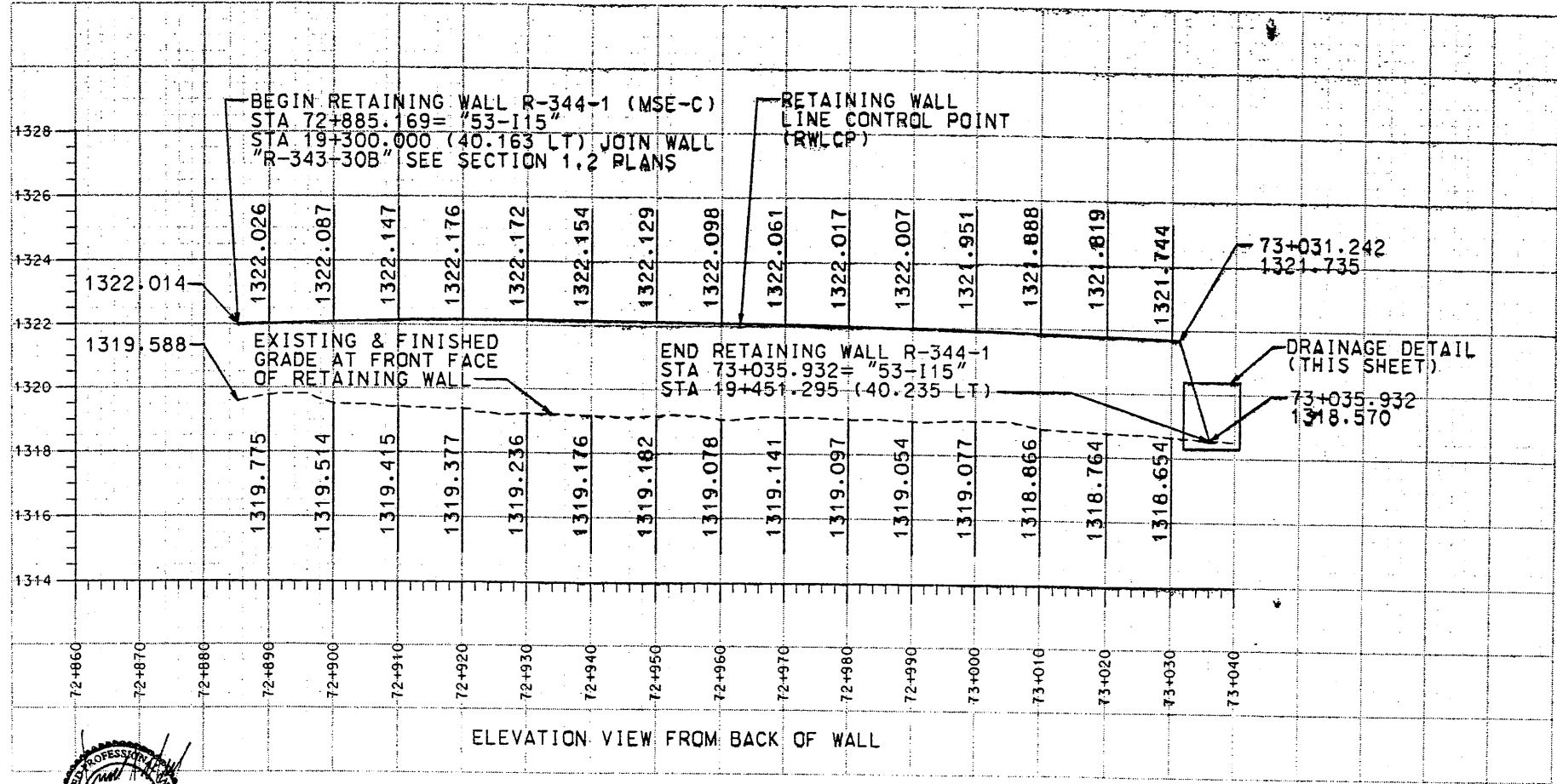
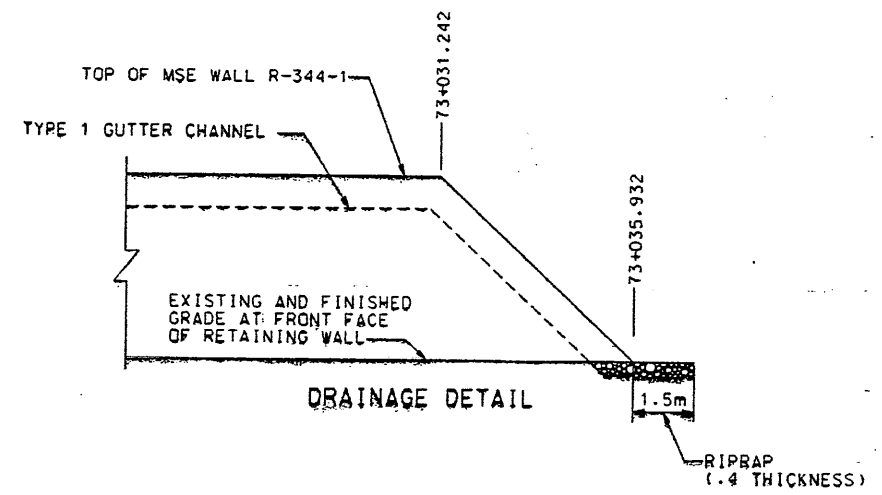
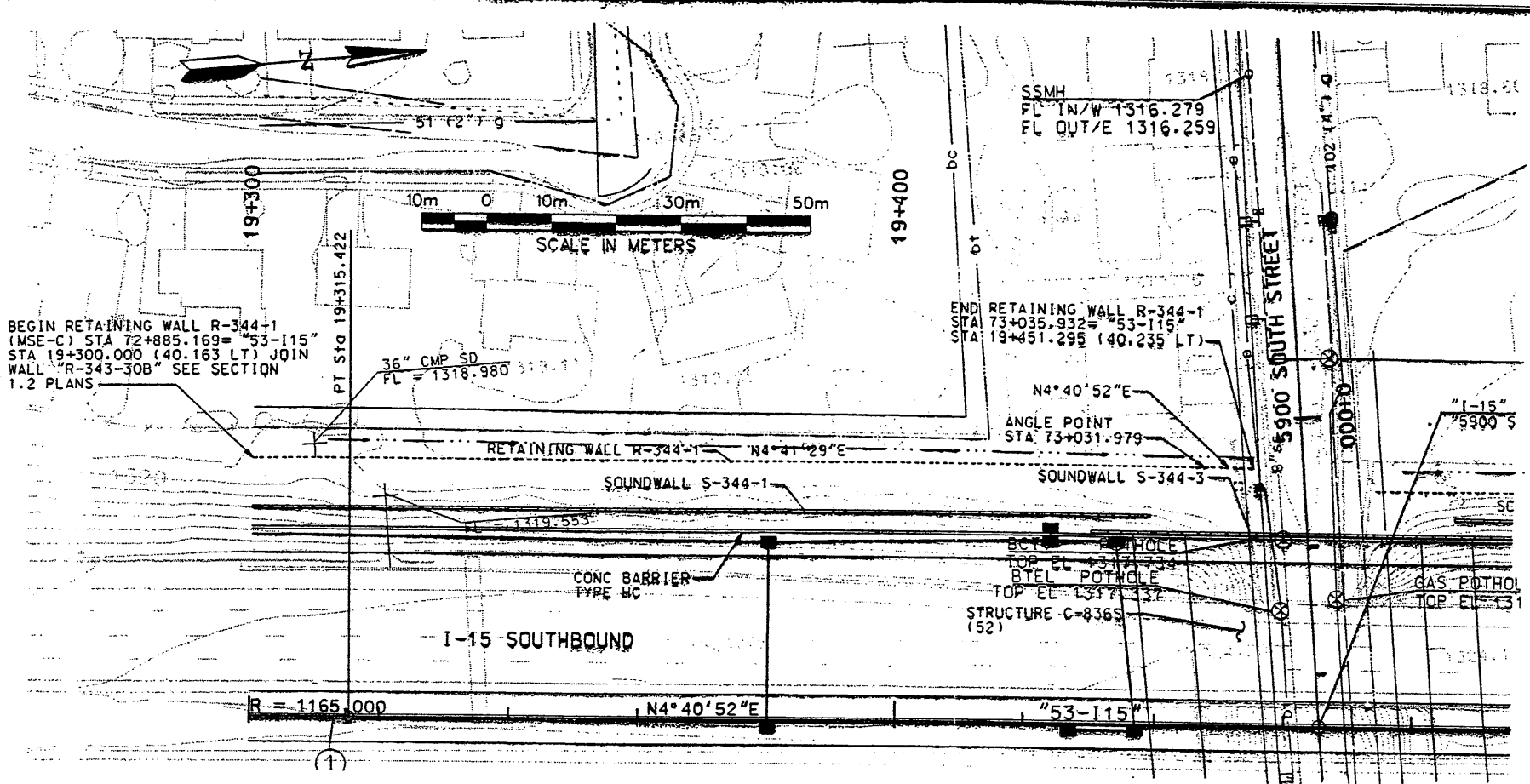


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 First Reference File: c:\dgn\ref\53_design01.dgn
 Second Reference File Levels: [1-57, 60-64]
 Third Reference File: c:\dgn\ref\53_row01.dgn
 Fourth Reference File Levels: [2-64]
 Fifth Reference File: c:\dgn\ref\53_top03.dgn
 Sixth Reference File Levels: [1-61, 63, 64]

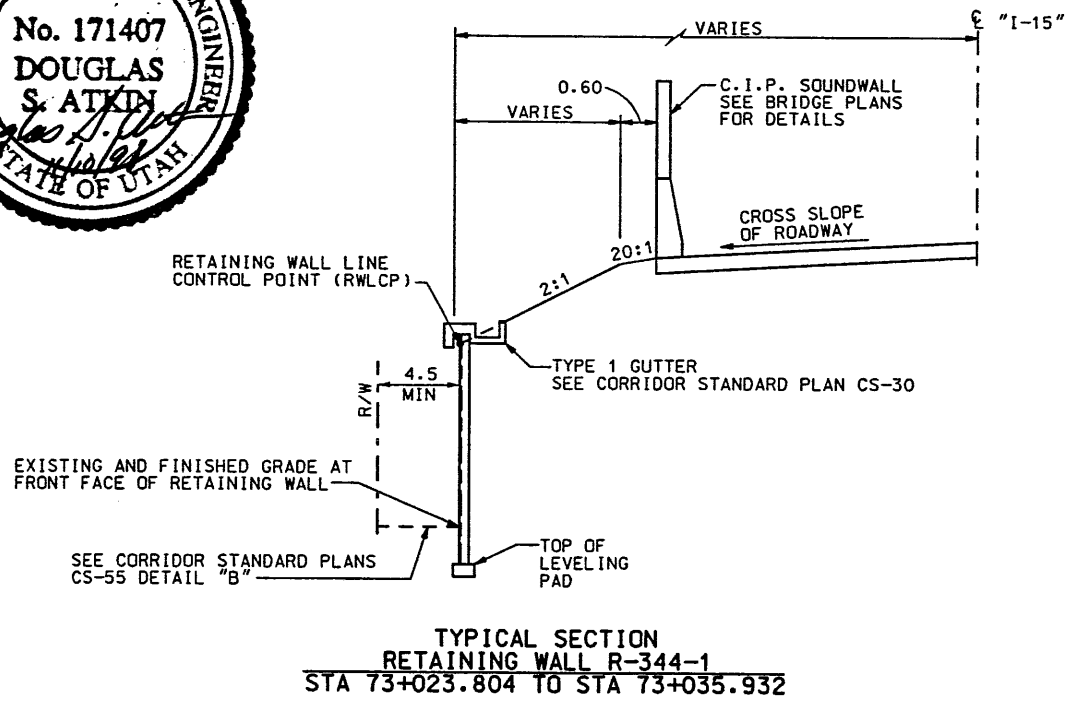
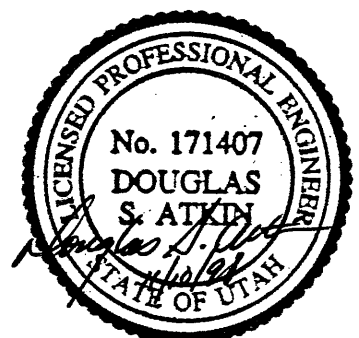
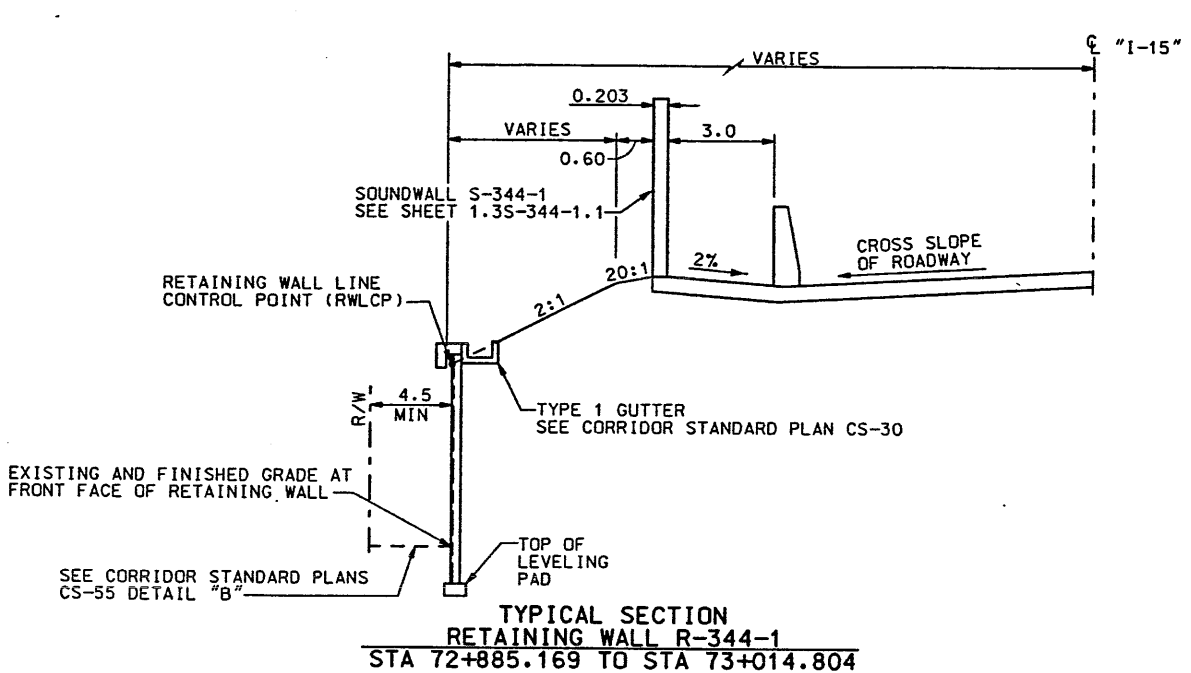
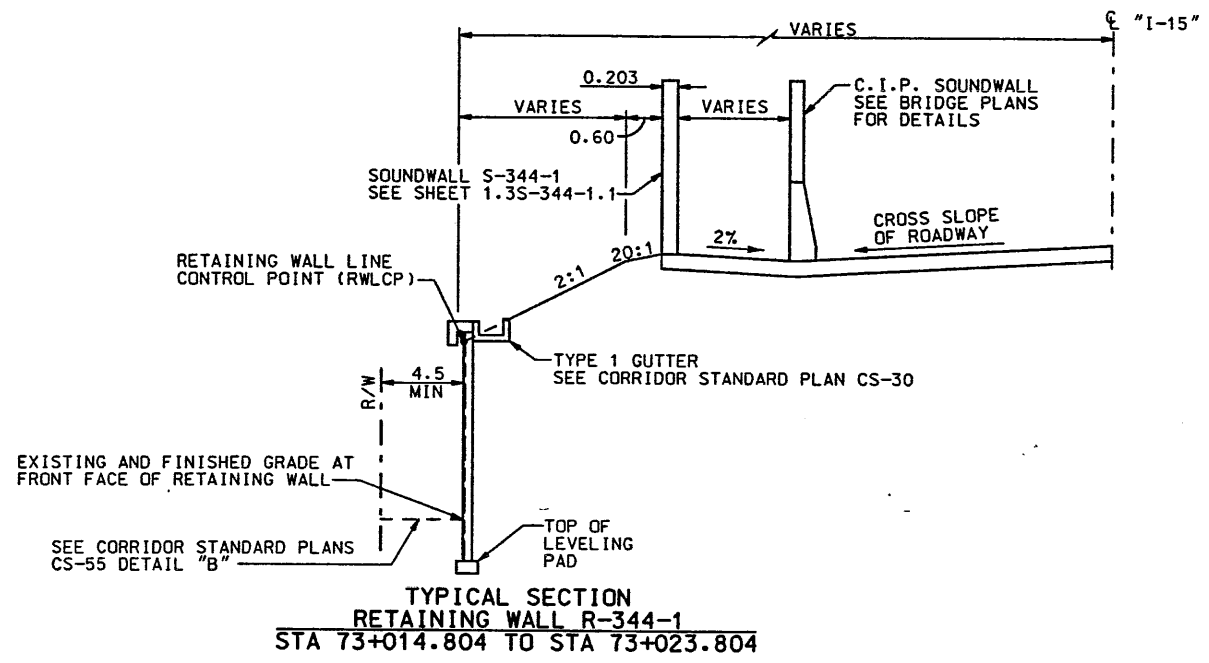
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 Date: 01-DEC-1997 Time: 13:16 Username: fulk/dj



NOTE:
 THE FOUNDATION BEARING MATERIALS SHOULD BE OBSERVED BY THE GEOTECHNICAL ENGINEER DURING SITE PREPARATION. ANY UNDESIRABLE MATERIALS WILL NEED TO BE REMOVED AND REPLACED WITH BORROW IN ORDER TO ACHIEVE ACCEPTABLE CONDITIONS AT THE BASE OF THE WALL.

WARREN CONSTRUCTORS
 DEC 02 1997
 RELEASED FOR CONSTRUCTION

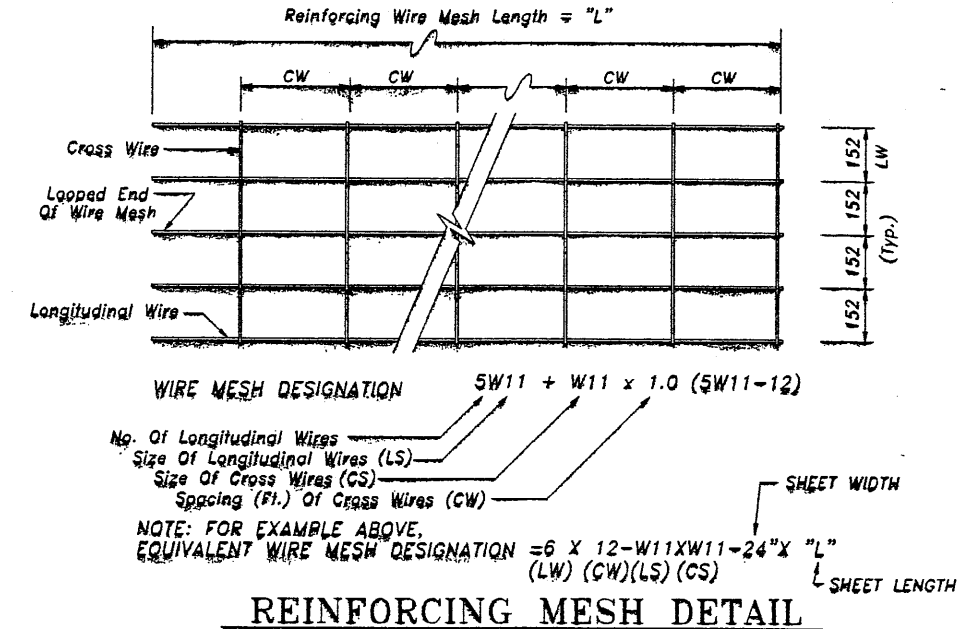
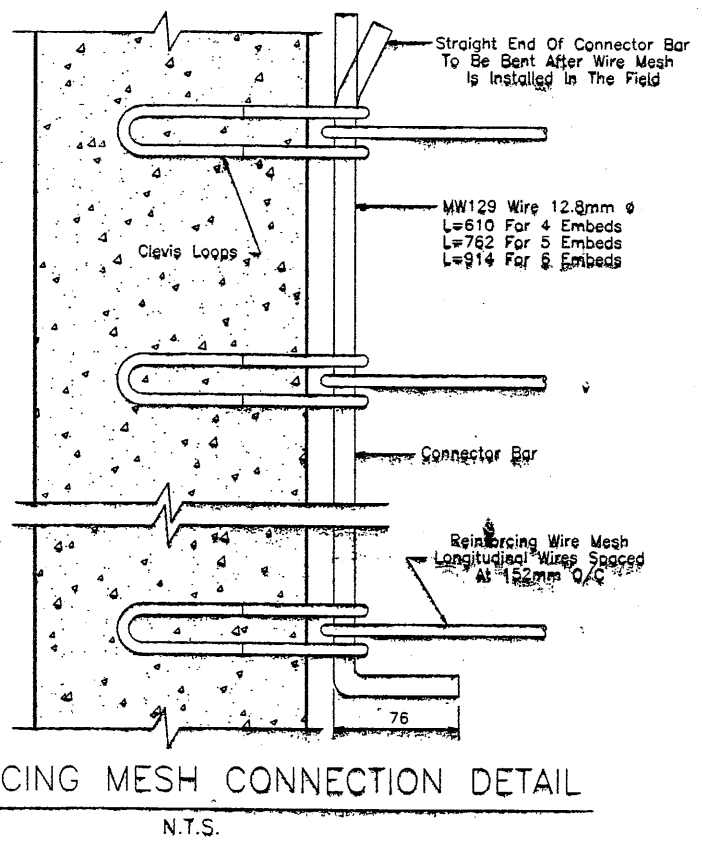
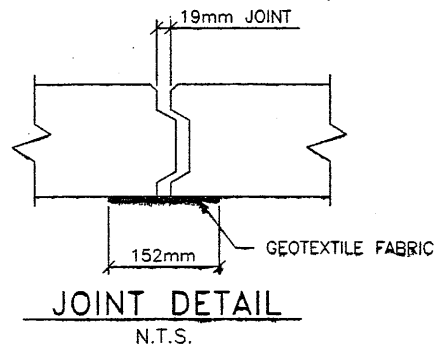
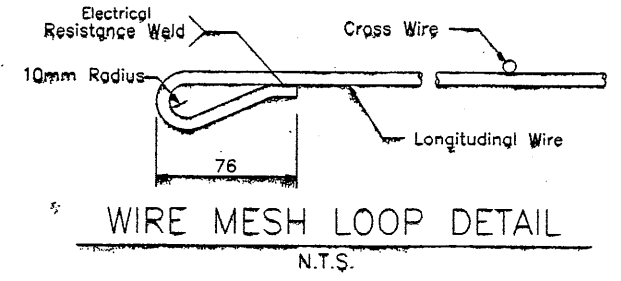
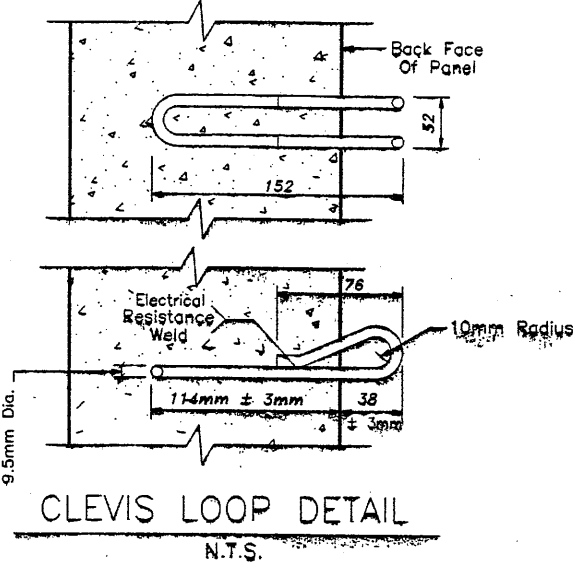
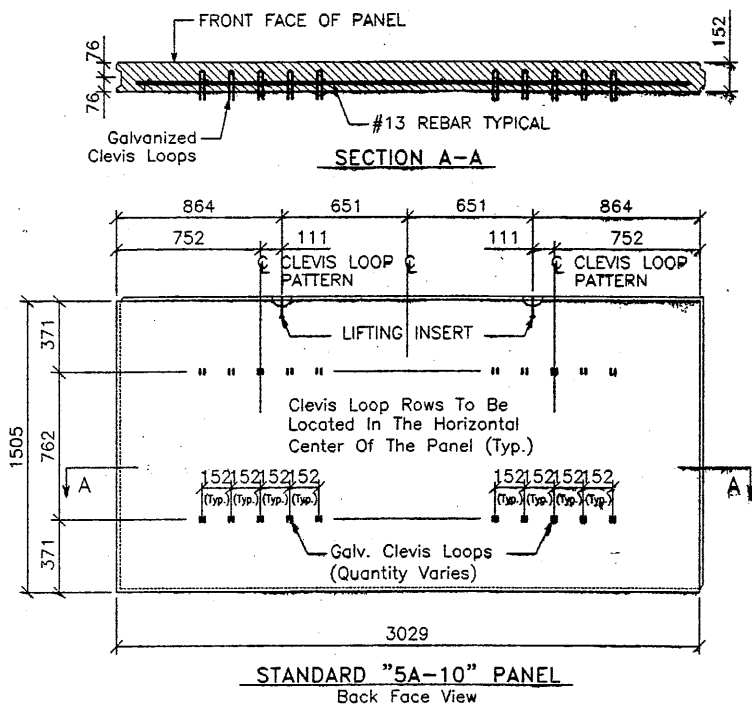
APPROVED FOR CONSTRUCTION		INITIAL RELEASE	
NO.	DATE	NO.	DATE
1	12-1-97		
UTAH DEPARTMENT OF TRANSPORTATION		PROJECT NUMBER	
URS Greiner		1313409	
SVENDRUP/DE LEUW		PROJECT MANAGER	
DESIGN	CHK	DESIGN	CHK
10/97	10/97	10/97	10/97
RICK CHAPMAN	DR	RICK CHAPMAN	DR
PROJECT DESIGN ENGINEER		PROJECT DESIGN ENGINEER	
DATE	DATE	DATE	DATE
10/97	10/97	10/97	10/97
DOUG GRAY	CHK	DOUG GRAY	CHK
PROJECT MANAGER		PROJECT MANAGER	
DATE	DATE	DATE	DATE
10/97	10/97	10/97	10/97
APPROVAL	APPROVAL	APPROVAL	APPROVAL
RECOMM.	RECOMM.	RECOMM.	RECOMM.
DATE	DATE	DATE	DATE
10/97	10/97	10/97	10/97
APPROVED	APPROVED	APPROVED	APPROVED
DATE	DATE	DATE	DATE
10/97	10/97	10/97	10/97
PROJECT NUMBER	PROJECT NUMBER	PROJECT NUMBER	PROJECT NUMBER
#SP-15-7(135)296	#SP-15-7(135)296	#SP-15-7(135)296	#SP-15-7(135)296
SALT LAKE COUNTY	SALT LAKE COUNTY	SALT LAKE COUNTY	SALT LAKE COUNTY
DWG. NO.	DWG. NO.	DWG. NO.	DWG. NO.
1.3R-344-1.1	1.3R-344-1.1	1.3R-344-1.1	1.3R-344-1.1
SHT. 1 OF 12	SHT. 1 OF 12	SHT. 1 OF 12	SHT. 1 OF 12
REF.	REF.	REF.	REF.



