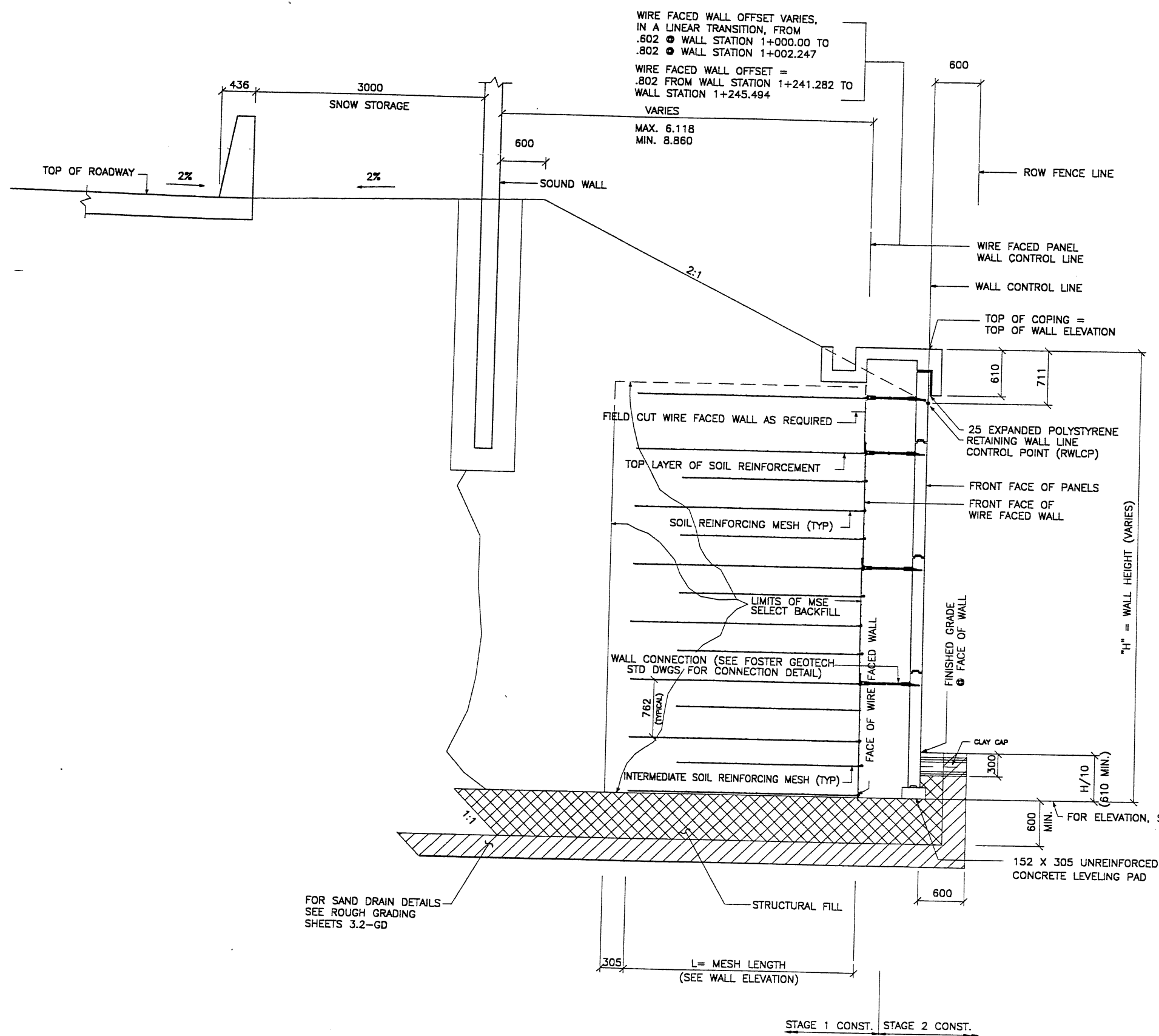


RETAINED EARTH™ WALLS
 PLAN VIEW MSE WALL "R-351-29"
 UTAH I-15 RECONSTRUCTION
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO.	3.2-R351-29.5
JOB NO.	239-0007
Sheet No.	RE-1

RFC After Final Approval

XREFE
 K-UTAH.DWG
 .WALLS\SUBMITL-1\65-29\RE-2
 H:\RE_EARTH\PROJECT\239-0007\1
 7-22-98
 FINAL PL

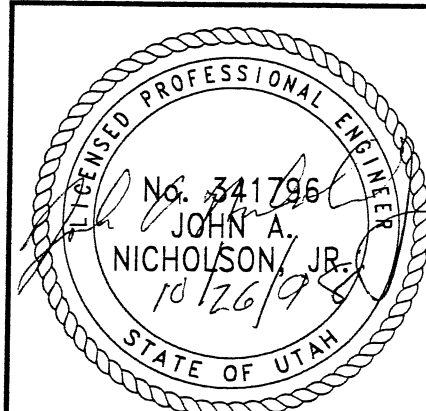


WIRE FACED WALL OFFSET VARIES,
 IN A LINEAR TRANSITION, FROM
 .802 @ WALL STATION 1+000.00 TO
 .802 @ WALL STATION 1+002.247
 WIRE FACED WALL OFFSET =
 .802 FROM WALL STATION 1+241.282 TO
 WALL STATION 1+245.494
 VARIES
 MAX. 6.118
 MIN. 8.860

SEE FOSTER GEOTECHNICAL STD DWG FOR PLACEMENT OF INTERMEDIATE SOIL REINFORCEMENT

NOTE:
 INTERMEDIATE SOIL REINFORCEMENT SHALL BE PLACED BEGINNING AT THE BOTTOM OF A WALL SECTION TO A HEIGHT ENDING 4.5M BELOW THE TOP OF COPING. IF A WALL SECTION IS LESS THAN 4.5M TALL PLACE 2 ROWS OF INTERMEDIATE SOIL REINFORCEMENT AT THE BOTTOM OF THE WALL. SEE FOSTER GEOTECHNICAL STANDARD DRAWINGS FOR PLACEMENT DETAILS.

WASATCH CONSTRUCTORS
NOV 05 1998
 RELEASED FOR CONSTRUCTION



TYPICAL CROSS SECTION
 STATION 1+000.000 TO STATION 1+245.494
 (SEE DWG NO. 3.2R-351-29.3 FOR ADDITIONAL INFORMATION)

CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

METRIC

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲	10-19-98	RELEASE FOR 1ST STAGE CONST. ONLY

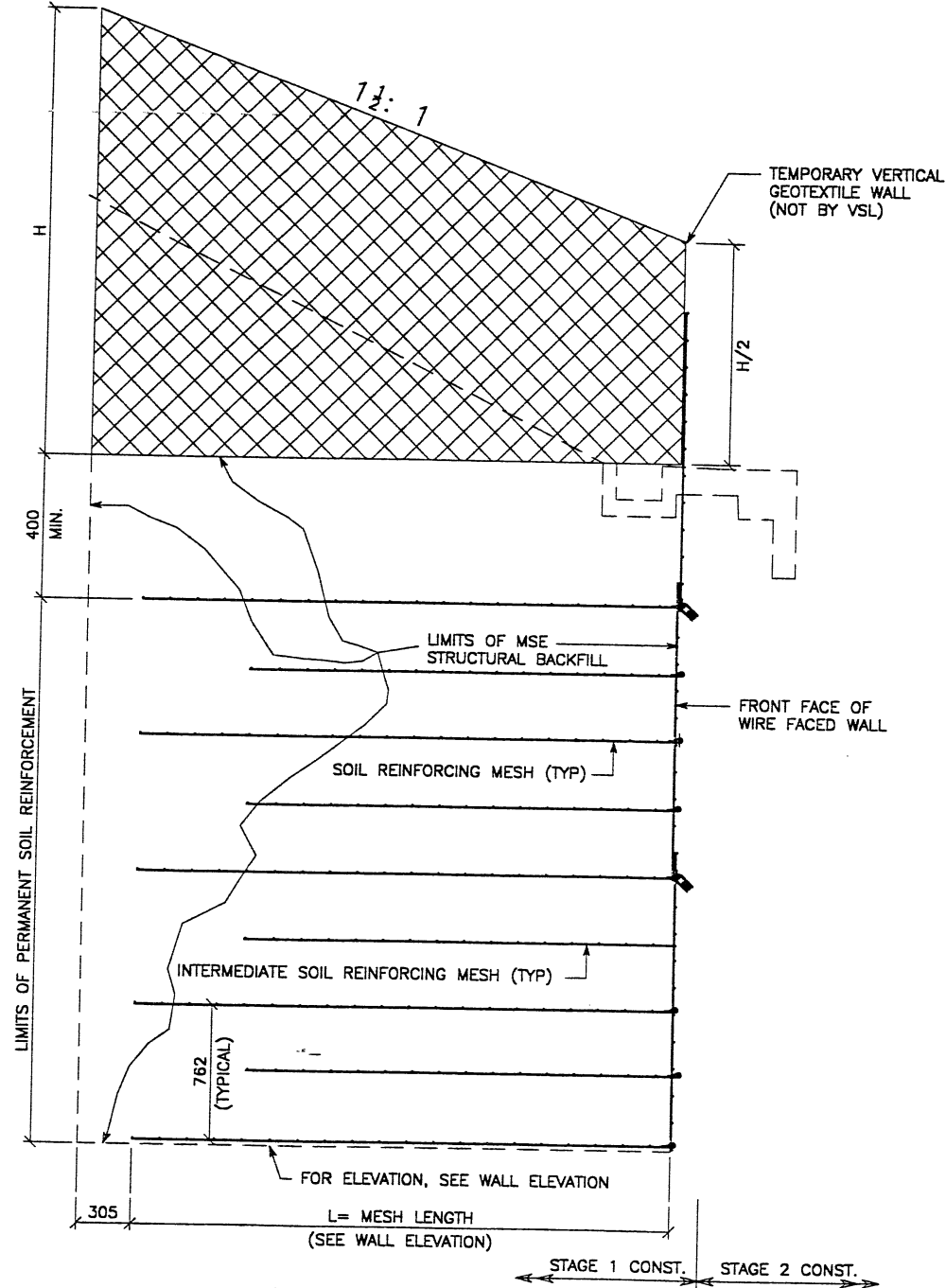
DES.	10-02-98	MM	RETAINED EARTH™	NO.		DATE		REVISION		BY	CHK
DRN.	10-02-98	RSW									
CHK.	10-02-98	MM									

VSL CORPORATION
 2600 Plaza Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-6272
 Fax: (919) 781-4989

VSL
 ATLANTA, GA / DALLAS, TX / BALTIMORE, MD (CORPORATE OFFICE)
 MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA

RETAINED EARTH™ WALLS
 WIRE FACED WALL "R-351-29"
 TYPICAL CROSS SECTION
 UTAH 1-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO. 3.2R-351-29.6
 JOB NO. 239-0007
 SH. NO. RE-2



TYPICAL CROSS SECTION
AT FINAL PHASE OF WIRE FACE WALL
 SCALE: 1:20 (FULL SIZE)
 SCALE: 1:40 (HALF SIZE)

SEE FOSTER GEOTECHNICAL STD
 DWG FOR PLACEMENT OF
 INTERMEDIATE SOIL REINFORCEMENT

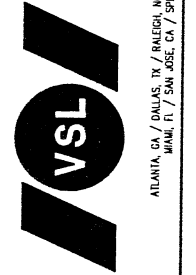
NOTE:

INTERMEDIATE SOIL REINFORCEMENT SHALL BE PLACED BEGINNING AT THE BOTTOM OF A WALL SECTION TO A HEIGHT ENDING 4.5M BELOW THE TOP OF COPING. IF A WALL SECTION IS LESS THAN 4.5M TALL PLACE 2 ROWS OF INTERMEDIATE SOIL REINFORCEMENT AT THE BOTTOM OF THE WALL. SEE FOSTER GEOTECHNICAL STANDARD DRAWINGS FOR PLACEMENT DETAILS.

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	10-19-98	RELEASE FOR 1ST STAGE CONST. ONLY

DES.	MM	RSW	MM	REVISION
10-02-98	MM	RSW	MM	
10-02-98	RSW	MM		
10-02-98	MM			

VSL CORPORATION
 2840 Plaza Place, Suite 200
 Raleigh, NC 27617 781-8272
 Telephone: (919) 781-8272
 Fax: (919) 781-8869

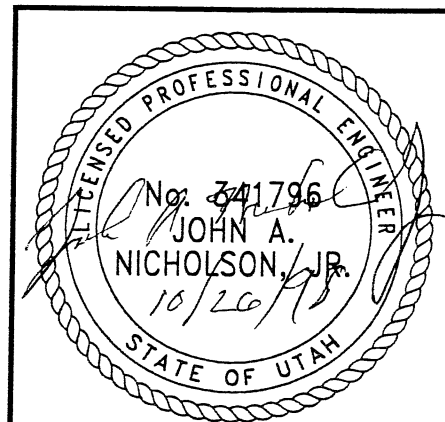


VSL Corporation VSL's
 design is a strict liability
 professional engineering
 service. VSL's design
 information is for
 reference only. VSL
 does not warrant or
 represent that the
 information is true or
 correct. VSL's liability
 is limited to the
 design services provided.
 VSL DISCLAIMS LIABILITY
 THEREFOR.

WASATCH CONSTRUCTORS

NOV 06 1998

RELEASED FOR CONSTRUCTION



METRIC

CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

RETAINED EARTH™ WALLS
 WIRE FACED WALL "R-351-29"
 TYPICAL SECTIONS @ WIRE FACED WALL
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO.	3.2R-351-29.7
JOB NO.	239-0007
SHT. NO.	RE-3

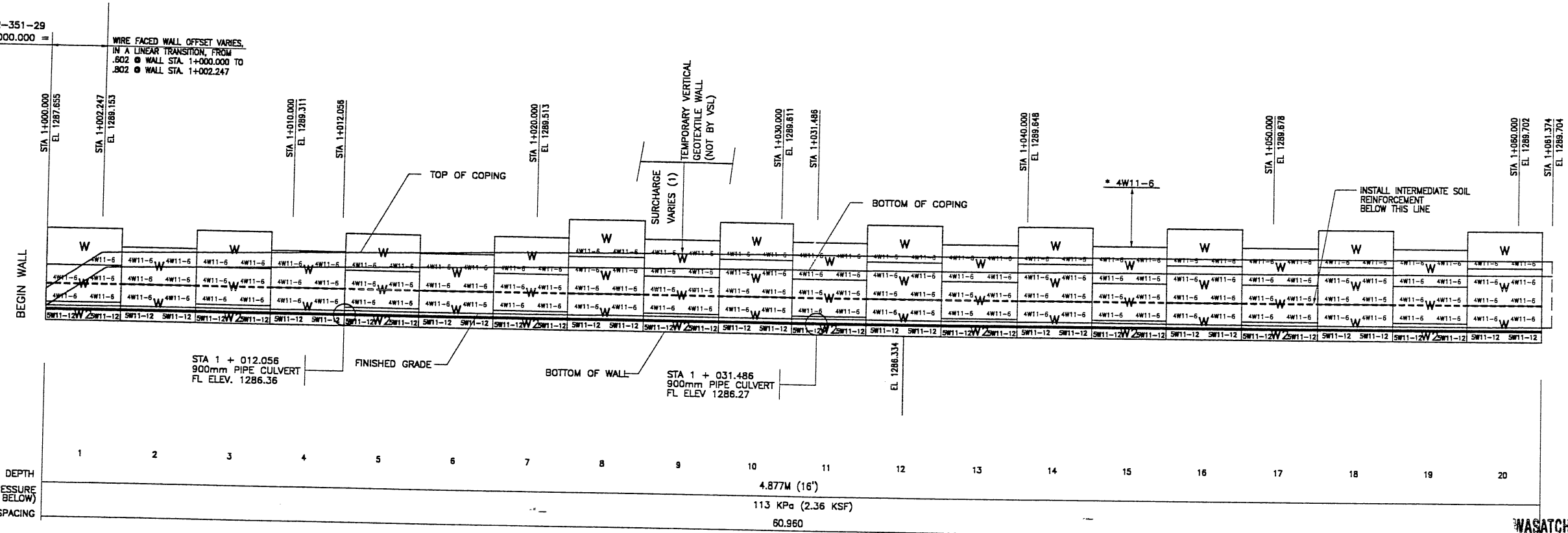
UTAH.DWG
XREFET
TL-1\65-29.DWG
H:\RE_EARTH\PROJECT\239-0007\1998\65-WALLS\65.
7-02-98
FINAL PI

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△ 10-19-98		RELEASE FOR 1ST STAGE CONST. ONLY

NO.	DATE	REVISION

BEGIN WIRE FACED WALL R-351-29
WIRE FACED WALL STA 1+000.000 =
06_1-15 STA 34+823.635
● 42.222 LT

WIRE FACED WALL OFFSET VARIES
IN A LINEAR TRANSITION, FROM
.802 @ WALL STA. 1+000.000 TO
.802 @ WALL STA. 1+002.247



MESH DEPTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
MAXIMUM BEARING PRESSURE (SEE NOTE BELOW)										4.877M (16')										
PIN SPACING										113 KPa (2.36 KSF)										

NOTE: FIELD CUT THE WIRE FACING GRID TO ALLOW THE PIPES TO PASS THROUGH THE WALL. ANY SOIL REINFORCEMENT THAT IS OBSTRUCTED BY THE PIPE SHALL BE RELOCATED DIRECTLY ADJACENT TO THE PIPE.

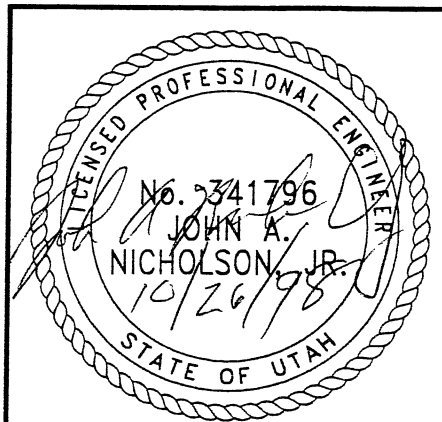
* INDICATES SOIL REINFORCING TYPE MESH TO BE USED ON ADDITIONAL WIRE WALL FACING ADDED AFTER SETTLEMENT.

(1) SEE WOODWARD-CLYDE MEMORANDUM 3.2.45C TABLE B.2.7

RETAINING WALL "R-351-29" - 1ST STAGE: WIRE FACED WALL
(FRONT FACE SHOWN)
(TOTAL SURFACE AREA OF FACING = 1062.32 SM)
SCALE 1:100 (FULL SIZE)
SCALE 1:200 (HALF SIZE)

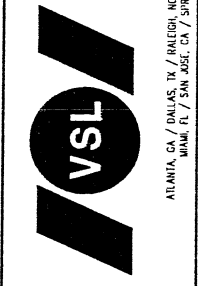
METRIC

CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.



WASATCH CONSTRUCTORS
NOV 06 1998
RELEASED FOR CONSTRUCTION

VSL CORPORATION
2840 Piedmont Ave., Suite 200
Durham, NC 27704
Tel: (919) 781-8272
Fax: (919) 781-1689



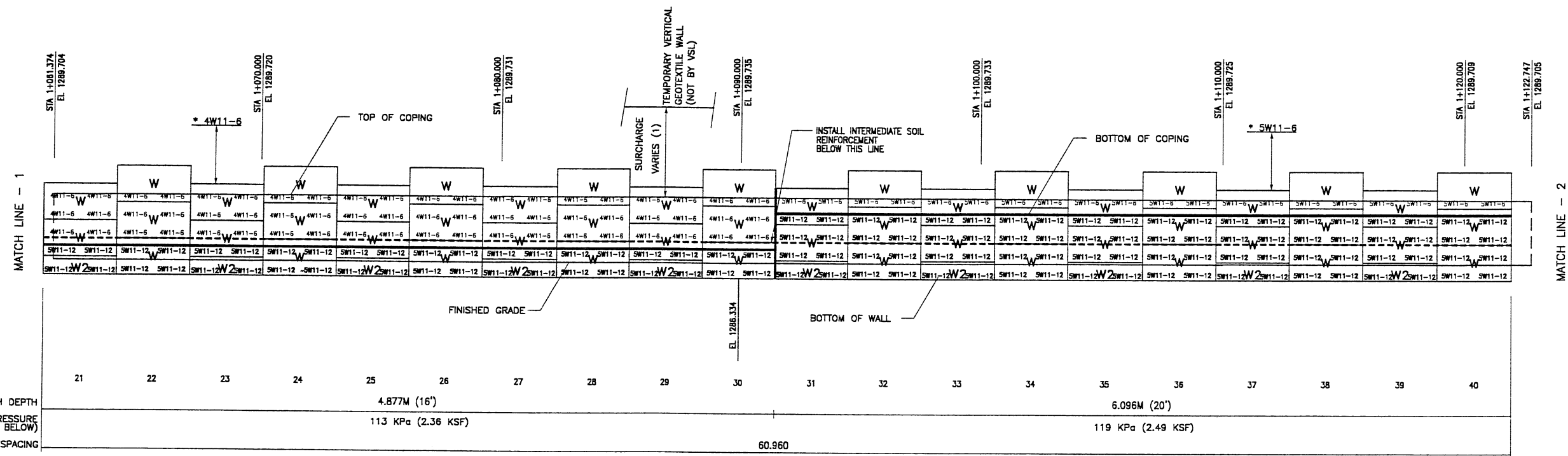
VSL Corporation (VSL) is a registered trademark of VSL Corporation. All rights reserved. The use of the VSL logo and name is prohibited without the written consent of VSL Corporation. Any unauthorized use of the VSL logo and name is strictly prohibited and will be prosecuted to the fullest extent of the law.

RETAINED EARTH™ WALLS
WALL "R-351-29" - 1ST STAGE: WIRE FACED WALL
UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

DWG. NO.	3.2R-351-29.8
JOB NO.	239-0007
SHT. NO.	RE-4

FINAL DT 10-02-98 H:\RE_EARTH\PROJECT\239-0007\1998\65-WA\SUBMITL-1\65-29.DWG X-UTAH.DWG

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲	10-19-98	RELEASE FOR 1ST STAGE CONST. ONLY



RETAINING WALL "R-351-29" - 1ST STAGE: WIRE FACED WALL
 (FRONT FACE SHOWN) SCALE 1:100 (FULL SIZE)
 SCALE 1:200 (HALF SIZE)
 (TOTAL SURFACE AREA OF FACING = 1062.32 SM)

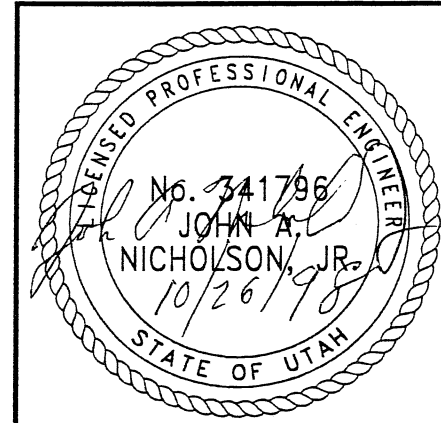
WASATCH CONSTRUCTORS
 NOV 0 6 1998
 RELEASED FOR CONSTRUCTION

* INDICATES SOIL REINFORCING TYPE MESH TO BE USED ON ADDITIONAL WIRE WALL FACING ADDED AFTER SETTLEMENT.
 (1) SEE WOODWARD-CLYDE MEMORANDUM 3.2.45C TABLE 8.2.7

NOTE: THE INDICATED MAXIMUM BEARING PRESSURES AT FINAL STAGE FOR STATIC LOAD CONDITION.

METRIC

CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.




DES.	MM	DIRN	RSW	CHK	MM	NO.	DATE	REVISION	BY	CHK
VSL CORPORATION 2800 Plaza Place, Suite 200 Raleigh, NC 27612 Telephone: (919) 781-4572 Fax: (919) 781-4989	10-02-98	10-02-98	MM	RETAINED EARTH™						
<p align="center">VSL</p> <p align="center">ATLANTA, GA / DALLAS, TX / FALCON, NC (CORPORATE OFFICE) MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA</p>										
<p>RETAINED EARTH™ WALLS WALL "R-351-29" - 1ST STAGE: WIRE FACED WALL UTAH 1-15 INTERCHANGE SALT LAKE COUNTY, UTAH UTAH DEPARTMENT OF TRANSP.</p>										
<p>DWG. NO. 3.2R-351-29.9 JOB NO. 239-0007 SH. NO. RE-5</p>										

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲	10-19-98	RELEASE FOR 1ST STAGE CONST. ONLY

DES.	MM	RSW	MM	NO.	DATE	REVISION	CHK
10-02-98	MM	RSW	MM				
10-02-98	RSW						
10-02-98	MM						

VSL CORPORATION
 2800 Plaza Place, Suite 200
 Raleigh, NC 27617 Tel: 672
 Fax: (919) 781-6859

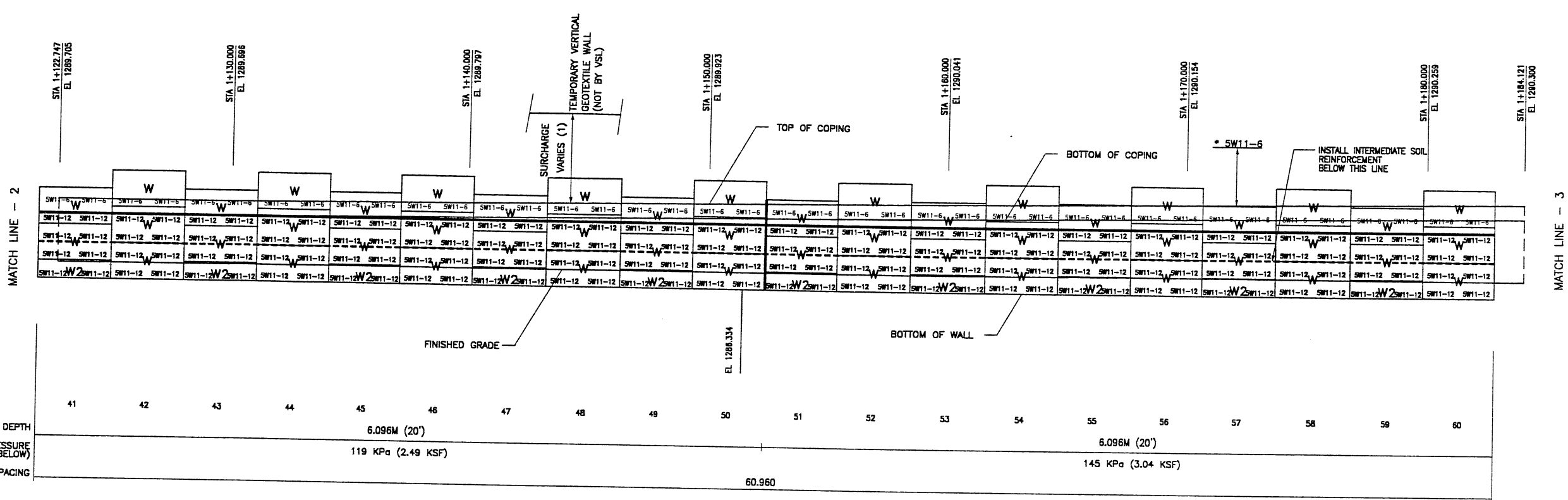


ATLANTA, GA / DALLAS, TX / RALEIGH, NC (CORPORATE OFFICE)
 MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA

VSL Corporation hereby certifies that the design shown on this drawing is the work of a duly licensed Professional Engineer in the State of Utah. The use of this design is subject to the terms and conditions of the contract. No part of this design may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without the prior written permission of VSL Corporation. Any other use is strictly prohibited and will result in the design being held liable. THEREFOR.