WASATCH CONSTRUCTORS
NOV 19 1998
RELEASED FOR CONSTRUCTION

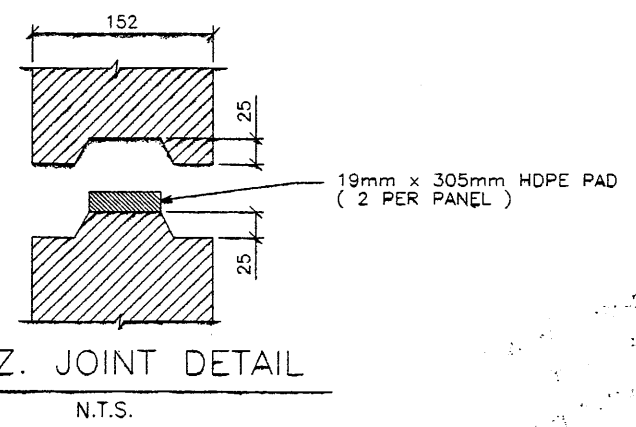
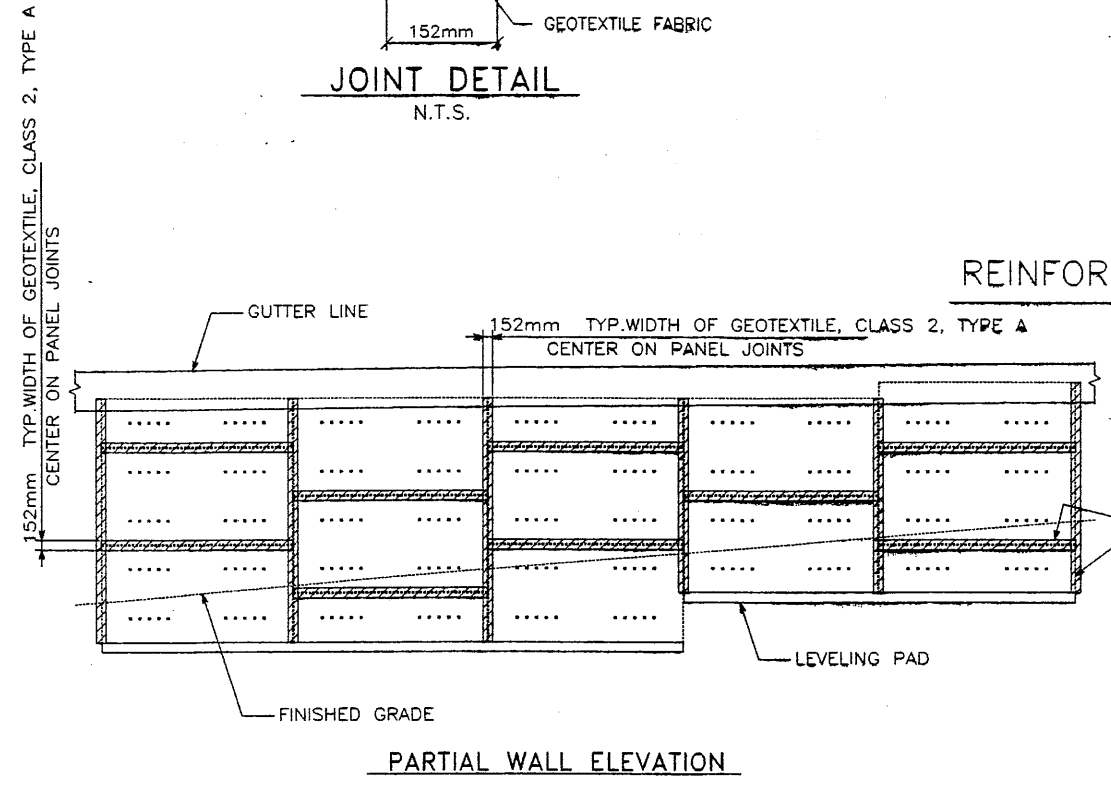
APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	INITIAL RELEASE	REFERENCED SOUNDWALL
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A	11-10-98		
UTAH DEPARTMENT OF TRANSPORTATION		1313409	
URS Greiner		SVERDRUP/DE LEUW	
DESIGN	CHECK	DESIGN	CHECK
PRV	OK	PRV	OK
10/97	10/97	10/97	10/97
DATE	DATE	DATE	DATE
RICK CHAPMAN		DON GRAML	
PROJECT DESIGN ENGINEER		PROJECT MANAGER	
APPROVAL	APPROVED	APPROVED	APPROVED
RECOMM.	DATE	DATE	DATE
10/97	10/97	10/97	10/97
DATE	DATE	DATE	DATE
I-15 CORRIDOR RECONSTRUCTION		#SP-15-7(135)296	
MISC DETAILS		PROJECT NUMBER	
RET/NOISE WALL R-344-1			
SECTION 1.3			
SALT LAKE COUNTY			
DWG. NO.			
1.3R-344-1.1a			
SHT. 2 OF 12			
REF.			

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	11-24-97	RELEASE FOR CONSTRUCTION <i>dt</i>



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 0.089 mm.



WARREN CONSTRUCTORS
DEC 02 1997
RELEASED FOR CONSTRUCTION

METRIC

PROFESSIONAL ENGINEER
No. 341796
JOHN A. NICHOLSON, JR.
11/24/97
STATE OF UTAH

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.

NO.	DATE	DESCRIPTION	REVISION	DATE	BY

RETAINED EARTH™
VSL CORPORATION
2840 Plaza Place, Suite 200
Knoxville, TN 37917-6772
Fax: (615) 761-4869

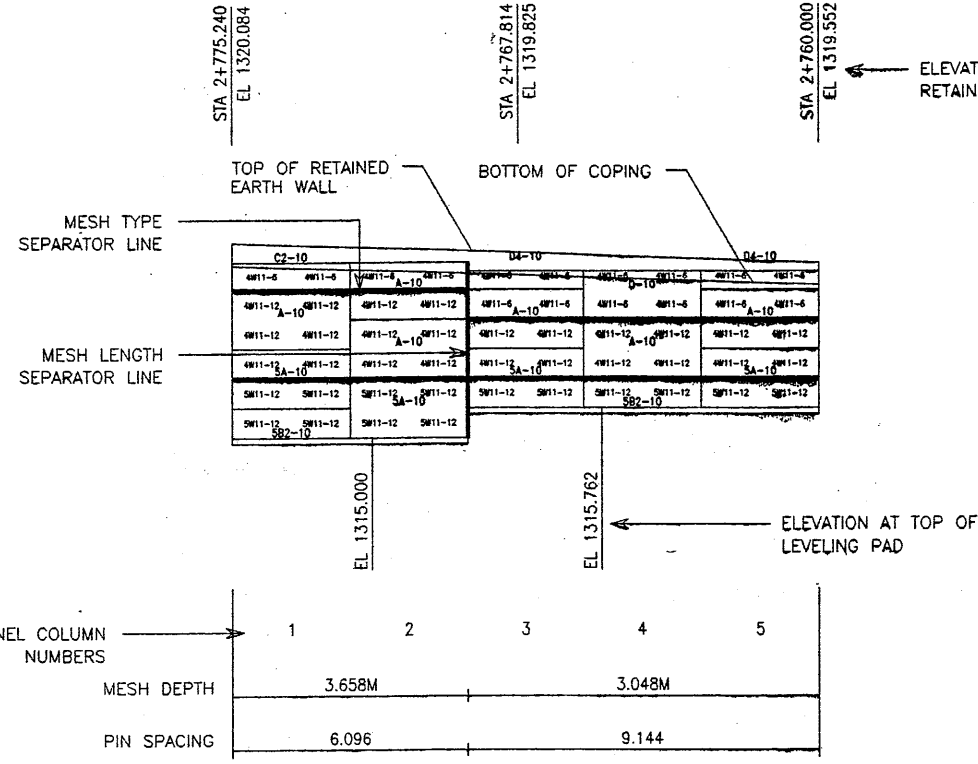
ATLANTA, GA / DALLAS, TX / RALEIGH, NC (CORPORATE OFFICE)
MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA

VSL

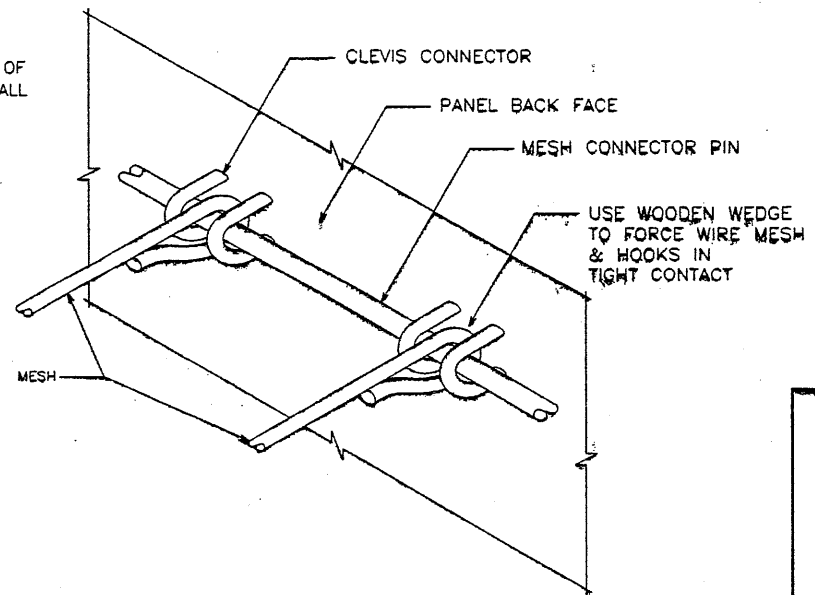
RETAINED EARTH™ WALLS
PRECAST WALL "R-344-1"
TYPICAL DETAILS
UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

SCALE:
1.3R-344-1.3
JOB NO:
239-0007
RE-2 4/12

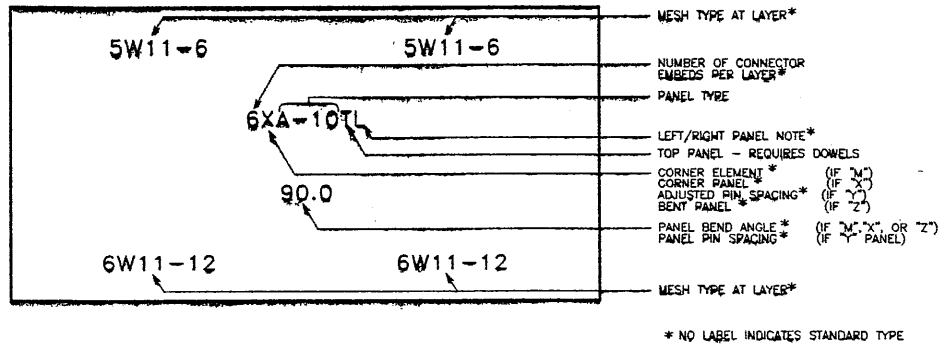
APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	11-24-97	RELEASE FOR CONSTRUCTION <i>OK</i>



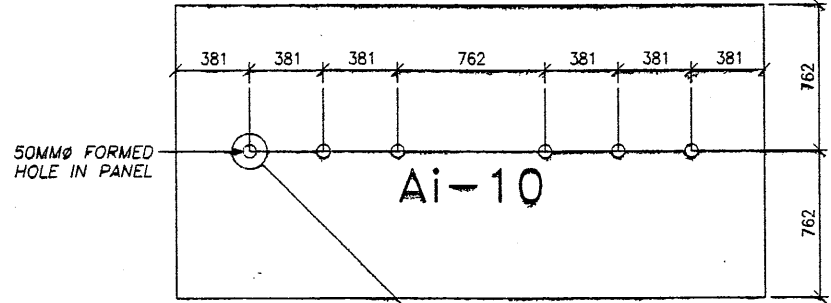
1 WALL ELEVATION KEY
(FRONT FACE SHOWN)



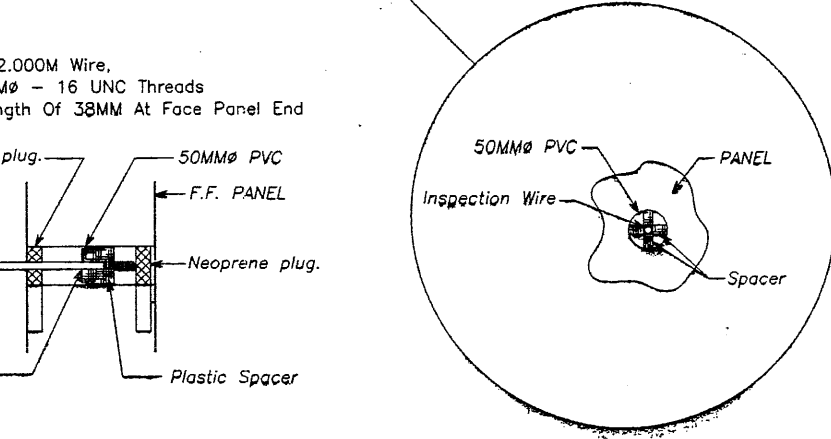
2 MESH CLEVIS CONNECTOR
VSL RETAINED EARTH IS PROTECTED UNDER U.S. PATENT 4,725,170.



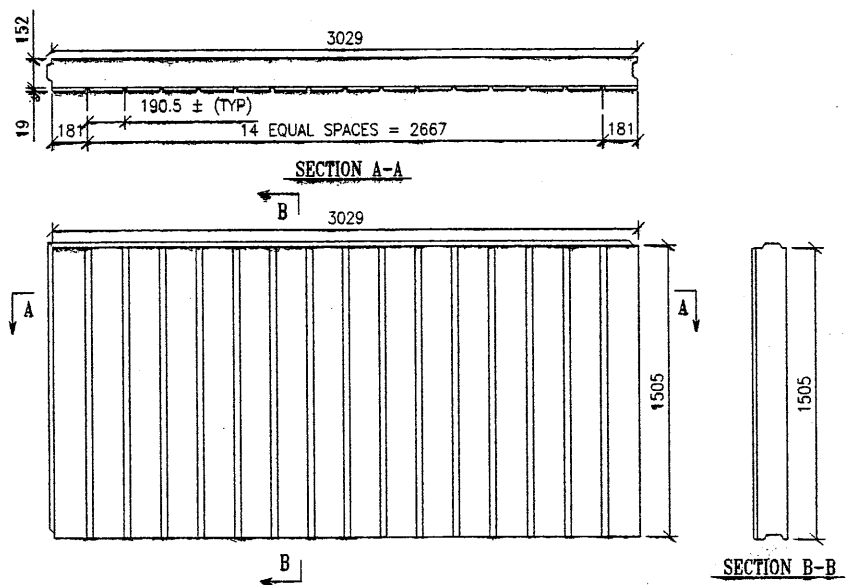
3 PANEL LABELS



4 PANEL TYPES
ALL DIMENSIONS ARE IN MILLIMETERS

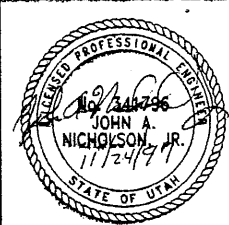


5 INSPECTION WIRE DETAIL
(PANEL FRONT FACE SHOWN)



6 ARCHITECTURAL PANEL FINISH
(PANEL FRONT FACE SHOWN)

WARREN CONSTRUCTORS
DEC 02 1997
RELEASED FOR CONSTRUCTION



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NO.	DATE	REVISION	CHK

DES.	10-03-97	MM
DRN.	10-03-97	DDO
CHK.	10-03-97	MM

VSL CORPORATION
8940 Plaza Place, Suite 200
Raleigh, NC 27617
Telephone: (919) 781-6272
Fac: (919) 781-6869

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

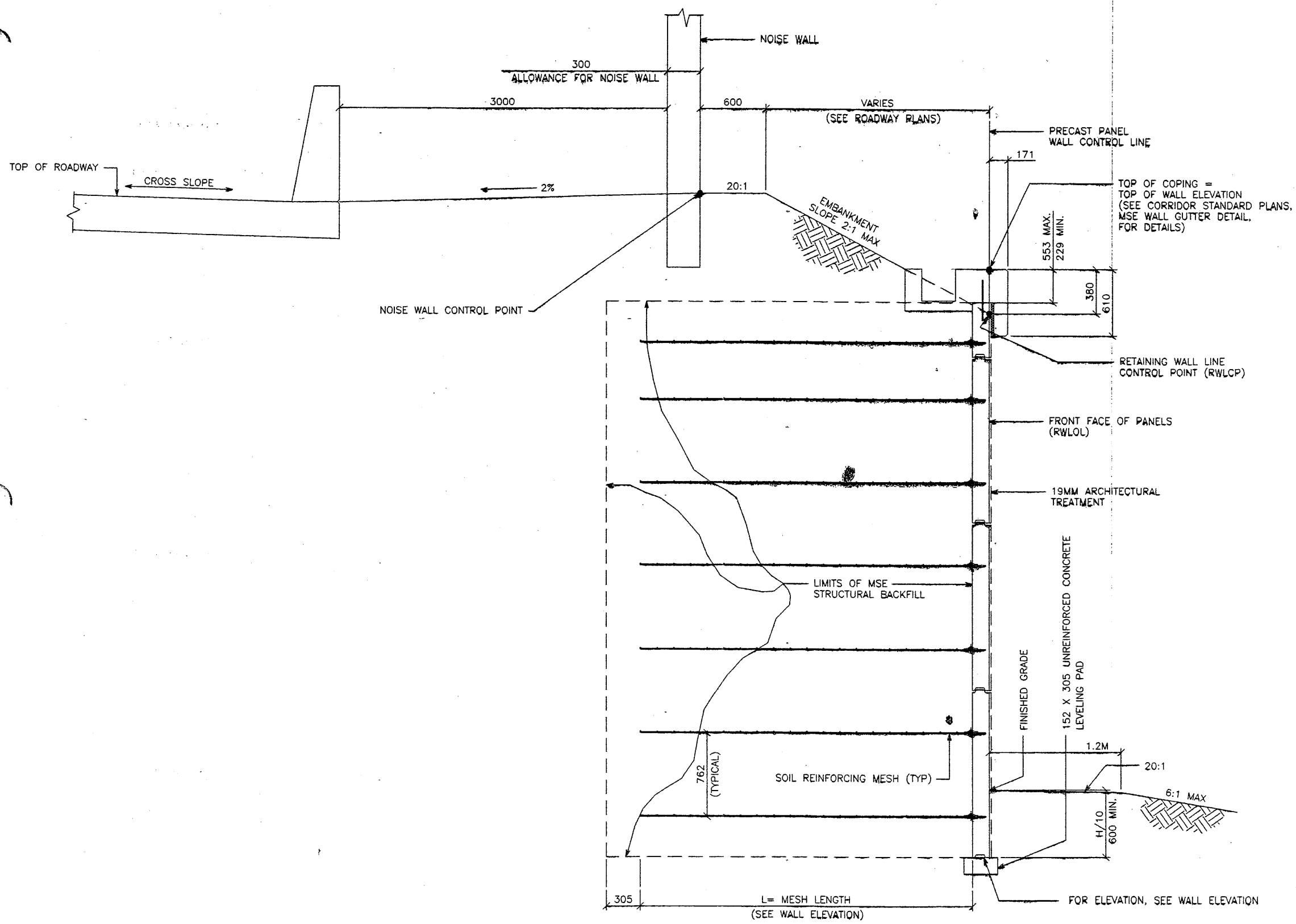
RETAINED EARTH™ WALLS
PRECAST WALL "R-344-1"
TYPICAL DETAILS

UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

SCALE: 1.3R-344-1.4
JOB NO: 239-0007
RE-3 5/12

FINAL PLOT 11-24-97

E:\PROJECT\239-0007\53SERIES\53-01\RE-4



TYPICAL CROSS SECTION - STA 72+885.169 TO 73+004.637
 (SEE DWG. NO. 1.3R-344-1.01 FOR ADDITIONAL INFORMATION)
 SCALE: 1:20 (FULL SIZE)
 SCALE: 1:40 (HALF SIZE)

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APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	11-24-97	RELEASE FOR CONSTRUCTION <i>ol</i>

DES.	DRN.	CHK.	RETAINED EARTH™	NO.	DATE	REVISION	BY	CHK
MM	DDO	MM	VSL					
10-03-97	10-03-97	10-03-97						

VSL CORPORATION
 2840 Plaza Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-6772
 Fax: (919) 781-6969

ATLANTA, GA / BALTIMORE, MD / BALDWIN, NC (CORPORATE OFFICE)
 MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA

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WABATCH CONSTRUCTORS
 Dec 02 1997
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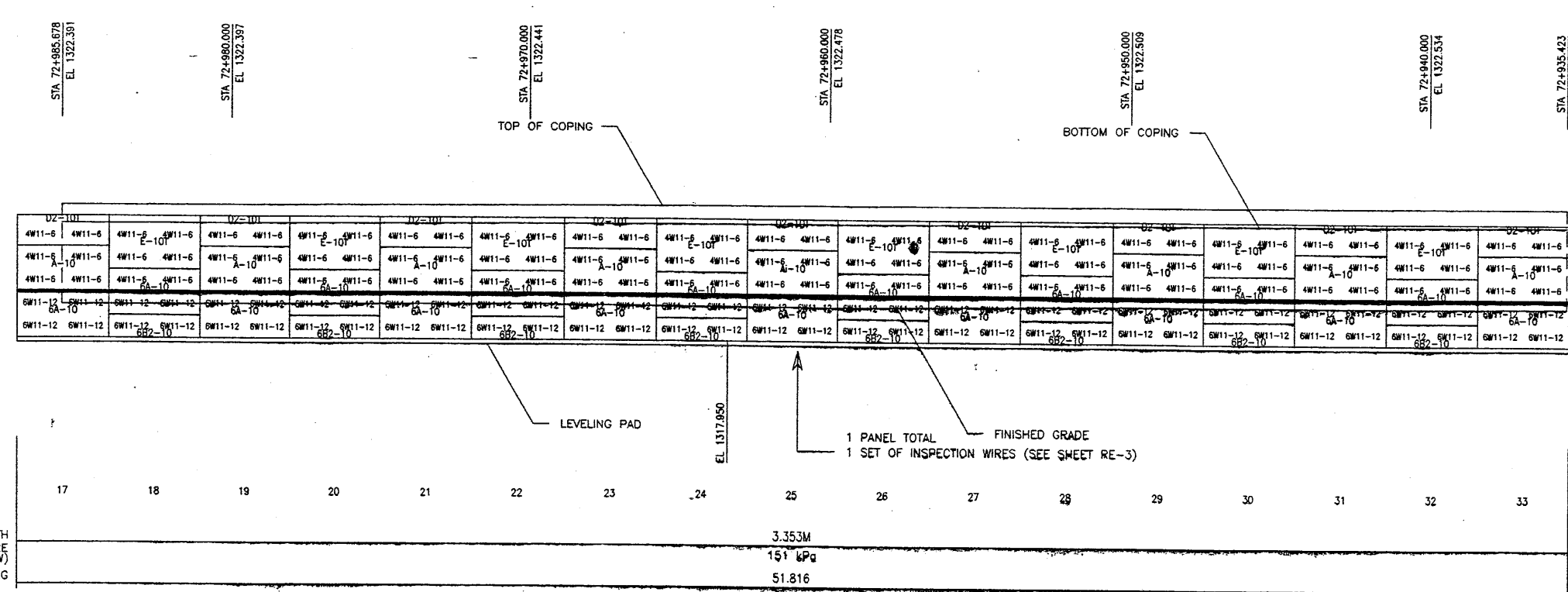
METRIC

RETAINED EARTH™ WALLS
 PRECAST WALL "R-344-1"
 TYPICAL CROSS SECTION

UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

SCALE: 1.3R-344-1.5
 JOB NO: 239-0007
 RE-4 6/12

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	11-24-97	RELEASE FOR CONSTRUCTION <i>ot</i>



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

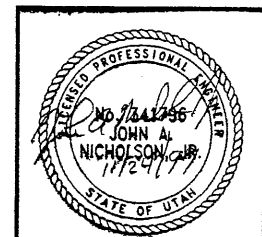
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
								3.353M								
								151 kPa								
								51.816								

ELEVATION PRECAST WALL "R-344-1"
(FRONT FACE SHOWN) SCALE 1:100 (FULL SIZE)
(TOTAL SURFACE AREA OF PANELS = 535.35 SQ) 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.

WAGATCH CONSTRUCTORS
DEC 6 1997
RELEASED FOR CONSTRUCTION

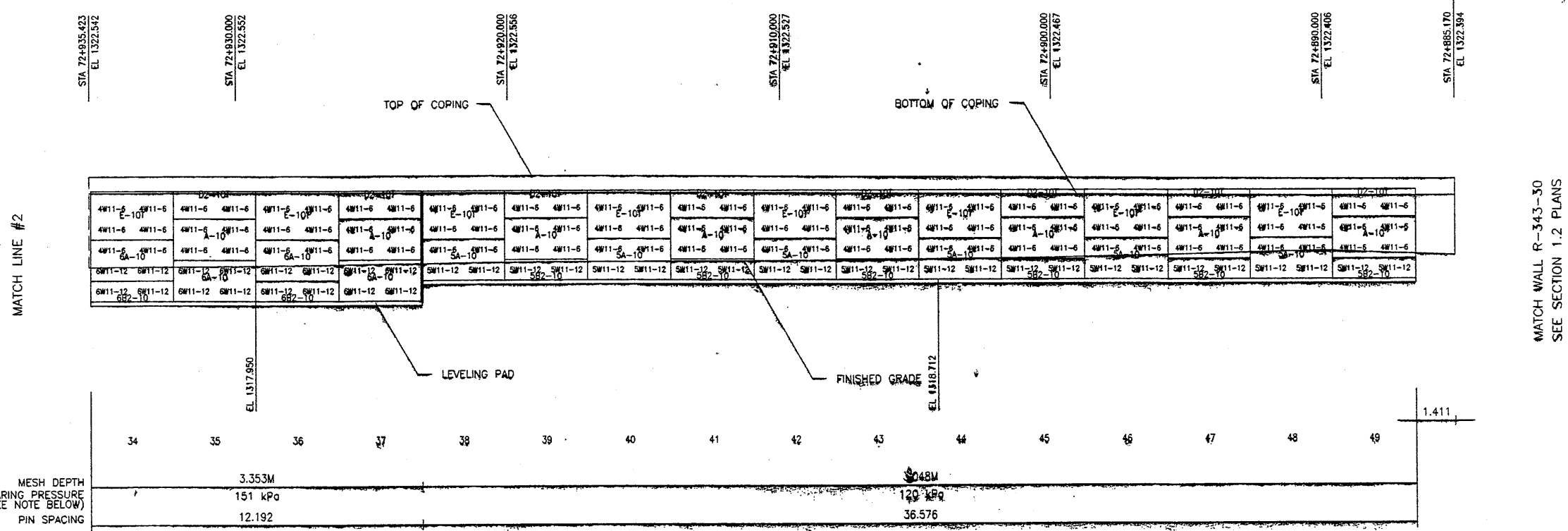
METRIC



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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.	10-03-97	MM	VSL RETAINED EARTH™	NO.	DATE	BY	CHK
DRN.	10-03-97	DDO					
CHK.	10-03-97	MM					
<p>VSL CORPORATION 2840 Plaza Place, Suite 200 Raleigh, NC 27612 761-8272 Telephone: (919) 761-4869 Fax: (919) 761-4869</p> <p>ATLANTA, GA / DALLAS, TX / FAYETTEVILLE, NC (CORPORATE OFFICE) MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA</p>							
<p>RETAINED EARTH™ WALLS PRECAST WALL "R-344-1" UTAH I-15 INTERCHANGE SALT LAKE COUNTY, UTAH UTAH DEPARTMENT OF TRANSP.</p>							
<p>SCALE: 1.3R-344-1.9 JOB NO: 239-0007 RE-810/2</p>							

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	11-24-97	RELEASE FOR CONSTRUCTION



WALL STA 72+885.169 =
 *53-115" STA 19+300.000
 @ 40.163 LT
 NOMINAL PANEL FACE (RWLOL)
 BEGIN PRECAST WALL "R-344-1"

STA 72+835.403 EL 1322.542
 STA 72+890.000 EL 1322.552
 STA 72+920.000 EL 1322.556
 STA 72+910.000 EL 1322.557
 STA 72+900.000 EL 1322.467
 STA 72+890.000 EL 1322.406
 STA 72+885.170 EL 1322.394

MATCH LINE #2

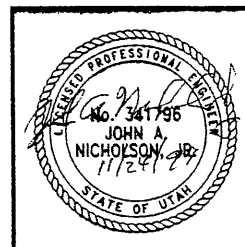
MATCH WALL R-343-30
 SEE SECTION 1.2 PLANS

ELEVATION PRECAST WALL "R-344-1"
 (FRONT FACE SHOWN)
 (TOTAL SURFACE AREA OF PANELS = 535.35 SM)
 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.

WARREN CONSTRUCTORS
 02 137
 RELEASED FOR CONSTRUCTION

METRIC



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NO.	DATE	DESCRIPTION	BY	CHK

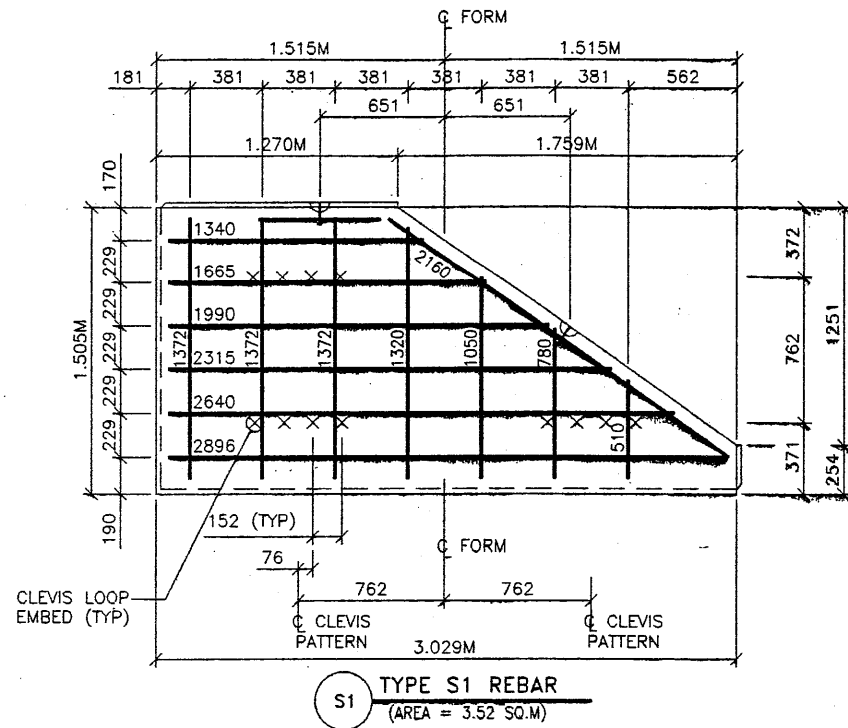
DES.	MM	DDO	MM	NO.	DATE	REVISION
10-03-97						
10-03-97						
10-03-97						

RETAINED EARTH™
 VSL CORPORATION
 2840 Plaza Blvd, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-6272
 Facsimile: (919) 781-4969

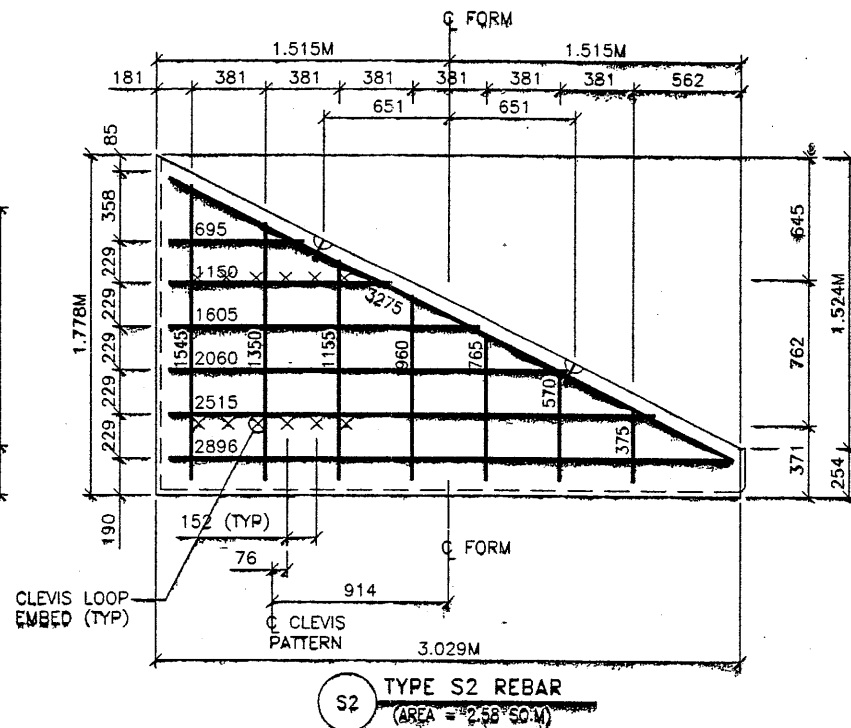
ATLANTA, GA / DALLAS, TX / HOUSTON, TX (CORPORATE OFFICE)
 MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA

RETAINED EARTH™ WALLS
PRECAST WALL "R-344-1"
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

SCALE:
 1.3R-344-1.10
 JOB NO:
 239-0007
 RE-9 11/2



S1 TYPE S1 REBAR
(AREA = 3.52 SQ.M)



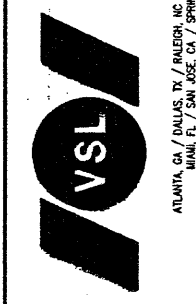
S2 TYPE S2 REBAR
(AREA = 2.58 SQ.M)

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	11-24-97	RELEASE FOR CONSTRUCTION <i>OK</i>

- 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 9.5mmØ CLEVIS LOOPS.
 10. VSL RETAINED EARTH™ IS PROTECTED UNDER PATENT 4,725,170.

NO.	DATE	REVISION	BY	CHK

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

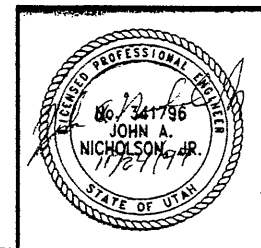


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RETAINED EARTH™ WALLS
PRECAST WALL "R-344-1"
SPECIAL PANEL REINFORCEMENT
UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

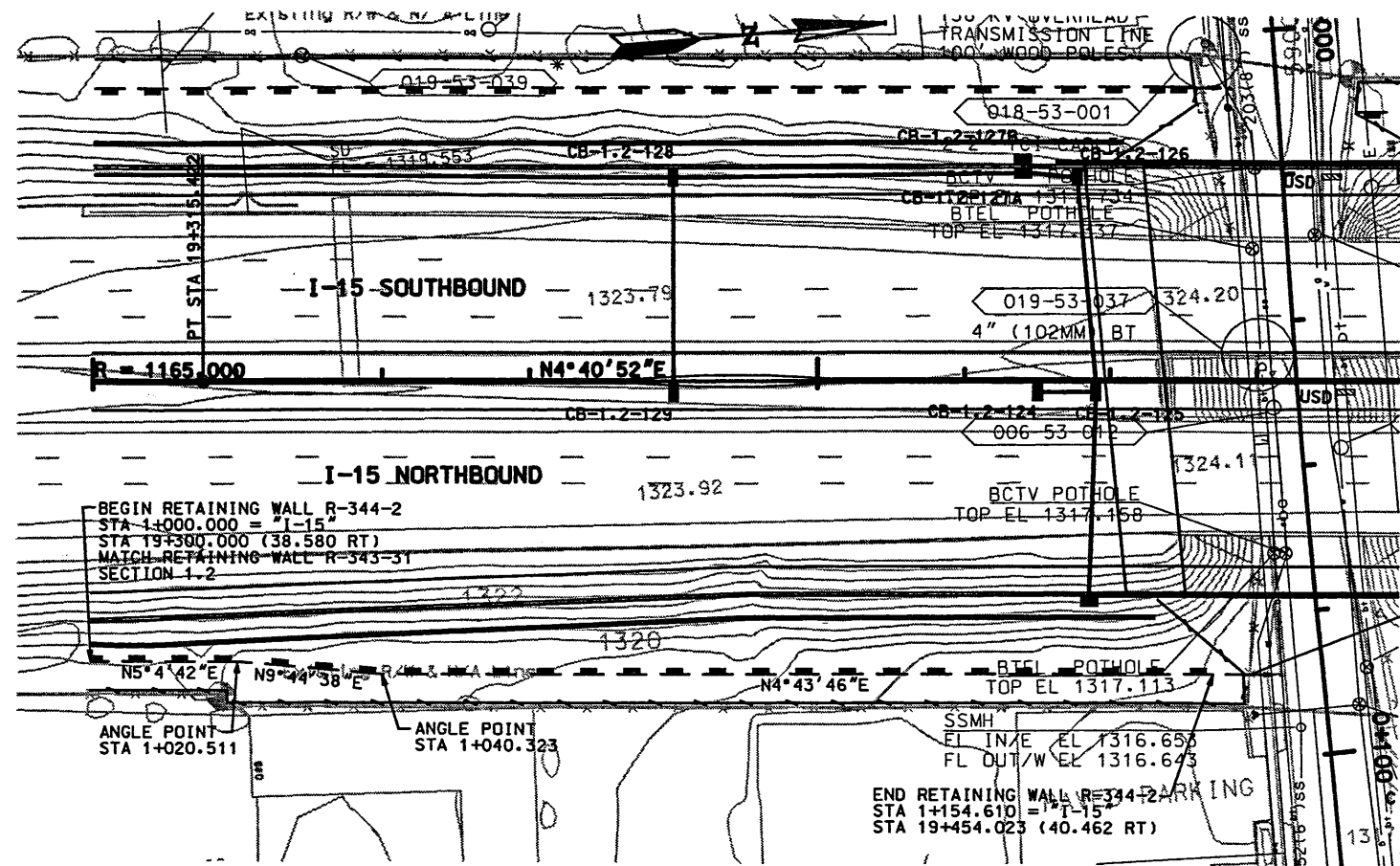
WARREN CONSTRUCTORS
EST. 1957
RELEASED FOR CONSTRUCTION

METRIC

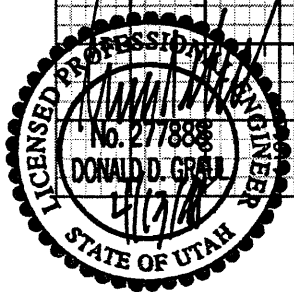
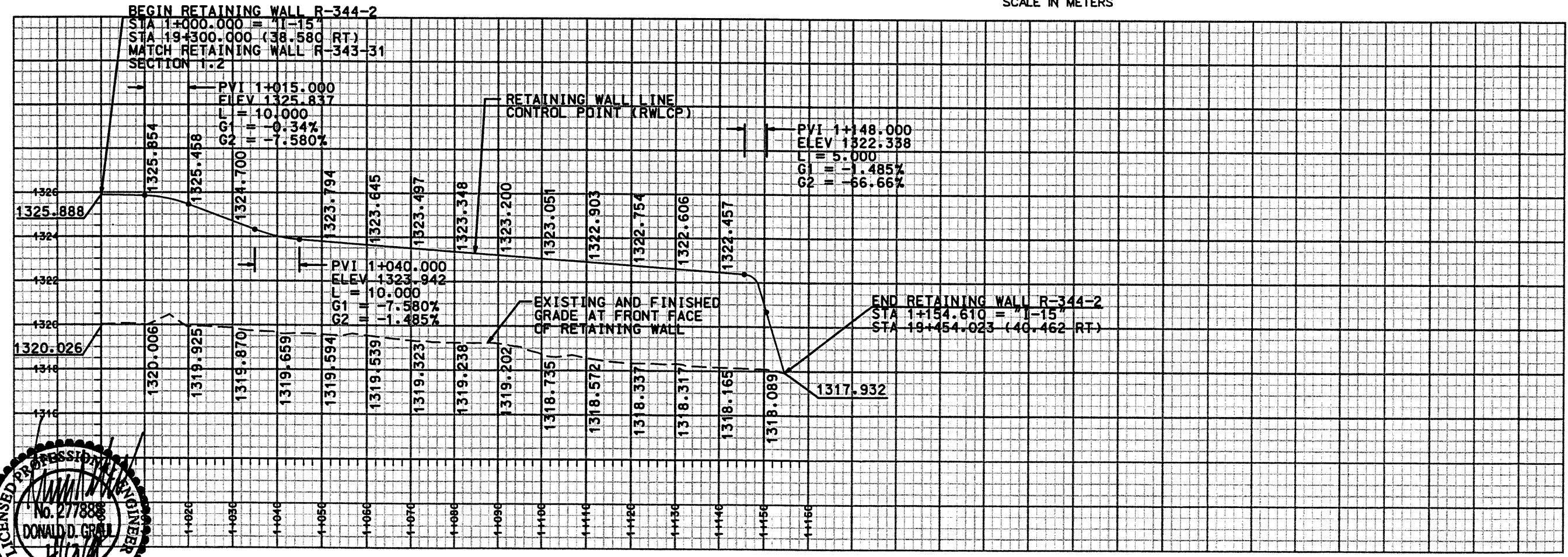


CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY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

SCALE: 1.3R-344-1.11
JOB NO: 239-0007
RE-10 1/2



SEE 1.3-DR1 FOR DRAINAGE THIS AREA



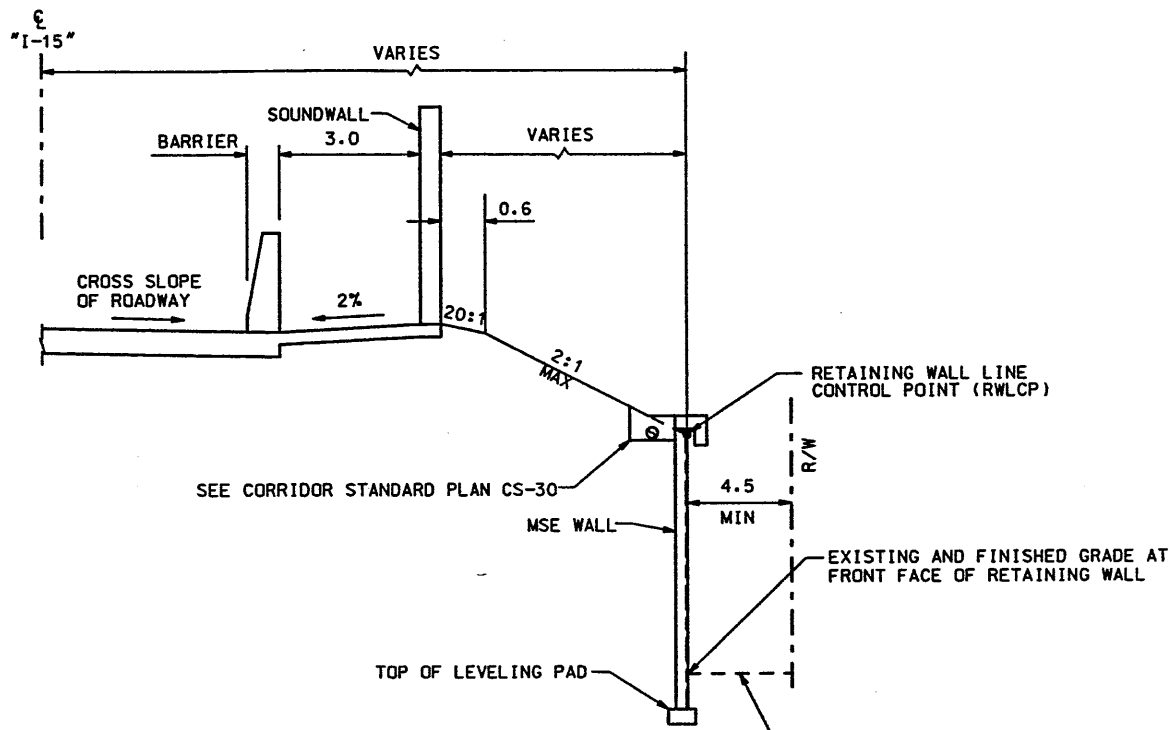
NOTE:
 THE FOUNDATION BEARING MATERIALS SHOULD BE OBSERVED BY THE GEOTECHNICAL ENGINEER DURING SITE PREPARATION. ANY UNDESIRABLE MATERIALS WILL NEED TO BE REMOVED AND REPLACED WITH BORROW IN ORDER TO ACHIEVE ACCEPTABLE CONDITIONS AT THE BASE OF THE WALL.

WASATCH CONSTRUCTORS
 APR 13 1998
 RELEASED FOR CONSTRUCTION

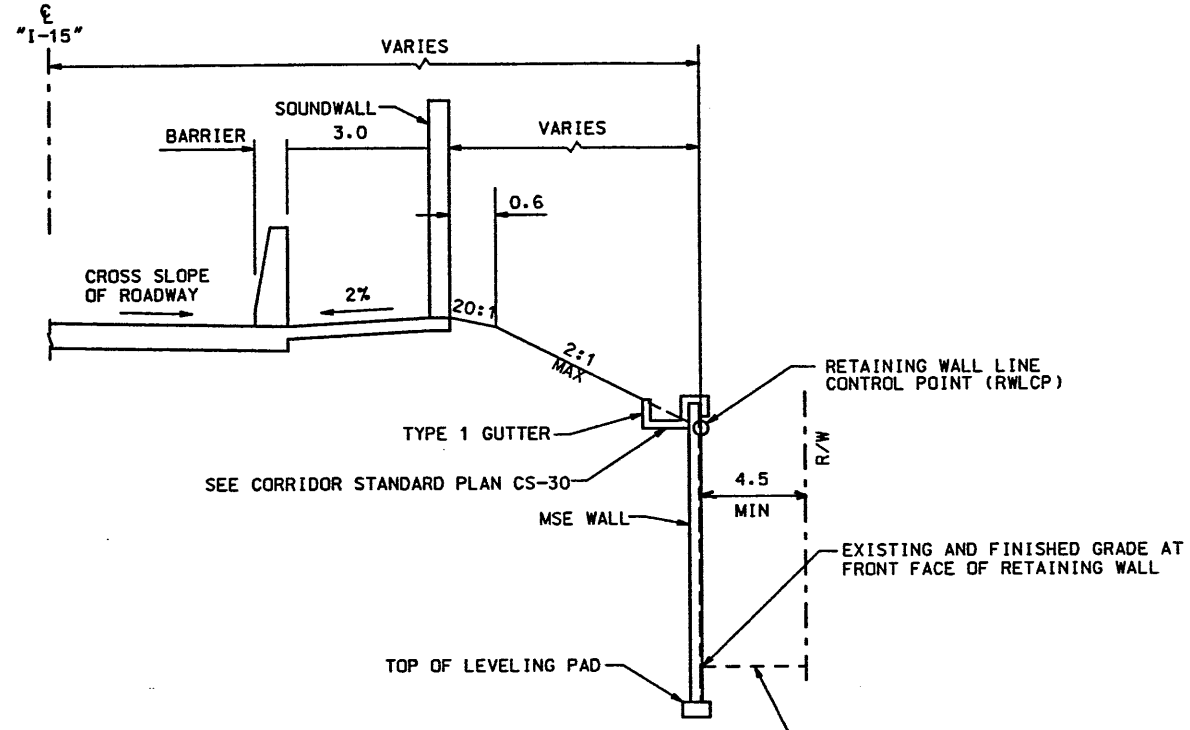
APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	INITIAL	RELEASE
1	4-13-98		
UTAH DEPARTMENT OF TRANSPORTATION		1312401	
I-15 CORRIDOR RECONSTRUCTION		SVERDRUP/DE LEUW	
SITUATION/LAYOUT		URS Greiner	
RETAINING WALL R-344-2		DESIGN: RY 1/98	
SECTION 1.3		CHECK: JBE 1/98	
PROJECT NUMBER		DRAWN: RY 1/98	
#SP-15-7(135)296		CHECK: JBE 1/98	
SALT LAKE COUNTY		PROJECT MANAGER	
DWG. NO.		DATE	
1.3R-344-2.1		DATE	
SHT. 1 OF 8		DATE	
REF.		DATE	

Date: 15-APR-1998 Time: 12:00 Username: stottr

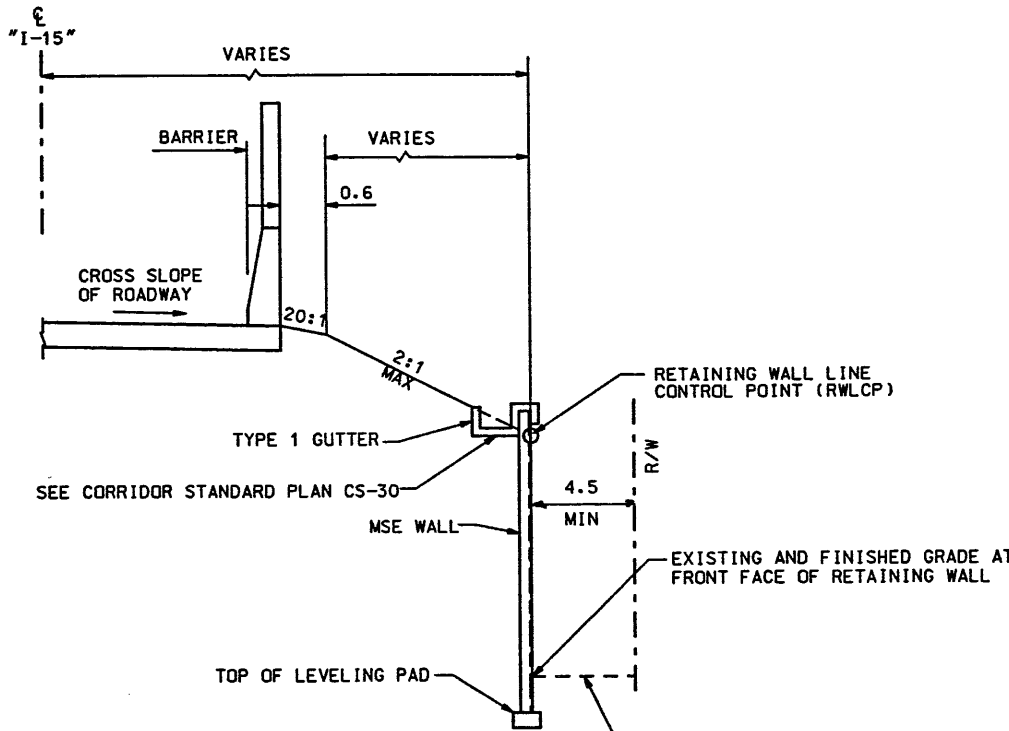
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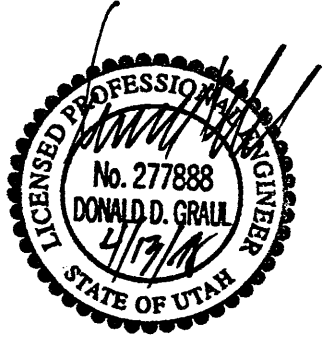
TYPICAL SECTION
RETAINING WALL R-344-2
STA 1+000.000 TO STA 1+055.000



TYPICAL SECTION
RETAINING WALL R-344-2
STA 1+055.000 TO STA 1+146.803



TYPICAL SECTION
RETAINING WALL R-344-2
STA 1+146.803 TO STA 1+154.610



WASATCH CONSTRUCTORS
APR 13 1998
RELEASED FOR CONSTRUCTION

APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	INITIALS	RELEASE
1	4-13-98		
UTAH DEPARTMENT OF TRANSPORTATION		1312401	
URS Greiner		DESIGN	CHECK
SVERRUP/DE LEUW		1/98	1/98
DESIGN	1/98	1/98	1/98
DRAWN	1/98	1/98	1/98
QUANT.	1/98	1/98	1/98
APPROVED	1/98	DATE	DATE
1/98	1/98	DATE	DATE
I-15 CORRIDOR RECONSTRUCTION		PROJECT NUMBER	
TYPICAL SECTIONS		#SP-15-7(135)296	
RETAINING WALL R-344-2		SECTION 1-3	
SALT LAKE COUNTY		DWG. NO.	
1.3R-344-2.2		SHT. 2 OF 8	
REF.			