RETAINED EARTH™ WALLS	DWG. NO.
WALL "R-351-29" - 1ST STAGE: WIRE FACED WALL	3.2R-351-29.10
UTAH I-15 INTERCHANGE	JOB NO.
SALT LAKE COUNTY, UTAH	239-0007
UTAH DEPARTMENT OF TRANSP.	SHT. NO.
	RE-6

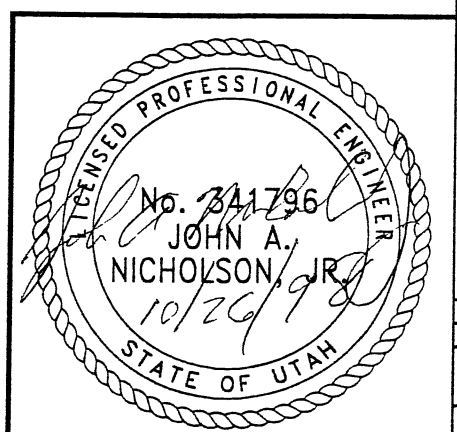
11 of 12



RETAINING WALL "R-351-29" - 1ST STAGE: WIRE FACED WALL
 (FRONT FACE SHOWN) SCALE 1:100 (FULL SIZE)
 SCALE 1:200 (HALF SIZE)

(TOTAL SURFACE AREA OF FACING = 1062.32 SM)

WASATCH CONSTRUCTORS
 NOV 06 1998
 RELEASED FOR CONSTRUCTION



* INDICATES SOIL REINFORCING TYPE MESH TO BE USED ON ADDITIONAL WIRE WALL FACING ADDED AFTER SETTLEMENT.

(1) SEE WOODWARD-CLYDE MEMORANDUM 3.2.45C TABLE B.2.7

NOTE:
 THE INDICATED MAXIMUM BEARING PRESSURES AT FINAL STAGE FOR STATIC LOAD CONDITION.

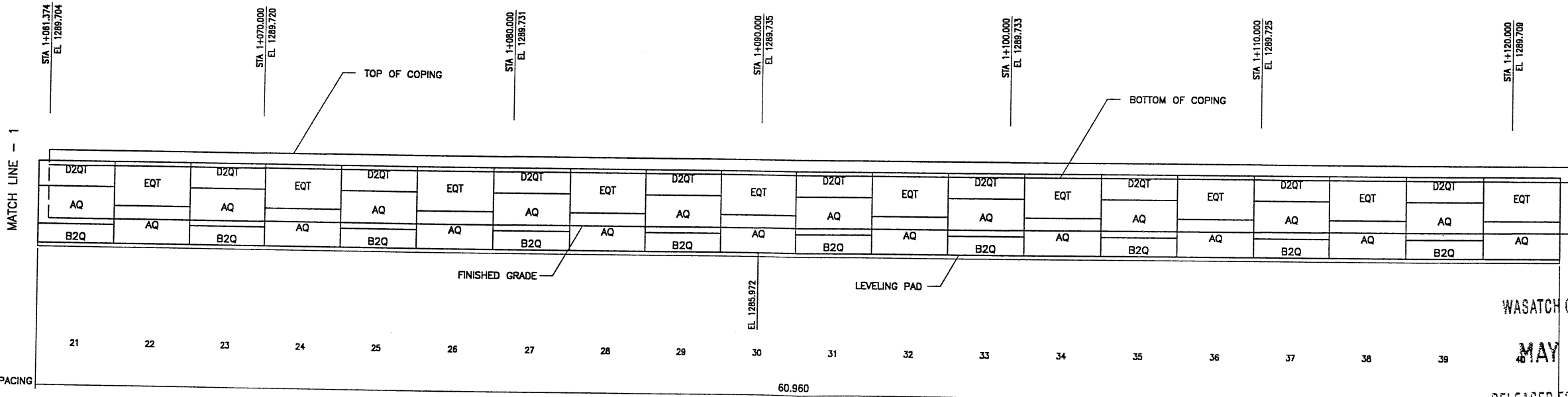
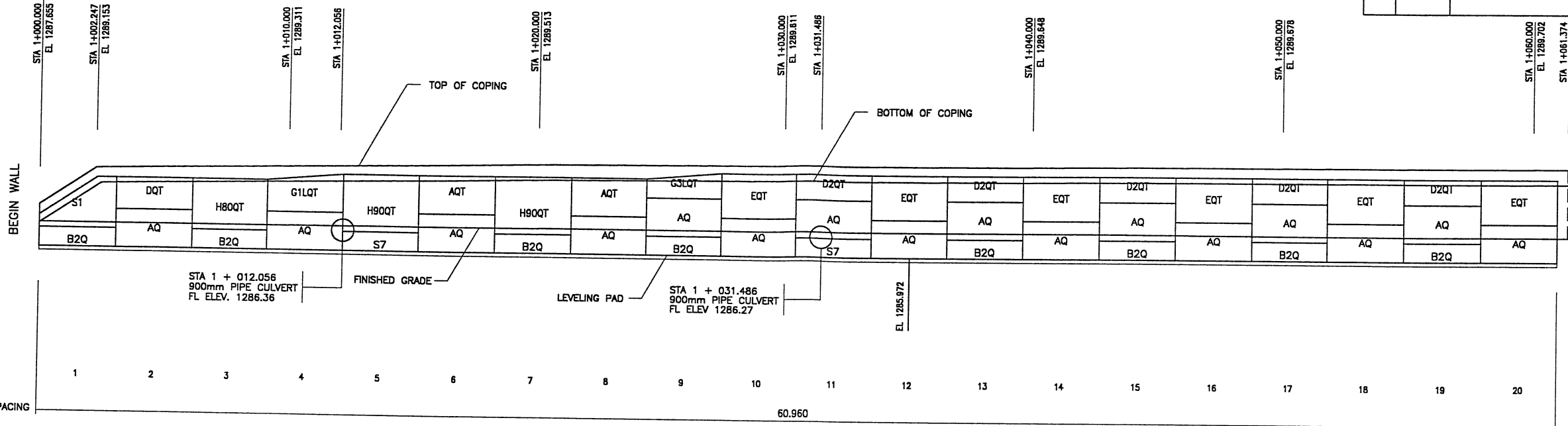
METRIC

CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

NOTE: PANELS ADJACENT TO PIPES TO BE FIELD SAW-CUT TO FIT AROUND PIPE HEADWALLS. EXPOSED REINFORCING STEEL SHALL BE CUT BACK AND PATCHED AS PER THE APPROVED PROCEDURES. IF AN ENTIRE GROUP OF CLEVIS LOOPS ON ONE SIDE OF A PANEL IS REMOVED DURING THE CUTTING AND/OR IF ANY OF THE SHEAR DOWELS IN THE BOTTOM OF THE PANELS ARE REMOVED, CONTACT FOSTER GEOTECHNICAL FOR A STRUCTURAL EVALUATION.

BEGIN PRECAST WALL R-351-29
 PRECAST WALL STA 1+000.000 =
 06_J-15 STA 34+823.635
 ● 42.222 LT

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	04-07-00	RELEASE FOR 2nd STAGE CONSTRUCTION



NO.	DATE	REVISION	BY	CHK

VSL CORPORATION
 2500 Plaza Place, Suite 200
 Raleigh, NC 27617-6272
 Tel: (919) 781-4669
 Fax: (919) 781-4669

ATLANTA, GA / DALLAS, TX / RALEIGH, NC (CORPORATE OFFICE)
 MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA

USE: CONTRACTORS (10/27)
 This drawing is the property of VSL Corporation. It is to be used only for the project and location specified herein. No part of this drawing may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of VSL Corporation. VSL Corporation shall not be liable for any errors or omissions in this drawing.

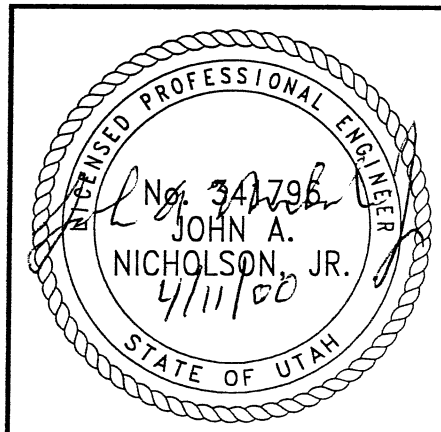
WASATCH CONSTRUCTORS
 MAY 18 2000
 RELEASED FOR CONSTRUCTION

RETAINING WALL "R-351-29" - 2nd STAGE: PRECAST WALL
 (FRONT FACE SHOWN)
 (TOTAL SURFACE AREA OF FACING = 864.35 SM)

SCALE 1:100 (FULL SIZE)
 SCALE 1:200 (HALF SIZE)

METRIC

CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS TO BE VERIFIED BY OTHERS. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.



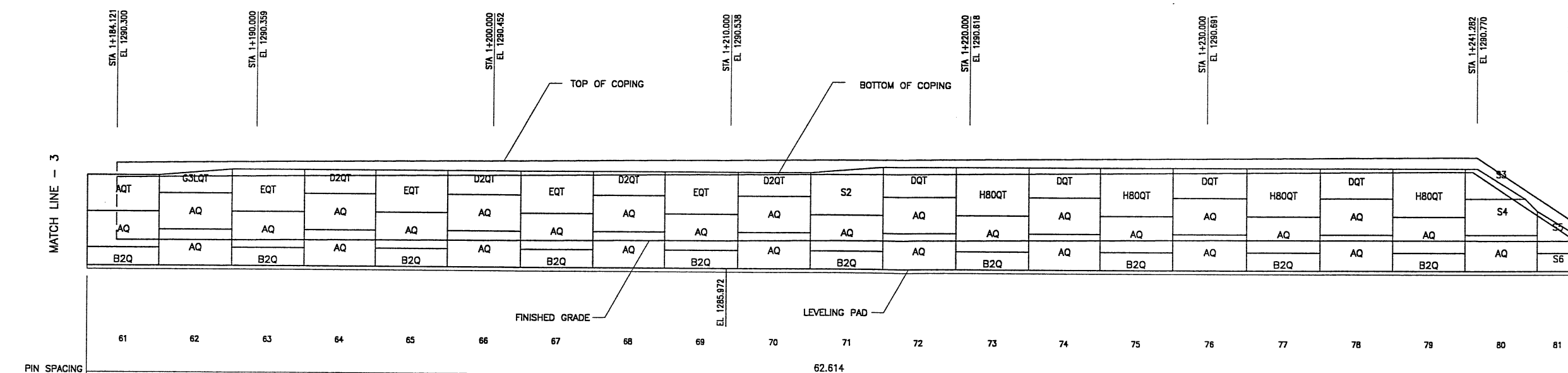
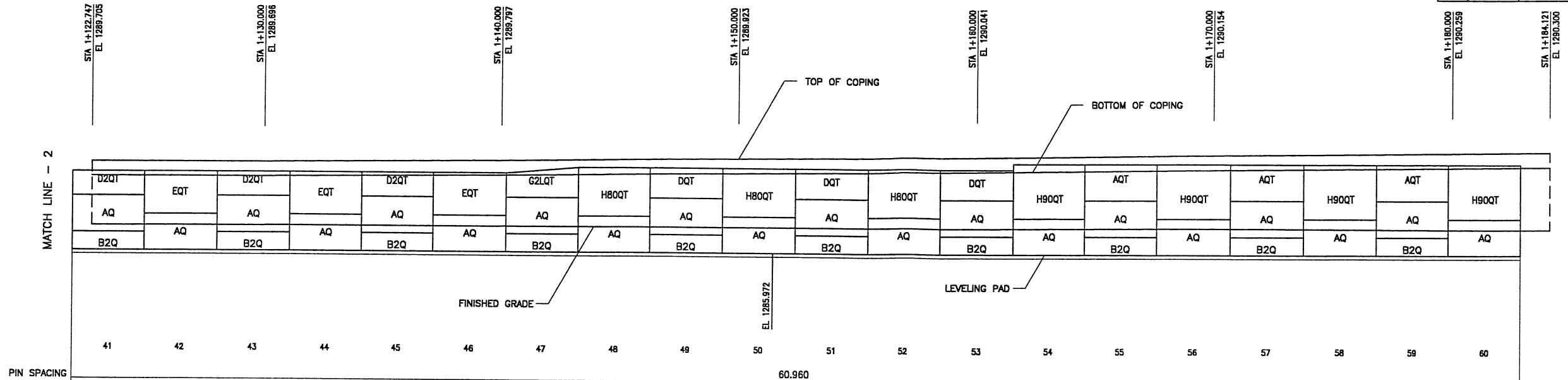
RETAINED EARTH™ WALLS WALL "R-351-29" - 2ND STAGE: PRECAST WALL	UTAH 1-15 INTERCHANGE SALT LAKE COUNTY, UTAH UTAH DEPARTMENT OF TRANSP.
DWG. NO. 3.2R-351-29.12	JOB NO. 239-0007
SHT. NO. RE-8	

RFC After Final Approval

FINAL P: 04-10-00 XRL .ICE (X-UTAH.DWG)

FINAL PLOT 04-10-00 XRE (X-UTAH.DWG)

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	04-07-00	RELEASE FOR 2nd STAGE CONSTRUCTION



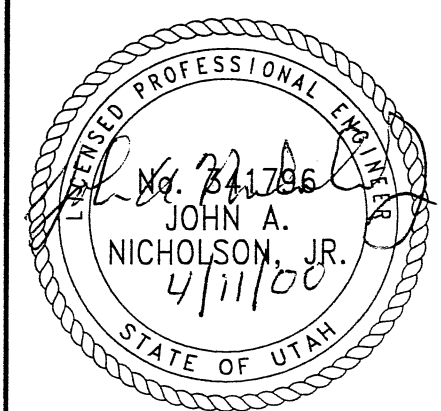
BEGIN PRECAST WALL R-351-29
 PRECAST WALL STA 1+245.494 =
 06+15 STA 34+578.150
 @ 44.342 LT

END WALL
 WASATCH CONSTRUCTORS
 MAY 18 2000
 RELEASED FOR CONSTRUCTION

RETAINING WALL "R-351-29" - 2nd STAGE: PRECAST WALL
 (FRONT FACE SHOWN)
 (TOTAL SURFACE AREA OF FACING = 864.35 SM)
 SCALE 1:100 (FULL SIZE)
 SCALE 1:200 (HALF SIZE)

METRIC

CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS TO BE VERIFIED BY OTHERS. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.



NO.	DATE	DESCRIPTION	BY	CHK

DES.	04-07-00	JN
DRN.	04-07-00	SW
CHK.	04-07-00	JN

RETAINED EARTH™

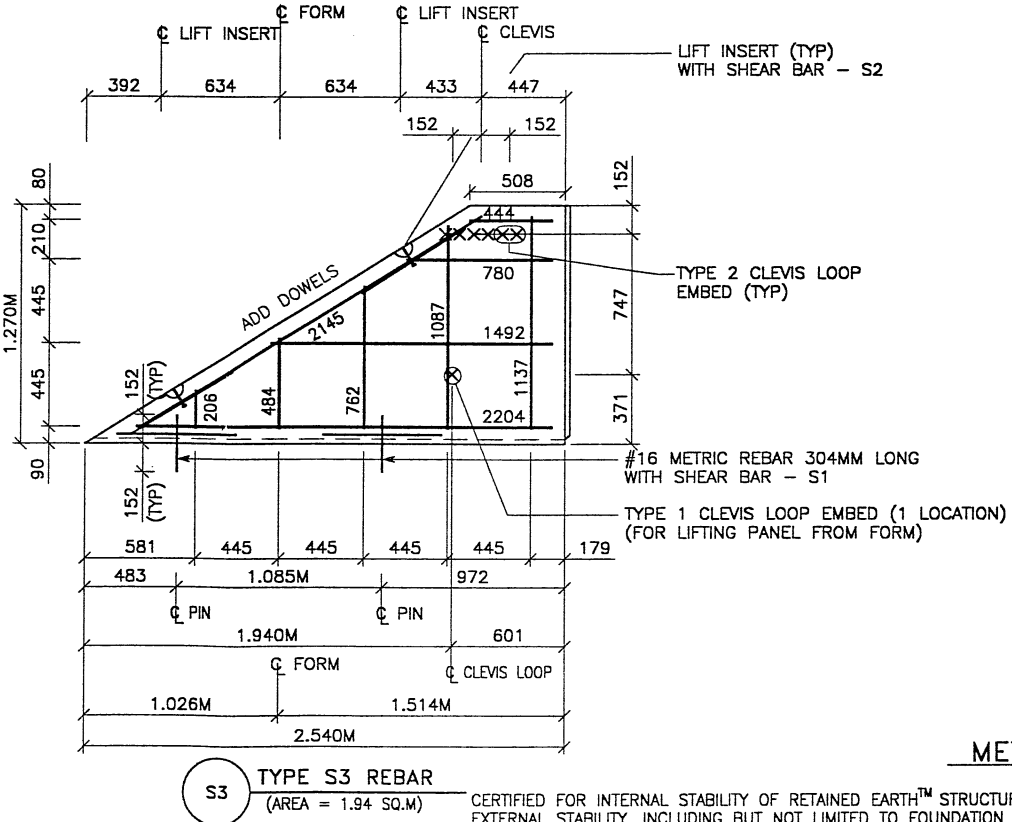
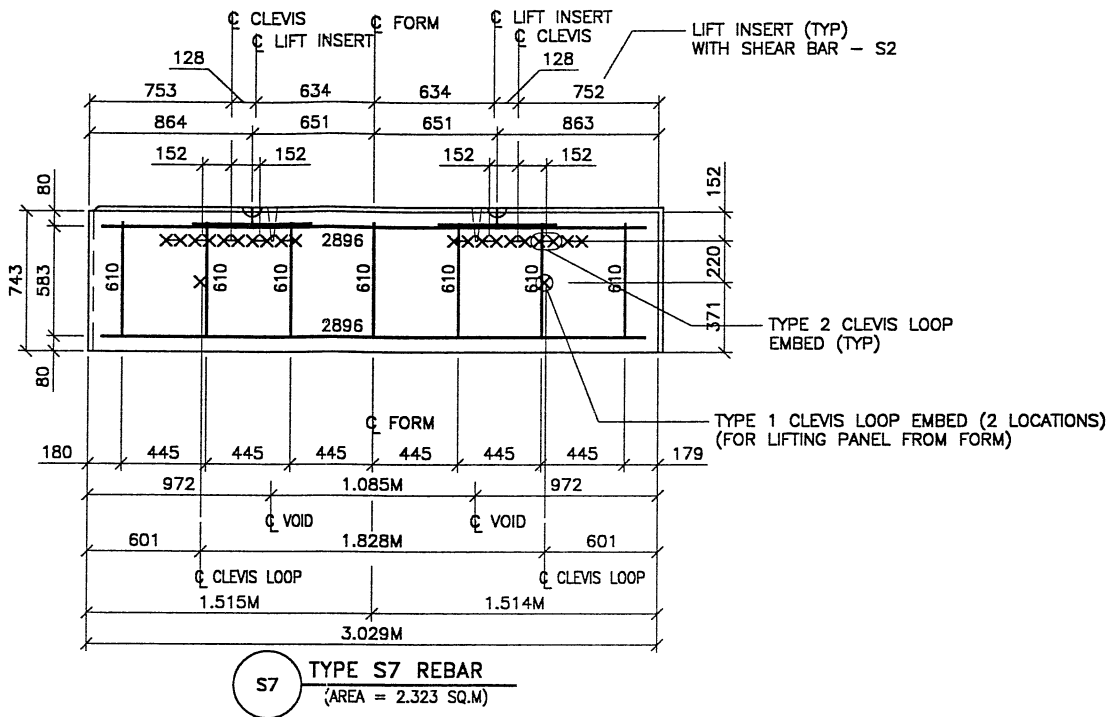
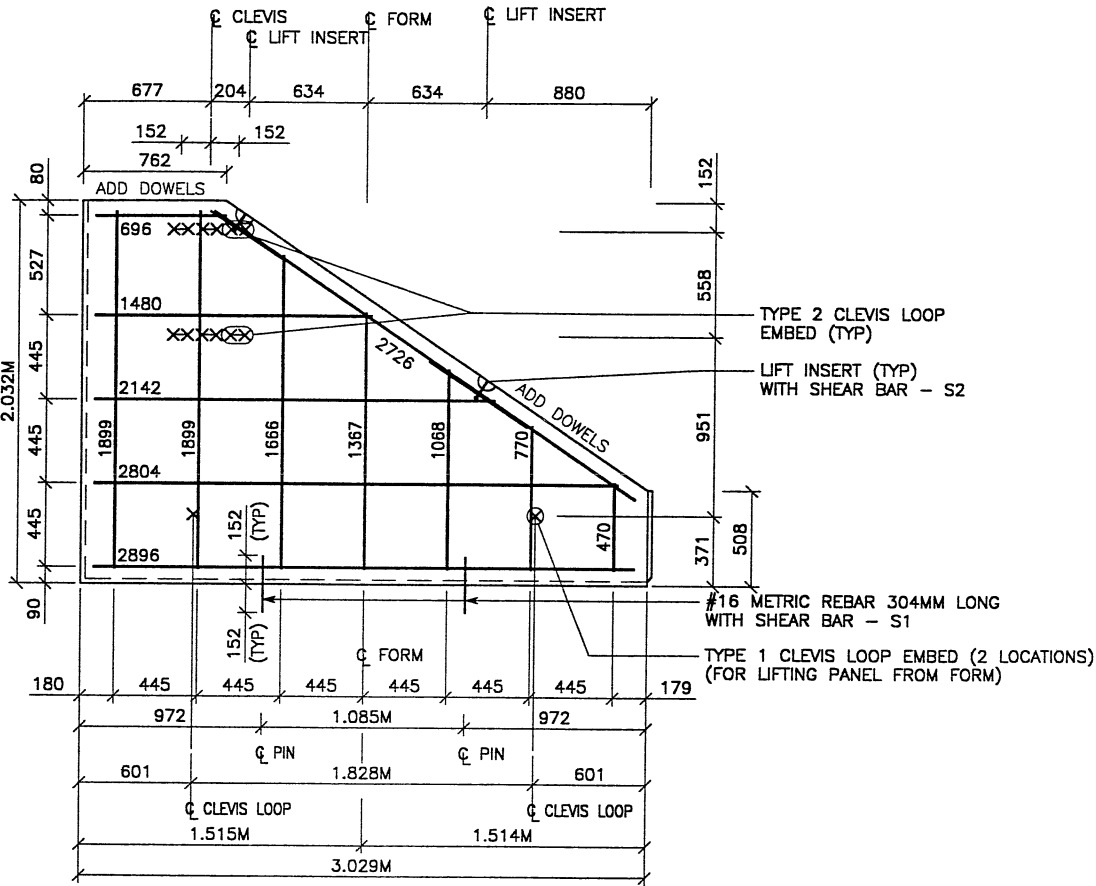
VSL CORPORATION
 2840 Plaza Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-8272
 Fax: (919) 781-4989

ATLANTA, GA / DALLAS, TX / FREDERICK, MD (CORPORATE OFFICE)
 MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA

RETAINED EARTH™ WALLS
 WALL "R-351-29" - 2ND STAGE: PRECAST WALL
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO.	3.2R-351-29.13
JOB NO.	239-0007
SHT NO.	RE-9

RFC After Final Approval



APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲	04-07-00	RELEASE FOR 2ND STAGE CONSTRUCTION

- PANEL REINFORCEMENT NOTES:**
- PANELS ARE SHOWN BACK FACE.
 - HORIZONTAL REINFORCEMENT SHALL HAVE 50 mm MINIMUM COVER TO THE BACK FACE.
 - ALL REINFORCEMENT SHALL HAVE 50 mm MINIMUM COVER TO THE SIDES.
 - ALL REINFORCING BARS ARE #13 METRIC. LABELS ON EACH BAR INDICATE LENGTH. EXAMPLE: 1345 IS A #13 BAR 1345 mm LONG.
 - PANEL REINFORCEMENT BARS SHALL BE DEFORMED BILLET STEEL BARS FOR CONCRETE REINFORCEMENT CONFORMING TO THE SPECIFICATIONS OF ASTM DESIGNATION A615, GRADE 60.
 - ALL REINFORCING STEEL TO BE GALVANIZED IN ACCORDANCE WITH ASTM 767 CLASS I.
 - CONCRETE PANELS TO HAVE 28 DAY COMPRESSIVE STRENGTH OF 25,200 KPa.
 - EQUIVALENT WELDED WIRE FABRIC MAY BE USED.
 - ALL PANELS TO USE 9.5mmØ WIDE CLEVIS LOOPS.
 - VSL RETAINED EARTH™ IS PROTECTED UNDER PATENT 4,725,170. LIFT INSERTS ARE 6 3/4" LONG IN ALL PANELS LESS THAN 1.524M TALL. PANELS TALLER THAN 1.524M SHALL HAVE 11" LONG LIFT ANCHORS.