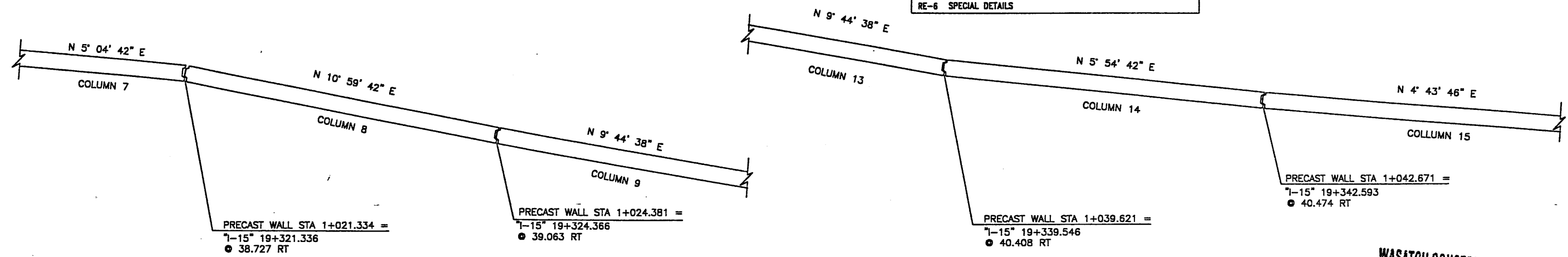
REFERENCE (X-UTAH.DWG)

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FINAL 04-09-98

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	04-09-98	RELEASE FOR CONSTRUCTION

RETAINED EARTH INDEX	
RE-1	PLAN PRECAST WALL R-344-9, NOTES & DESIGN CRITERIA
RE-2	TYPICAL CROSS SECTION
RE-3	PRECAST WALL R-344-2
RE-4	PRECAST WALL R-344-2
RE-5	PRECAST WALL R-344-2
RE-6	SPECIAL DETAILS



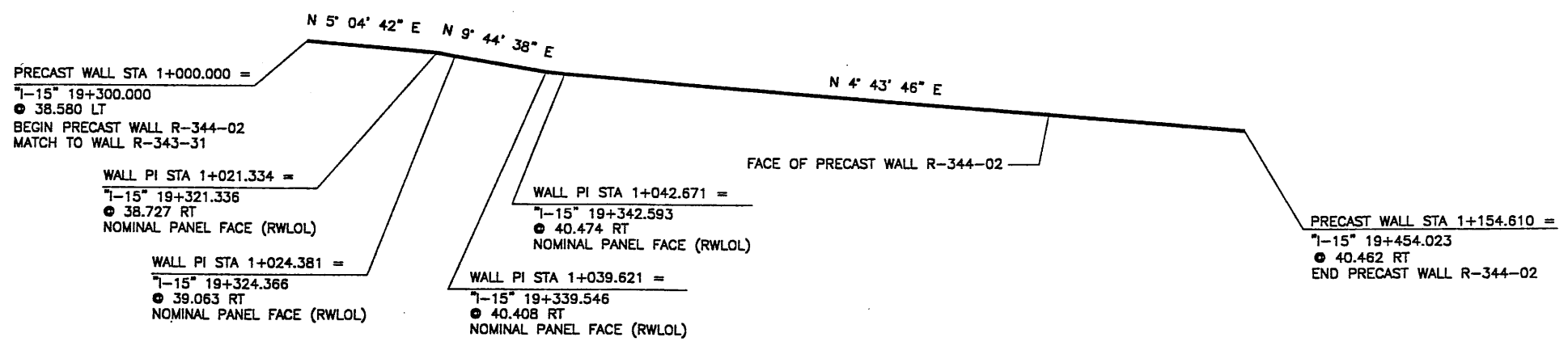
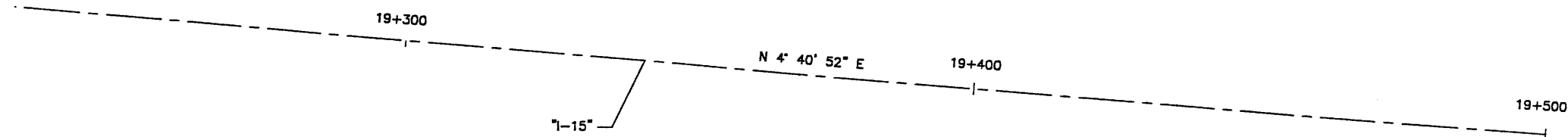
DETAIL A
 SCALE: 1=50 (HALF SIZE)
 SCALE: 1=25 (FULL SIZE)

DETAIL B
 SCALE: 1=50 (HALF SIZE)
 SCALE: 1=25 (FULL SIZE)

WASATCH CONSTRUCTORS
APR 13 1998
 RELEASED FOR CONSTRUCTION

DESIGN PARAMETERS
ANGLE OF INTERNAL FRICTION (SELECT) = 34°
ANGLE OF INTERNAL FRICTION (BASE) = 31°
ANGLE OF INTERNAL FRICTION (RANDOM) = 34°
UNIT WEIGHT BACKFILL = 135 PCF. (21.2 KN/M ³)
TRAFFIC SURCHARGE = 250 PSF (12KPa)
SEISMIC ACCELERATION COFF. = 0.12g (TYP)

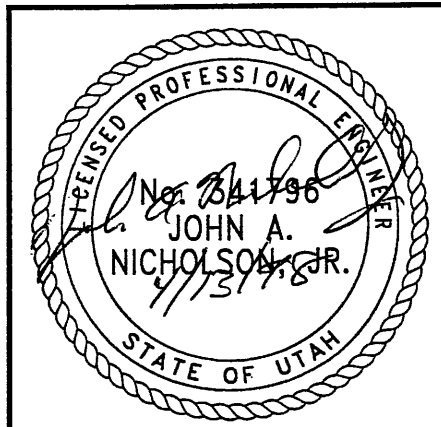
DESIGN CRITERIA
SAFETY FACTOR (OVERTURNING) = 2.0
SAFETY FACTOR (SLIDING) = 1.5
SAFETY FACTOR (PULLOUT) = 1.5
DESIGN LIFE = 75 YEARS



PLAN VIEW MSE WALL "R-344-02"
 SCALE: 1=1000 (HALF SIZE)
 SCALE: 1=500 (FULL SIZE)

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
1	04-09-98	RELEASE FOR CONSTRUCTION		

DES.	DRN.	CHK.	RETAINED EARTH™	NO.	DATE
03-18-98	03-18-98	03-18-98			

VSL CORPORATION
 2840 Pico Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-8772
 Fax: (919) 781-4669

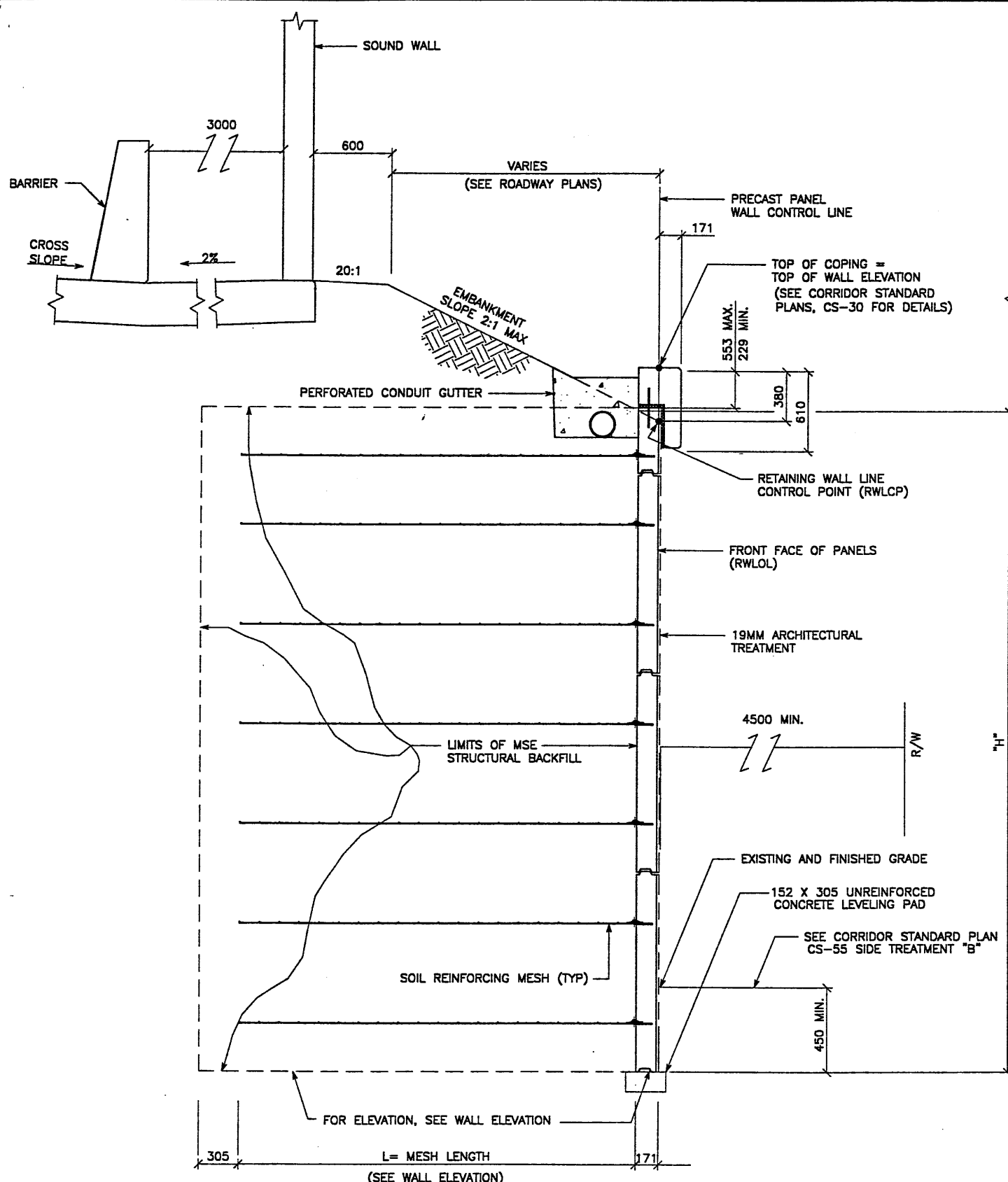
ALANTA, GA / DALLAS, TX / BALTIMORE, MD (CORPORATE OFFICE)
 MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA

RETAINED EARTH™ WALLS
 PLAN VIEW MSE WALL "R-344-02"
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO.
1.3R-344-2.3

JOB NO.
239-0007

SHT. NO.
RE-13/8

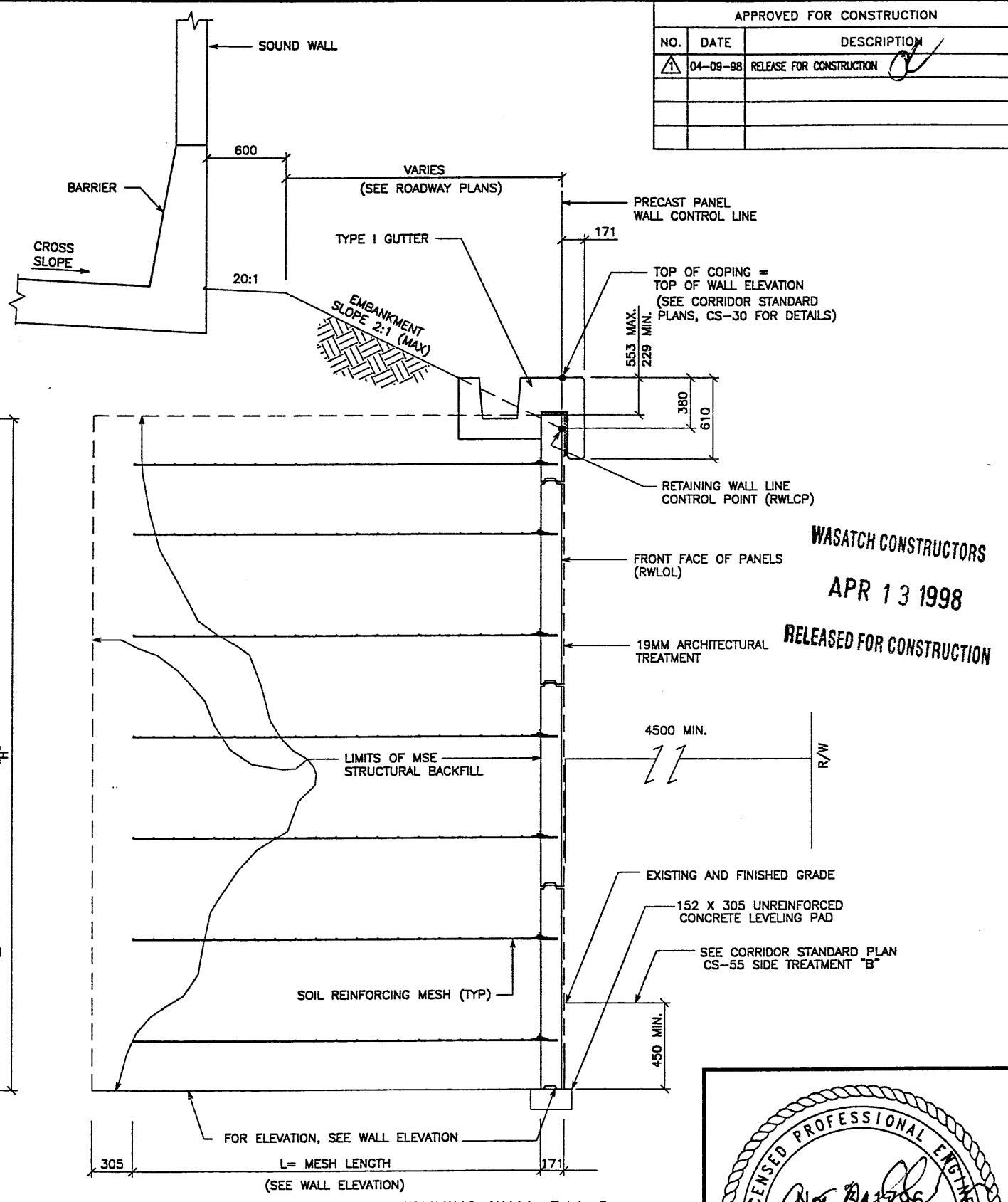


TYPICAL CROSS SECTION - RETAINING WALL 344-2

STA 1+000.000 TO STA 1+055.000

SCALE: 1:20 (FULL SIZE)

SCALE: 1:40 (HALF SIZE)



TYPICAL CROSS SECTION - RETAINING WALL 344-2

STA 1+055.000 TO STA 1+154.610

SCALE: 1:20 (FULL SIZE)

SCALE: 1:40 (HALF SIZE)

METRIC

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APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲	04-09-98	RELEASE FOR CONSTRUCTION

NO.	DATE	DESCRIPTION

VSL CORPORATION
 2840 P.O. Box 200
 8640 N. 216th St.
 Redmond, WA 98073
 Telephone: (919) 781-8272
 Fax: (919) 781-8689

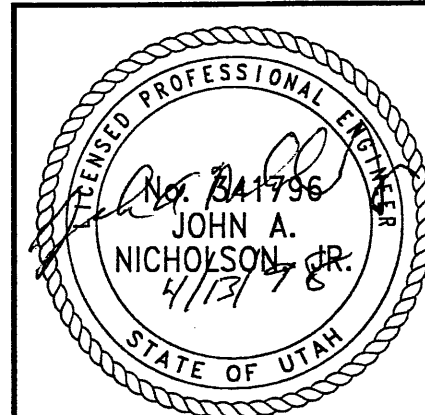
WASATCH CONSTRUCTORS
APR 13 1998
RELEASED FOR CONSTRUCTION

ATLANTA, GA / DULLES, VA / RALEIGH, NC (CORPORATE OFFICE)
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 VSL CORPORATION ACCEPTS NO
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RETAINED EARTH™ WALLS
 PRECAST WALL 344-02
 TYPICAL CROSS SECTIONS

UTAH I-15 RECONSTRUCTION
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

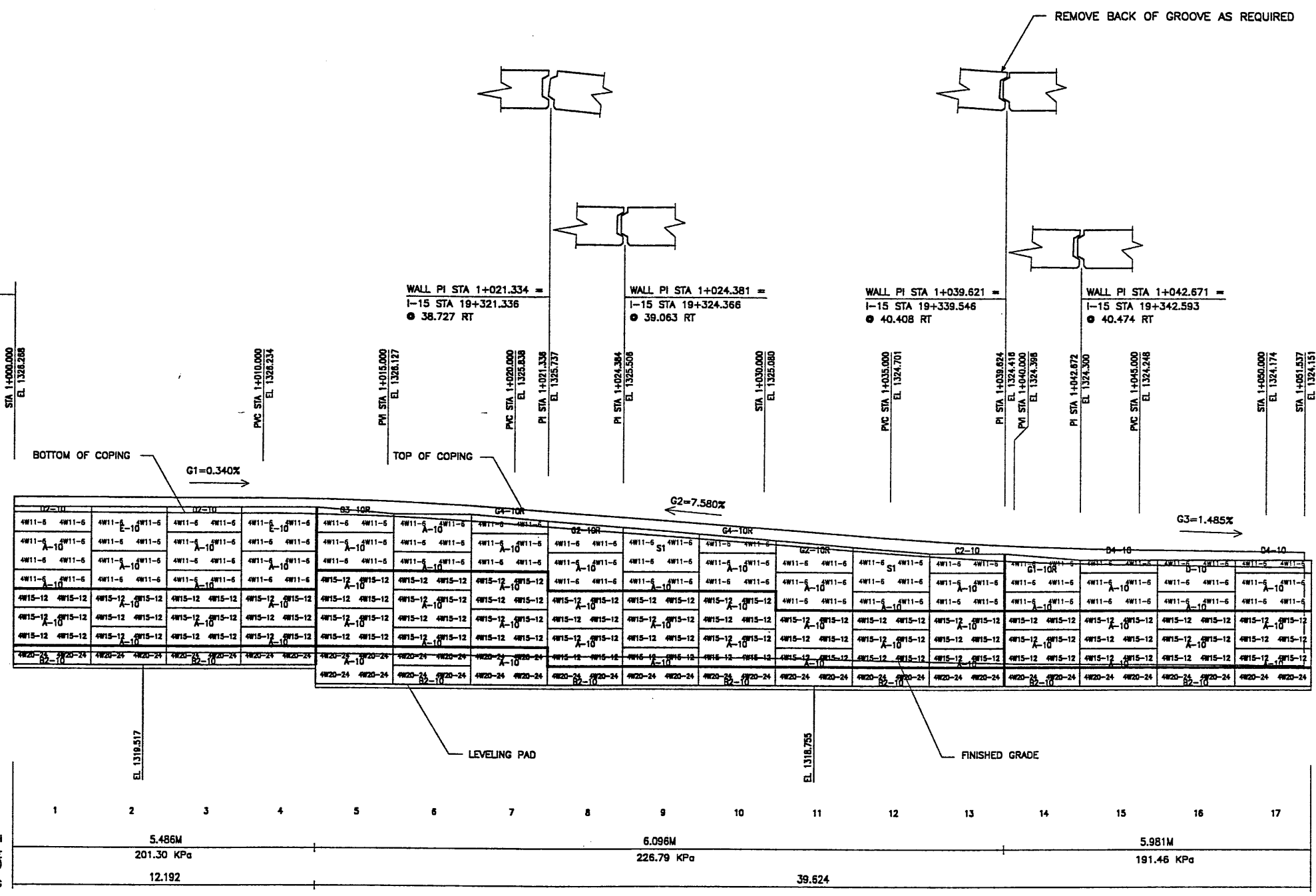


DWG. NO.	1.3R-344-2.4
JOB NO.	239-0007
SHT. NO.	RE-2 4/8

H:\RE_EARTH\PROJECT\007\1998\53SERIES\53-02\SUBMITL-2\53-02.DWG
 FINAL 04-09-98

BEGIN WALL R-344-2
 WALL STA 1+000.000 =
 I-15 STA 19+300.000
 ● 35.580 RT
 NOMINAL PANEL FACE (RWLOL)

MATCH RETAINING WALL R-(343)-31
 BEGIN WALL



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

METRIC

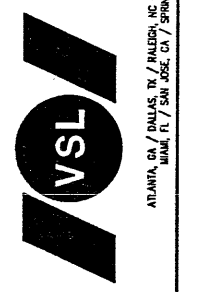
APPROVER NOTE:
 MAXIMUM FINAL UNFACTORED BEARING PRESSURES
 ARE INDICATED BELOW "MESH DEPTH LINE"
 REVIEWER TO VERIFY MAXIMUM BEARING
 CAPACITY OF FOUNDATION.

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.

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△ 04-09-98		RELEASE FOR CONSTRUCTION

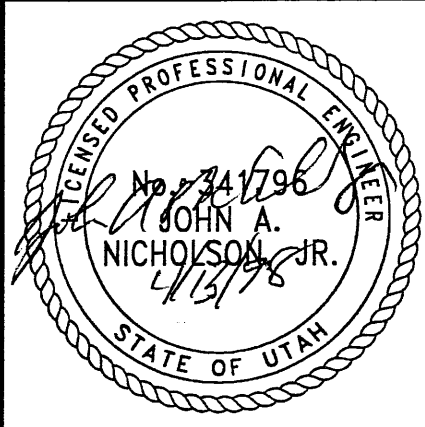
DES.	DRN.	CHK.	RETAINED EARTH™	NO.	DATE	BY	CHK
03-24-98	JL	RSW					
03-24-98	RSW						
03-24-98	JL						

VSL CORPORATION
 2840 Plaza Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-9272
 Fax: (919) 781-4999



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

WASATCH CONSTRUCTORS
APR 13 1998
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RETAINED EARTH™ WALLS
 PRECAST WALL "R-344-2"
 UTAH I-15 RECONSTRUCTION
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO.	1.3R-344-2.5
JOB NO.	239-0007
SHT. NO.	RE-3 5/8

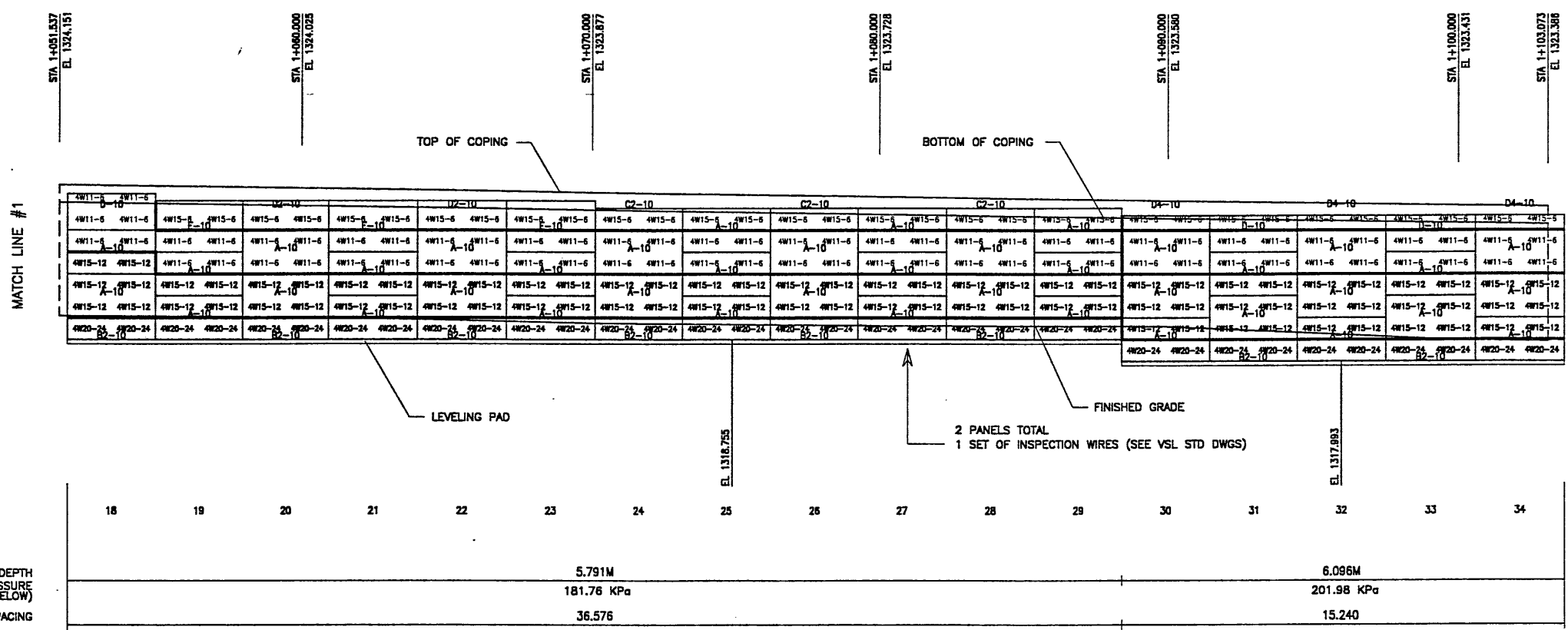
APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	04-09-98	RELEASE FOR CONSTRUCTION

DES.	DRN.	CHK.	RETAINED EARTH™	NO.	DATE	REVISION	BY
JL	RSW	JL					
03-24-98	03-24-98	03-24-98					

VSL CORPORATION
 2840 Plaza Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-4872
 Fax: (919) 781-4959

ALABAMA, GA / DALLAS, TX / BALDWIN, NC (CORPORATE OFFICE)
 MAAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA

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

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
5.791M												6.096M				
181.76 KPa												201.98 KPa				
36.576												15.240				

ELEVATION VIEW WALL R-344-2
 (FRONT FACE SHOWN)
 (TOTAL SURFACE AREA OF PANELS = 817.13 SM)

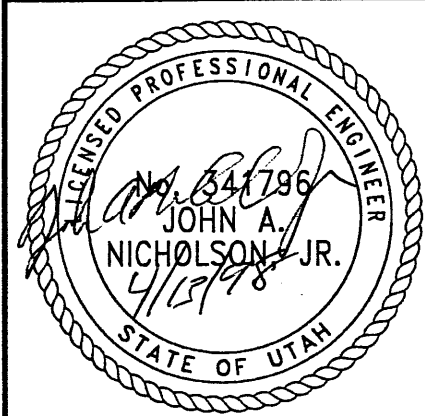
SCALE 1:100 (FULL SIZE)
 SCALE 1:200 (HALF SIZE)

METRIC

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

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 THE MANUFACTURER'S SPECIFICATION.

WASATCH CONSTRUCTORS
 APR 13 1998
 RELEASED FOR CONSTRUCTION

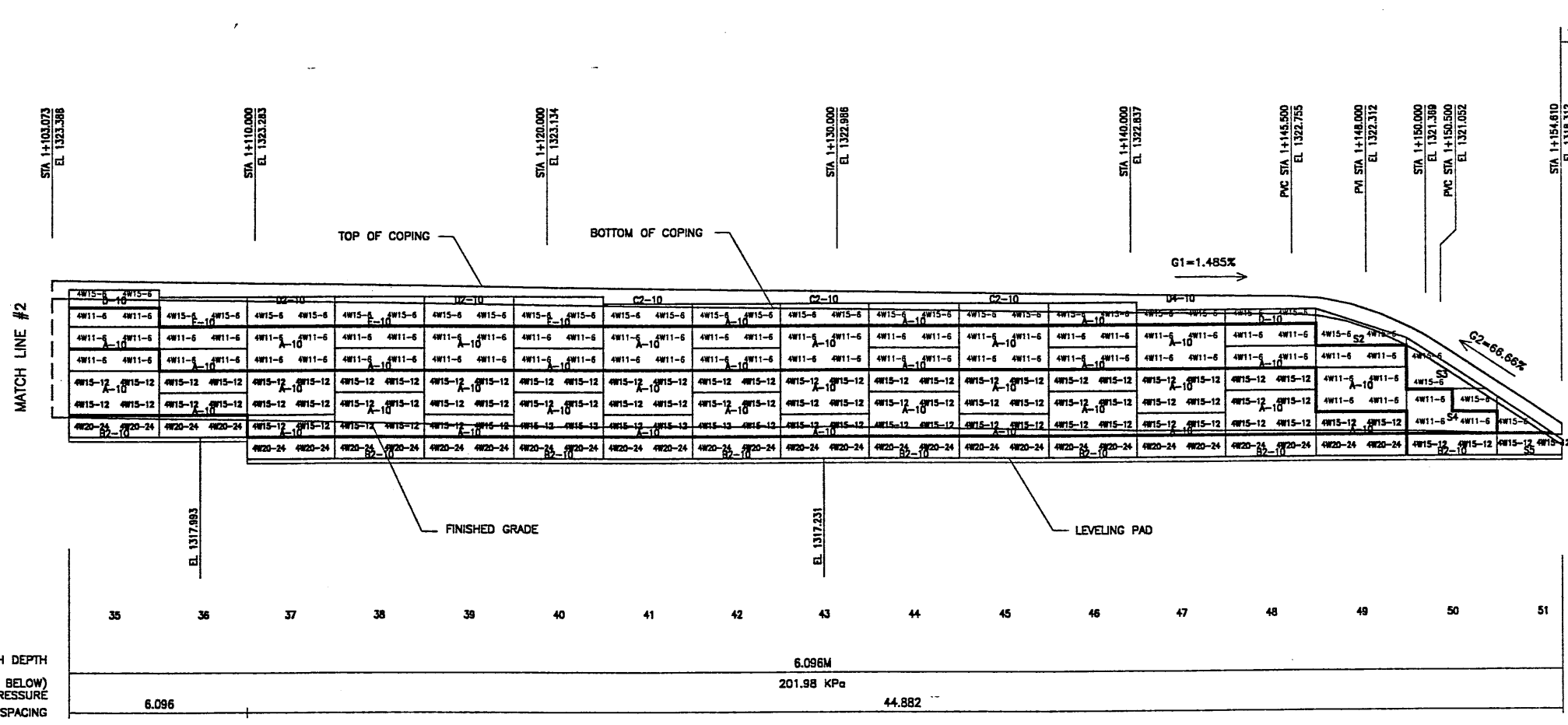


RETAINED EARTH™ WALLS
 PRECAST WALL "R-344-2"
 UTAH I-15 RECONSTRUCTION
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO.	1.3R-344-2.6
JOB NO.	239-0007
SHT. NO.	RE-4 6/8

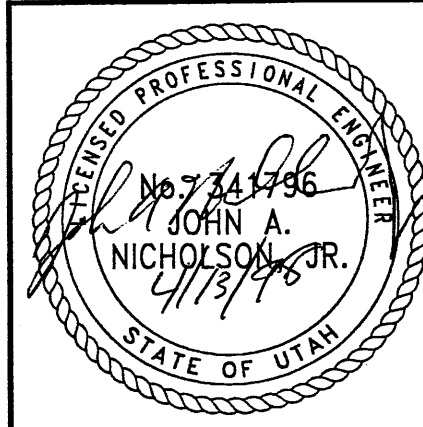
APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲	04-09-98	RELEASE FOR CONSTRUCTION

DES.	CHK.	RETAINED EARTH™	NO.	DATE	BY	CHK.
DES. 03-24-98	JL					
DRN. 03-24-98	RSW					
CHK. 03-24-98	JL					



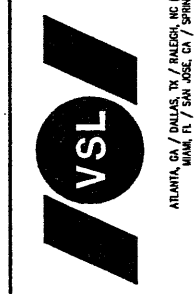
END WALL R-344-2
 WALL STA 1+154.610 =
 I-15 STA 19+454.023
 ● 40.462 RT
 NOMINAL PANEL FACE (RWLOL)

WASATCH CONSTRUCTORS
 APR 13 1998
 RELEASED FOR CONSTRUCTION



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 EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE
 STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE
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 OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO
 THE MANUFACTURER'S SPECIFICATION.