DES:	DIRN:	CHK:	DATE	NO.	BY
04-10-00	04-10-00	04-10-00			

VSL CORPORATION
2840 Plaza Place, Suite 200
Raleigh, NC 27617
Telephone: (919) 781-6272
Fac: (919) 751-4666

VSL

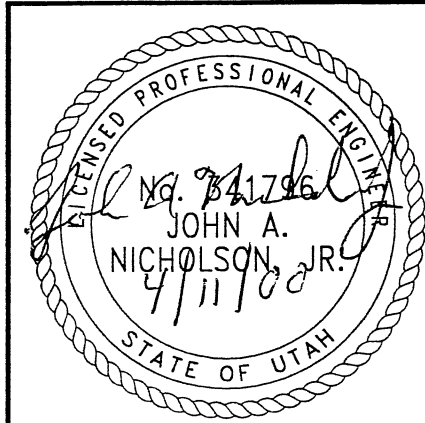
ATLANTA, GA / DALLAS, TX / PALM BEACH, FL (CORPORATE OFFICE)
MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA

VSL Corporation (VSL) is a registered provider of construction services and calculations. The user of this information is solely responsible for its use. VSL does not assume any liability for the use of this information. THE INFORMATION IS PROVIDED AS IS. VSL DOES NOT ASSUME ANY LIABILITY THEREFOR.

WASATCH CONSTRUCTORS

MAY 18 2000

RELEASED FOR CONSTRUCTION



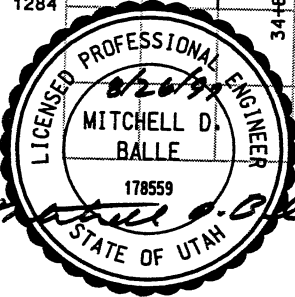
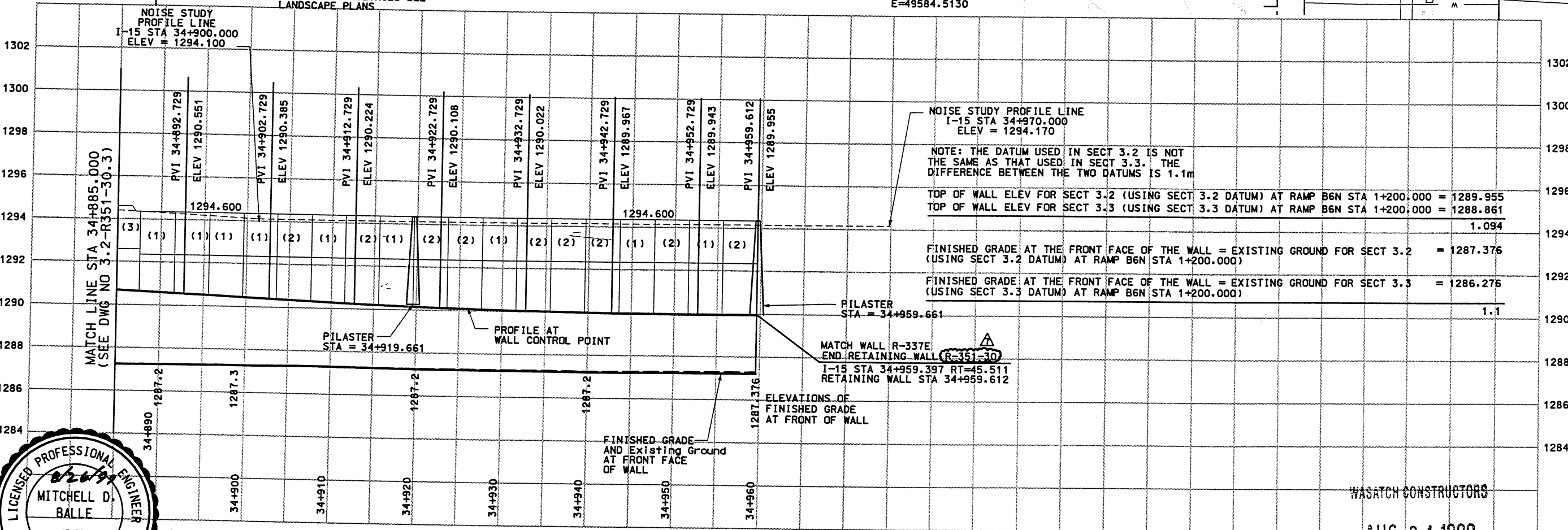
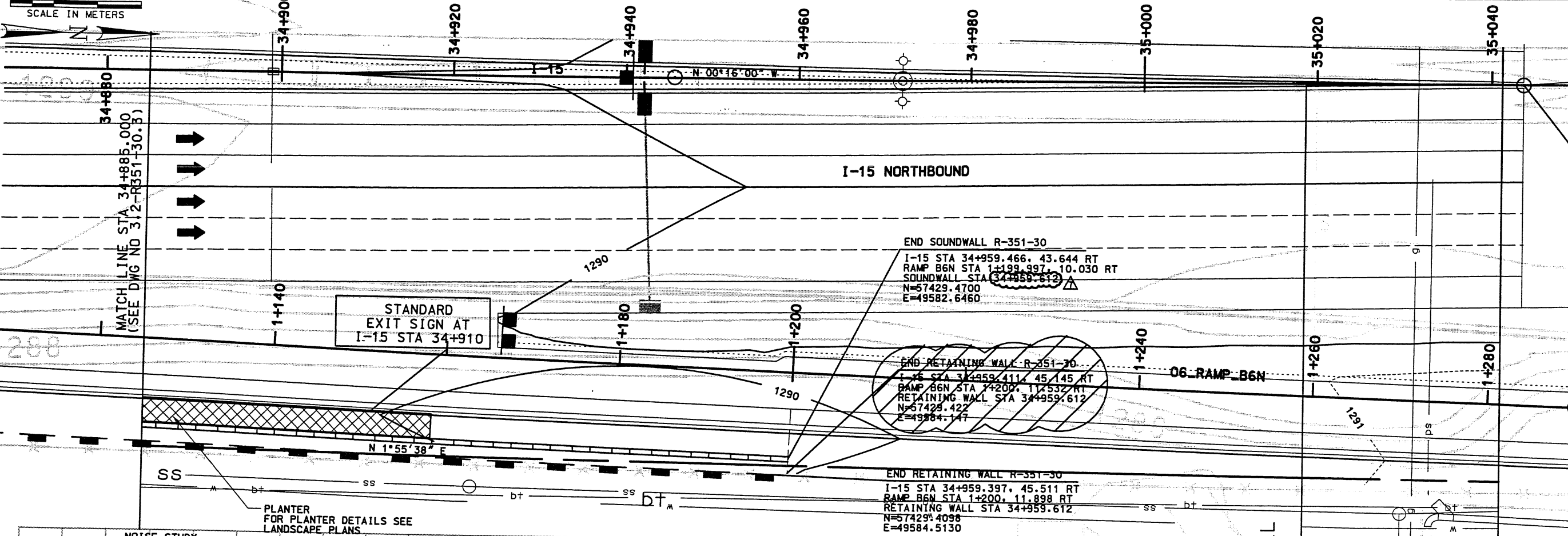
RETAINED EARTH™ WALLS
WALL "R-351-29"
2-STAGE PANEL REINFORCEMENT
UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

DWG. NO.	3.2R-351-29.15
JOB NO.	239-0007
SHT. NO.	RE-11

METRIC

CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS TO BE VERIFIED BY OTHERS. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

File name: c:\p1\15-cadd\06-97\sheet - Files\wall\06-wall_30.cad Date: 25 AUG 1999 Time: 14:55:18 User name: susername**



SEALED FOR RELEASE NO. 7 ONLY.

WALL R-351-30
VIEW IS FRONT FACE OF WALL

WASATCH CONSTRUCTORS

AUG 31 1999

RELEASED FOR CONSTRUCTION

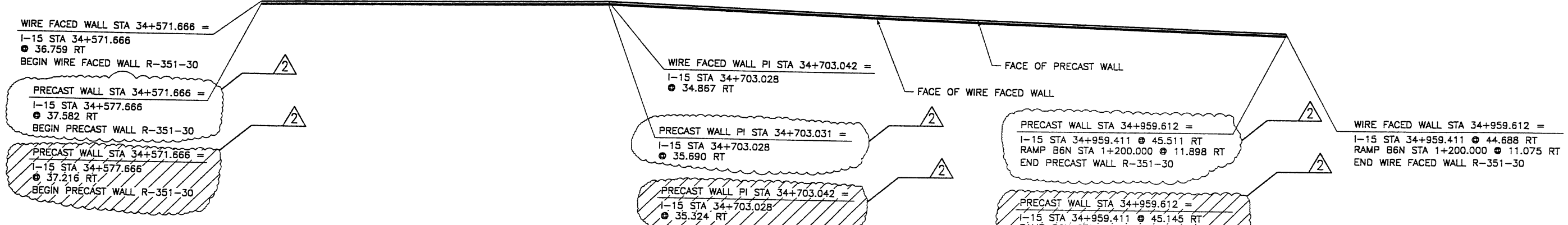
APPROVED FOR CONSTRUCTION	
NO.	DATE
4/23/99	4/23/99
5/21/99	5/21/99
8/25/99	8/25/99
DESCRIPTION	
SOUNDWALL ADJUSTED FOR EVEN PANELS	
FINAL SUBMITTAL COMMENTS	
FINAL RESUBMITTAL COMMENTS	
FINAL RESUBMITTAL COMMENTS	
UTAH DEPARTMENT OF TRANSPORTATION	
SVERDRUP/DE LEUW	3212413
DESIGN PLC 10/23/98	CHECK MC 10/23/98
PROJECT DESIGN ENGINEER	PLC 10/23/98
MARVIN COOK	CHECK
DATE 10/23/98	DATE 10/23/98
PROJECT MANAGER	QUANT.
KEITH SABOL	
SECTION MANAGER	
I-15 CORRIDOR RECONSTRUCTION	
SITUATION & LAYOUT	
SECTION 3.2	
PROJECT NUMBER #SP-15-7(135)296	
SALT LAKE COUNTY	
DWG. NO. 3.2-R351-30.3	
SHT. 3 OF 25	

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	9-11-97	RELEASE FOR 1ST STAGE CONST. ONLY
△	11-16-98	RELEASE FOR 2ND STAGE CONST. <i>N</i>

NO.	DATE	REVISION

MEET BRIDGE

MATCH WALL 600N-E



PLAN VIEW MSE WALL "6S-30"

SCALE: 1=800 (FULL SIZE)
SCALE: 1=1600 (HALF SIZE)

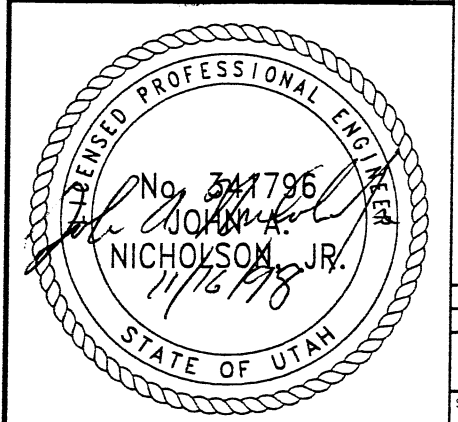
RETAINED EARTH INDEX	
RE-1	PLAN WIRE FACED WALL R-351-30, NOTES & DESIGN CRITERIA
RE-2	WALL CONNECTION DETAILS @ STAGE CONST.
RE-3	TYPICAL DETAILS
RE-4	TYPICAL CROSS SECTIONS @ WIRE FACED WALL
RE-5	TYPICAL CROSS SECTION
RE-6	OBSTRUCTION DETAIL
RE-7	WIRE FACED WALL R-351-30
RE-8	WIRE FACED WALL R-351-30
RE-9	WIRE FACED WALL R-351-30
RE-10	WIRE FACED WALL R-351-30
RE-11	WIRE FACED WALL R-351-30
RE-12	WIRE FACED WALL R-351-30
RE-13	WIRE FACED WALL R-351-30
RE-14	PRECAST WALL R-351-30
RE-15	PRECAST WALL R-351-30
RE-16	PRECAST WALL R-351-30
RE-17	PRECAST WALL R-351-30
RE-18	PRECAST WALL R-351-30
RE-19	PRECAST WALL R-351-30
RE-20	PRECAST WALL R-351-30
RE-21	SPECIAL PANEL DETAILS
RE-22	SPECIAL PANEL DETAILS

DESIGN PARAMETERS	
ANGLE OF INTERNAL FRICTION (SELECT) = 34°	
ANGLE OF INTERNAL FRICTION (BASE) = 30°	
ANGLE OF INTERNAL FRICTION (RANDOM) = 34°	
UNIT WEIGHT BACKFILL = 135 PCF. (21.2 KN/M ³)	
TRAFFIC SURCHARGE = 250 PSF	
SEISMIC ACCELERATION COFF. = 0.27g (TYP)	
SEISMIC ACCELERATION COFF. = 0.68g (AT BRIDGE ABUTMENTS)	
DESIGN CRITERIA	
SAFETY FACTOR (OVERTURNING) = 2.0	
SAFETY FACTOR (SLIDING) = 1.5	
SAFETY FACTOR (PULLOUT) = 1.5	
DESIGN LIFE = 75 YEARS	

2ND STAGE DESIGN
 BASED ON POST SETTLEMENT SURVEY OF WIRE FACE, LATERAL OUT WARD DISPLACEMENTS RANGED FROM 98mm TO 366mm MEASURED AT THE BASE OF THE WALL

NOTE:
 THE WALL CONNECTIONS ON WALL 6S-30 MAY BE ROTATED A MAXIMUM OF 42° VERTICALLY (COL 1-6) AND 55° VERTICALLY (COL 7-12B). SEE DETAIL "SECTION ROTATED" ON VSL STANDARD DRAWING NO. 18 FOR MORE INFORMATION.

WASATCH CONSTRUCTORS
 DEC 15 1998
 RELEASED FOR CONSTRUCTION



METRIC
 CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

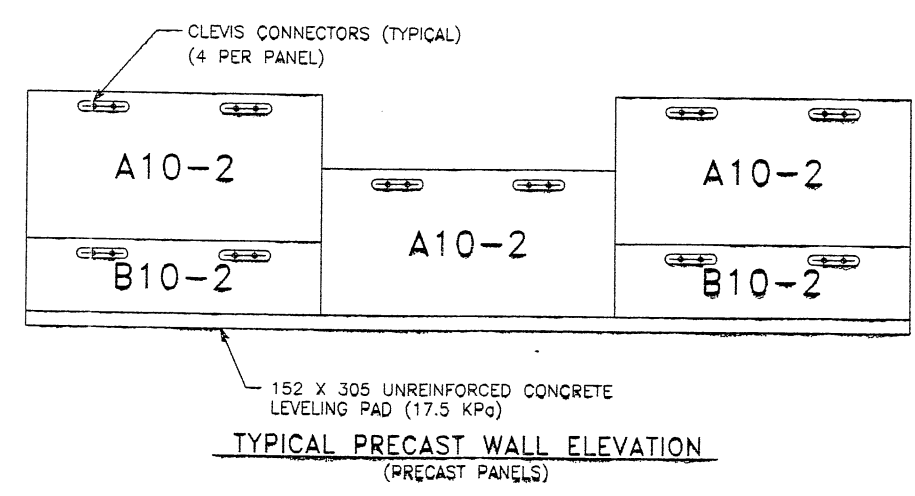
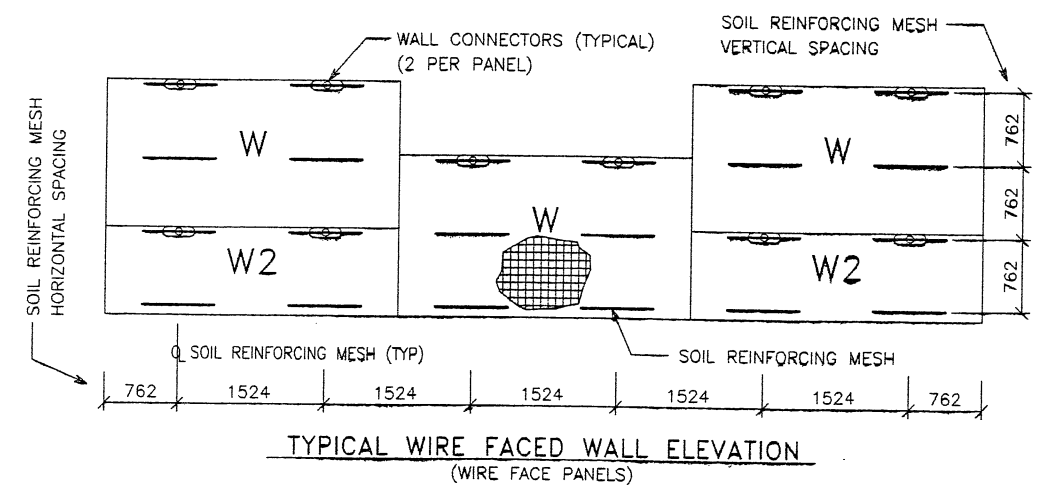
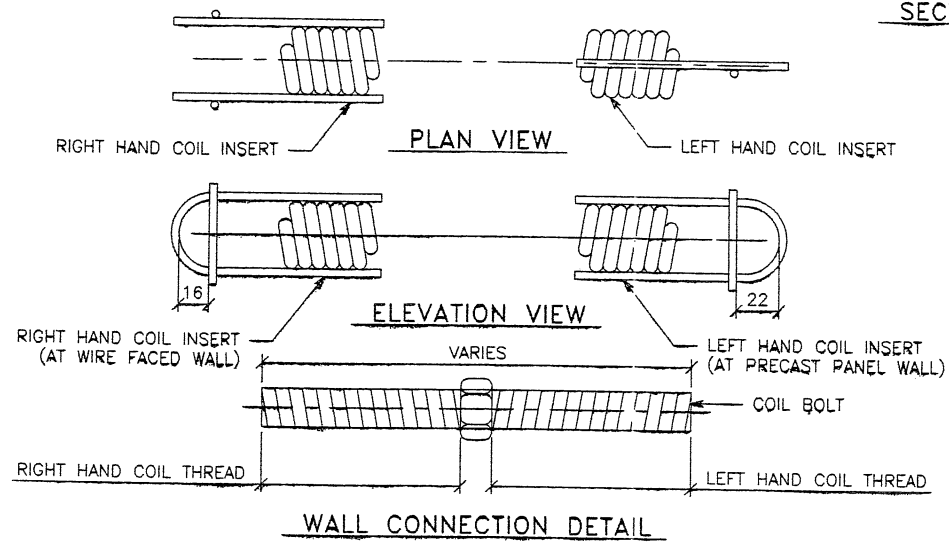
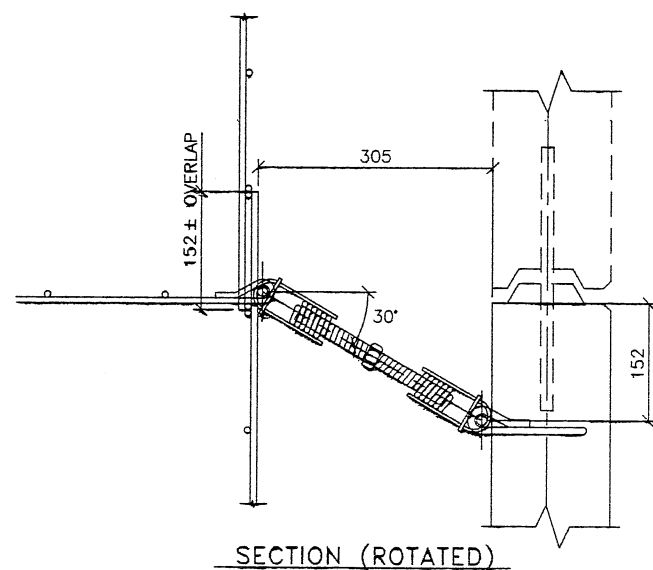
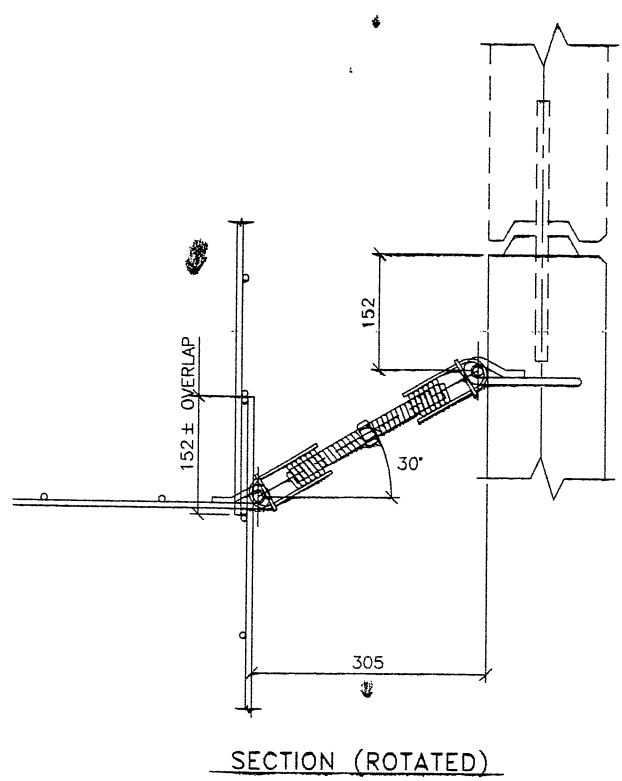
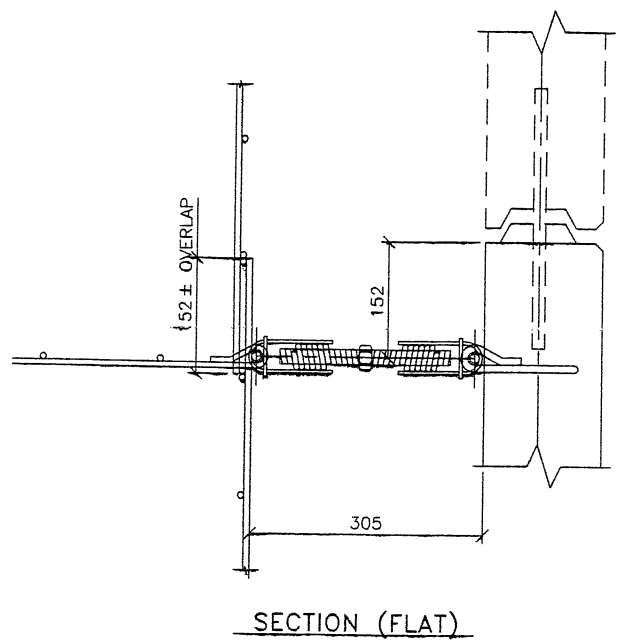
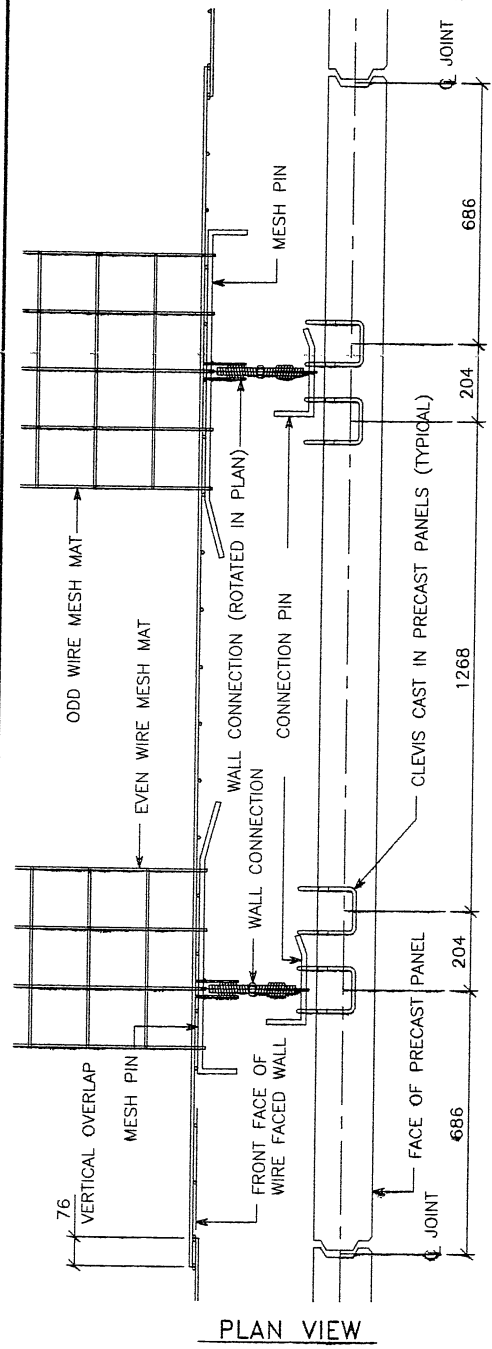
VSL CORPORATION
 7840 River Road, Suite 200
 Raleigh, NC 27615
 Telephone: (919) 781-9272
 Fax: (919) 781-6669

ATLANTA, GA / DALLAS, TX / FARGO, ND (CORPORATE OFFICE)
 MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA

RETAINED EARTH™ WALLS	
PLAN VIEW MSE WALL "R-351-30"	
UTAH I-15 INTERCHANGE SALT LAKE COUNTY, UTAH UTAH DEPARTMENT OF TRANSP.	
DWG. NO.	3.2R-351-30.5a
JOB NO.	239-0007
SHT. NO.	RE-1

E:\PROJECT\239-0007\6S-WALLS\6S-30\REF-2

FINAL PLG. 9-08-97



APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲	9-11-97	RELEASE FOR 1ST STAGE CONST. ONLY

WAGATCH CONSTRUCTORS
SEP 16 1997
RELEASED FOR CONSTRUCTION

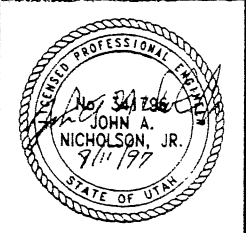
DES.	MM	MM	MM
09-08-97	MM	09-08-97	DDO
CHK	(N) (S) (97)	MM	

VSL CORPORATION
2840 Plus Place, Suite 200
Raleigh, NC 27612
Telephone: (919) 781-8272
Fax: (919) 781-4969



VSL Corporation (1997)
All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of VSL Corporation.