VSL CORPORATION
 2840 Ross Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-8272
 Fax: (919) 781-6659



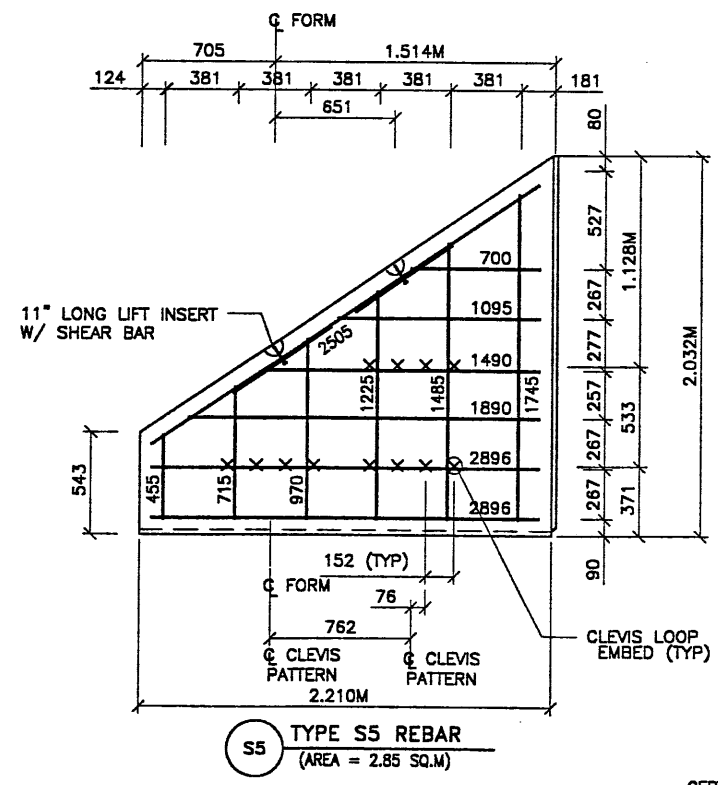
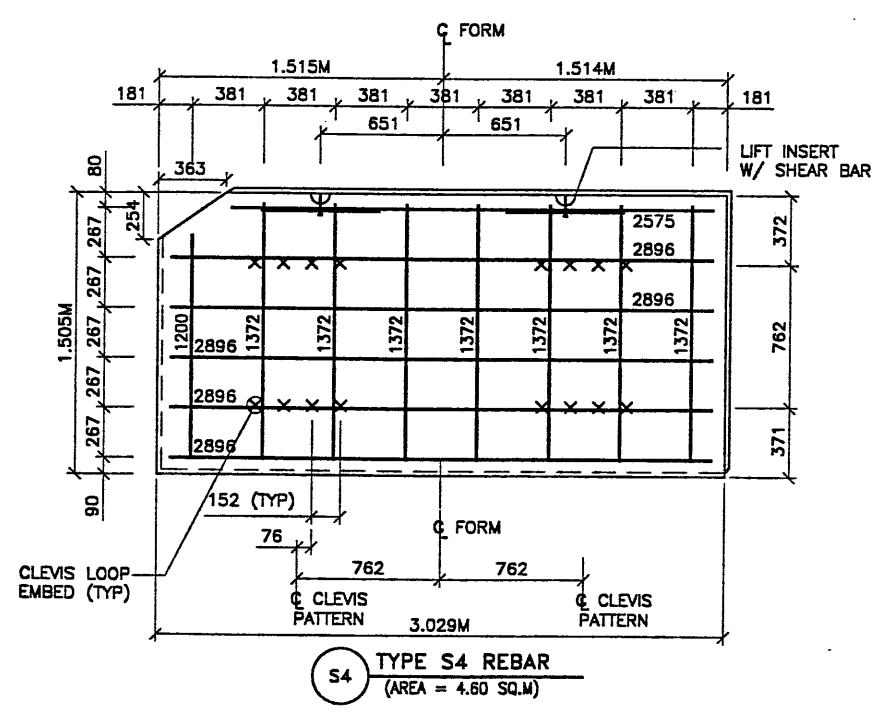
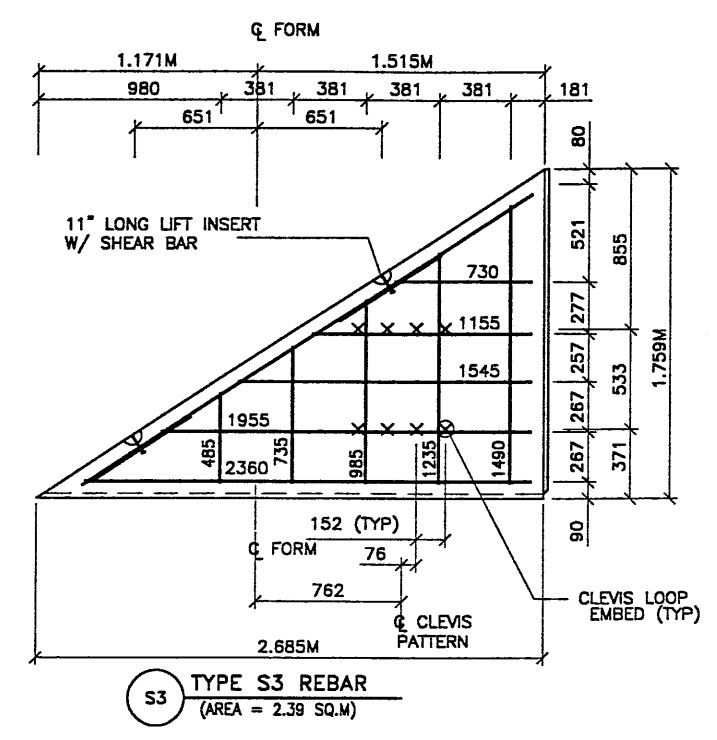
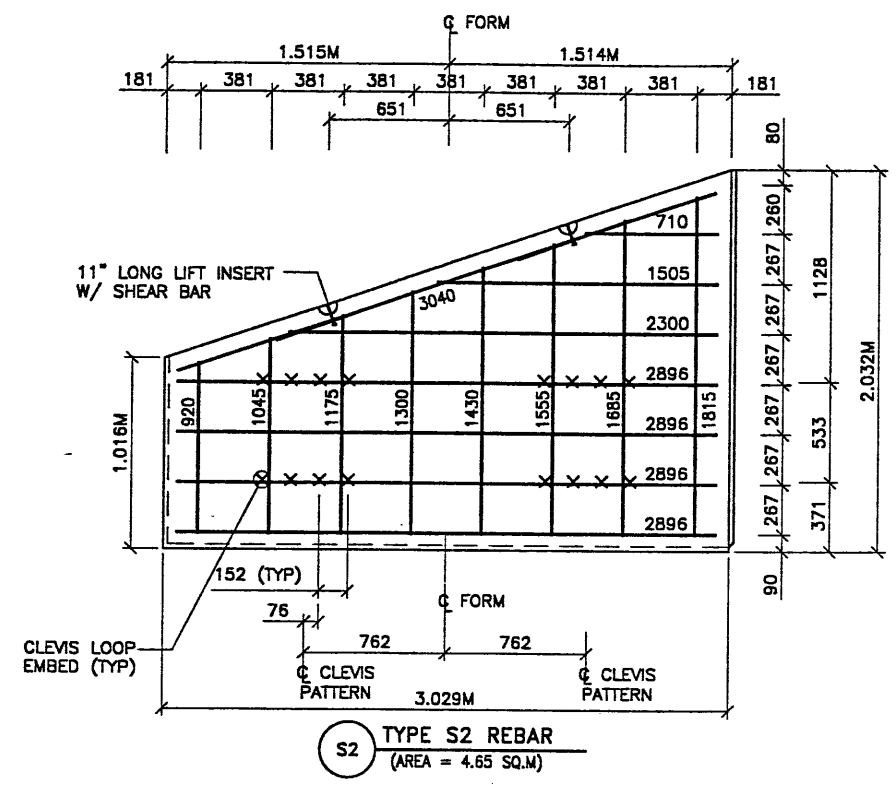
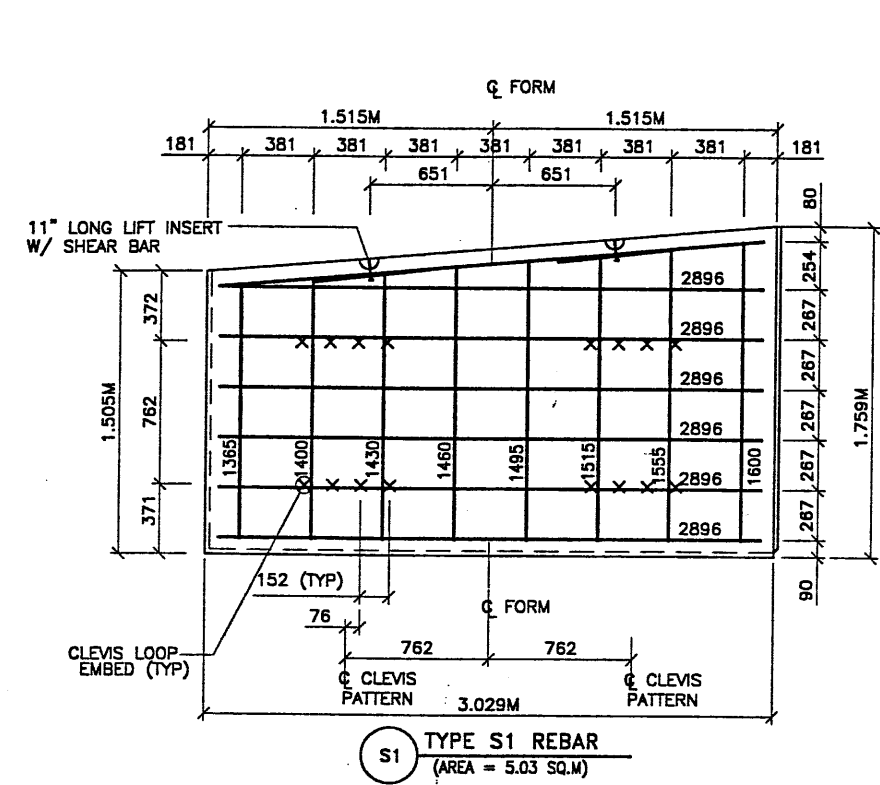
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RETAINED EARTH™ WALLS
 PRECAST WALL "R-344-2"
 UTAH I-15 RECONSTRUCTION
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO.	1.3R-344-2.7
JOB NO.	239-0007
SHT. NO.	RE-57

FIN. 04-09-98 H:\RE_EARTH\PROJECT\239-0007\1998\3SERIES\53-02\53-021.DWG

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	04-09-98	RELEASE FOR CONSTRUCTION

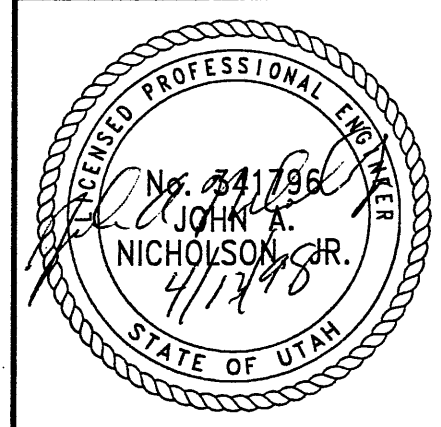


- PANEL REINFORCEMENT NOTES:**
- PANELS ARE SHOWN BACK FACE.
 - HORIZONTAL REINFORCEMENT SHALL HAVE 50 mm MINIMUM COVER TO THE BACK FACE.
 - ALL REINFORCEMENT SHALL HAVE 50 mm MINIMUM COVER TO THE SIDES.
 - ALL REINFORCING BARS ARE #13 METRIC. LABELS ON EACH BAR INDICATE LENGTH. EXAMPLE: 1345 IS A #13 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 1.
 - CONCRETE PANELS TO HAVE 28 DAY COMPRESSIVE STRENGTH OF 27,500 KPa.
 - EQUVALENT WELDED WIRE FABRIC MAY BE USED.
 - ALL PANELS TO USE 9.5mm# 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.

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
APR 13 1998
RELEASED FOR CONSTRUCTION

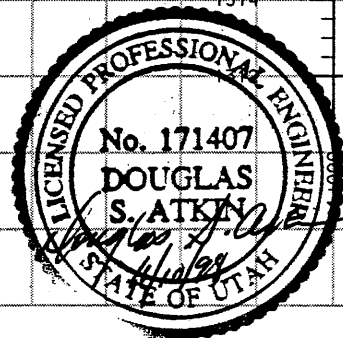
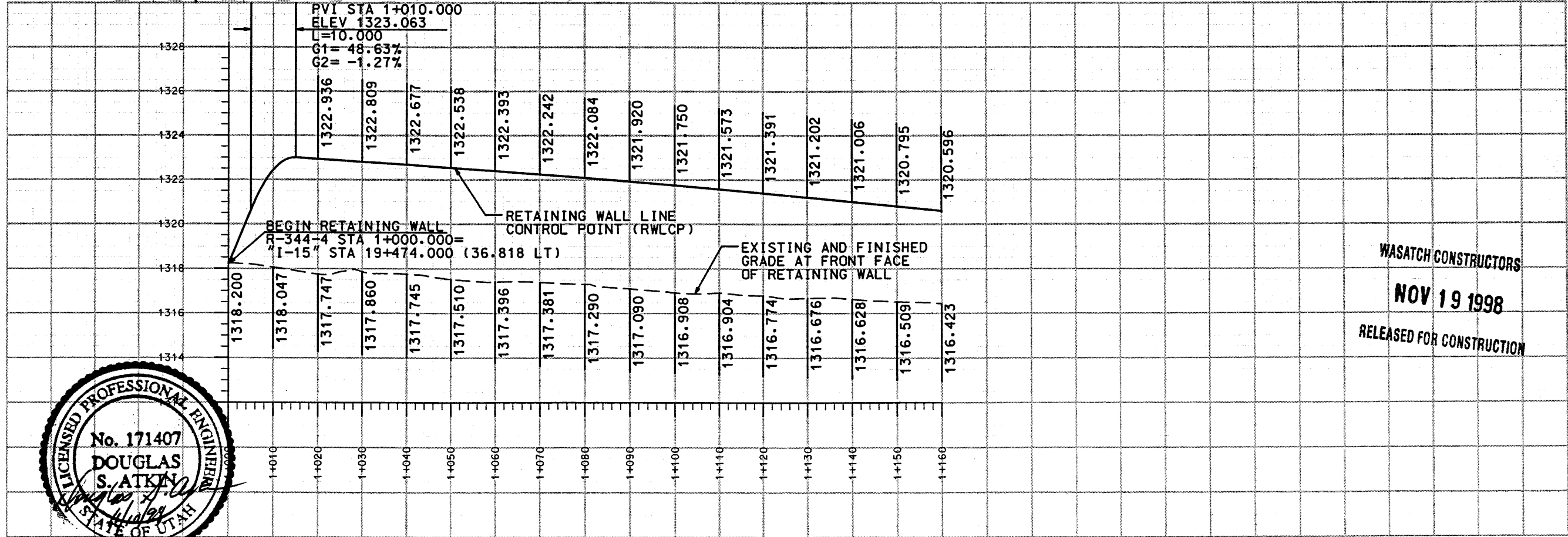
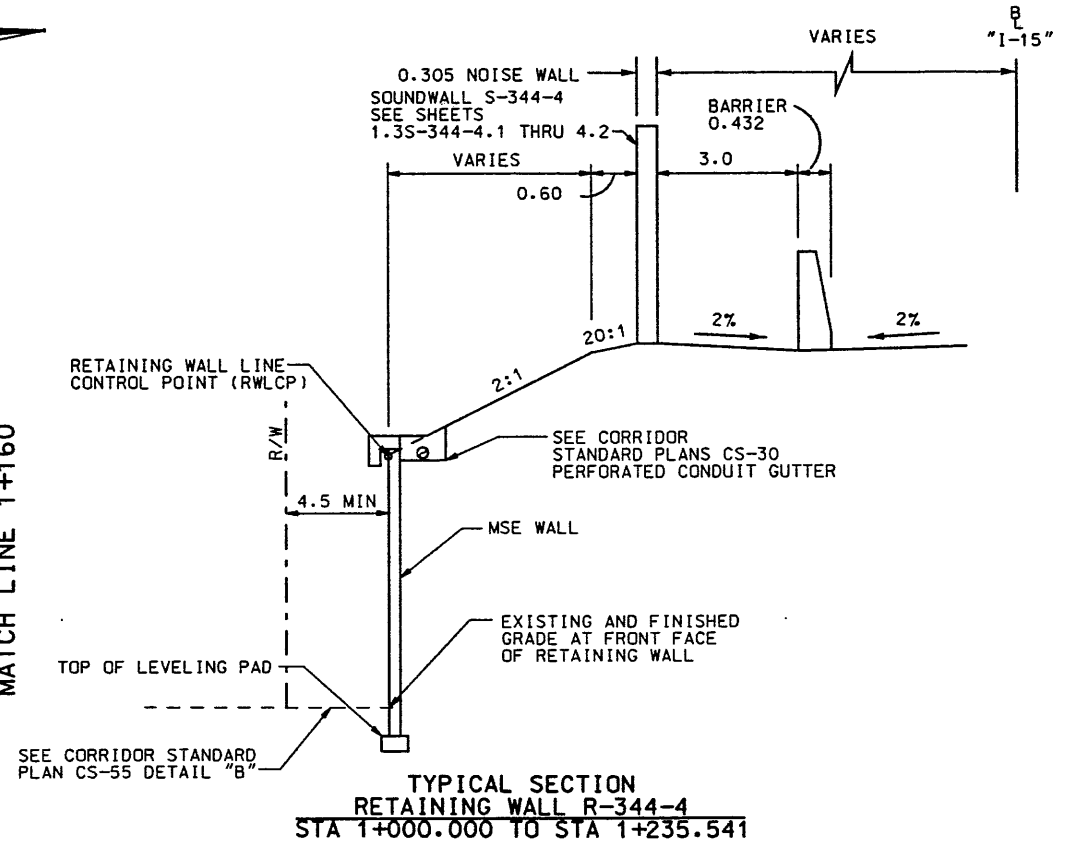
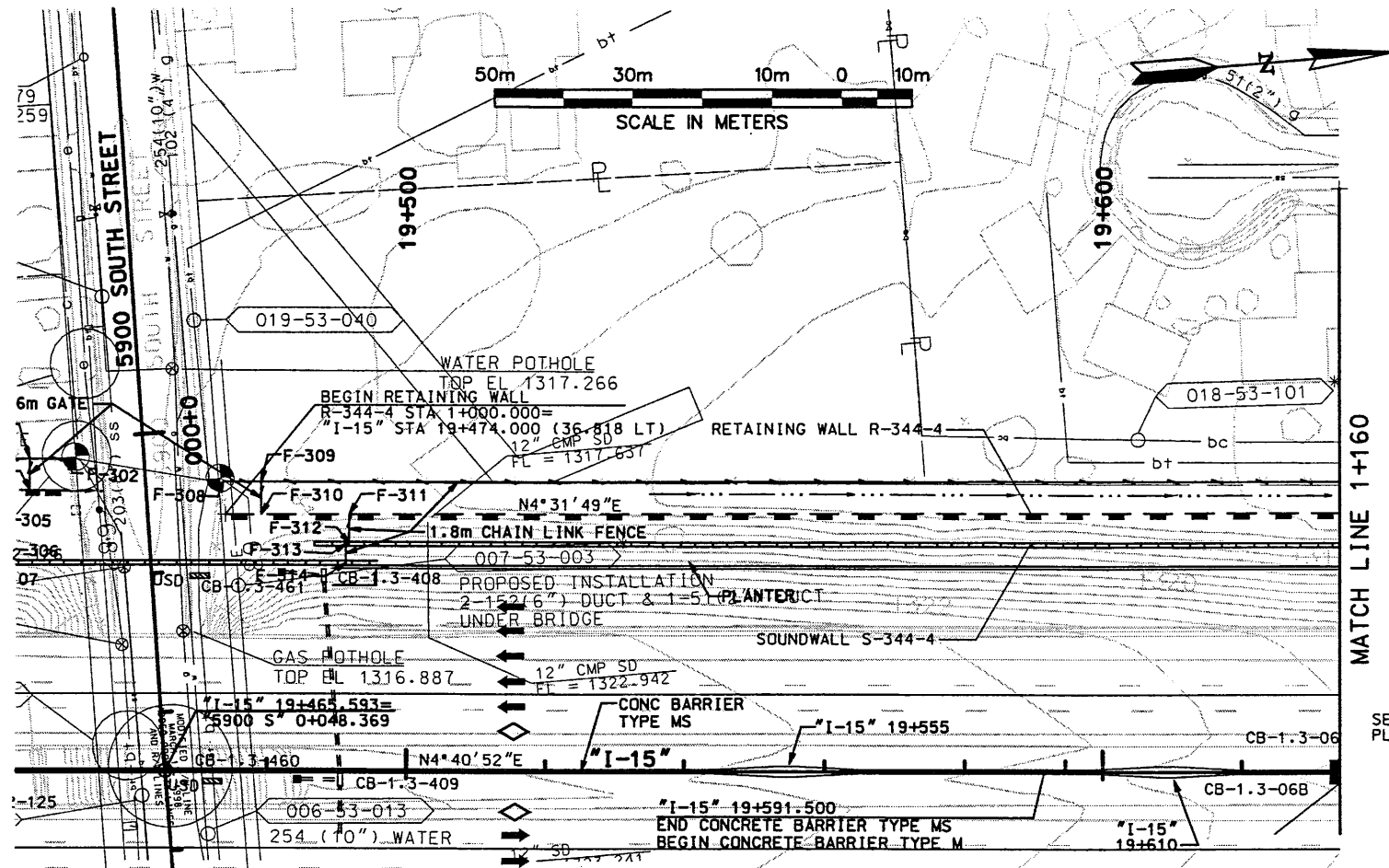


REVISION		NO.	DATE

DES:	03-23-98	RSW
DRN:	03-23-98	RSW
CHK:	03-23-98	JL

DWG. NO.	1.3R-344-2.8
JOB NO.	239-0007
SHT. NO.	RE-6 8/8

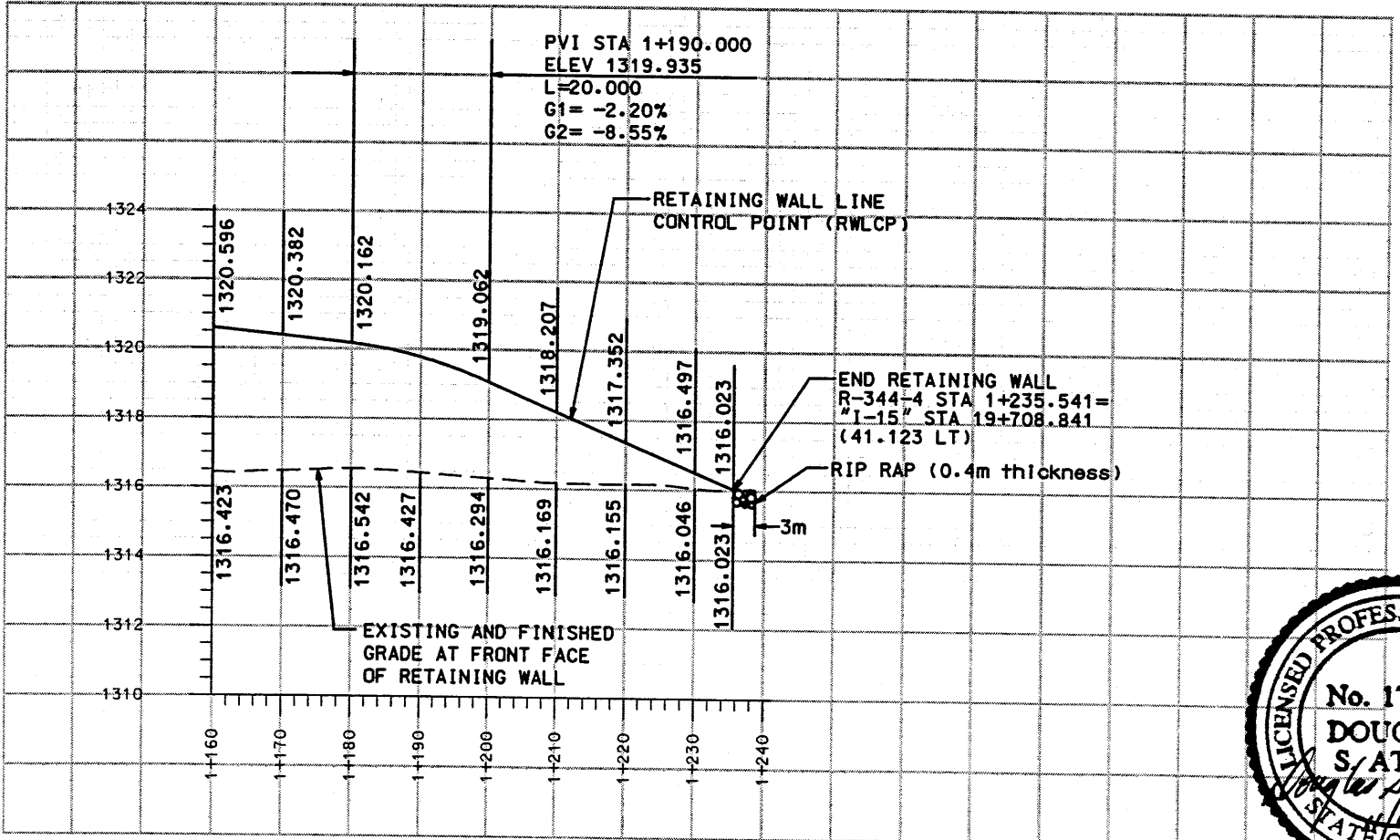
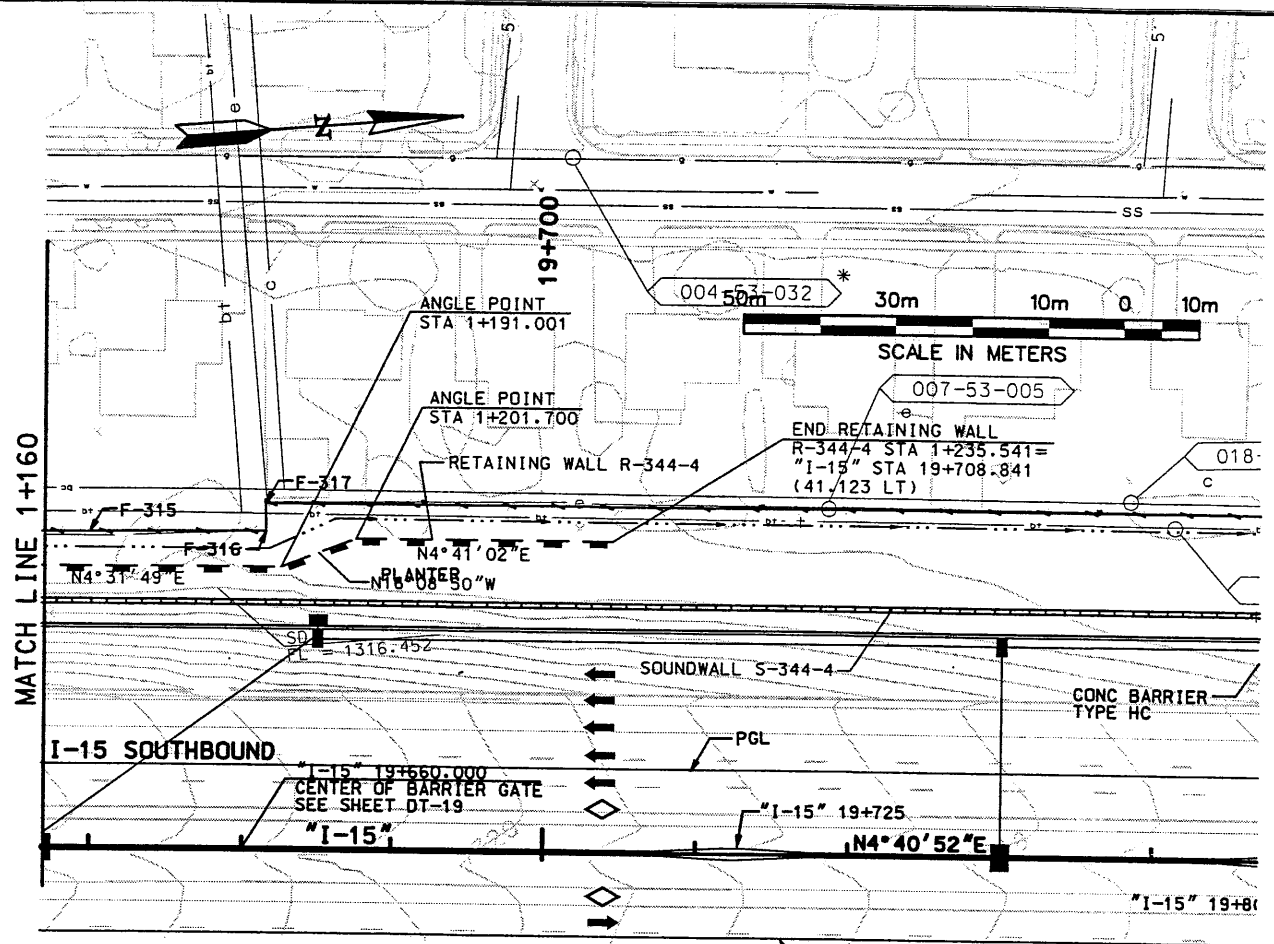
RETAINED EARTH™ WALLS
 PRECAST WALL "R-344-2"
 SPECIAL PANEL REINFORCEMENT
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.



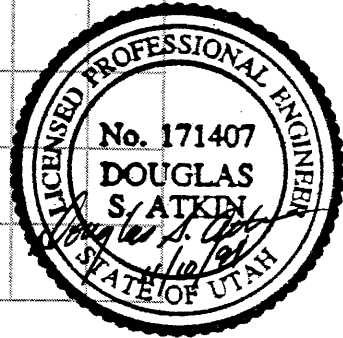
ELEVATION VIEW FROM BACK FACE OF WALL

APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	INITIAL RELEASE	REFERENCED SOUNDWALL
12-1-97			
11-10-98			
UTAH DEPARTMENT OF TRANSPORTATION			
URS Greiner			
SVERDRUP/DE LEUW			
DESIGN	JUN 10/97	CHECK	JUN 10/97
DRAWN	MUN 10/97	CHECK	MUN 10/97
PROJECT DESIGN ENGINEER		CHECK	
PROJECT MANAGER		CHECK	
QUANT.			1312402
I-15 CORRIDOR RECONSTRUCTION		SITUATION/LAYOUT	
RET WALL R-344-4		SECTION 1.3	
PROJECT NUMBER		#SP-15-7(135)296	
SALT LAKE COUNTY			
DWG. NO. 1.3R-344-4.1			
SHT. 1 OF 9			
REF.			

WASATCH CONSTRUCTORS
 NOV 19 1998
 RELEASED FOR CONSTRUCTION



ELEVATION VIEW FROM BACK FACE OF WALL



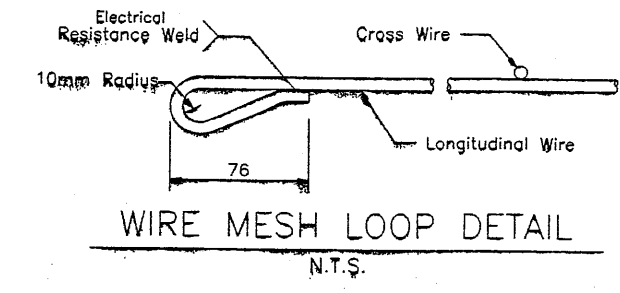
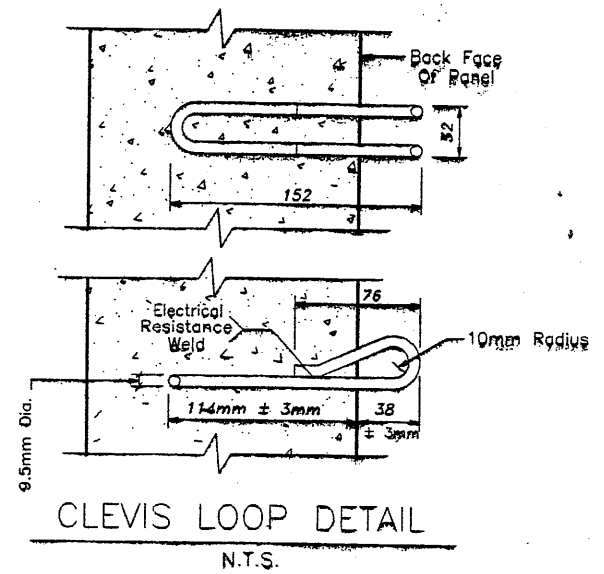
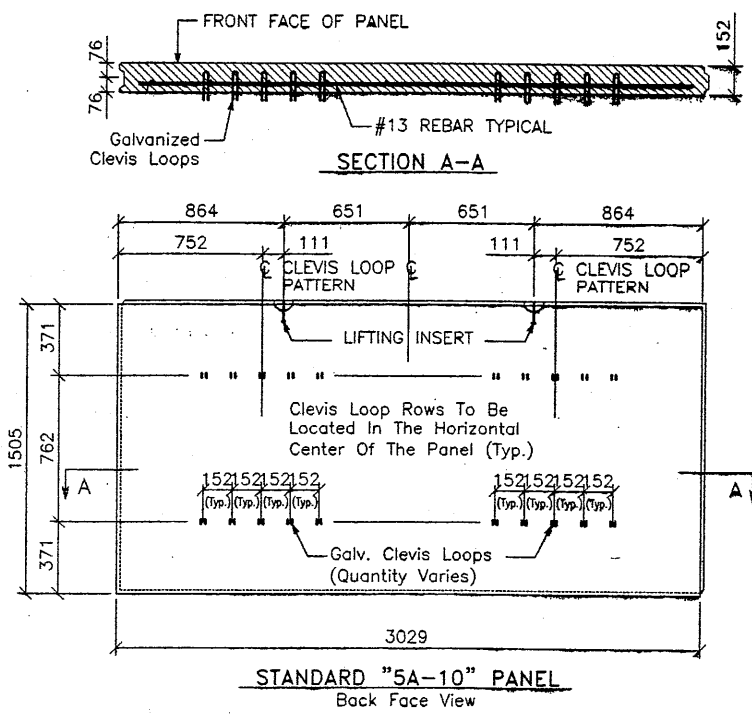
WASATCH CONSTRUCTORS
 NOV 19 1998
 RELEASED FOR CONSTRUCTION

NOTE:
 THE FOUNDATION BEARING MATERIALS SHOULD BE OBSERVED BY THE GEOTECHNICAL ENGINEER DURING SITE PREPARATION. ANY UNDESIRABLE MATERIALS WILL NEED TO BE REMOVED AND REPLACED WITH BORROW IN ORDER TO ACHIEVE ACCEPTABLE CONDITIONS AT THE BASE OF THE WALL.

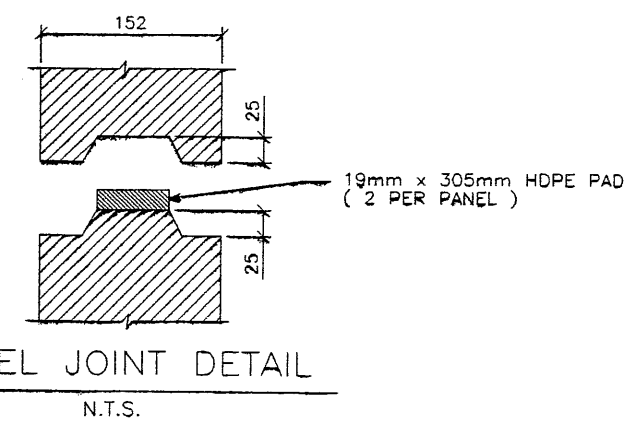
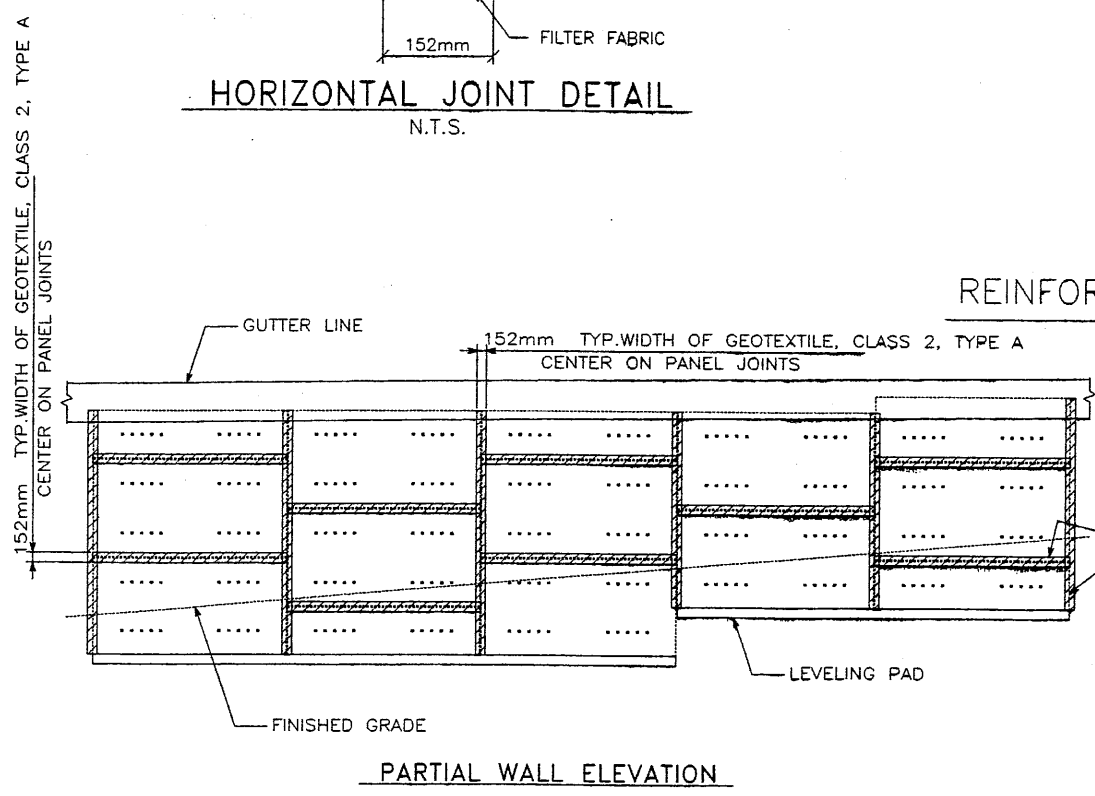
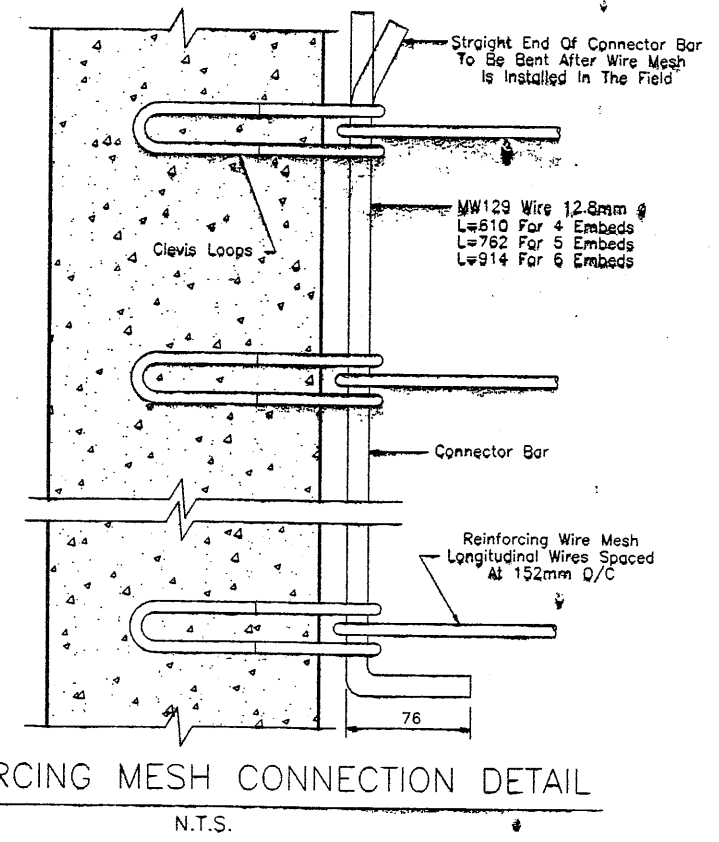
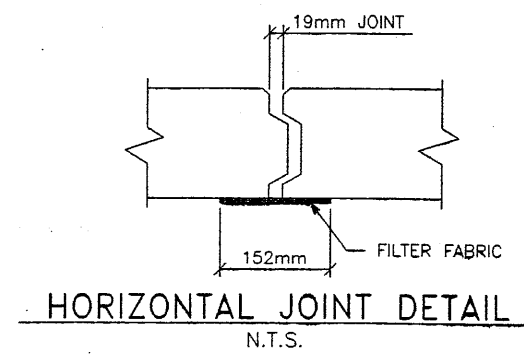
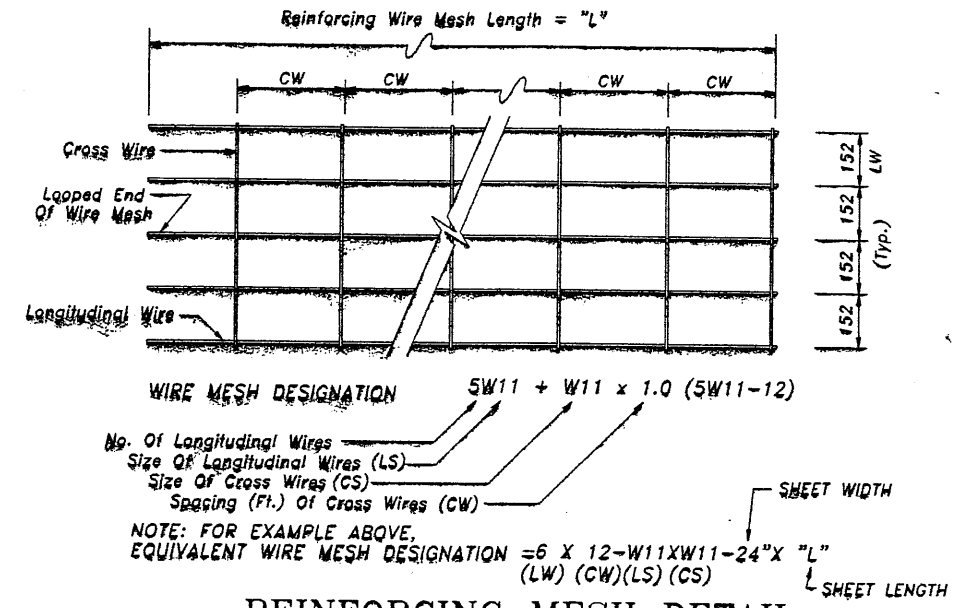
APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	INITIAL RELEASE	REFERENCED SOUNDWALL
A	12-1-97		
A	11-10-98		
UTAH DEPARTMENT OF TRANSPORTATION		1312402	
URS Greiner		SVERDRUP/DE LEUW	
DESIGN	JIM	10/97	CHECK
DRAWN	MUM	10/97	CHECK
QUANT.			CHECK
REVISION	DATE	BY	PROJECT DESIGN ENGINEER
			PROJECT MANAGER
I-15 CORRIDOR RECONSTRUCTION		SALT LAKE COUNTY	
SITUATION/LAYOUT		DWG. NO.	
RET WALL R-344-4		1.3R-344-4.2	
SECTION 1.3		SHT. 2 OF 9	
PROJECT NUMBER		REF.	
#SP-15-7(135)296			

FINAL PLOT 11-97 H:\RE_EARTH\PROJECT\239-0007\5SERIES\F\SUBMITL-2\RE-2

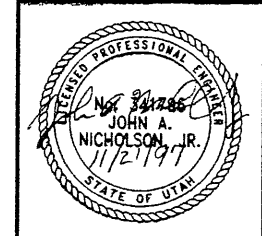
APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	11-11-97	RELEASE FOR CONSTRUCTION <i>OV</i>



WATCH CONSTRUCTORS
DEC 04 1997
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.



RETAINED EARTH™ WALLS PRECAST WALL "R-344-4" TYPICAL DETAILS

UTAH I-15 INTERCHANGE SALT LAKE COUNTY, UTAH

UTAH DEPARTMENT OF TRANSP.

SCALE: 1.3R-344-4.4

JOB NO: 239-0007

RE-24/12

VSL CORPORATION
2840 Plaza Place, Suite 200
Raleigh, NC 27612
Telephone: (919) 781-8272
Fax: (919) 781-8869

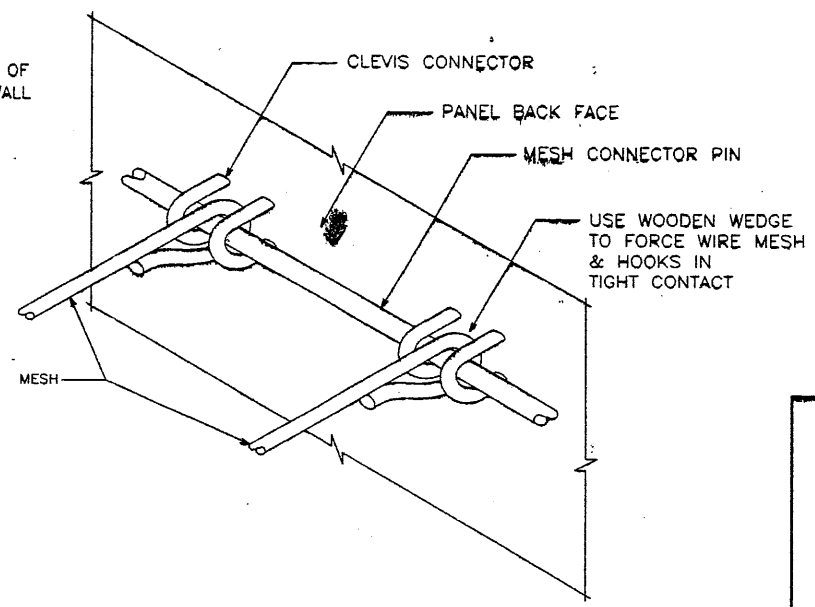
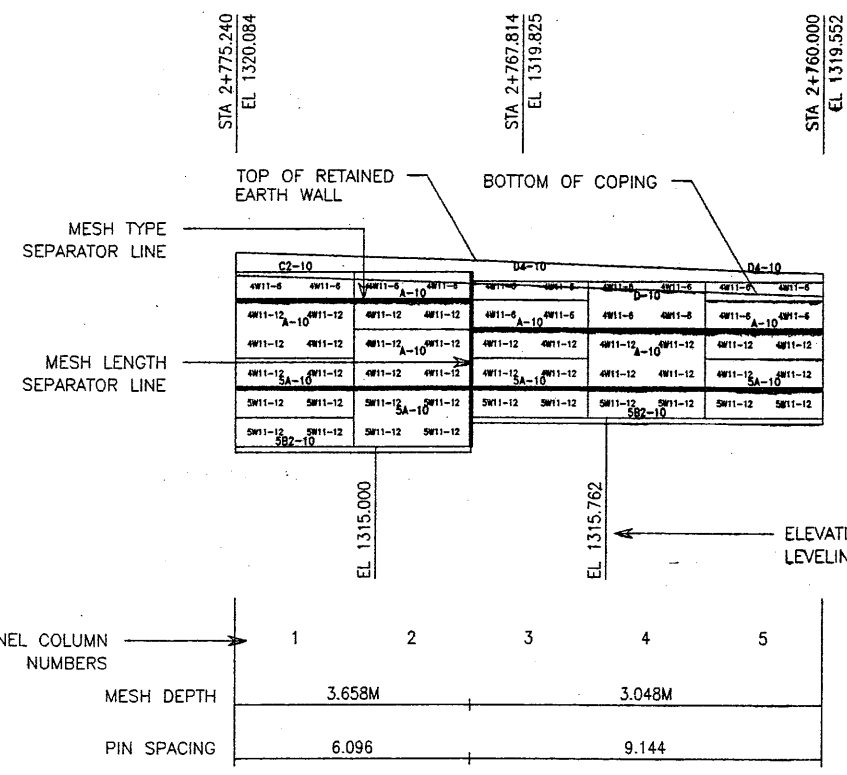
ATLANTA, GA / DALLAS, TX / FALCON, NC (CORPORATE OFFICE)
MADE IN / SAN JOSE, CA / SPRINGFIELD, VA

VSL

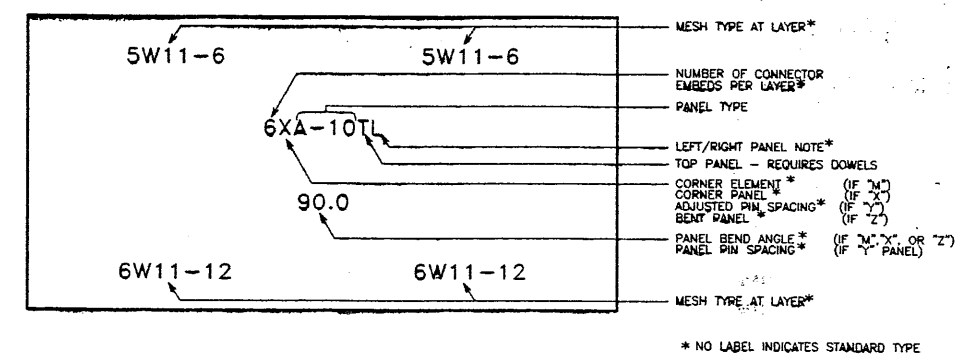
FINAL PLAN - 11-97 H:\RE_EARTH\PROJECT\239-0007\53SERIES\53-04\RE-3

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	11-11-97	RELEASE FOR CONSTRUCTION <i>OK</i>

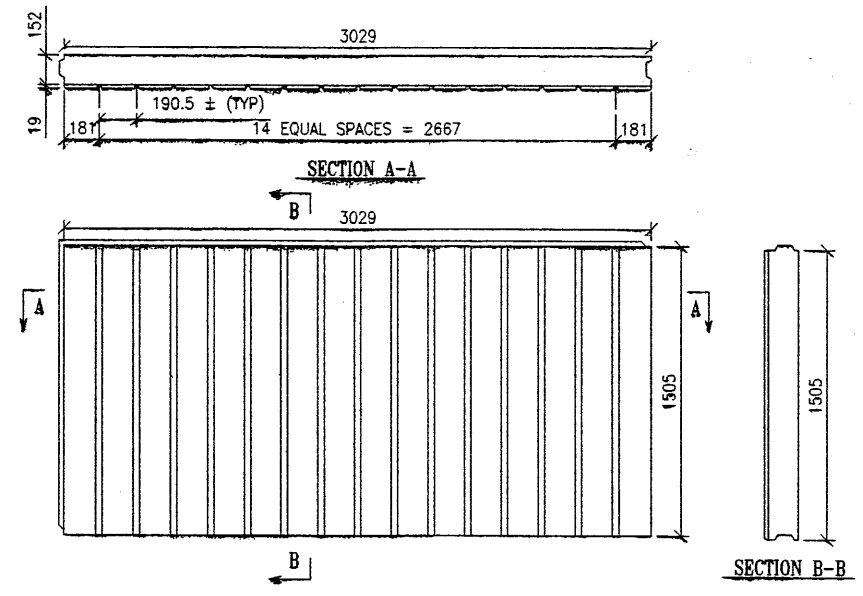
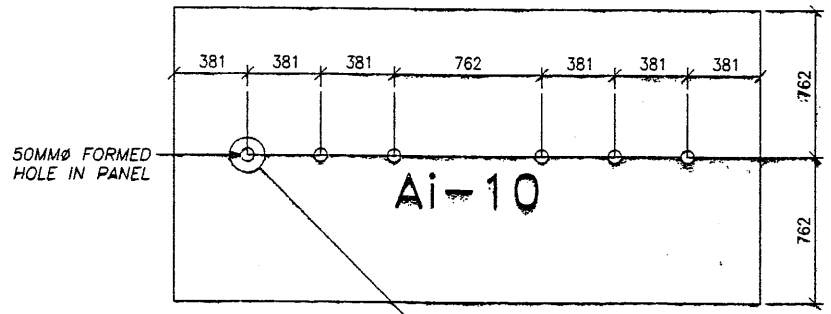
WASATCH CONSTRUCTORS
DEC 04 1997
RELEASED FOR CONSTRUCTION



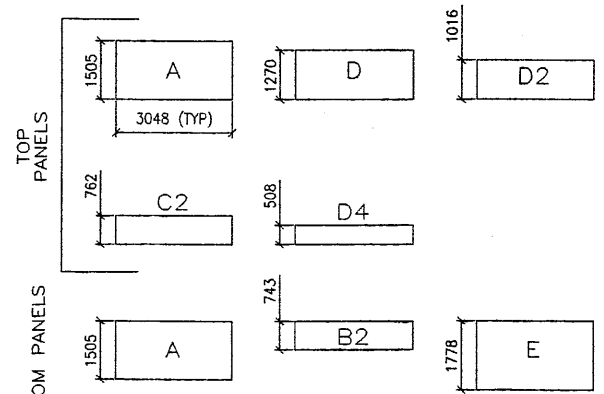
2 MESH CLEVIS CONNECTOR
VSL RETAINED EARTH IS PROTECTED UNDER U.S. PATENT 4,725,170.