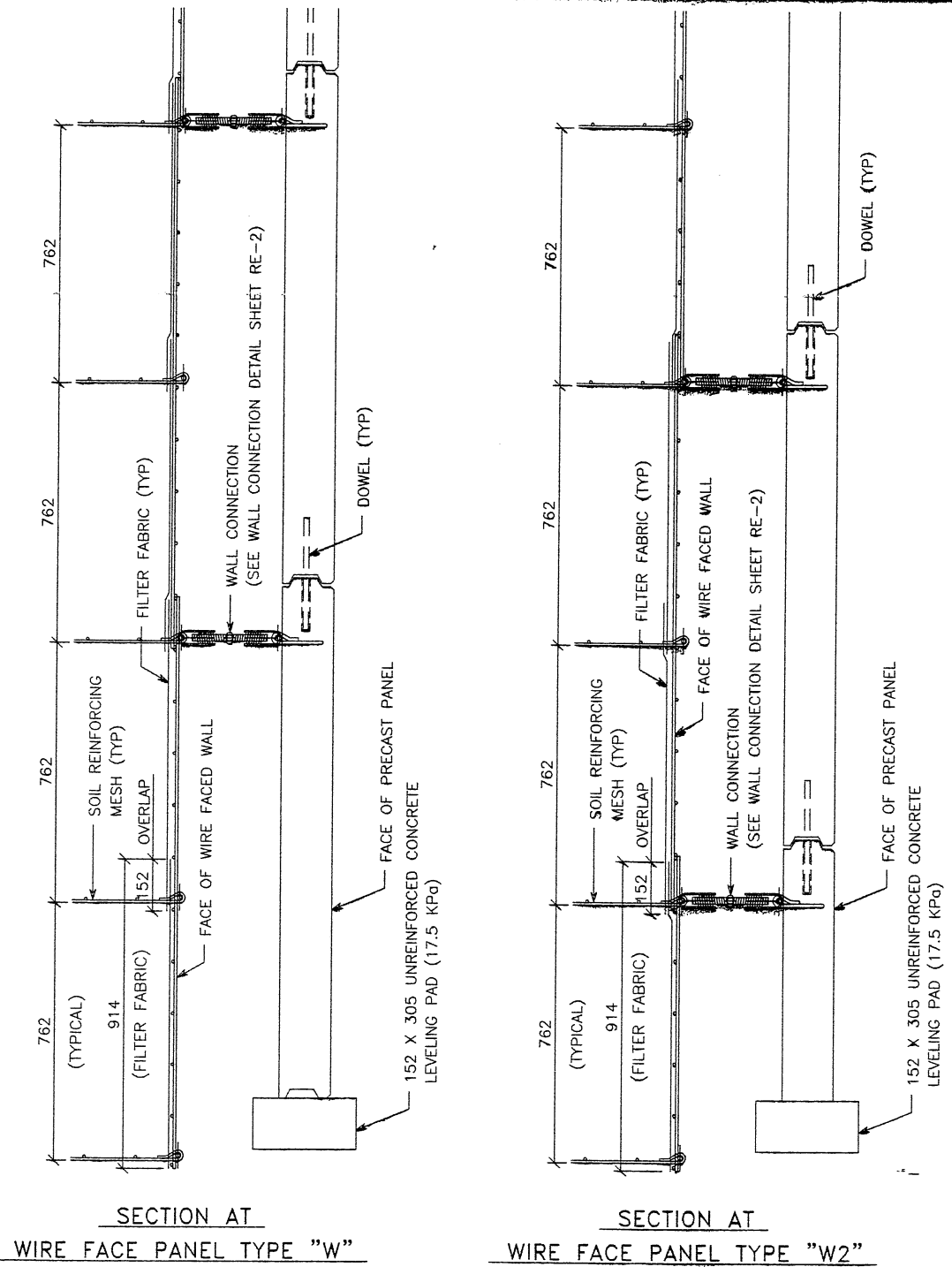
METRIC



CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

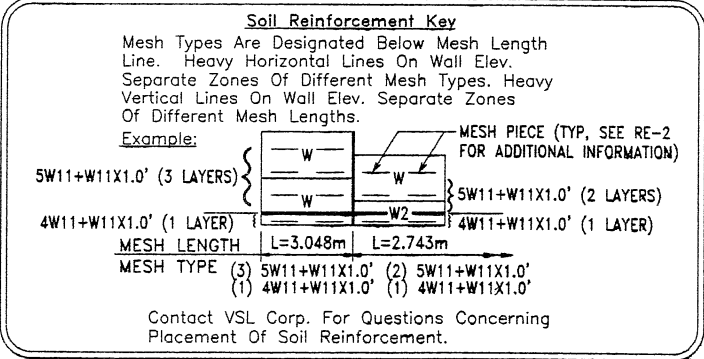
RETAINED EARTH™ WALLS
WIRE FACED WALL "R-351-30"
WALL CONNECTION DETAILS @ STAGE CONST.
UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSPORTATION

NO.	32R-351-30.6
DATE	9/11/97
PROJECT	239-0007
REV.	RE-2

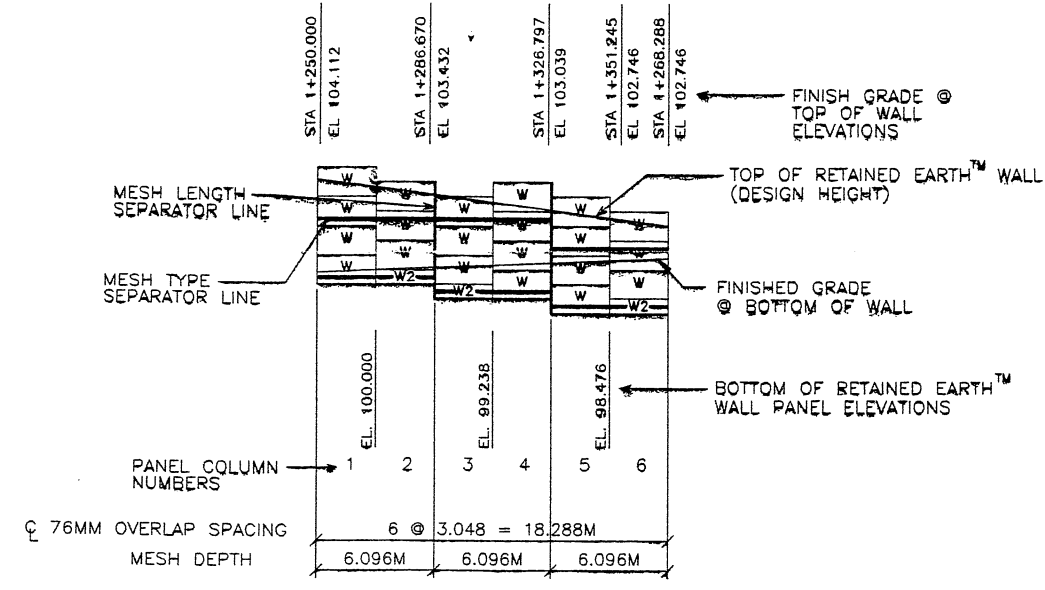


SECTION AT WIRE FACE PANEL TYPE "W"

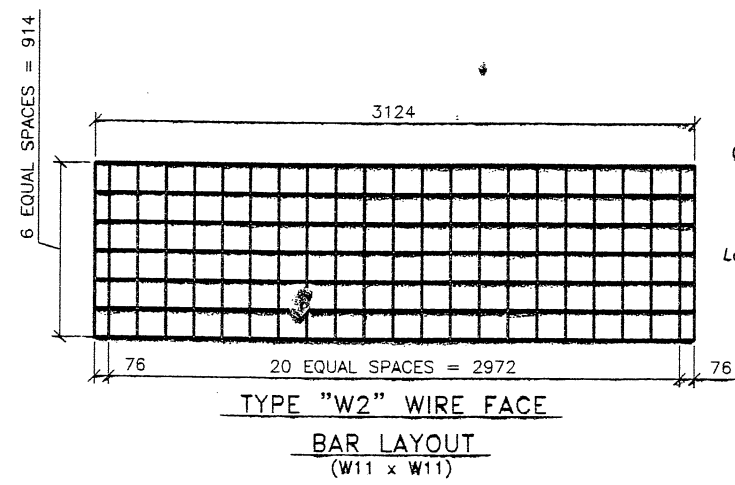
SECTION AT WIRE FACE PANEL TYPE "W2"



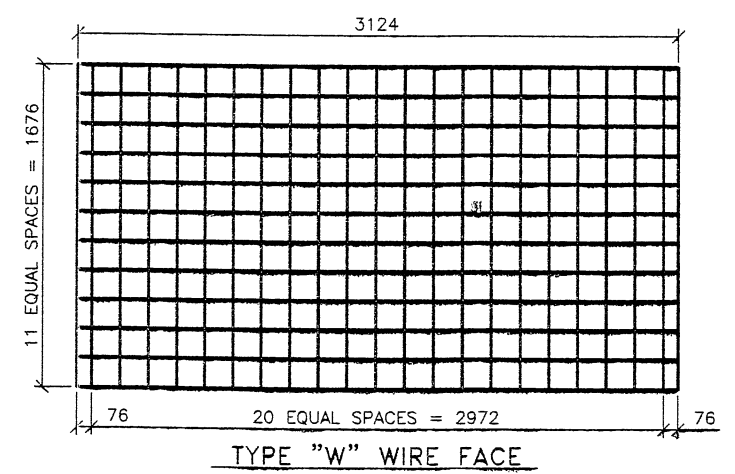
Contact VSL Corp. For Questions Concerning Placement Of Soil Reinforcement.



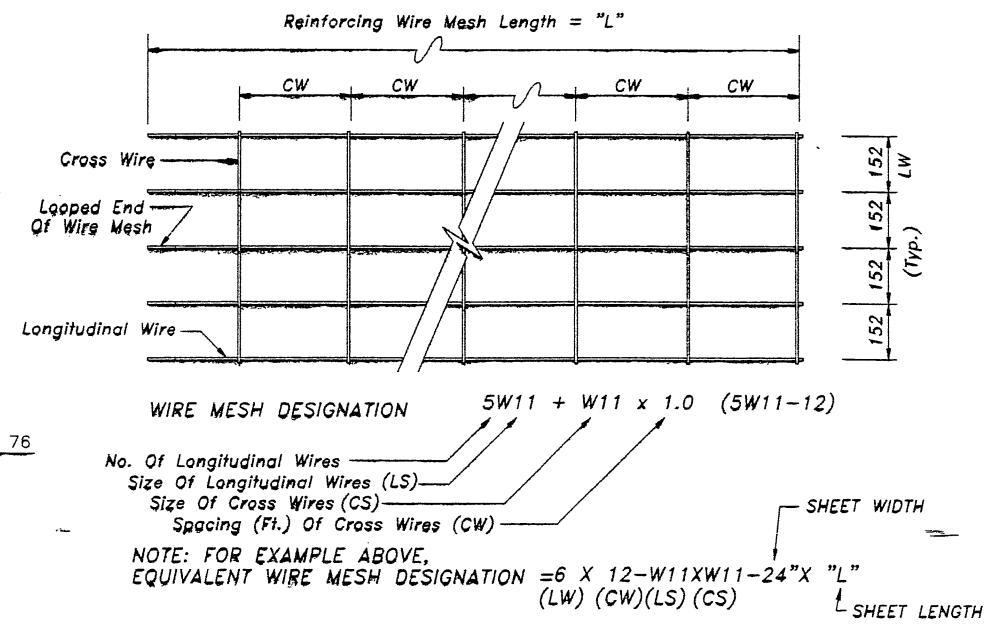
1 WIRE FACED WALL ELEVATION KEY (FRONT FACE SHOWN)



TYPE "W2" WIRE FACE BAR LAYOUT (W11 x W11)



TYPE "W" WIRE FACE BAR LAYOUT (W11 x W11)



WIRE MESH DESIGNATION 5W11 + W11 x 1.0 (5W11-12)
 No. Of Longitudinal Wires
 Size Of Longitudinal Wires (LS)
 Size Of Cross Wires (CS)
 Spacing (Ft.) Of Cross Wires (CW)
 NOTE: FOR EXAMPLE ABOVE, EQUIVALENT WIRE MESH DESIGNATION = 6 X 12-W11XW11-24" X "L"
 (LW) (CW)(LS) (CS)

NOTE: W11 (71 sq mm) And W20 (129 sq mm) Steel Wire Material And Welding Of Cross Wires And Loops Shall Conform To ASTM A82 And ASTM 185, Fy = 448 MPa. Mesh Shall Be Galvanized To ASTM A-123 To A Minimum Effective Thickness Of 0.086 mm.

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲	9-11-97	RELEASE FOR 1ST STAGE CONST. ONLY

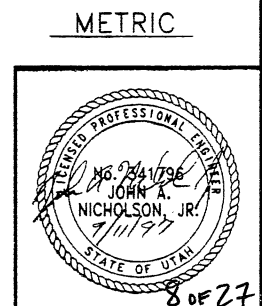
WASATCH CONSTRUCTORS
 SEP 16 1997
 RELEASED FOR CONSTRUCTION

VSL CORPORATION
 2840 Plaza Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-6272
 Fax: (919) 781-4869



VSL Corporation (VSL) is a registered trademark of VSL Corporation. The use of the word "VSL" in this document is for identification purposes only. The use of the word "VSL" in any other context is the responsibility of the user. Any other use is strictly prohibited.

RETAINED EARTH™ WALLS
 WIRE FACED WALL "R-351-30"
 TYPICAL DETAILS
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSPORTATION

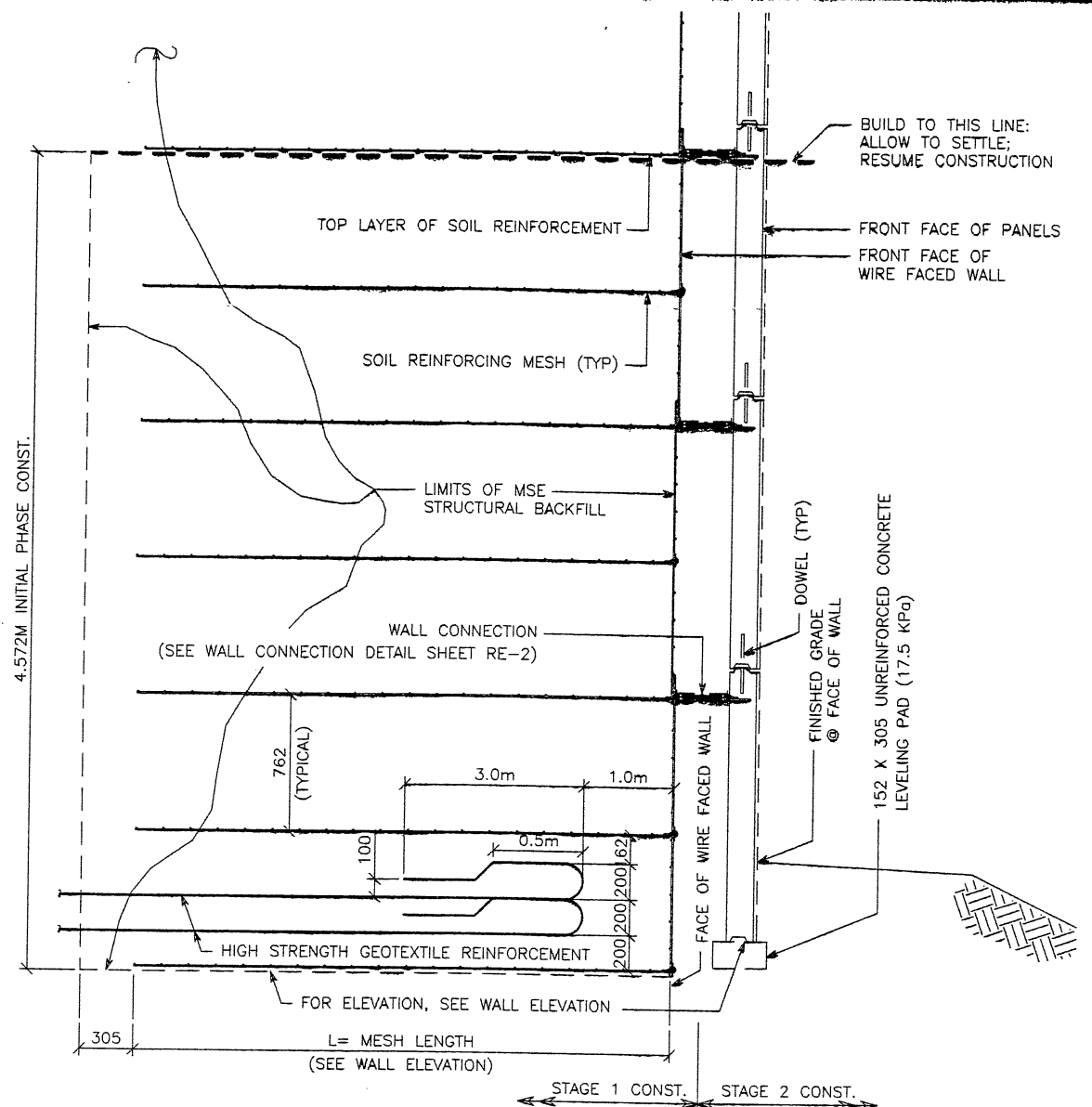


CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

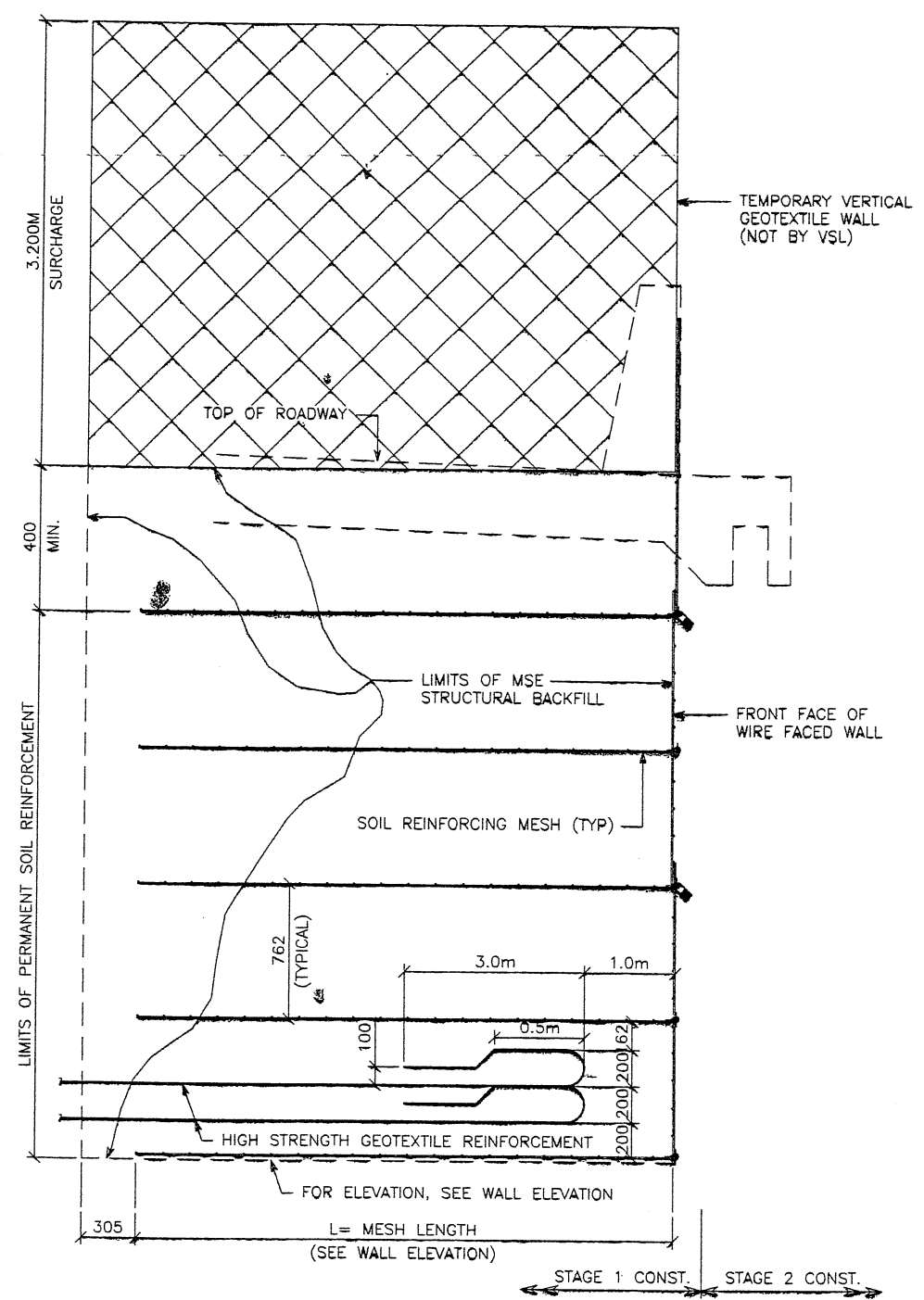
DWG. NO. 3.2R-351-30.7
 JOB NO. 239-0007
 SHT. NO. RE-3

J:\6S-WALLS\6S-30\RE-4

FINAL PLOI J-05-97



**TYPICAL CROSS SECTION
AT VERTICAL PHASE CONST.**
SCALE: 1:20 (FULL SIZE)
SCALE: 1:40 (HALF SIZE)



**TYPICAL CROSS SECTION
AT FINAL PHASE OF WIRE FACE WALL**
SCALE: 1:20 (FULL SIZE)
SCALE: 1:40 (HALF SIZE)

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	9-11-97	RELEASE FOR 1ST STAGE CONST. ONLY

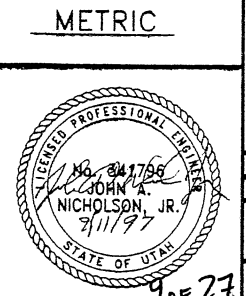
WABATCH CONSTRUCTORS
SEP 16 1997
RELEASED FOR CONSTRUCTION

VSL CORPORATION
2840 Plaza Place, Suite 200
Raleigh, NC 27612
Telephone: (919) 781-6272
Fax: (919) 781-6969



VSL Corporation (VSL) claims a strict proprietary right in all designs, specifications, drawings, and other documents prepared by or for VSL. No part of any reproduction of these documents may be made without the prior written permission of VSL. Any other use is strictly prohibited and void.

RETAINED EARTH™ WALLS
WIRE FACED WALL "R-351-30"
TYPICAL SECTIONS @ WIRE FACED WALL
UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSPORTATION



CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

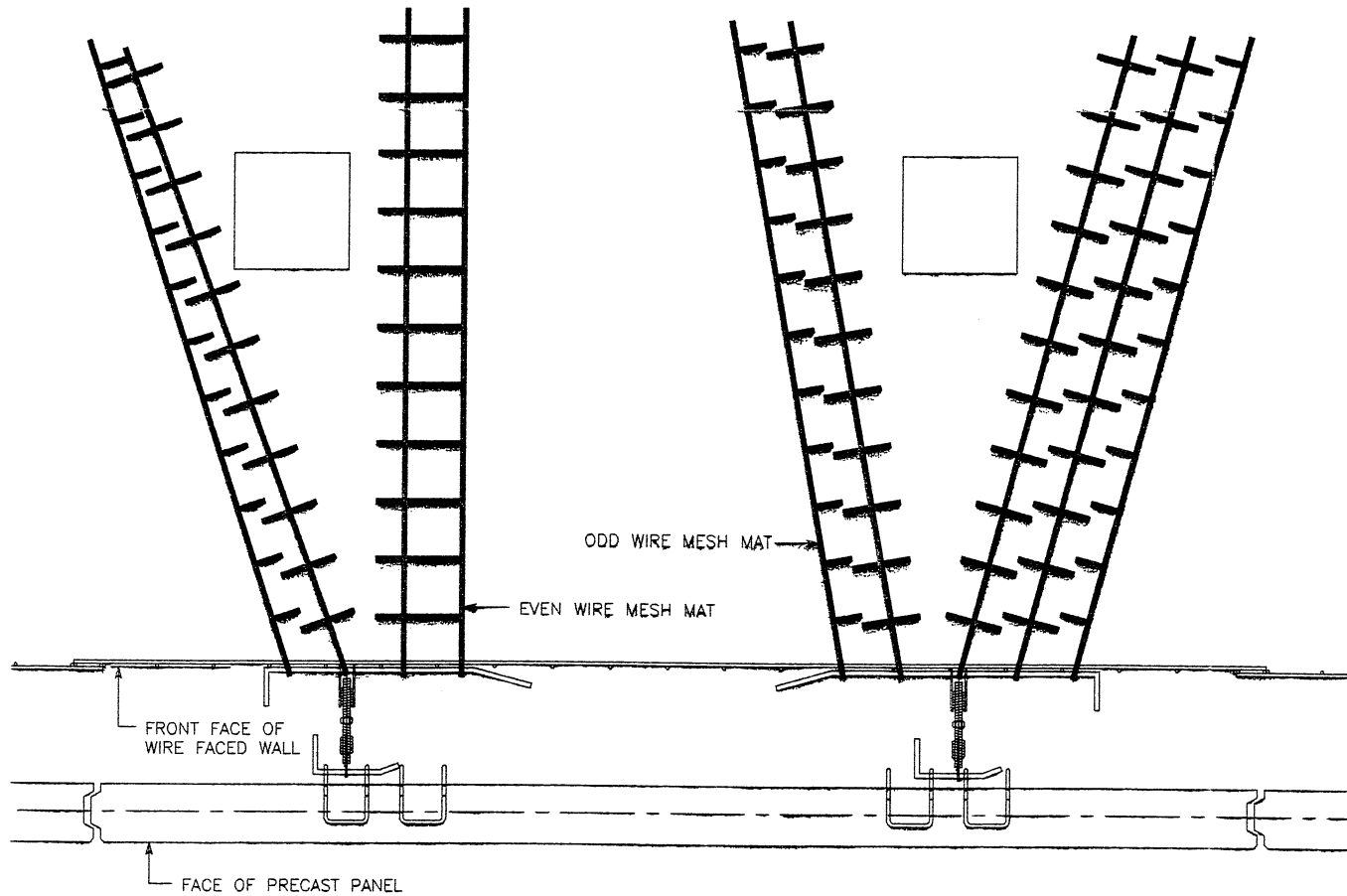
METRIC

DWG. NO.	3.2R-351-30.8
JOB NO.	239-0007
SHT. NO.	RE-4

E:\PROJECT\239-0007\6S-WALLS\6S-30\RE-6

FINAL PLG. 08-XX-97

OBSTRUCTION SHALL BE CONSTRUCTED BEFORE WALL INSTALLATION OR, VOID FORMER SHALL BE INSTALLED DURING BACKFILL PLACEMENT.
VOID FORMER NOT SUPPLIED BY VSL CORPORATION.
FIELD CUT & SKEW SOIL REINFORCING AROUND OBSTRUCTION. DAMAGED GALVANIZING SHALL BE COATED WITH ZINC RICH PAINT.