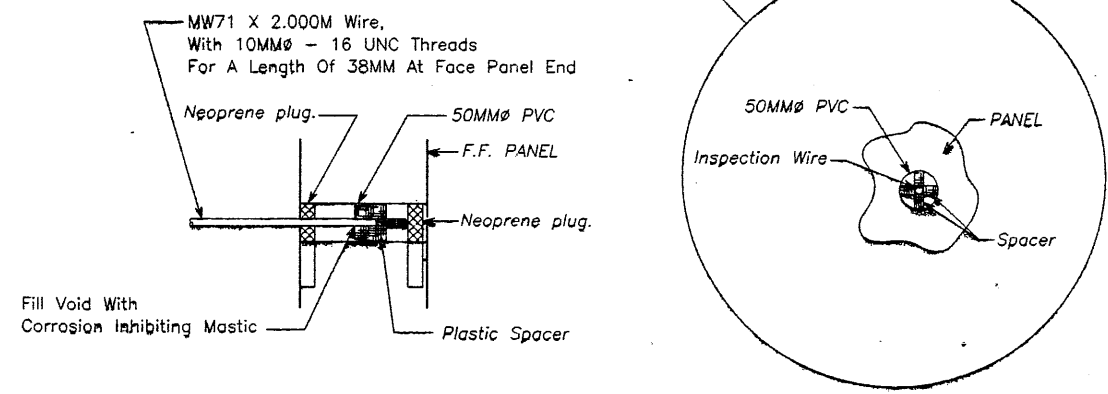
3 PANEL LABELS



5 ARCHITECTURAL PANEL FINISH
(PANEL FRONT FACE SHOWN)

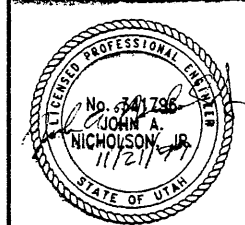


4 PANEL TYPES
ALL DIMENSIONS ARE IN MILLIMETERS



7 INSPECTION WIRE DETAIL
(PANEL FRONT FACE SHOWN)

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DES.	MM	09-25-97	DES.	MM	09-25-97	DES.	MM	09-25-97	DES.	MM	09-25-97
DRN.	DDO	09-25-97	DRN.	DDO	09-25-97	DRN.	DDO	09-25-97	DRN.	DDO	09-25-97
CHK.	MM	09-25-97	CHK.	MM	09-25-97	CHK.	MM	09-25-97	CHK.	MM	09-25-97

VSL CORPORATION
2840 Peach Place, Suite 200
Raleigh, NC 27612
Telephone: (919) 761-6272
Fax: (919) 761-4869

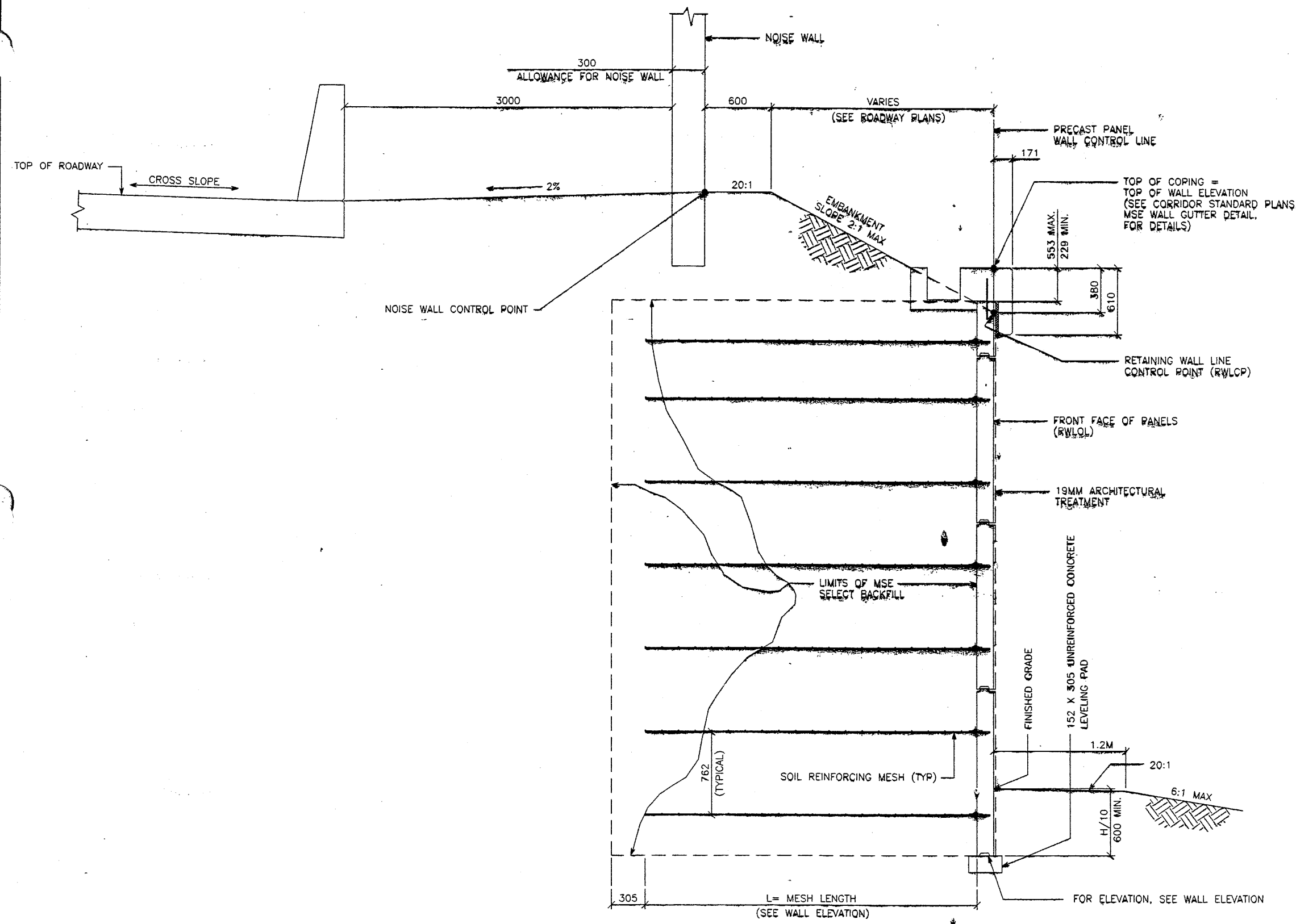
ATLANTA, GA / DANLUS, TX / RALEIGH, NC (CORPORATE OFFICE)
MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA

VSL

RETAINED EARTH™ WALLS
PRECAST WALL "R-344-4"
TYPICAL DETAILS
UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

SCALE: 1:3R-344-4.5
JOB NO: 239-0007
RE-35/12

H:\RE_EARTH\PROJECT\239-0007\53SERIES\SUBMITL-2\RE-4
 -11-97
 FINAL PL



TYPICAL CROSS SECTION

(SEE DWG. NO. 1.3R-344-4.01 FOR ADDITIONAL INFORMATION)
 SCALE: 1:20 (FULL SIZE)
 SCALE: 1:40 (HALF SIZE)

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APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲	11-11-97	RELEASE FOR CONSTRUCTION <i>OK</i>

WARATCH CONSTRUCTORS
 DEC 04 1997
 RELEASED FOR CONSTRUCTION

DES.	DRN.	CHK.	NO.	DATE	REVISION	BY	CHK
09-25-97	MM	09-25-97	DDO	MM			
09-25-97	MM	09-25-97	MM				

VSL CORPORATION
 2840 Potts Plaza, Suite 200
 Raleigh, NC (919) 781-8772
 Fax: (919) 781-4869

VSL

ATLANTA, GA / DALLAS, TX / HALDOR, NC (CORPORATE OFFICE)
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RETAINED EARTH™ WALLS
 PRECAST WALL "R-344-4"
 TYPICAL CROSS SECTION

UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

METRIC

SCALE: 1.3R-344-4.6
 JOB NO: 239-0007
 RE-4 6/12

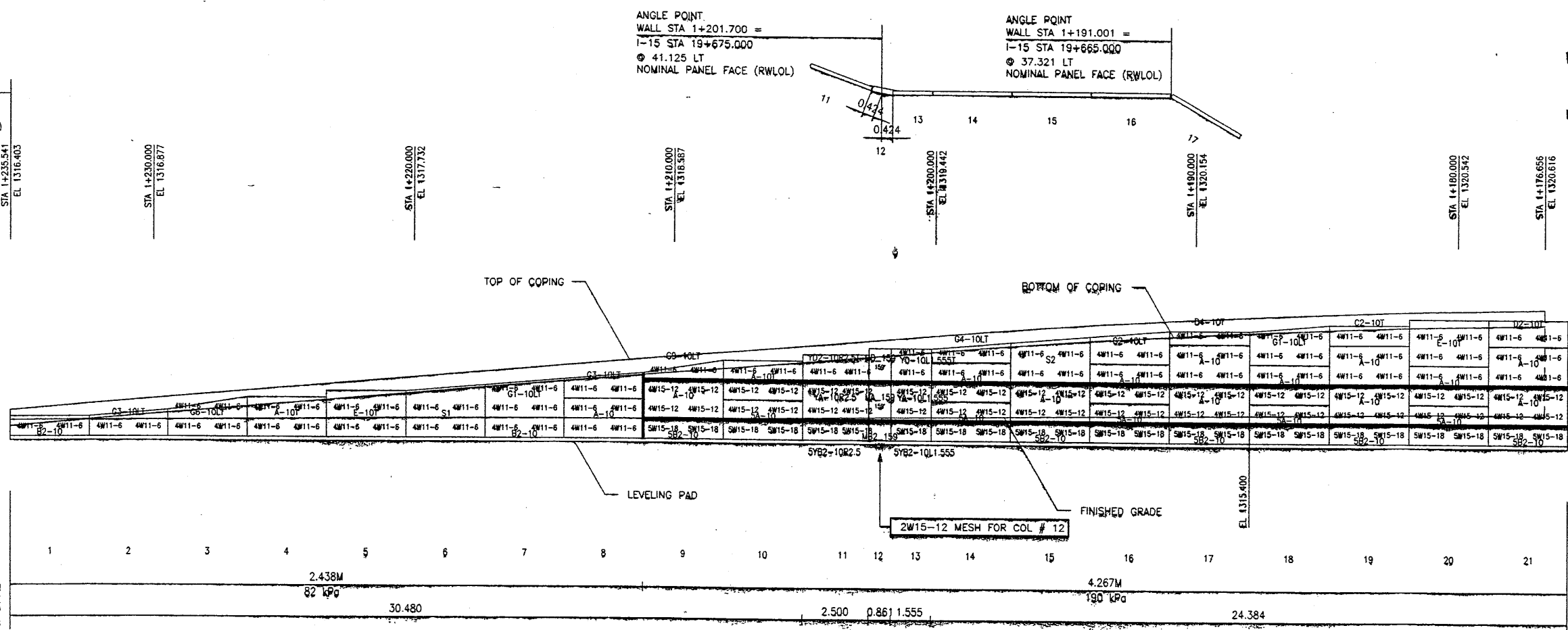
FINAL PLAN 1-14-97 H:\RE-EARTH\PROJECT\239-0007\3\SERIES\53-04

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	11-11-97	RELEASE FOR CONSTRUCTION <i>st</i>

END PRECAST WALL R-344-4
WALL STA 1+235.541 =
I-15 STA 19+708.841
⊙ 41.123 LT
NOMINAL PANEL FACE (RWLOL)

ANGLE POINT
WALL STA 1+201.700 =
I-15 STA 19+675.000
⊙ 41.125 LT
NOMINAL PANEL FACE (RWLOL)

ANGLE POINT
WALL STA 1+191.001 =
I-15 STA 19+665.000
⊙ 37.321 LT
NOMINAL PANEL FACE (RWLOL)



WATCH CONSTRUCTORS
DEC 8 1997
RELEASED FOR CONSTRUCTION

DES.	MM	LOP	MM	NO.	DATE	REVISION	BY
09-25-97							CHK
09-25-97							
09-25-97							

VSL CORPORATION
2840 Plaza Place, Suite 200
Raleigh, NC 27612
Telephone: (919) 781-6772
Fax: (919) 781-4869



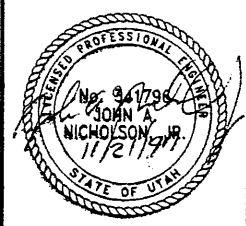
ATLANTA, GA / DALLAS, TX / PALMDALE, IN (CORPORATE OFFICE)
MINN. IA / SAN JOSE, CA / SPRINGFIELD, VA

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ELEVATION PRECAST WALL R-344-4

(FRONT FACE SHOWN) SCALE 1:100 (FULL SIZE)
(TOTAL SURFACE AREA OF PANELS = 1.156.15 SM) 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
PRECAST WALL "R-344-4"
I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

SCALE:	1.3R-344-4.7
JOB NO.:	239-0007
	RE-57/12

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

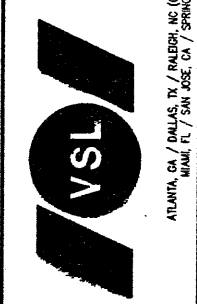
APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	11-11-97	RELEASE FOR CONSTRUCTION

WASATCH CONSTRUCTORS
 DEC 04 1997
 RELEASED FOR CONSTRUCTION

DES.	MM	NO.	DATE
DRN.	09-25-97	LOP	MM
CHK.	09-25-97	MM	MM

RETAINED EARTH™	NO.	DATE

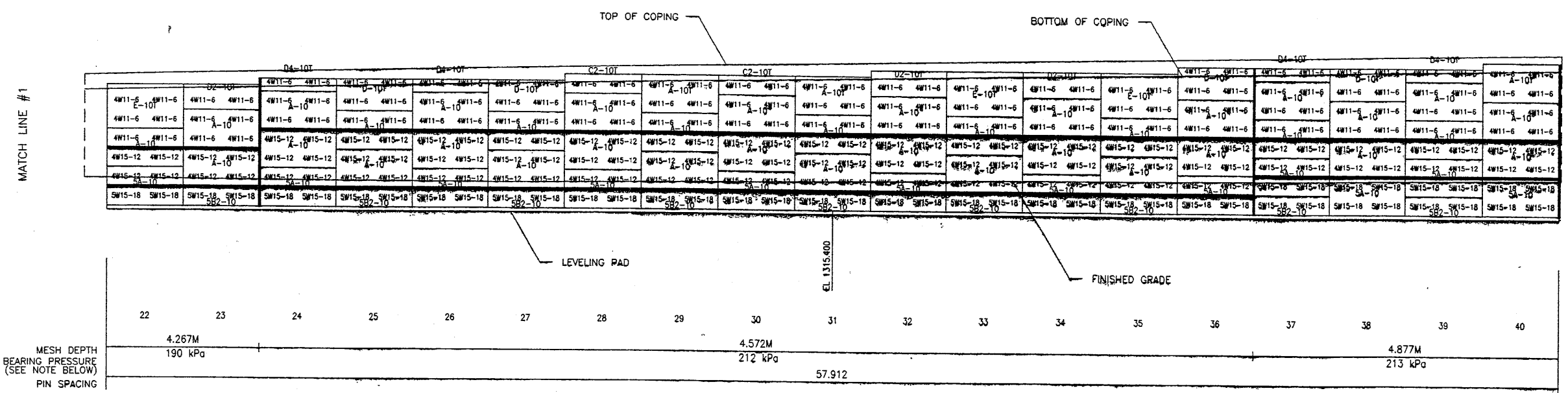
VSL CORPORATION
 2840 Plaza Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-6772
 Fax: (919) 781-6993



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RETAINED EARTH™ WALLS
 PRECAST WALL "R-344-4"
 I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

SCALE:	1.3R-344-4.8
JOB NO:	239-0007
	RE-6 8/12

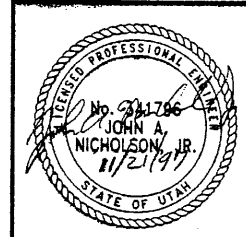


ELEVATION PRECAST WALL R-344-4

(FRONT FACE SHOWN) SCALE 1:100 (FULL SIZE)
 (TOTAL SURFACE AREA OF PANELS = 1,156.15 SM) 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.

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METRIC

53-04

H:\RE_EARTH\PROJECT 239-0007\53SERIES\53-04

-14-97

FINAL PL

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	11-11-97	RELEASE FOR CONSTRUCTION

WARATCH CONSTRUCTORS
 DEC 04 1997
 RELEASED FOR CONSTRUCTION

STA 1+117.771
EL 1321.812

STA 1+110.000
EL 1321.953

STA 1+100.000
EL 1322.130

STA 1+090.000
EL 1322.300

STA 1+080.000
EL 1322.464

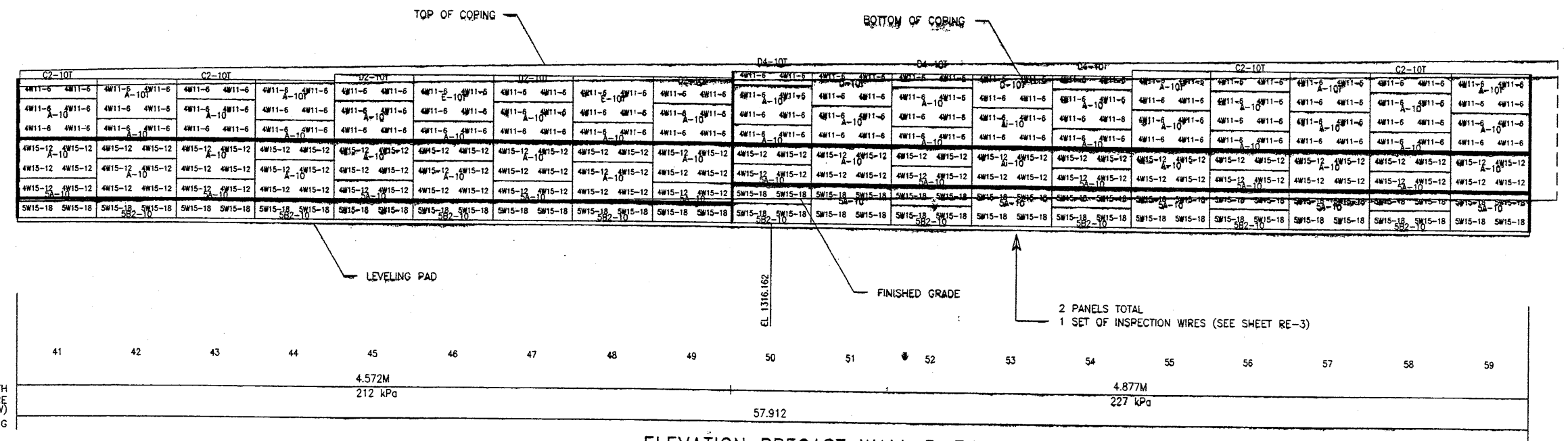
STA 1+070.000
EL 1322.622

STA 1+060.000
EL 1322.773

STA 1+058.885
EL 1322.768

MATCH LINE #2

MATCH LINE #3

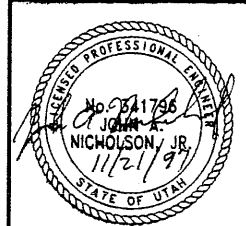


ELEVATION PRECAST WALL R-344-4

(FRONT FACE SHOWN) SCALE 1:100 (FULL SIZE)
 (TOTAL SURFACE AREA OF PANELS = 1,156.15 SM) 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.

DES.	MM	DRN.	MM	CHK.	MM	NO.	DATE	REVISION	CHK
09-25-97	09-25-97	09-25-97	09-25-97	09-25-97					

VSL CORPORATION
 2640 Pima Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 481-6272
 Fax: (919) 701-4689

VSL
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RETAINED EARTH™ WALLS
 PRECAST WALL "R-344-4"
 I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

SCALE:
1.3R-344-4.9
 JOB NO:
239-0007
 RE-7 9/12

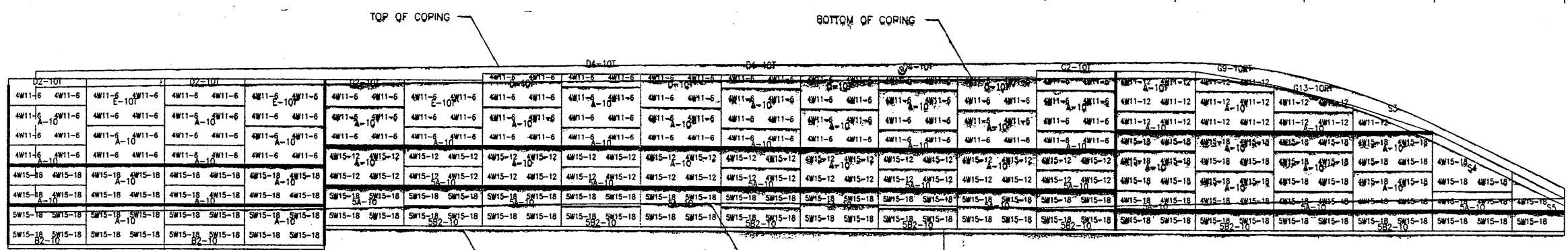
FINAL PLOT 2-26-97 H:\RE_EARTH\PROJECT\239-0007\3SERIES\53-04\SUP\2\53-04

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	11-11-97	RELEASE FOR CONSTRUCTION

BEGIN PRECAST WALL R-344-4
 WALL STA 1+000.000 =
 1-15 STA 19+474.000
 @ 36.818 LT
 NOMINAL PANEL FACE (R/W/L)

WARATCH CONSTRUCTORS
 DEC 04 1997
 RELEASED FOR CONSTRUCTION

STA 1+058.885 EL 1322.789	STA 1+050.000 EL 1322.916	STA 1+040.000 EL 1323.057	STA 1+030.000 EL 1323.189	STA 1+020.000 EL 1323.316	STA 1+015.000 EL 1323.380	STA 1+010.000 EL 1322.819	STA 1+005.000 EL 1321.012	STA 1+000.000 EL 1318.990
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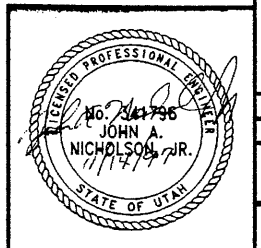


60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
5.486M		218 kPa		4.877M		213 kPa		47.740		7.315M		200 kPa							
MESH DEPTH		MAXIMUM BEARING PRESSURE (SEE NOTE BELOW)		PIN SPACING															

ELEVATION PRECAST WALL R-344-4
 (FRONT FACE SHOWN)
 (TOTAL SURFACE AREA OF PANELS = 1,156.15 SM)
 SCALE 1:100 (FULL SIZE)
 SCALE 1:200 (HALF SIZE)

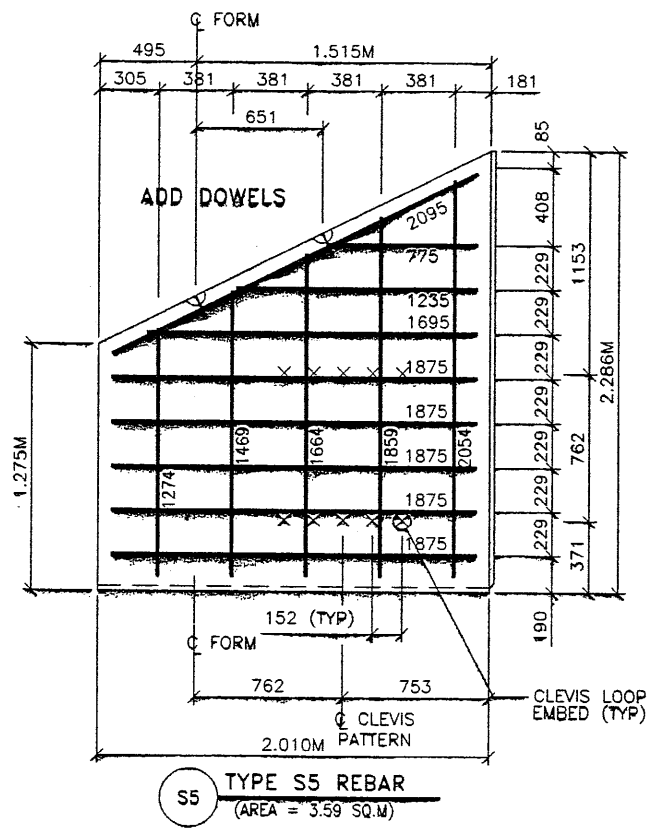
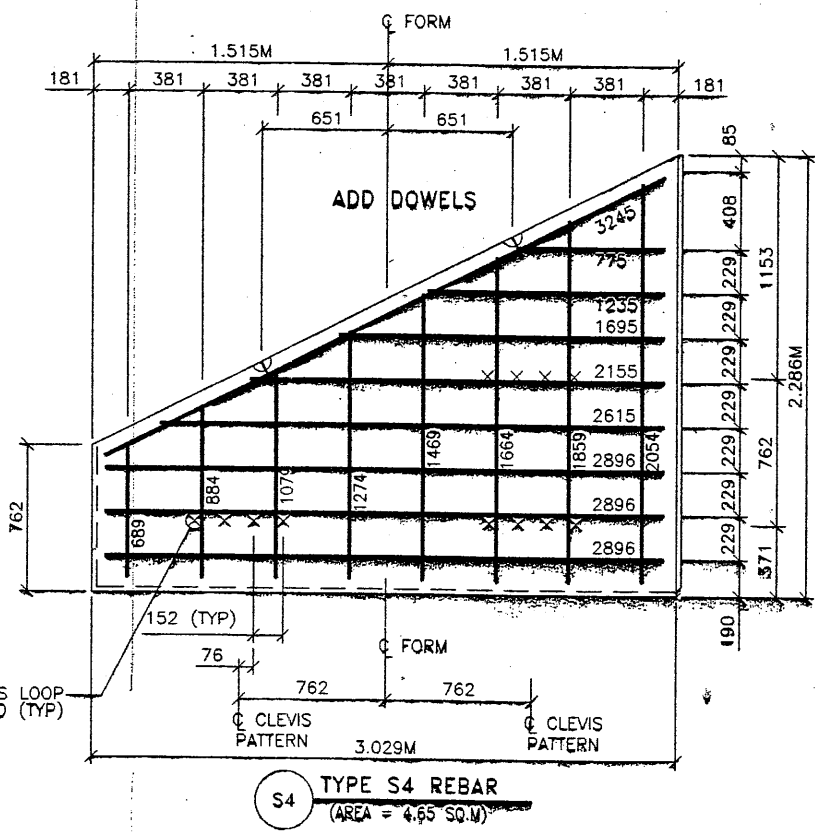
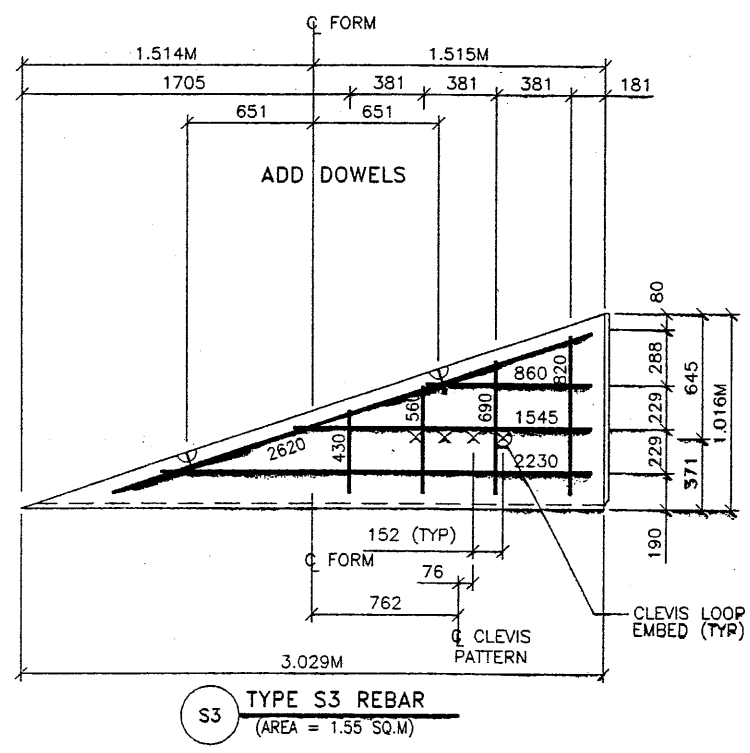
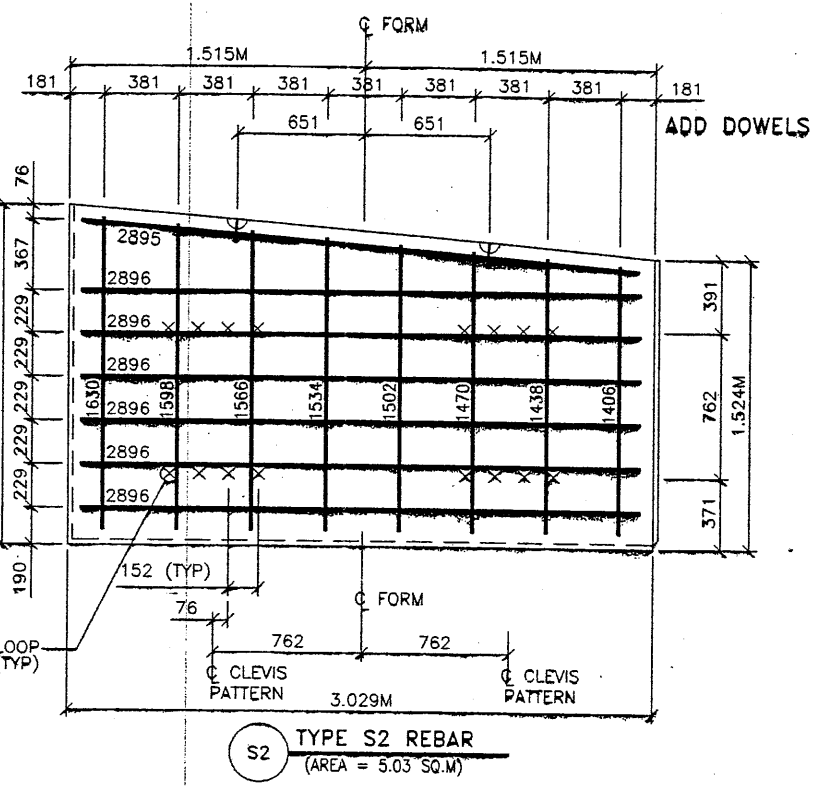
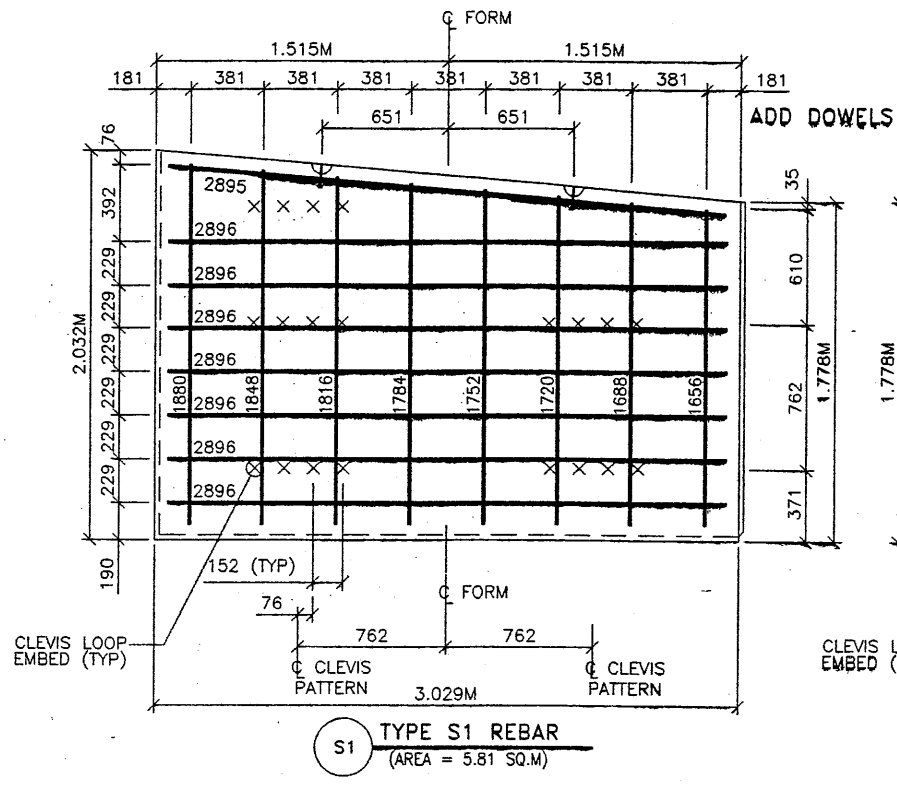
APPROVER NOTE:
 MAXIMUM FINAL UNFACTORED BEARING PRESSURES
 ARE INDICATED BELOW "MESH DEPTH LINE"
 REVIEWER TO VERIFY MAXIMUM BEARING
 CAPACITY OF FOUNDATION.