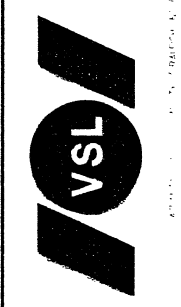
60 OBSTRUCTION (VERTICAL)

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	9-11-97	RELEASE FOR 1ST STAGE CONST. ONLY

WASATCH CONSTRUCTORS
SEP 16 1997
RELEASED FOR CONSTRUCTION

DES.	08-XX-97	MM
DRN.	08-XX-97	DDO
CHK.	08-XX-97	MM

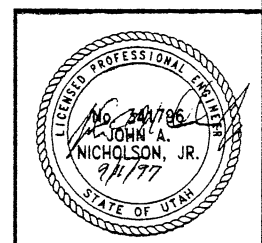
VSL CORPORATION
2840 Plaza Place, Suite 200
Raleigh, NC 27612
Telephone: (919) 781-6272
Fax: (919) 781-4669



VSL Corporation (USA) designs and manufactures retaining walls and related structures. It is an equal opportunity employer. The use of the word "VSL" in this document is for identification purposes only. It is not intended to be used in any other way. Any other use is strictly prohibited and VSL will take appropriate legal action.

RETAINED EARTH™ WALLS
WIRE FACED WALL "R-351-30"
OBSTRUCTION DETAIL
UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSPORTATION

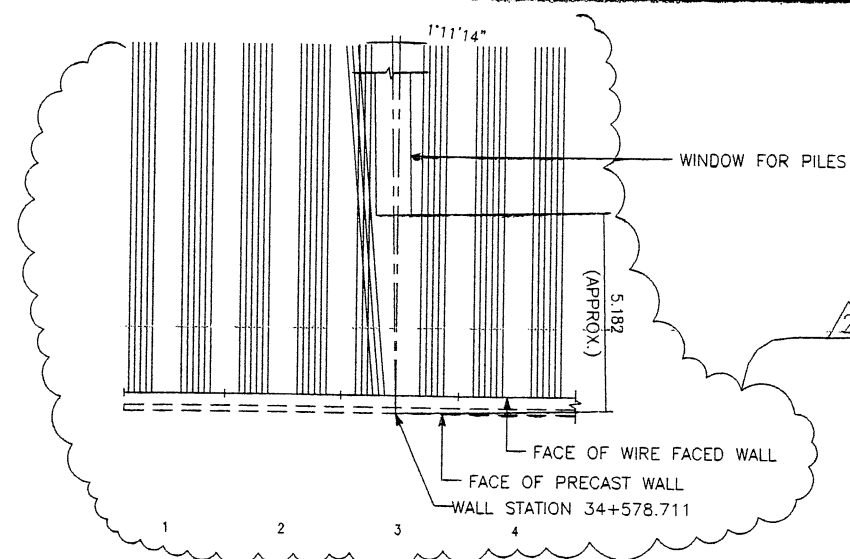
METRIC



CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

DWG. NO.	3.2R-351-30.10
JOB NO.	239-0007
SHT. NO.	RE-6

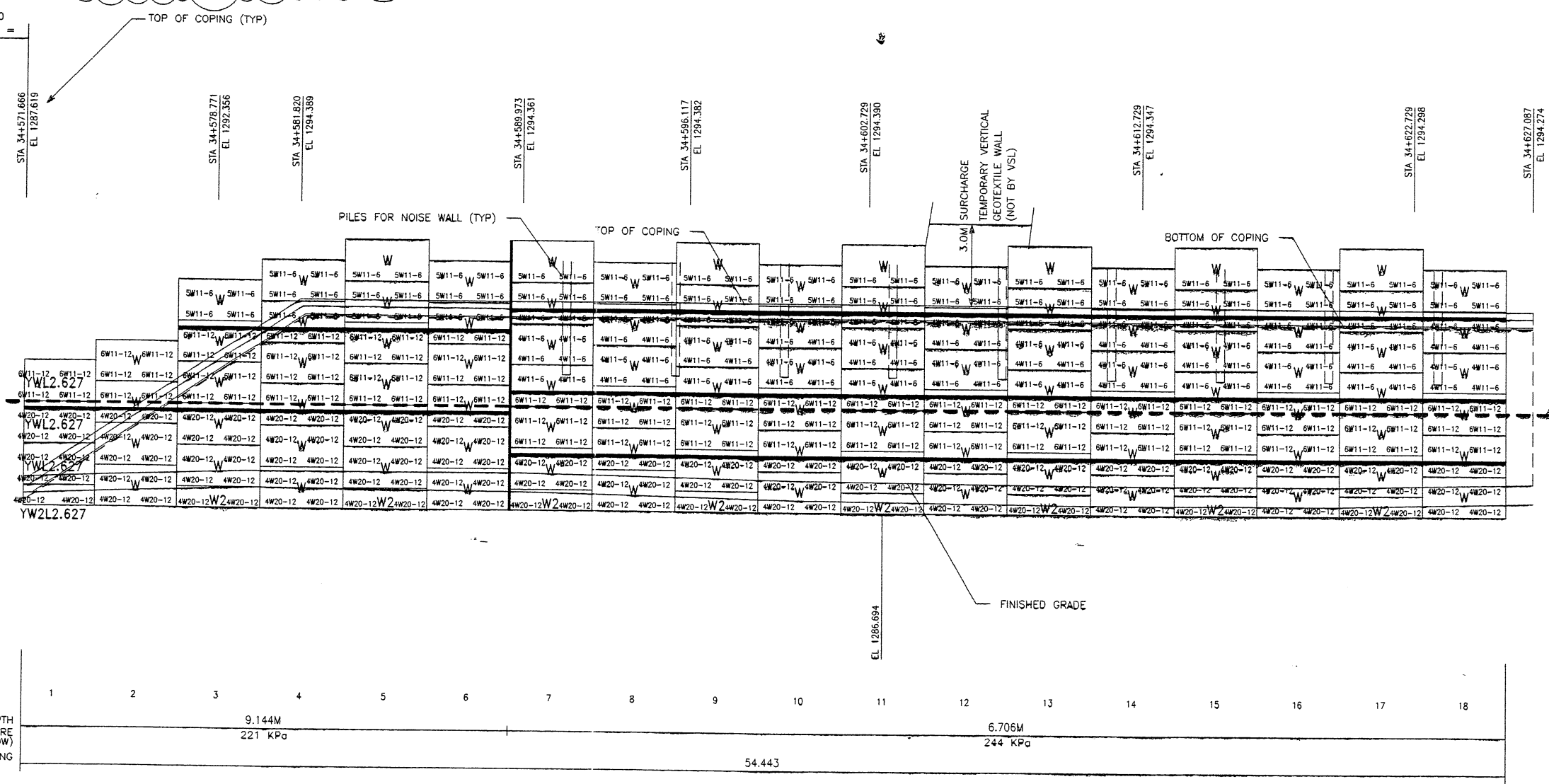
FINAL PLOT -29-97



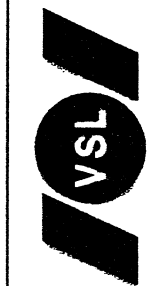
NOTE: PILES TO BE LOCATED PRIOR TO ERECTION OF WIRE FACED WALL. SOIL REINFORCEMENT TO BE FIELD ADJUSTED TO AVOID PILES.

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	9-08-97	RELEASE FOR 1ST STAGE CONST. ONLY
△	11-12-97	ADDED DETAIL FOR SKEWING MESH @ ABUT. PILE

BEGIN WIRE FACED WALL R-351-30
 WIRE FACED WALL STA 34+571.666 =
 I-15 STA 34+571.666
 @ 36.759 RT



WATCH CONSTRUCTORS
 NOV 19 1997
 RELEASED FOR CONSTRUCTION



VSL CORPORATION
 2840 Plaza Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 871-6772
 Fax: (919) 871-4893

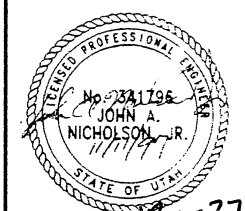
BUILD WALL UP TO THIS LINE:
 ALLOW TO SETTLE:
 RESUME CONSTRUCTION

APPROVER NOTE:
 MAXIMUM FINAL UNFACTORED BEARING PRESSURES
 ARE INDICATED BELOW "MESH DEPTH LINE"
 REVIEWER TO VERIFY MAXIMUM BEARING
 CAPACITY OF FOUNDATION.

RETAINING WALL "R-351-30" - 1ST STAGE: WIRE FACED WALL
 (FRONT FACE SHOWN)
 (TOTAL SURFACE AREA OF FACING = 2,330.04 SM)

SCALE 1:100 (FULL SIZE)
 SCALE 1:200 (HALF SIZE)

METRIC



CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

RETAINED EARTH™ WALLS
 WALL "R-351-30" - 1ST STAGE: WIRE FACED WALL
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP

DWG. NO.	3.2R-351-30.11
JOB NO.	239-0007
SHEET NO.	RE-7

VSL Corporation (VSL) is not responsible for the design, construction, or maintenance of any structure or system. The user of this document is responsible for the design, construction, and maintenance of any structure or system. The user of this document is responsible for the design, construction, and maintenance of any structure or system.

FINAL PLG. -05-97

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲	9-11-97	RELEASE FOR 1ST STAGE CONST. ONLY

WASATCH CONSTRUCTORS
 SEP 16 1997
 RELEASED FOR CONSTRUCTION

DES.	09-05-97	MM
DRN	09-05-97	DDO
CHK	09-05-97	MM

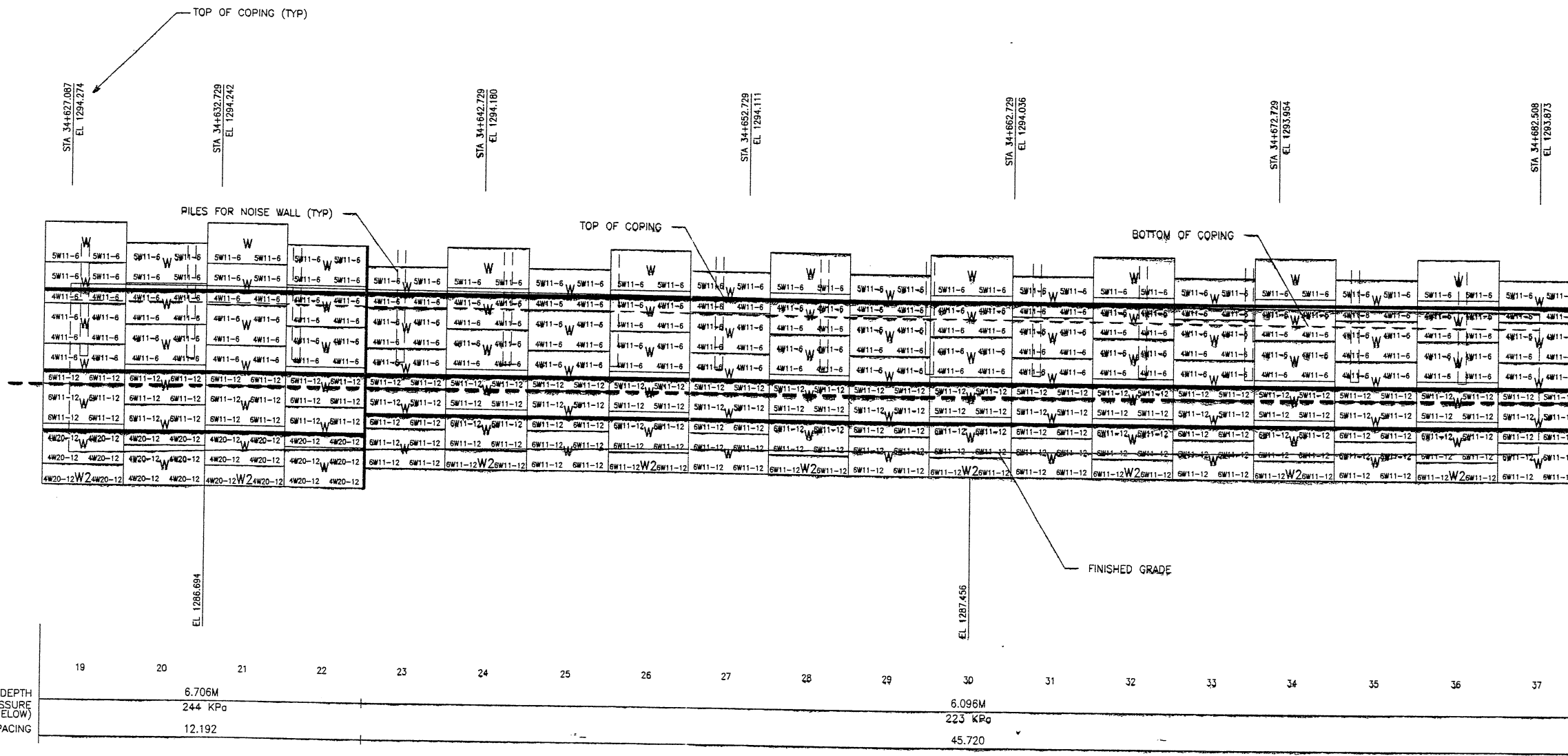
VSL CORPORATION
 2840 Plaza Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-6272
 Fax: (919) 781-4969



VSL CORPORATION (USA)
 1000 Peachtree Street, N.E.
 Atlanta, GA 30309
 Telephone: (404) 521-1111
 Fax: (404) 521-1112

RETAINED EARTH™ WALLS
 WALL "R-351-30" - 1ST STAGE: WIRE FACED WALL
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO.	3.2R-351-30.12
JOB NO.	239-0007
SHT. NO.	RE-8



BUILD WALL UP TO THIS LINE;
 ALLOW TO SETTLE;
 RESUME CONSTRUCTION

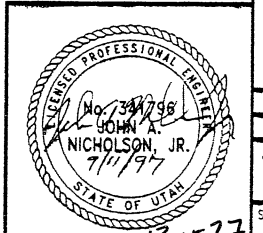
MESH DEPTH
 MAXIMUM BEARING PRESSURE
 (SEE NOTE BELOW)
 PIN SPACING

19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	
6.706M		6.096M		6.096M		6.096M		6.096M		6.096M		6.096M		6.096M		6.096M		6.096M	
244 KPa		223 KPa		223 KPa		223 KPa		223 KPa		223 KPa		223 KPa		223 KPa		223 KPa		223 KPa	
12.192		45.720		45.720		45.720		45.720		45.720		45.720		45.720		45.720		45.720	

SCALE 1:100 (FULL SIZE)
 SCALE 1:200 (HALF SIZE)

METRIC

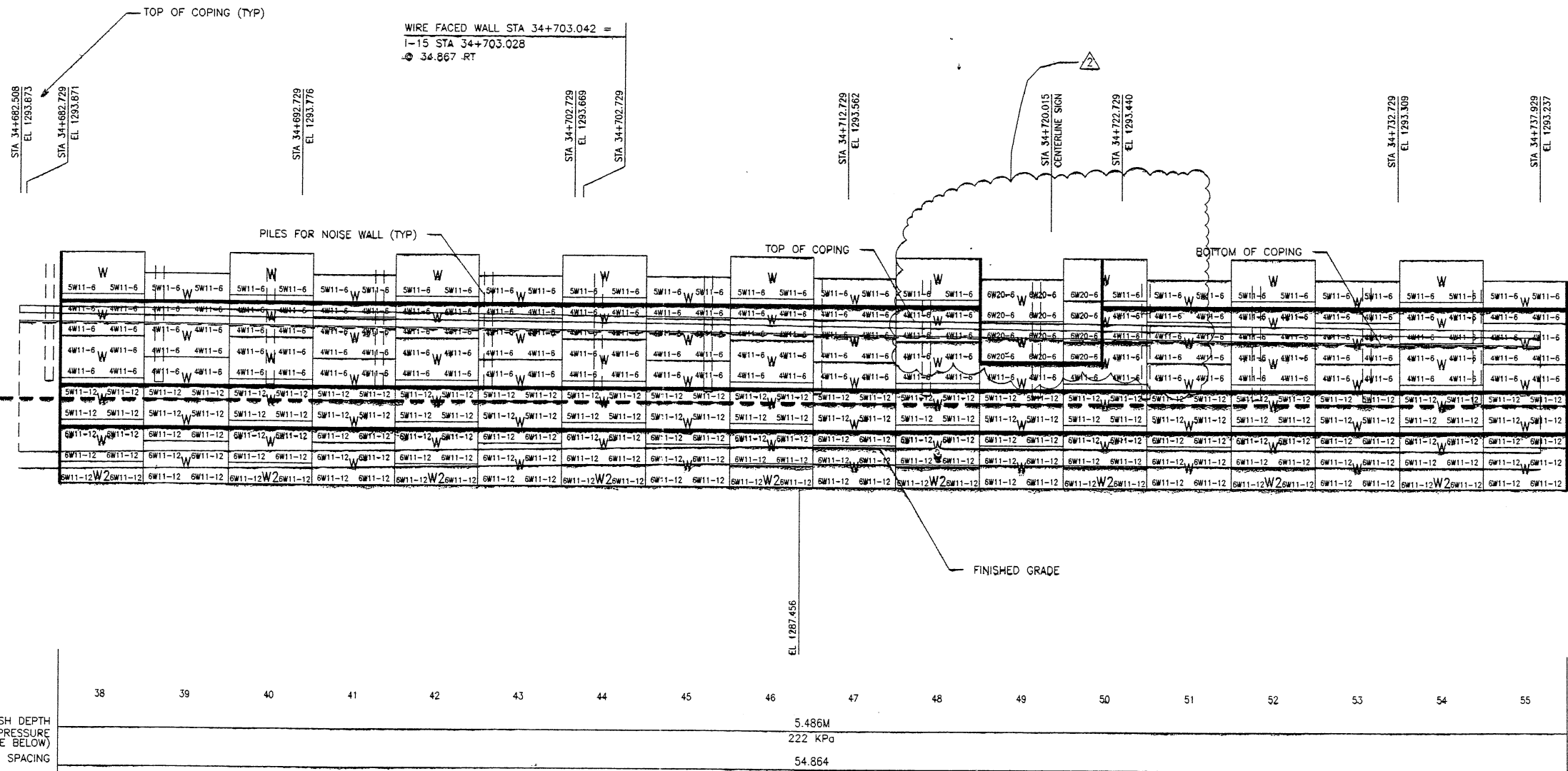
APPROVER NOTE:
 MAXIMUM FINAL UNFACTORED BEARING PRESSURES
 ARE INDICATED BELOW "MESH DEPTH LINE"
 REVIEWER TO VERIFY MAXIMUM BEARING
 CAPACITY OF FOUNDATION.



CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY.
 EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE
 STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE
 ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS
 OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO
 THE MANUFACTURER'S SPECIFICATION.

13 of 27

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	9-08-97	RELEASE FOR 1ST STAGE CONST. ONLY
△	11-12-97	REVISED SOIL REINFORCEMENT @ SIGN LOCATION <i>OK</i>



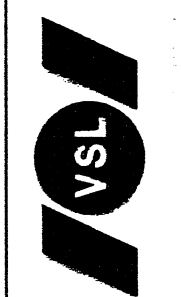
RETAINING WALL "R-351-30" - 1ST STAGE: WIRE FACED WALL
 (FRONT FACE SHOWN) SCALE 1:100 (FULL SIZE)
 (TOTAL SURFACE AREA OF FACING = 2,330.04 SM) SCALE 1:200 (HALF SIZE)

WASATCH CONSTRUCTORS
 NOV 19 1997
 RELEASED FOR CONSTRUCTION

BUILD WALL UP TO THIS LINE;
 ALLOW TO SETTLE;
 RESUME CONSTRUCTION

NO.	DATE	DESCRIPTION
△	9-08-97	RELEASE FOR 1ST STAGE CONST. ONLY
△	11-12-97	REVISED SOIL REINFORCEMENT @ SIGN LOCATION <i>OK</i>

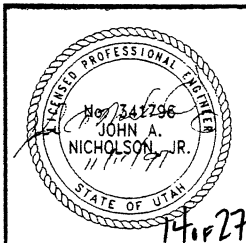
VSL CORPORATION
 2840 Flato Street, Suite 200
 Bellingham, WA 98201
 Phone: (360) 738-6272
 Fax: (360) 738-4963



VSL Corporation "COR" is a registered trademark of VSL Corporation. All rights reserved. VSL Corporation is not responsible for the use of this information in whole or in part. The user assumes all liability for any and all claims, damages, or losses resulting from the use of this information. The user agrees to hold VSL Corporation harmless from and against all such claims, damages, or losses.

RETAINED EARTH™ WALLS
 WALL "R-351-30" - 1ST STAGE: WIRE FACED WALL
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH

DWG. NO.	3.2R-351-30.13
JOB NO.	239-0007
SHT. NO.	RE-9

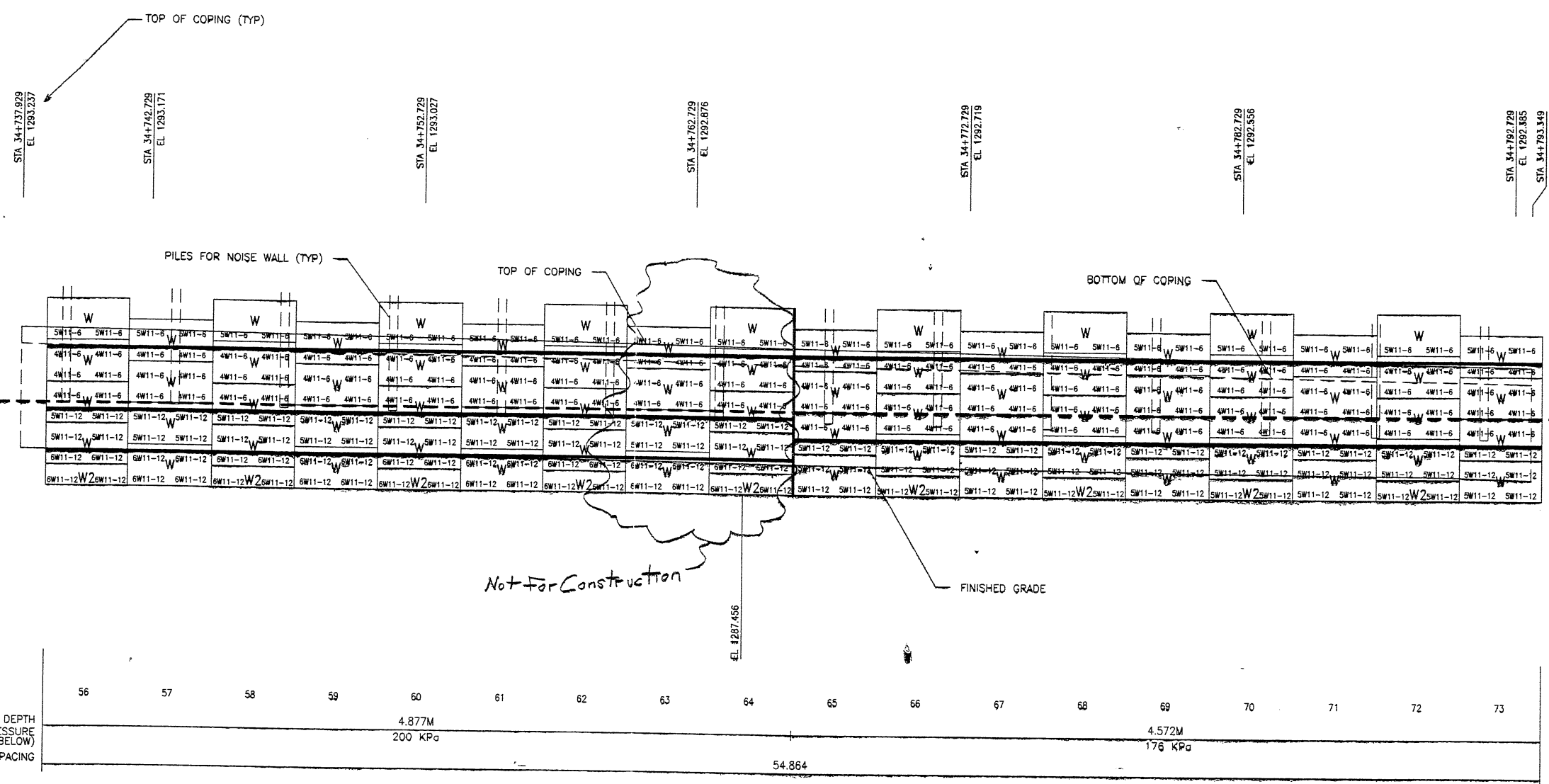


CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

FINAL PLOT J-05-97

APPROVER NOTE:
 MAXIMUM FINAL UNFACTORED BEARING PRESSURES ARE INDICATED BELOW "MESH DEPTH LINE". REVIEWER TO VERIFY MAXIMUM BEARING CAPACITY OF FOUNDATION.

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	9-11-97	RELEASE FOR 1ST STAGE CONST. ONLY



WASATCH CONSTRUCTORS
SEP 16 1997
RELEASED FOR CONSTRUCTION

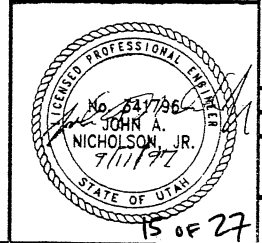
BUILD WALL UP TO THIS LINE;
ALLOW TO SETTLE;
RESUME CONSTRUCTION

MESH DEPTH
MAXIMUM BEARING PRESSURE
(SEE NOTE BELOW)
PIN SPACING

SCALE 1:100 (FULL SIZE)
SCALE 1:200 (HALF SIZE)

METRIC

APPROVER NOTE:
MAXIMUM FINAL UNFACTORED BEARING PRESSURES
ARE INDICATED BELOW "MESH DEPTH LINE"
REVIEWER TO VERIFY MAXIMUM BEARING
CAPACITY OF FOUNDATION.



CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY.
EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE
STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE
ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS
OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO
THE MANUFACTURER'S SPECIFICATION.

RETAINED EARTH™ WALLS
WALL "R-351-30" - 1ST STAGE: WIRE FACED WALL
UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSPORTATION

VSL CORPORATION
2840 Rivas Plaza, Suite 200
Raleigh, NC 27612
Telephone: (919) 781-8272
Fax: (919) 781-4869

DES: 09-05-97 MM
DRN: 09-05-97 DDO
CHK: 09-05-97 MM

DWG. NO.
3.2R-351-30.14
JOB NO:
239-0007
SHT. NO. RE-10

15 OF 27

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	9-11-97	RELEASE FOR 1ST STAGE CONST. ONLY

WASATCH CONSTRUCTORS
 SEP 16 1997
 RELEASED FOR CONSTRUCTION

DES.	09-05-97	MM
DRN.	09-05-97	MM
CHK.	09-05-97	MM

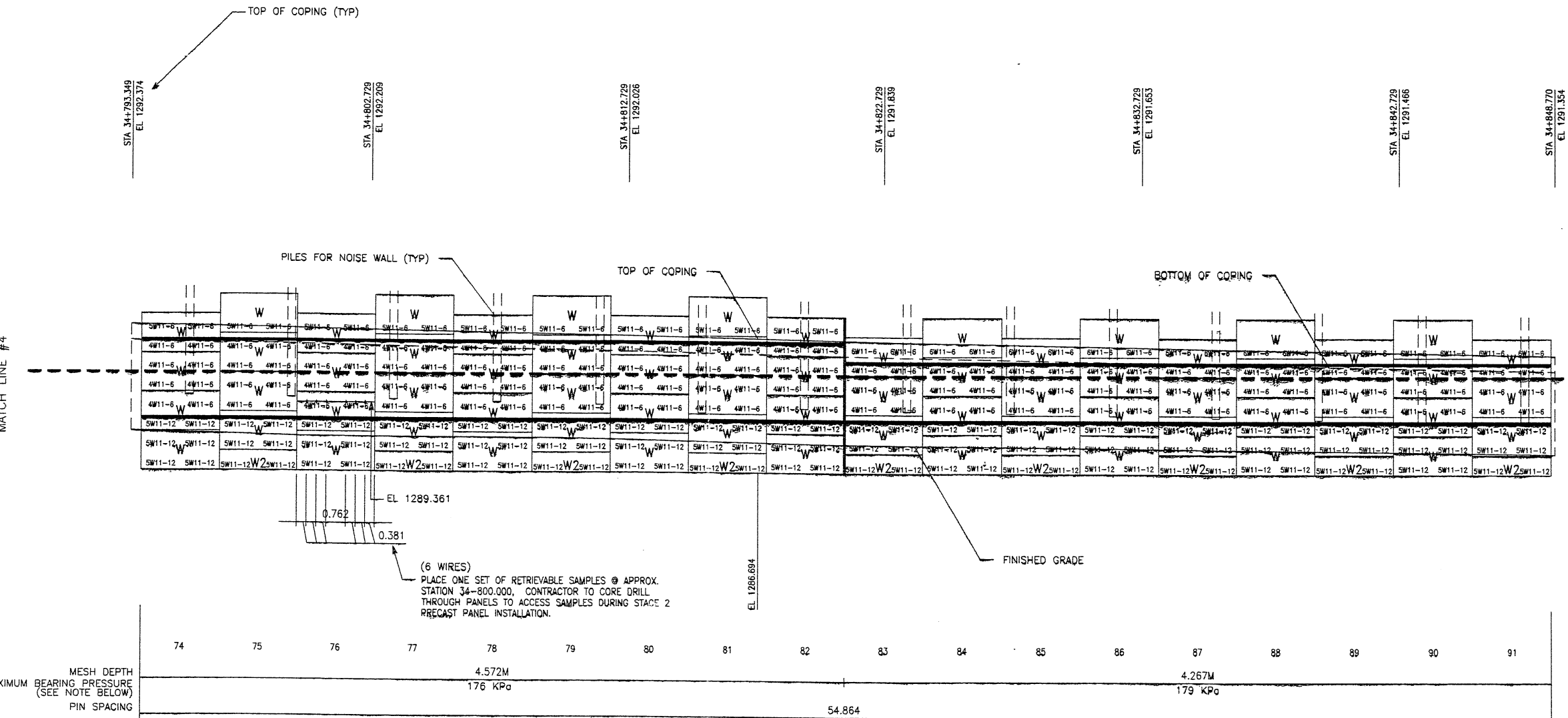
VSL CORPORATION
 9800 Plaza Place, Suite 200
 Raleigh, NC 27617
 Telephone: (919) 881-6272
 Fax: (919) 881-6889



VSL Corporation hereby certifies that the design shown on this drawing is the work of a duly licensed Professional Engineer in the State of North Carolina. The use of this information in any other project without the written consent of VSL Corporation is strictly prohibited and void.

RETAINED EARTH™ WALLS
 WALL "R-351-30" - 1ST STAGE: WIRE FACED WALL
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSPORTATION

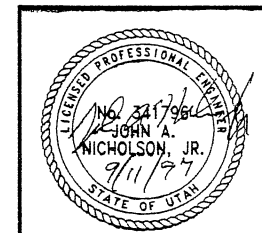
DWG. NO.	3.2R-351-30.15
JOB NO.	239-0007
SHT. NO.	RE-11



BUILD WALL UP TO THIS LINE;
 ALLOW TO SETTLE;
 RESUME CONSTRUCTION

SCALE 1:100 (FULL SIZE)
 SCALE 1:200 (HALF SIZE)

METRIC



CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

APPROVER NOTE:
 MAXIMUM FINAL UNFACTORED BEARING PRESSURES ARE INDICATED BELOW "MESH DEPTH LINE". REVIEWER TO VERIFY MAXIMUM BEARING CAPACITY OF FOUNDATION.

FINAL PLC 9-05-97

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	9-11-97	RELEASE FOR 1ST STAGE CONST. ONLY

WASATCH CONSTRUCTORS
 SEP 16 1997
 RELEASED FOR CONSTRUCTION

DES.	09-05-97	MM
DRN.	09-05-97	DDO
CHK.	09-05-97	MM

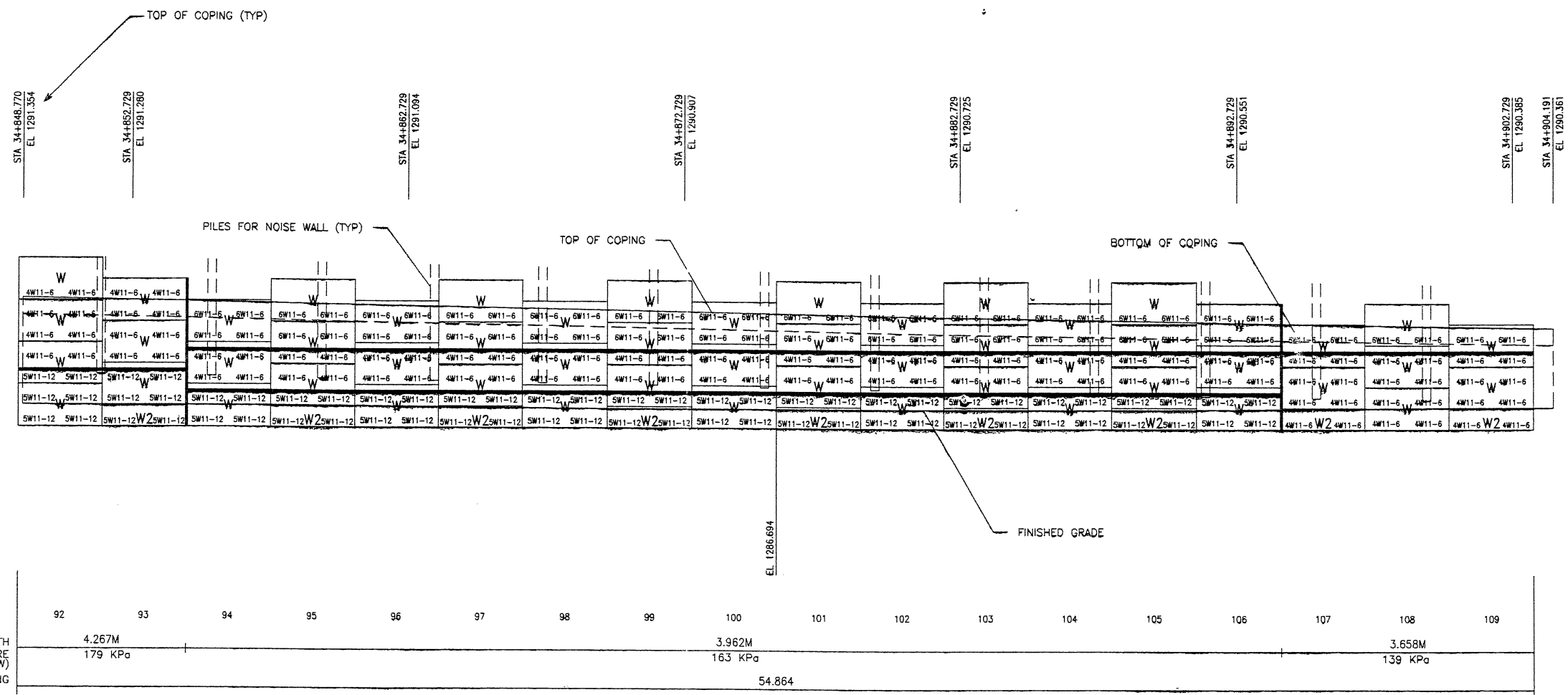
VSL CORPORATION
 2840 Plaza Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-6272
 Fax: (919) 781-4959



VSL Corporation (VSL) claims a proprietary right in all designs, specifications, drawings, and computer programs set forth on the sheet. The use of any part, or any reproduction thereof, in any project, or any reproduction thereof, is restricted to the material and/or project for which it was prepared and for which it was intended. Any other use is strictly prohibited.

RETAINED EARTH™ WALLS
 WALL "R-351-30" - 1ST STAGE: WIRE FACED WALL
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH

DWG. NO.	3.2R-351-30.16
JOB NO.	239-0007
SHT. NO.	RE-12



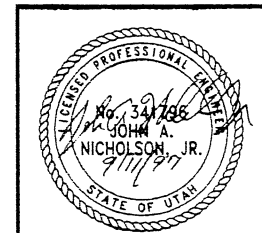
MATCH LINE #5

MATCH LINE #6

SCALE 1:100 (FULL SIZE)
 SCALE 1:200 (HALF SIZE)

APPROVER NOTE:
 MAXIMUM FINAL UNFACTORED BEARING PRESSURES ARE INDICATED BELOW "MESH DEPTH LINE" REVIEWER TO VERIFY MAXIMUM BEARING CAPACITY OF FOUNDATION.

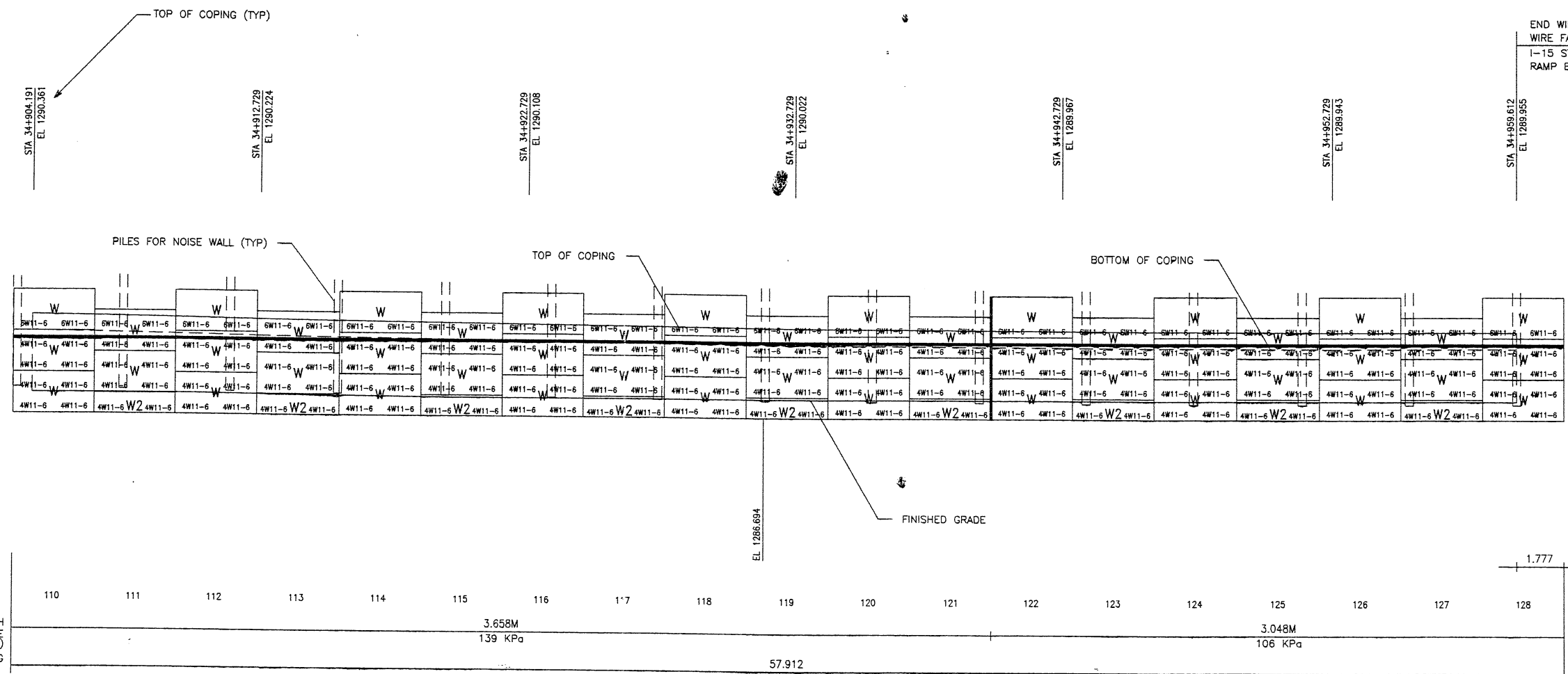
METRIC



CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

FINAL PLG. 09-05-97

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲	9-11-97	RELEASE FOR 1ST STAGE CONST. ONLY



END WIRE FACED WALL R-351-30
 WIRE FACED WALL STA 34+959.612 =
 1-15 STA 34+959.411 @ 44.688 RT
 RAMP B6N STA 1+200.000 @ 11.075 RT

WASATCH CONSTRUCTORS
 SEP 16 1997
 RELEASED FOR CONSTRUCTION

VSL CORPORATION
 2840 Plaza Place, Suite 200
 Raleigh, NC 27610
 Telephone: (919) 781-6272
 Fax: (919) 781-4889



VSL Corporation (USA) does not warrant, either explicitly or implicitly, the use of any information in this document for any purpose other than that intended by the manufacturer. The user assumes all liability for the use of this information.

RETAINED EARTH™ WALLS
 WALL "R-351-30" - 1ST STAGE: WIRE FACED WALL
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH

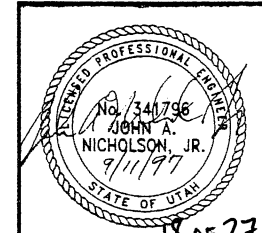
MESH DEPTH
 MAXIMUM BEARING PRESSURE
 (SEE NOTE BELOW)
 PIN SPACING

110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128
3.658M															3.048M			
139 KPa															106 KPa			
57.912																		

SCALE 1:100 (FULL SIZE)
 SCALE 1:200 (HALF SIZE)

METRIC

APPROVER NOTE:
 MAXIMUM FINAL UNFACTORED BEARING PRESSURES
 ARE INDICATED BELOW "MESH DEPTH LINE"
 REVIEWER TO VERIFY MAXIMUM BEARING
 CAPACITY OF FOUNDATION.



CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY.
 EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE
 STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE
 ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS
 OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO
 THE MANUFACTURER'S SPECIFICATION.

DWG. NO.
 3.2R-351-30.17
 JOB NO.
 239-0007
 SHT. NO.
 RE-17

18 OF 27

11-16-98

FINAL

11-16-98

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	11-16-98	RELEASE FOR 2ND STAGE CONST.

DES.	DRN.	CHK.	MM	RSW	MM	REVISION	DATE	NO.	CHK

VSL CORPORATION
 2840 Pecos Pkwy, Suite 200
 Houston, TX 77058
 Telephone: (713) 781-6272
 Facsimile: (713) 781-6859

ATLANTA, GA / DALLAS, TX / PALMDALE, CA (CORPORATE OFFICE)
 MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA

VSL

VSL Corporation (USA) Inc. is a registered professional engineer in the State of California. The use of this drawing is limited to the project and location specified on this sheet. The use of this drawing for any other project or location without the written consent of VSL Corporation is prohibited. Any other use is strictly prohibited. VSL, VSLITY and THE REFLECTOR are trademarks of VSL Corporation.

RETAINED EARTH™ WALLS
 WALL "R-351-30" - 2ND STAGE: PRECAST WALL
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

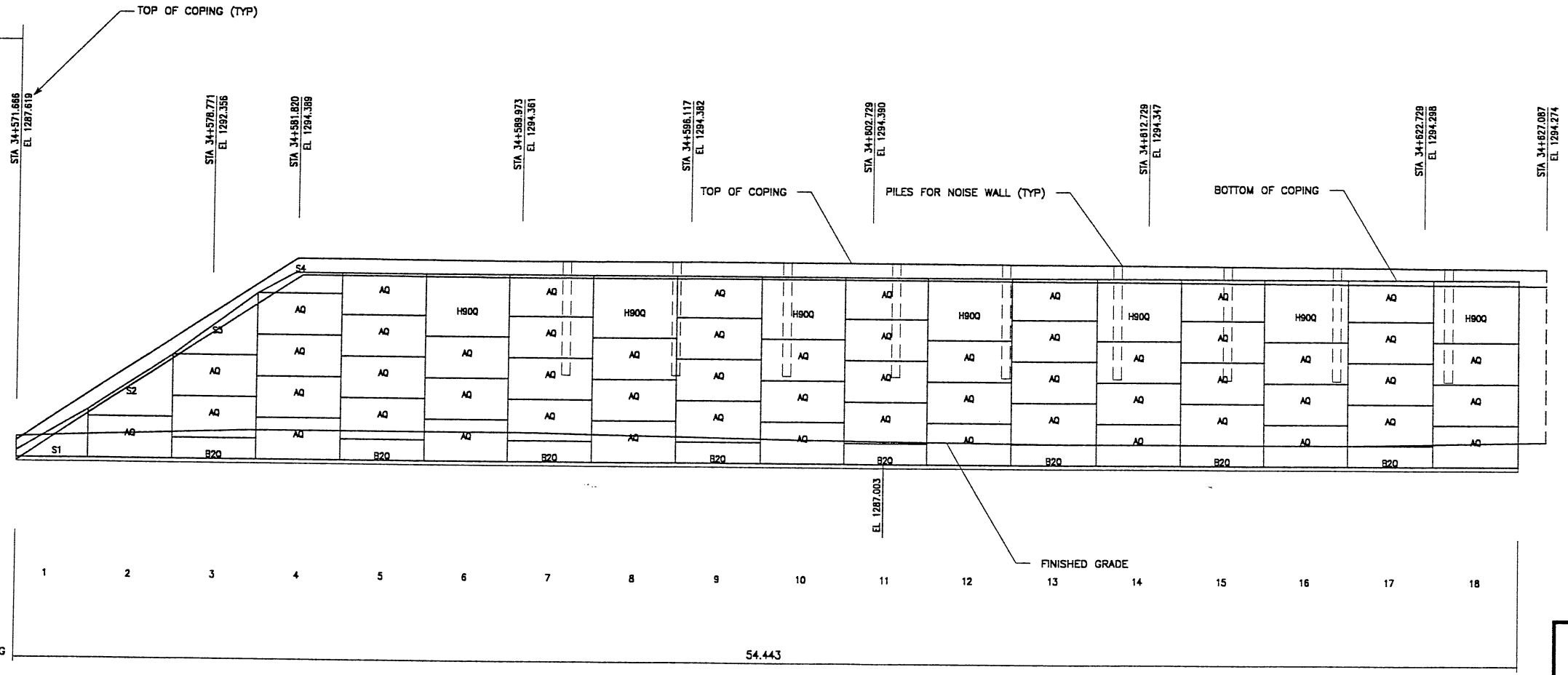
DWG. NO.
3.2R-351-30.18

JOB NO.
239-0007

SHT. NO.
RE-14

19 OF 27

BEGIN PRECAST WALL R-351-30
 PRECAST WALL STA 34+571.666 =
 I-15 STA 34+571.666
 ● 37.582 RT

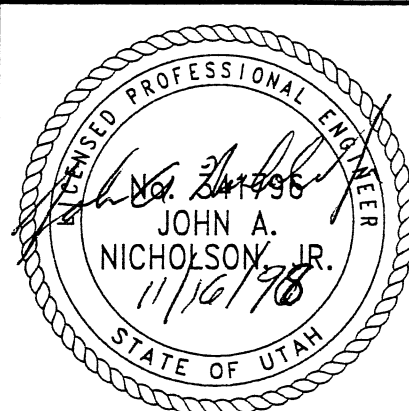


RETAINING WALL "R-351-30" - 2ND STAGE: PRECAST WALL
 (FRONT FACE SHOWN)
 (TOTAL SURFACE AREA OF FACING = 1,832.65 SM)

SCALE 1:100 (FULL SIZE)
 SCALE 1:200 (HALF SIZE)

METRIC

CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

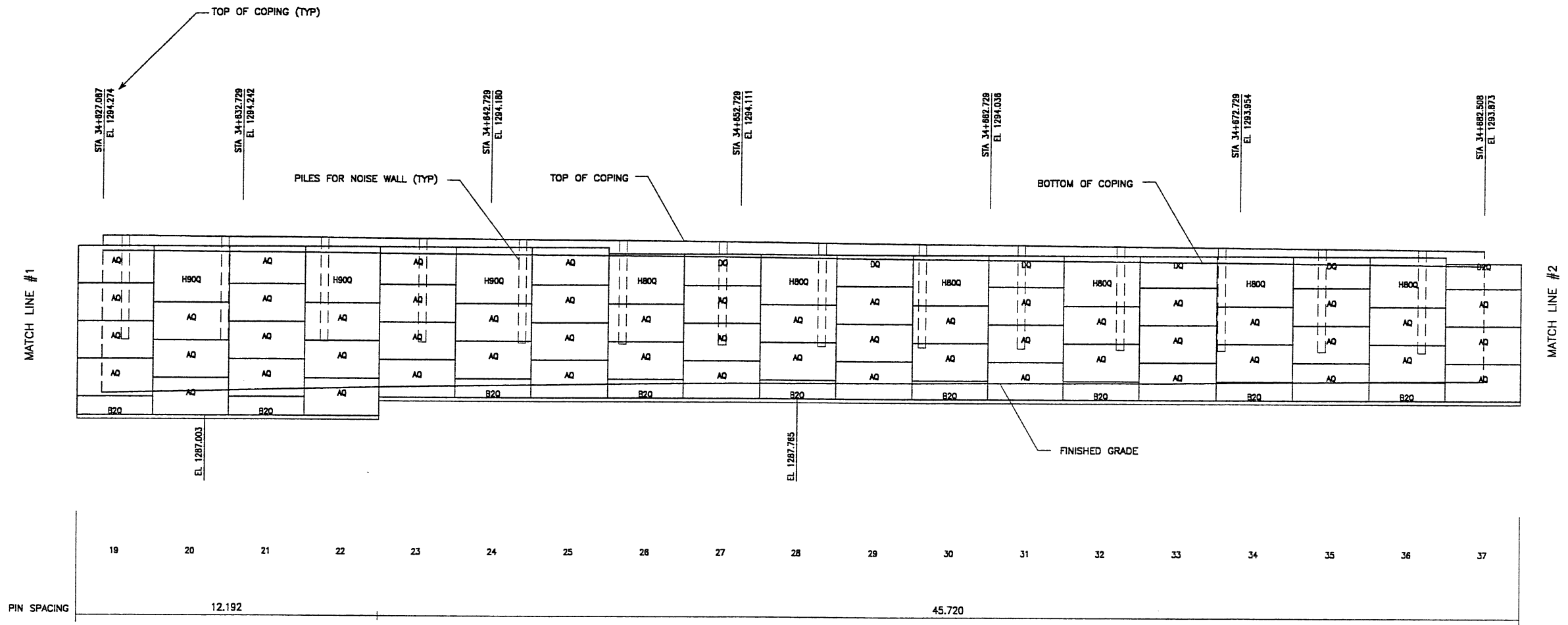


WASATCH CONSTRUCTORS
 DEC 15 1998
 RELEASED FOR CONSTRUCTION

MATCH LINE #1

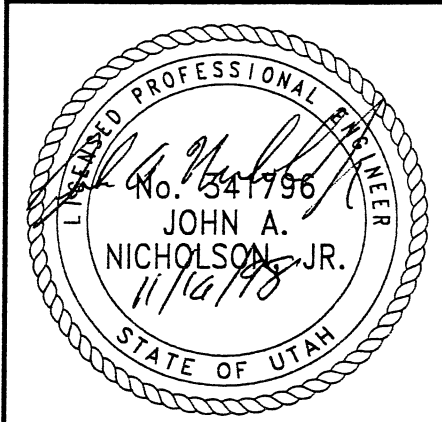
APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲	11-16-98	RELEASE FOR 2ND STAGE CONST.

NO.	DATE	REVISION	BY	CHK



RETAINING WALL "R-351-30" - 2ND STAGE: PRECAST WALL
 (FRONT FACE SHOWN) SCALE 1:100 (FULL SIZE)
 SCALE 1:200 (HALF SIZE)
 (TOTAL SURFACE AREA OF FACING = 1,832.65 SM)

WASATCH CONSTRUCTORS
DEC 15 1998
 RELEASED FOR CONSTRUCTION



METRIC
 CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

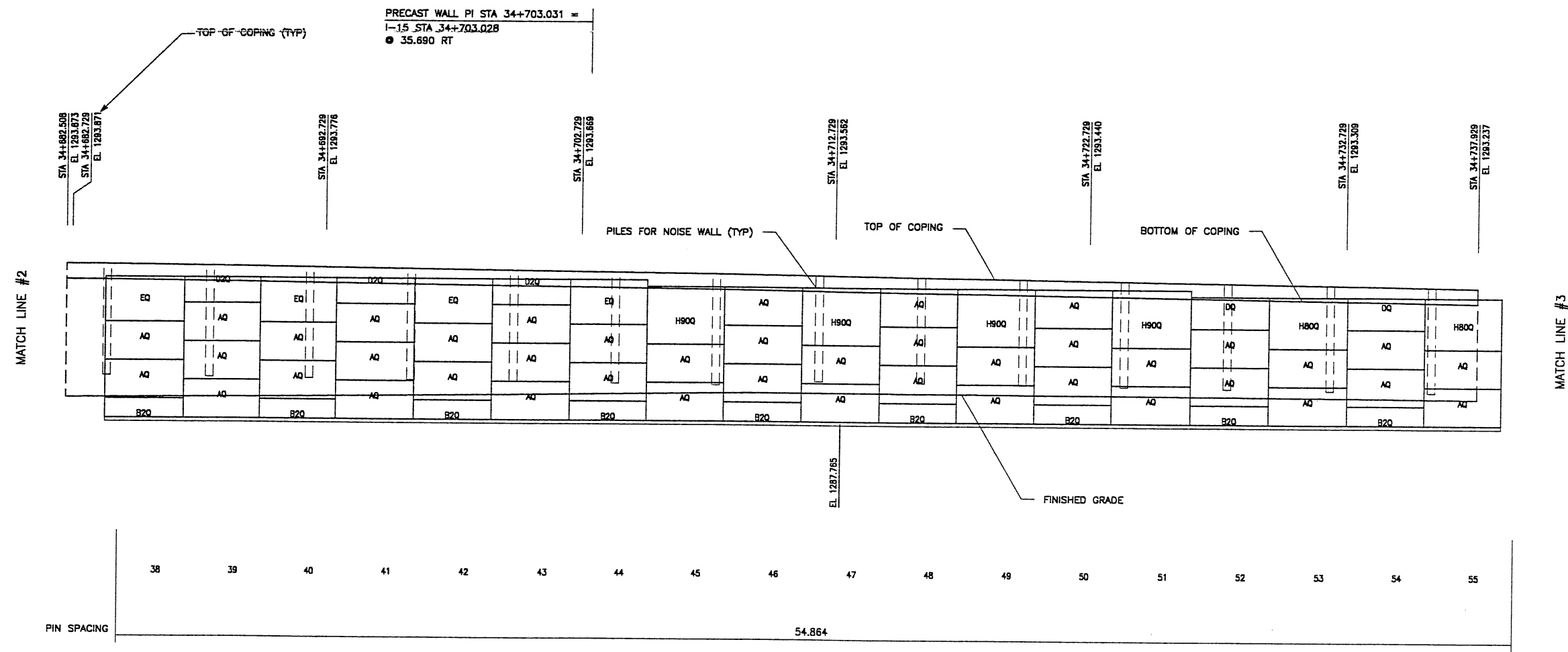
VSL CORPORATION
 2940 Plaza Place, Suite 700
 Raleigh, NC 27612
 Telephone: (919) 781-8272
 Fax: (919) 781-4869

ATLANTA, GA / DALLAS, TX / RALEIGH, NC (CORPORATE OFFICE)
 MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA

VSL Corporation (VSL) is a U.S. proprietary (patented) system for retaining walls and related structures. It is a registered trademark of VSL Corporation. VSL Corporation is not responsible for any errors or omissions in this drawing. It is the user's responsibility to verify all dimensions and quantities before construction. VSL CORPORATION ASSUMES NO LIABILITY FOR ANY CLAIMS OR DAMAGES OF ANY KIND.

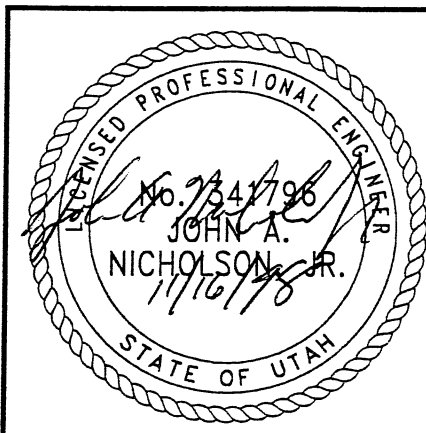
RETAINED EARTH™ WALLS
WALL "R-351-30" - 2ND STAGE: PRECAST WALL
UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.
DWG. NO. 3.2R-351-30.19
JOB NO. 239-0007
SHT. NO. RE-15

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	11-16-98	RELEASE FOR 2ND STAGE CONST.



RETAINING WALL "R-351-30" - 2ND STAGE: PRECAST WALL
 (FRONT FACE SHOWN) SCALE 1:100 (FULL SIZE)
 SCALE 1:200 (HALF SIZE)
 (TOTAL SURFACE AREA OF FACING = 1,832.65 SM)

WASATCH CONSTRUCTORS
 DEC 15 1998
 RELEASED FOR CONSTRUCTION



CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

METRIC

NO.	DATE	DESCRIPTION	BY	CHK

DES.	MM	NO.	DATE
DRN.	RSW		
CHK.	MM		

RETAINED EARTH™

VSL CORPORATION
 2840 Pines, Suite 200
 Raleigh, NC 27617
 Telephone: (919) 781-6272
 Fax: (919) 781-4969

ALANTA, GA / DALLAS, TX / RALEIGH, NC (CORPORATE OFFICE)
 MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA

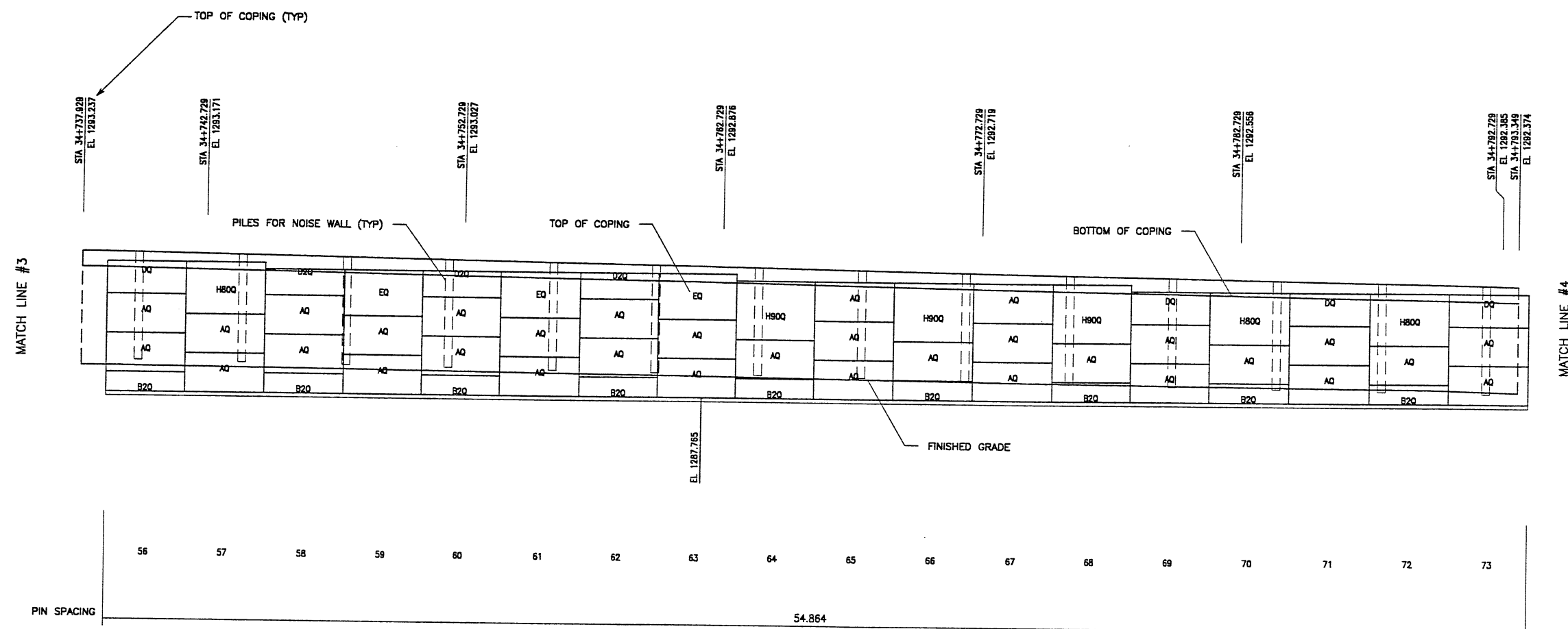
RETAINED EARTH™ WALLS
 WALL "R-351-30" - 2ND STAGE: PRECAST WALL
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO.
 3,2R-351-30.20

JOB NO.
 239-0007

SHT. NO.
 RE-16

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲	11-16-98	RELEASE FOR 2ND STAGE CONST.



RETAINING WALL "R-351-30" - 2ND STAGE: PRECAST WALL
 (FRONT FACE SHOWN)

(TOTAL SURFACE AREA OF FACING = 1,832.65 SM)

SCALE 1:100 (FULL SIZE)
 SCALE 1:200 (HALF SIZE)

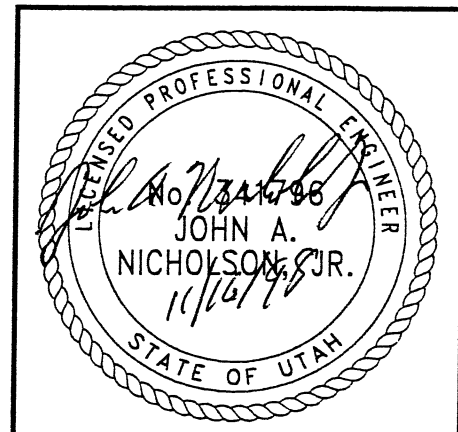
WASATCH CONSTRUCTORS

DEC 15 1998

RELEASED FOR CONSTRUCTION

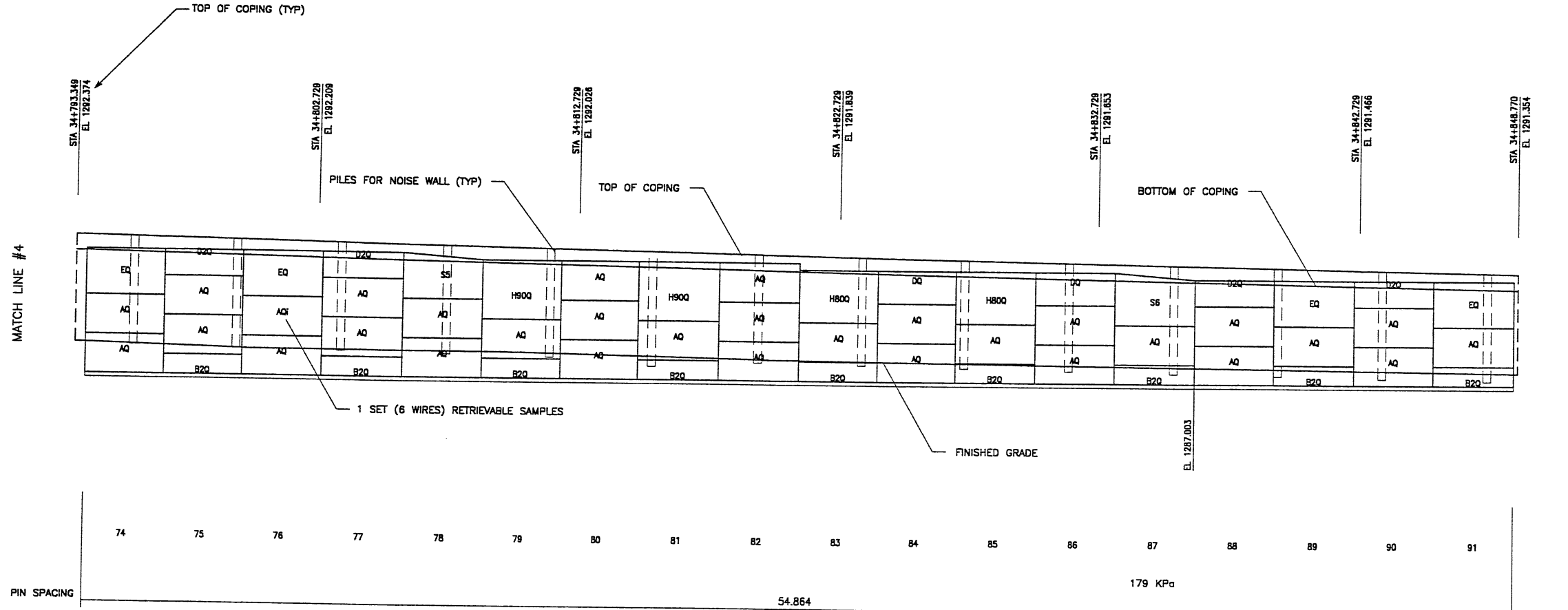
METRIC

CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.



DES. 09-29-98 MM		<p>VSL CORPORATION 2840 Piedra Place, Suite 200 Raleigh, NC 27612 Telephone: (919) 781-8272 Fax: (919) 781-4869</p>	RETAINED EARTH™ 	NO.	DATE	REVISION
DRN. 09-29-98 RSW						
CHK. 09-29-98 MM						
		VSL CORPORATION 2840 Piedra Place, Suite 200 Raleigh, NC 27612 Telephone: (919) 781-8272 Fax: (919) 781-4869		ATLANTA, GA / DALLAS, TX / RALEIGH, NC (CORPORATE OFFICE) MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA		
<small>VSL Corporation (VSL) is a registered provider of continuing education for engineers, architects, planners, and other professionals. The use of this information is subject to the restrictions and/or conditions set forth in the VSL License and Liability Waiver Agreement.</small>		RETAINED EARTH™ WALLS WALL "R-351-30" - 2ND STAGE: PRECAST WALL		UTAH I-15 INTERCHANGE SALT LAKE COUNTY, UTAH UTAH DEPARTMENT OF TRANSP.		
DWG. NO.		3.2R-351-30.21		JOB NO.		
		239-0007		SHT. NO.		
		RE-17				

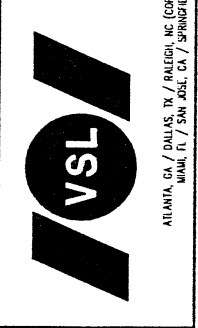
22 of 27



APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲	11-16-98	RELEASE FOR 2ND STAGE CONST.

DES.	DRN.	CHK.	RETAINED EARTH™	NO.	DATE	BY	CHK
09-29-98	09-29-98	09-29-98	MM	MM	MM	MM	MM

VSL CORPORATION
 2840 Plaza Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-6272
 Fax: (919) 781-6859



VSL Corporation (VSL) owns a U.S. patent for its Retained Earth™ walls. The design and construction of these walls is the responsibility of the engineer of record. The engineer of record is responsible for the design and construction of the walls and for the safety of the structure. The engineer of record is not responsible for the design and construction of the walls if the walls are not constructed in accordance with the design and specifications provided by VSL. Any other use of the walls without the written consent of VSL is strictly prohibited. VSL ACCEPTS NO LIABILITY FOR THE RESULTS OF THE RETAINED EARTH™ WALLS.

WASATCH CONSTRUCTORS
 DEC 15 1998
 RELEASED FOR CONSTRUCTION

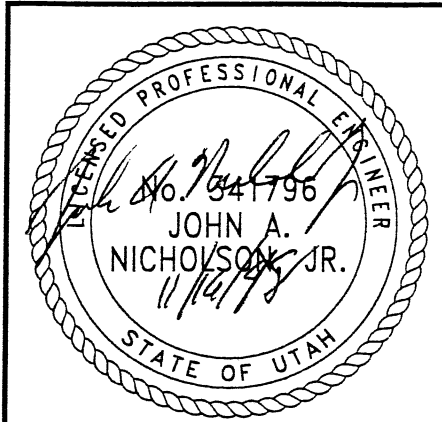
RETAINING WALL "R-351-30" - 2ND STAGE: PRECAST WALL
 (FRONT FACE SHOWN)

SCALE 1:100 (FULL SIZE)
 SCALE 1:200 (HALF SIZE)

(TOTAL SURFACE AREA OF FACING = 1,832.65 SM)

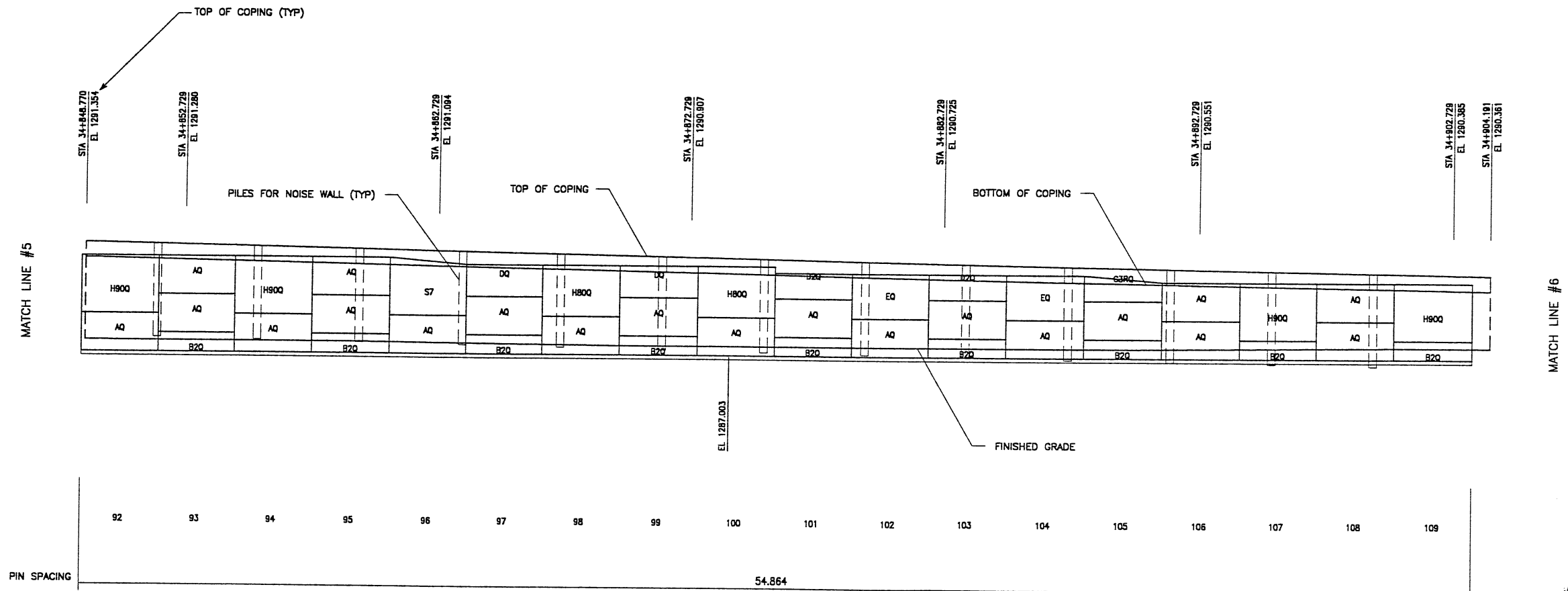
METRIC

CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.



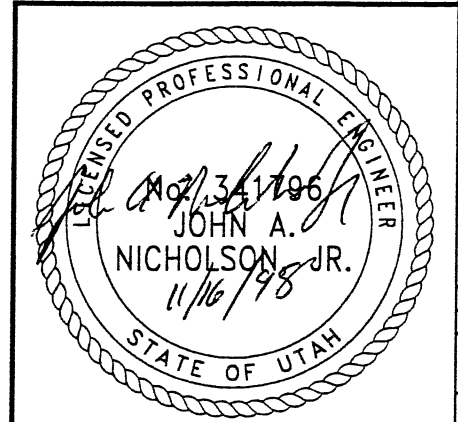
RETAINED EARTH™ WALLS
WALL "R-351-30" - 2ND STAGE: PRECAST WALL
UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.
DWG. NO. 3.2R-351-30.22
JOB NO. 239-0007
SHT. NO. RE-18

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	11-16-98	RELEASE FOR 2ND STAGE CONST.



RETAINING WALL "R-351-30" - 2ND STAGE: PRECAST WALL
 (FRONT FACE SHOWN) SCALE 1:100 (FULL SIZE)
 SCALE 1:200 (HALF SIZE)
 (TOTAL SURFACE AREA OF FACING = 1,832.65 SM)

WASATCH CONSTRUCTORS
DEC 15 1998
 RELEASED FOR CONSTRUCTION



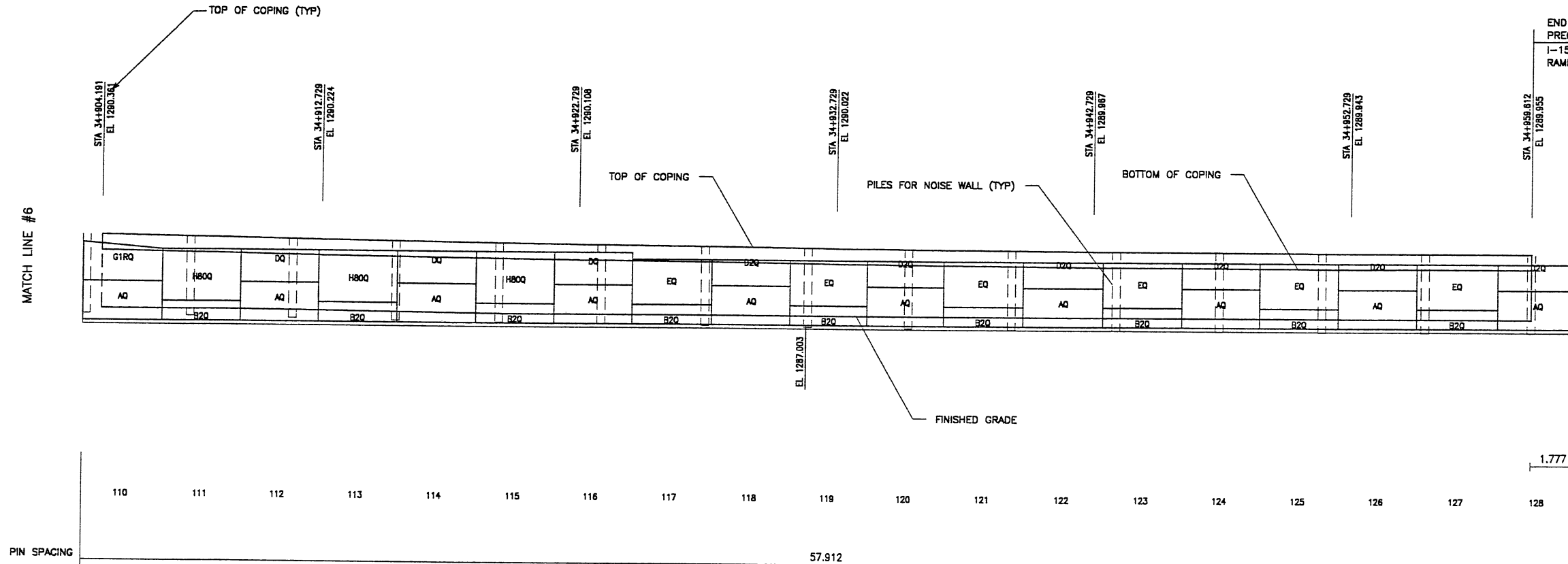
METRIC
 CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

DES:	09-29-98	MM	 VSL CORPORATION 2840 Plaza Place, Suite 200 Raleigh, NC 27617-1815-6772 Fax: (919) 781-4869 ATLANTA, GA / DALLAS, TX / RALEIGH, NC (CORPORATE OFFICE) MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA
DRN:	09-29-98	RSW	
CHK:	09-29-98	MM	
NO.			REVISION
DATE			
BY			

USE CONSTRUCTION SPEC'S
 RIGHT IN ALL DETAILS, SPEC.
 INFORMATION NOT LISTED
 ON THIS SHEET. THE USE OF
 OR IN PART, OR ANY REPO-
 sition thereof, is re-
 sponsible to the material manuf-
 acturer and VSL. VSL
 MAKES NO WARRANTY
 THEREFOR.

RETAINED EARTH™ WALLS
 WALL "R-351-30" - 2ND STAGE: PRECAST WALL
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO.	3.2R-351-30.23
JOB NO.	239-0007
SHT. NO.	RE-19



RETAINING WALL "R-351-30" - 2ND STAGE: PRECAST WALL

(FRONT FACE SHOWN)
 (TOTAL SURFACE AREA OF FACING = 1,832.65 SM)

SCALE 1:100 (FULL SIZE)
 SCALE 1:200 (HALF SIZE)

METRIC

CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	11-16-98	RELEASE FOR 2ND STAGE CONST.

END PRECAST WALL R-351-30
 PRECAST WALL STA 34+959.812 =
 I-15 STA 34+959.411 @ 45.511 RT
 RAMP B6N STA 1+200.000 @ 11.898 RT

DES.	MM	RSW	MM	NO.	DATE	REVISION	BY	CHK
09-29-98	MM	RSW	MM					
09-29-98	MM	RSW	MM					
09-29-98	MM	RSW	MM					

VSL CORPORATION
 2810 Plaza Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-6772
 Fax: (919) 781-4969



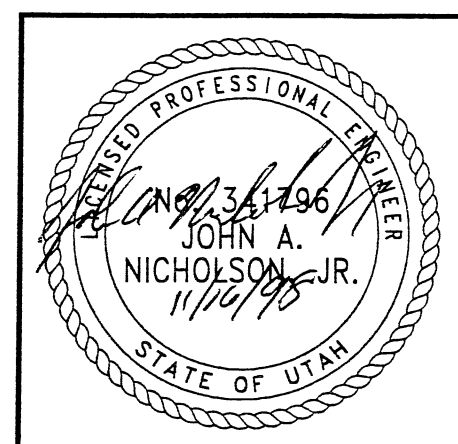
ALABAMA, CA / DALLAS, TX / FALCON, NC (CORPORATE OFFICE)
 MADE IN / SAN JOSE, CA / SPRINGFIELD, VA

VSL Corporation (VSL) is a Swiss company. All design, construction, and calculation instructions and calculations on this sheet are the property of VSL. The use of such information in whole or in part without the written permission of VSL is prohibited. VSL BEI CLAIMS ANY LIABILITY THEREFOR.

WASATCH CONSTRUCTORS

DEC 15 1998

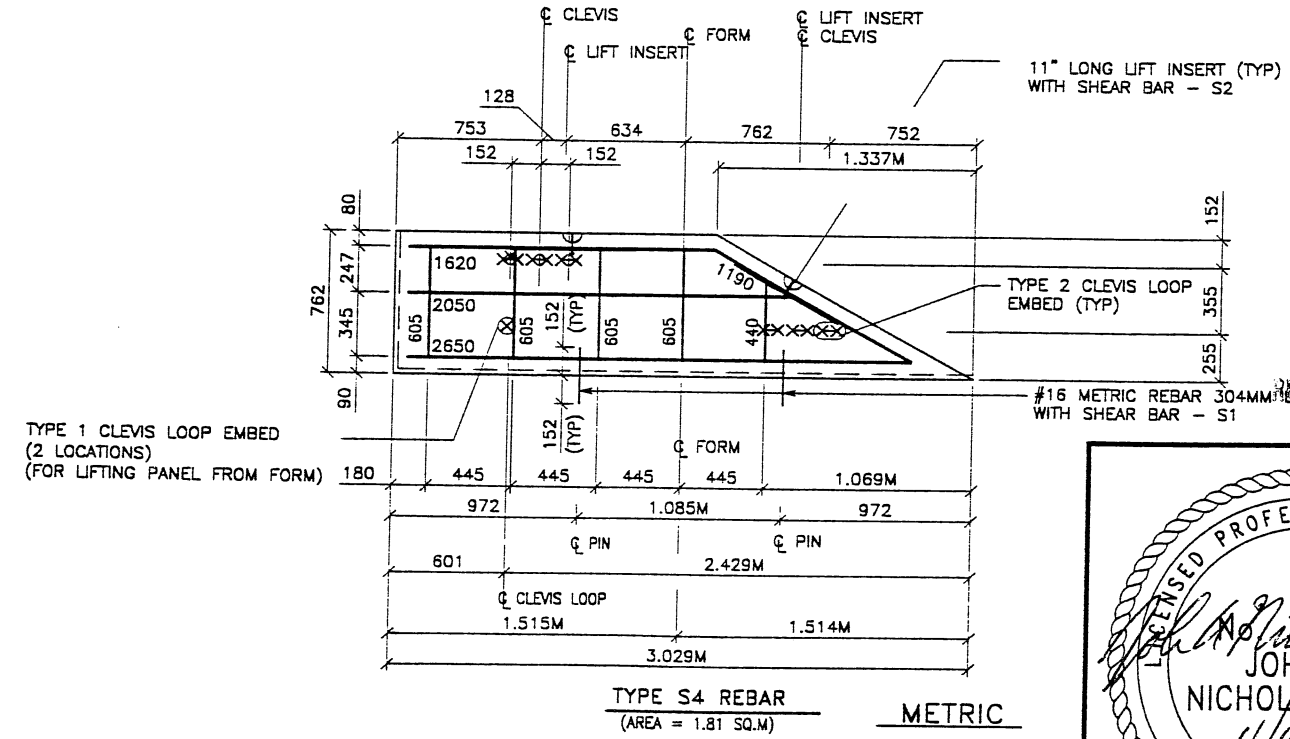
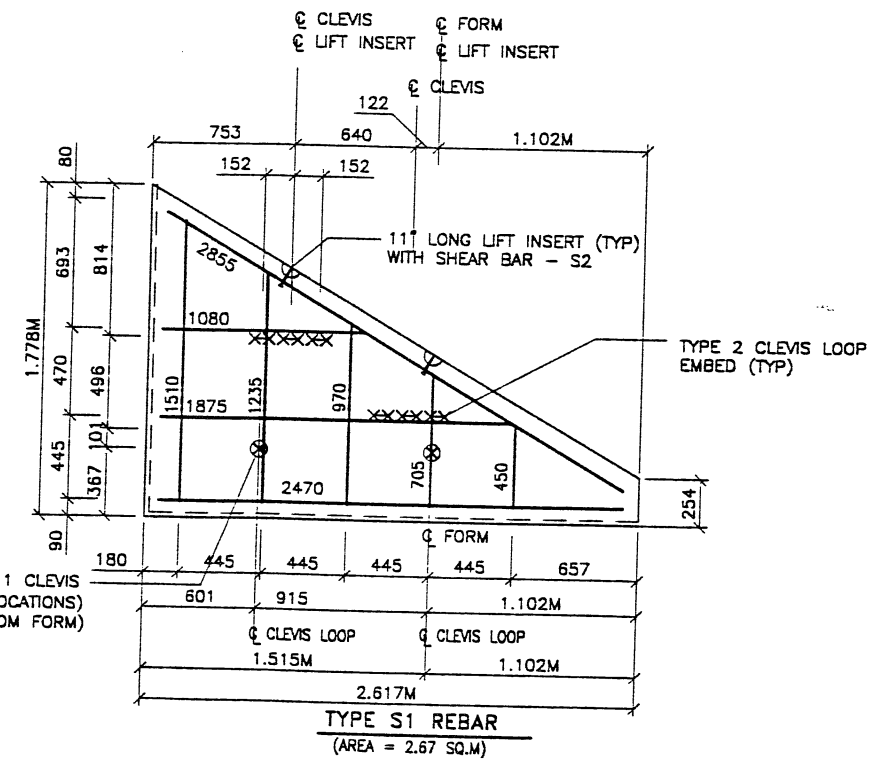
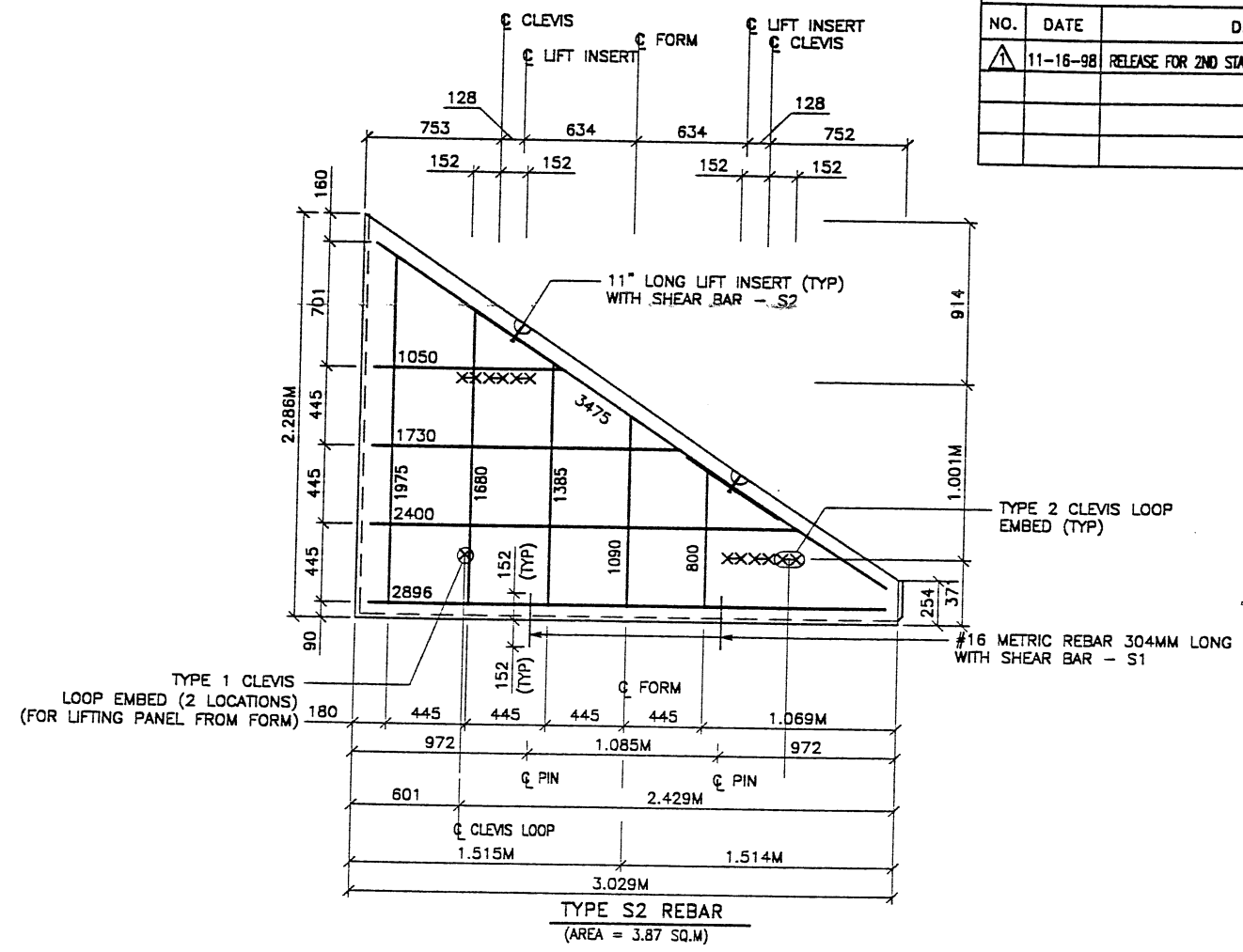
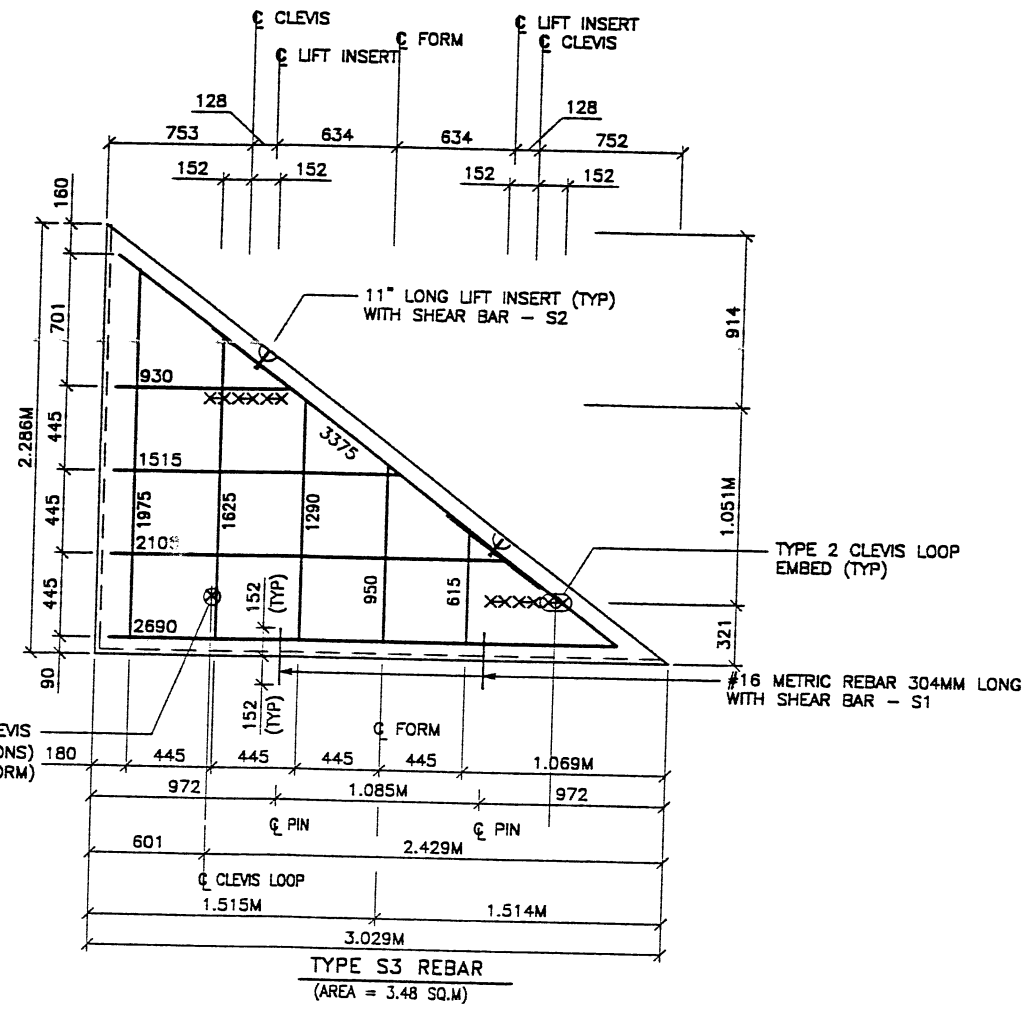
RELEASED FOR CONSTRUCTION



RETAINED EARTH™ WALLS
 WALL "R-351-30" - 2ND STAGE: PRECAST WALL
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO.	3.2R-351-30.24
JOB NO.	239-0007
SHT. NO.	RE-20

ENCE (X-UTAH) DWG



APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	11-16-98	RELEASE FOR 2ND STAGE CONST.

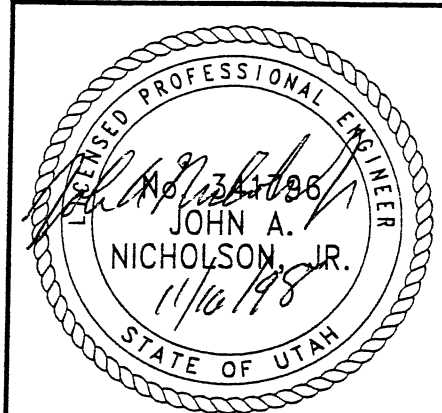
NO.	DATE	REVISION	CHK

VSL CORPORATION
 2840 Plaza Place, Suite 200
 Raleigh, NC 27612
 Telephone (919) 781-8277
 Fax (919) 781-9559

ALABAMA, CA / DANIEL, PA / PENNSYLVANIA, SC (CORPORATE OFFICE)
 VIRGINIA, VA / SAN JOSE, CA / SPRINGFIELD, VA

VSL Corporation (VSL) is a registered professional engineer in the State of North Carolina. The use of this information in any design or construction project is the responsibility of the user. VSL Corporation is not responsible for any errors or omissions in this information.

WASATCH CONSTRUCTORS
 DEC 15 1998
 RELEASED FOR CONSTRUCTION



RETAINED EARTH™ WALLS
 WALL "R-351-30"
 2-STAGE PANEL REINFORCEMENT
 600 NORTH / I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

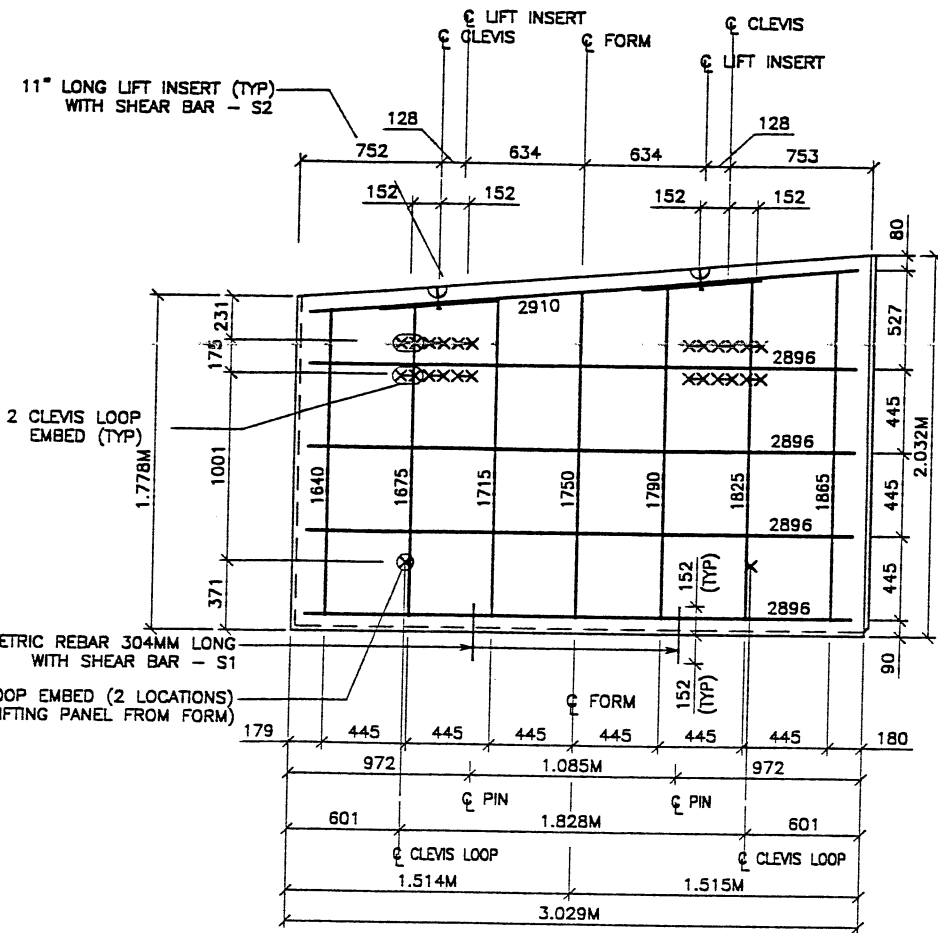
DWG. NO.
 3.2R-R351-30.25

JOB NO.
 239-0007

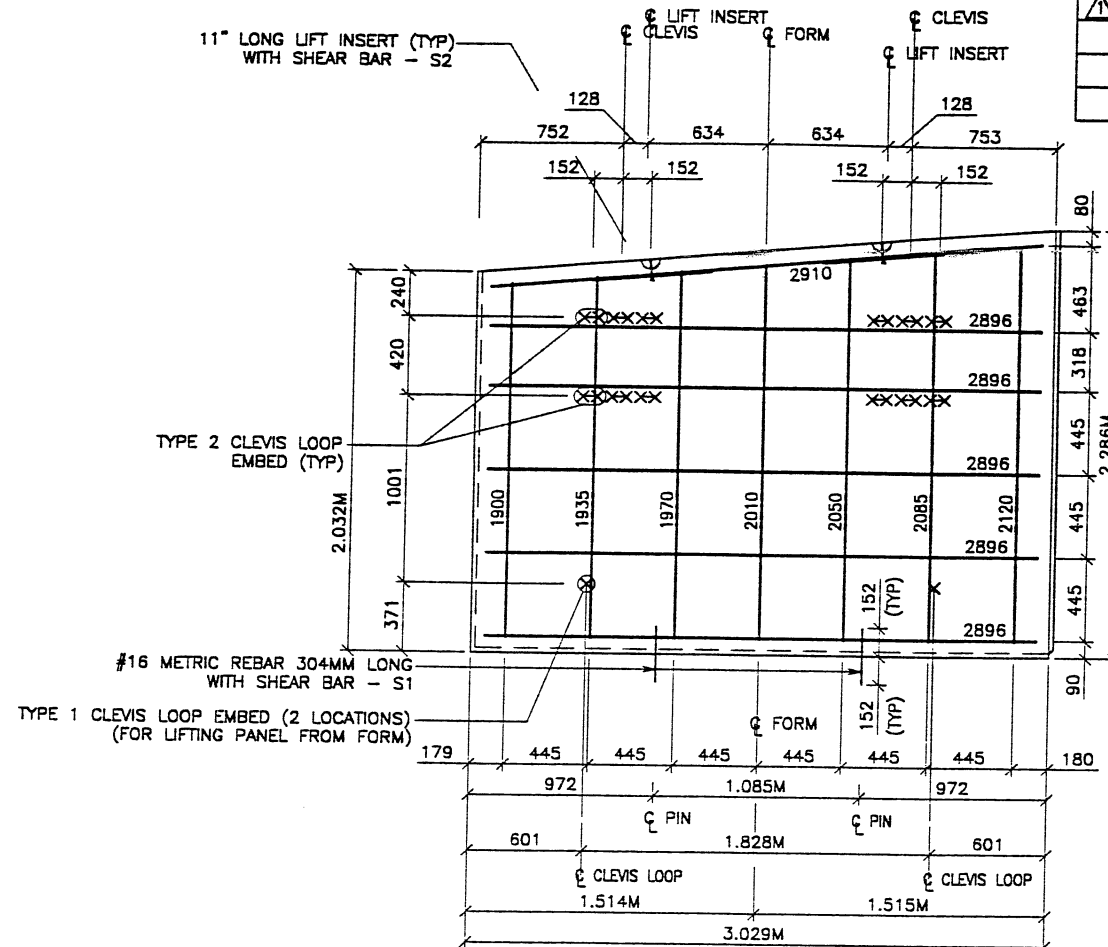
SHT. NO.
 RE-21

CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

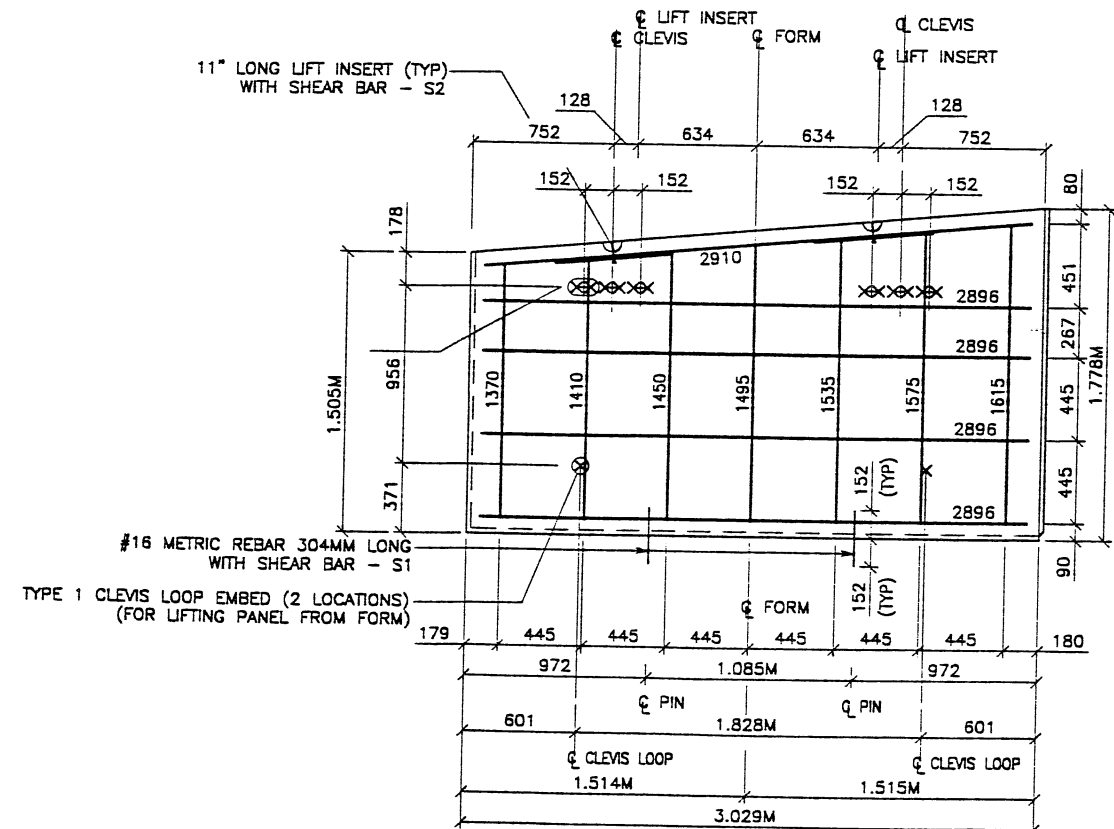
FIN OT 11-16-98



TYPE S6 REBAR
(AREA = 5.81 SQ.M)



TYPE S7 REBAR
(AREA = 6.58 SQ.M)



TYPE S5 REBAR
(AREA = 5.419 SQ.M)

PANEL REINFORCEMENT NOTES:

1. PANELS ARE SHOWN BACK FACE.
2. HORIZONTAL REINFORCEMENT SHALL HAVE 50 mm MINIMUM COVER TO THE BACK FACE.
3. ALL REINFORCEMENT SHALL HAVE 50 mm MINIMUM COVER TO THE SIDES.
4. ALL REINFORCING BARS ARE #13 METRIC. LABELS ON EACH BAR INDICATE LENGTH. EXAMPLE: 1345 IS A #13 BAR 1345 mm LONG.
5. PANEL REINFORCEMENT BARS SHALL BE DEFORMED BILLET STEEL BARS FOR CONCRETE REINFORCEMENT CONFORMING TO THE SPECIFICATIONS OF ASTM DESIGNATION A615, GRADE 60.
6. ALL REINFORCING STEEL TO BE GALVANIZED IN ACCORDANCE WITH ASTM 767 CLASS 1.
7. CONCRETE PANELS TO HAVE 28 DAY COMPRESSIVE STRENGTH OF 27,500 KPa.
8. EQUIVALENT WELDED WIRE FABRIC MAY BE USED.
9. ALL PANELS TO USE 9.5mm WIDE CLEVIS LOOPS.
10. VSL RETAINED EARTH™ IS PROTECTED UNDER PATENT 4,725,170.
11. LIFT INSERTS ARE 6 3/4" LONG IN ALL PANELS LESS THAN 1.524M TALL. PANELS TALLER THAN 1.524M SHALL HAVE 11" LONG LIFT ANCHORS.

METRIC

CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO THE MANUFACTURER'S SPECIFICATION.

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲ 11-16-98		RELEASE FOR 2ND STAGE CONST.

VSL CORPORATION
2840 Plaza Place, Suite 200
Raleigh, NC 27612
Telephone (919) 781 6272
Fax (919) 781 0959

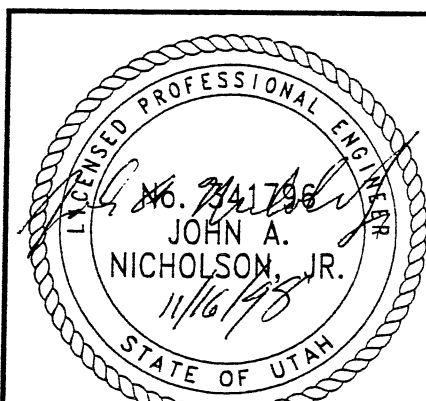


ATLANTA, GA / DANIEL, IN / HANNOVER, NH (CORPORATE OFFICE)
MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA

WASATCH CONSTRUCTORS

DEC 15 1998

RELEASED FOR CONSTRUCTION



RETAINED EARTH™ WALLS
WALL "R-351-30"
2-STAGE PANEL REINFORCEMENT
600 NORTH / I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

DWG. NO.	3.2R-R351-30.26
JOB NO.	239-0007
SHT. NO.	RE-22