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 THE MANUFACTURER'S SPECIFICATION.



DES. 09-25-97	MM	DRN. 09-25-97	LOP	CHK. 09-25-97	MM	RETAINED EARTH™	NO.	DATE	REVISION	BY	CHK
<p>VSL CORPORATION 2840 Riva Place, Suite 200 Raleigh, NC 27612 Telephone: (919) 781-8272 Fax: (919) 781-4869</p> <p>VSL ATLANTA, GA / DANLUS, TX / RALEIGH, NC (CORPORATE OFFICE) MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA</p>											
<p>RETAINED EARTH™ WALLS PRECAST WALL "R-344-4" I-15 INTERCHANGE SALT LAKE COUNTY, UTAH UTAH DEPARTMENT OF TRANSP.</p>											
<p>SCALE: 1:300 1:300-344-4.10 JOB NO: 239-0007 RE-8 10/12</p>											

H:\RE_EARTH\PROJECT\239-0007\53SERIES\53-SUBMITL-2\SPECIALS
 FINAL PLOT: 14-97



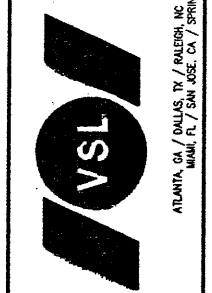
APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	11-14-97	RELEASE FOR CONSTRUCTION

WASATCH CONSTRUCTORS
 DEC 04 1997
 RELEASED FOR CONSTRUCTION

- 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 9.5mmØ CLEVIS LOOPS.
 10. VSL RETAINED EARTH™ IS PROTECTED UNDER PATENT 4,725,170.

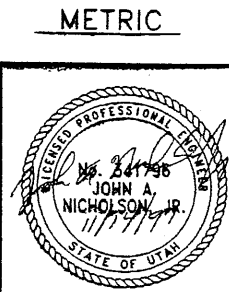
DES.	DRN.	CHK.	NO.	DATE
11-14-97	11-14-97	11-14-97		

VSL CORPORATION
 2840 Plaza Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-6072
 Fax: (919) 781-6969



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RETAINED EARTH™ WALLS
 PRECAST WALL "R-344-4"
 SPECIAL PANEL REINFORCEMENT
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

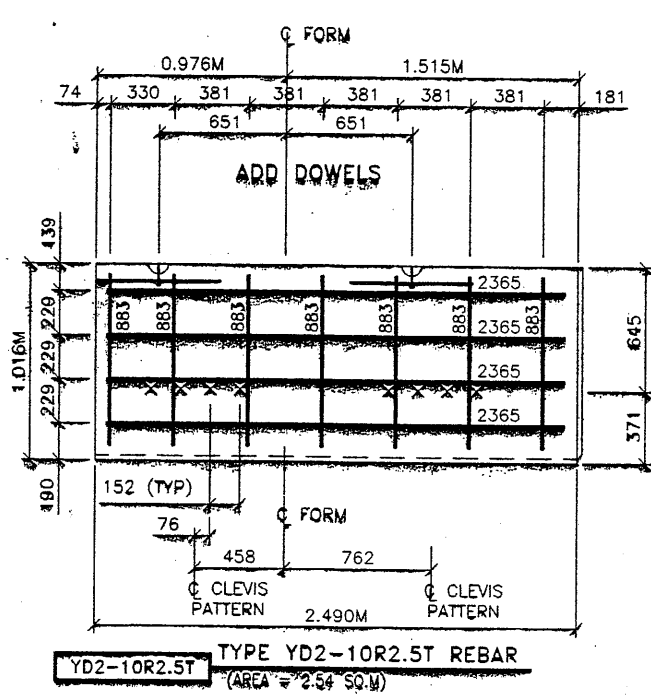
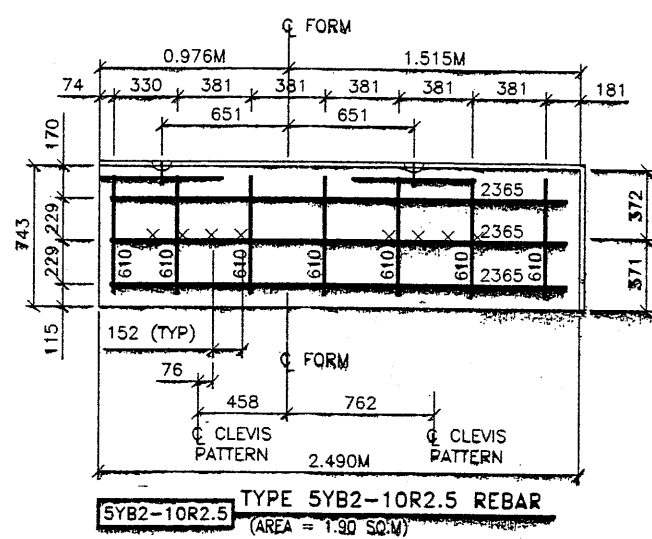
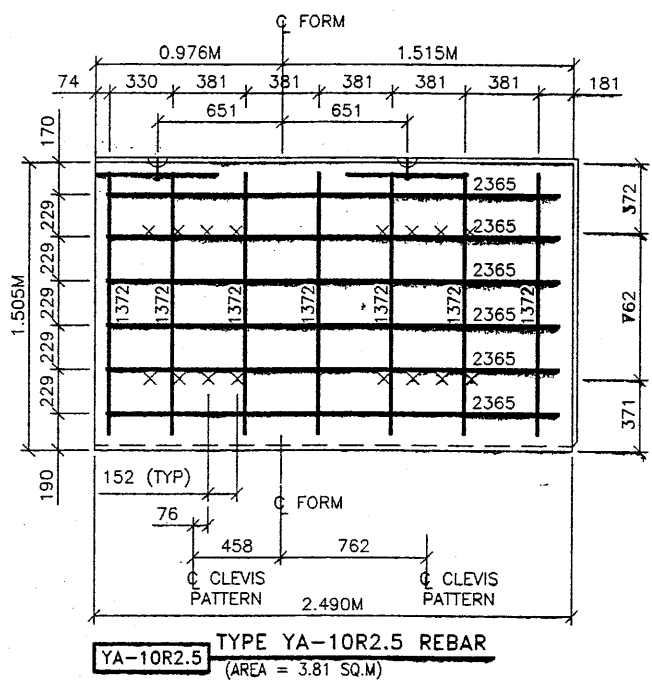


CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY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

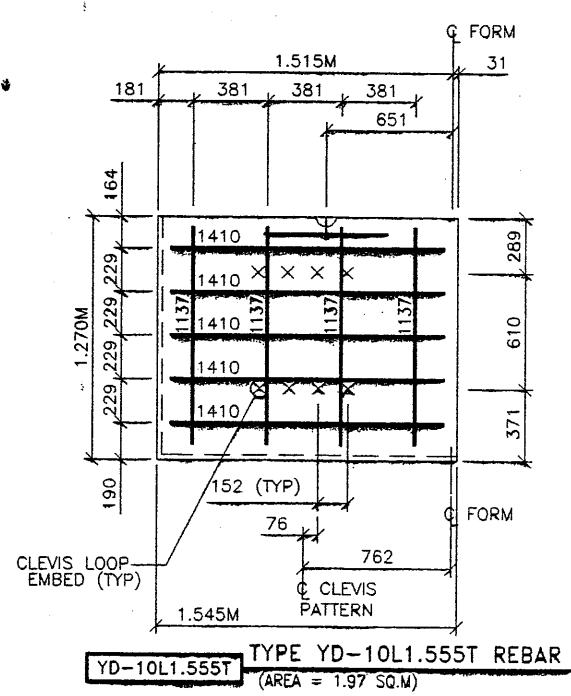
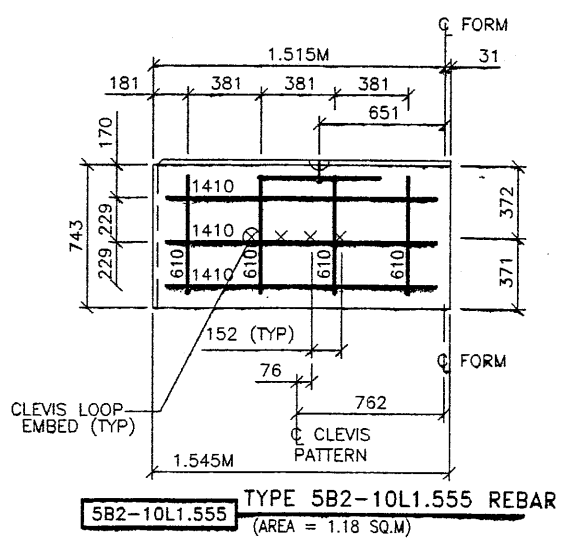
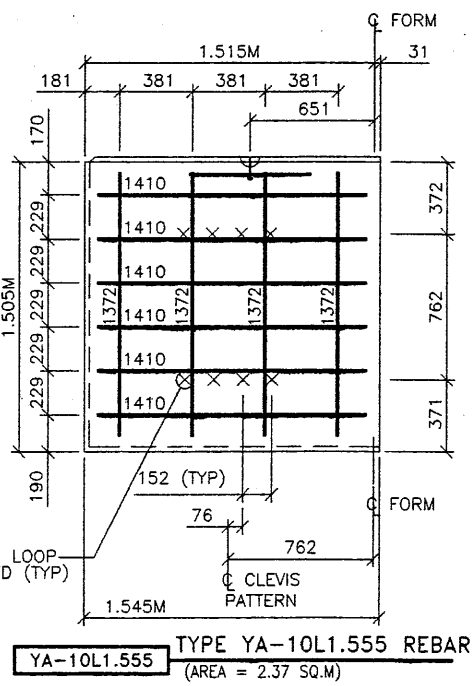
SCALE:	1.3R-344-4.11
JOB NO.:	239-0007
	RE-9 4/12

H:\RE_EARTH\PROJECT\239-0007\5SERIES\51\SUBMITL-2\SPECIALS
 FINAL PLOT 11-14-97

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	11-14-97	RELEASE FOR CONSTRUCTION



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WARATCH CONSTRUCTORS
 DEC 04 1997
 RELEASED FOR CONSTRUCTION

NO.	DATE	REVISION	BY	CHK

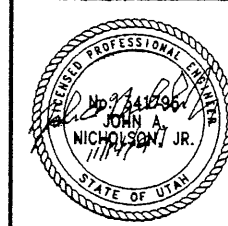
VSL CORPORATION
 2840 Plaza Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 761-4272
 Fax: (919) 761-4869

ATLANTA, GA / DALLAS, TX / RALEIGH, NC (CORPORATE OFFICE)
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RETAINED EARTH™ WALLS
 PRECAST WALL "R-344-4"
 SPECIAL PANEL REINFORCEMENT
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

METRIC



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SCALE: 1:3R-344-4.12

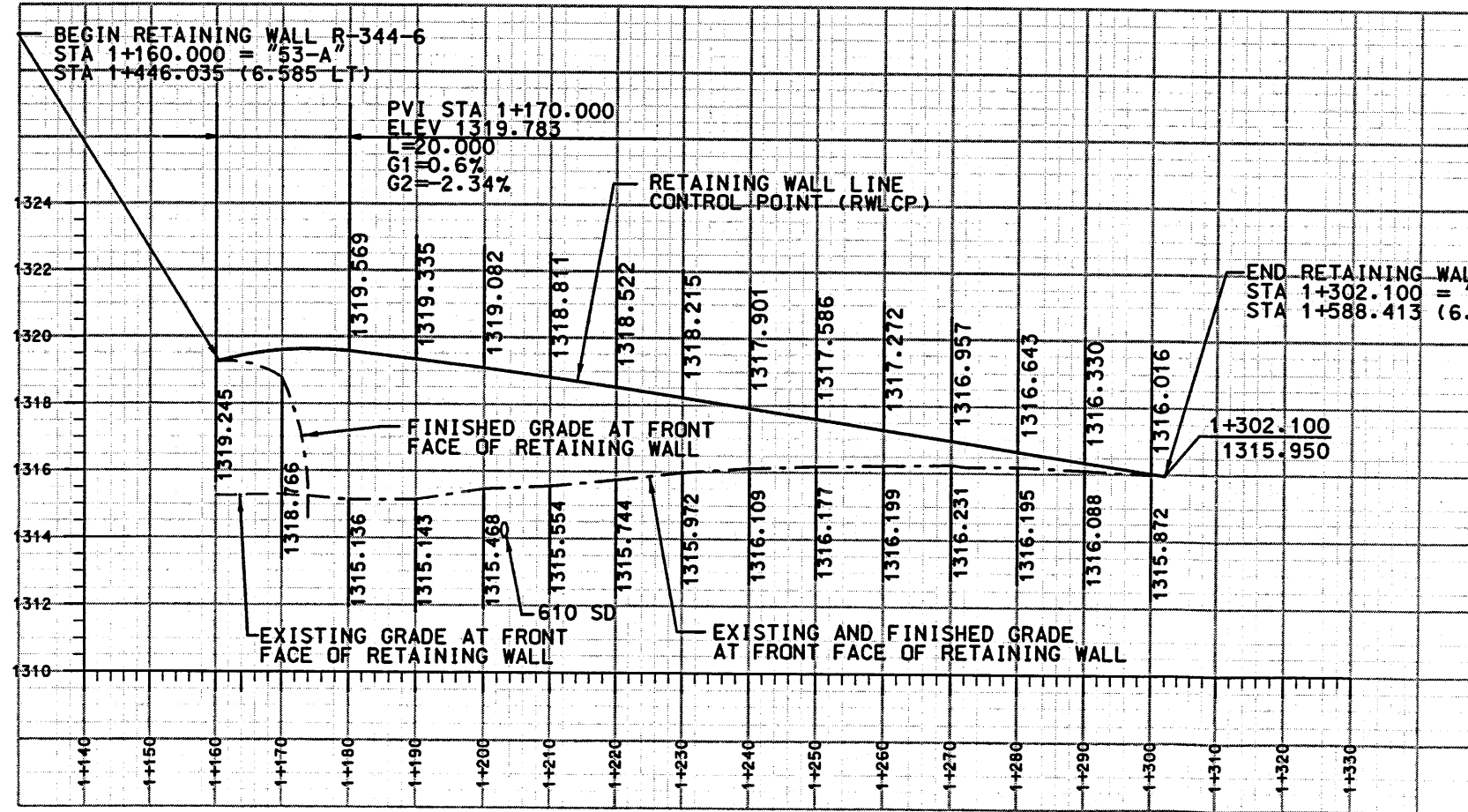
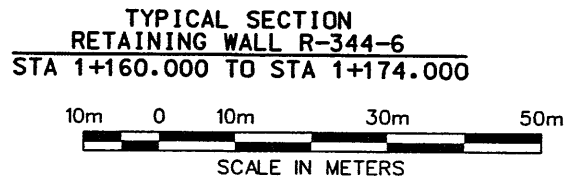
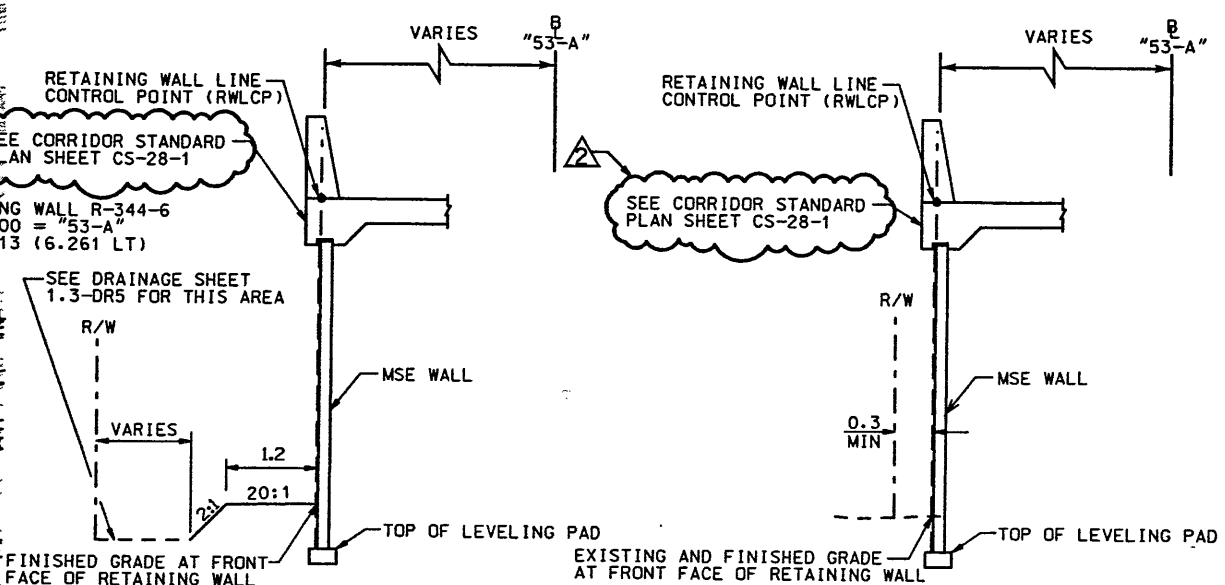
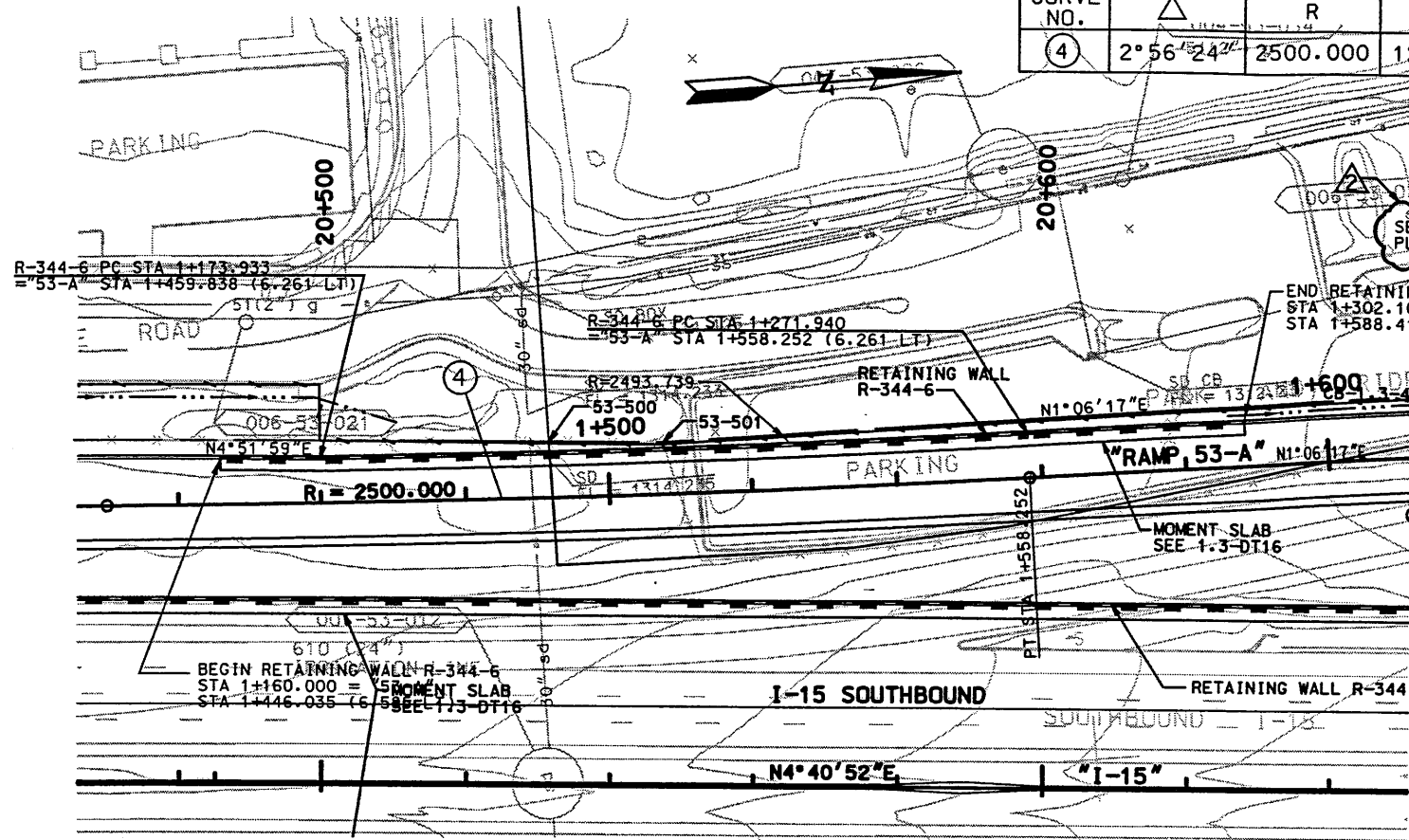
JOB NO: 239-0007

RE-1012

Filename: c:\dgn\115_cadd\53_31\sheet_files\wall\53_retwall-6.01.dgn

Username: moakkk
Date: 13-NOV-1998 Time: 15:49

CURVE NO.	Δ	R	L	T
4	2°56'24"	2500.000	128.285	64.157



ELEVATION VIEW FROM BACK OF WALL

WASATCH CONSTRUCTORS
NOV 24 1998
RELEASED FOR CONSTRUCTION

LICENSED PROFESSIONAL ENGINEER
No. 171407
DOUGLAS S. ATKIN
STATE OF UTAH

MATERIALS SHOULD BE OBSERVED BY THE GC AT SITE PREPARATION. ANY MATERIALS "NEED TO BE REMOVED" AND REPLACED TO MEET ACCEPTABLE CONDITIONS

APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	INITIALS	RELEASE
1	1-14-98		NOC-0295
2	11-13-98		

UTAH DEPARTMENT OF TRANSPORTATION		SITUATION/LAYOUT	
DESIGN	CHECK	DATE	BY
12/97	JAM	12/97	JAM
12/97	JAM	12/97	JAM
12/97	JAM	12/97	JAM

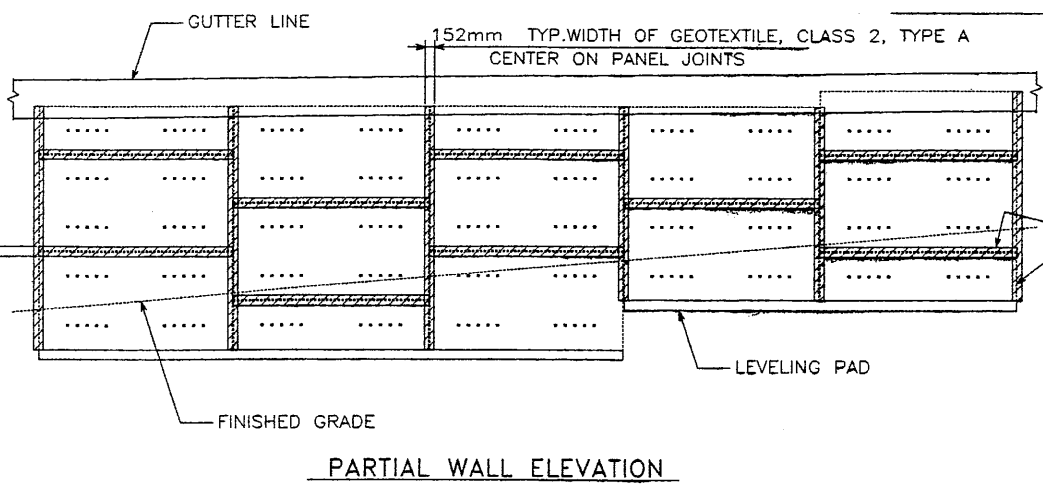
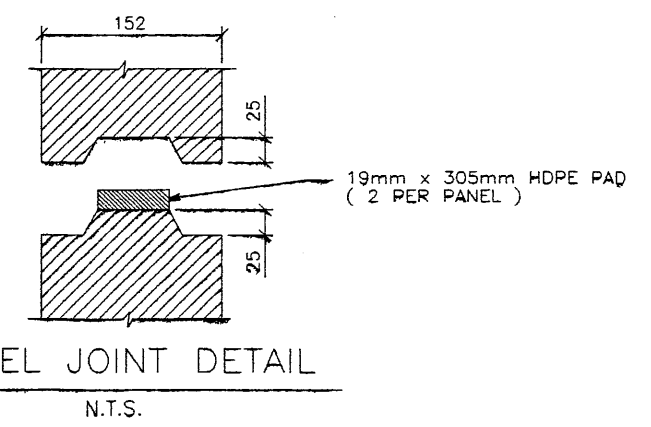
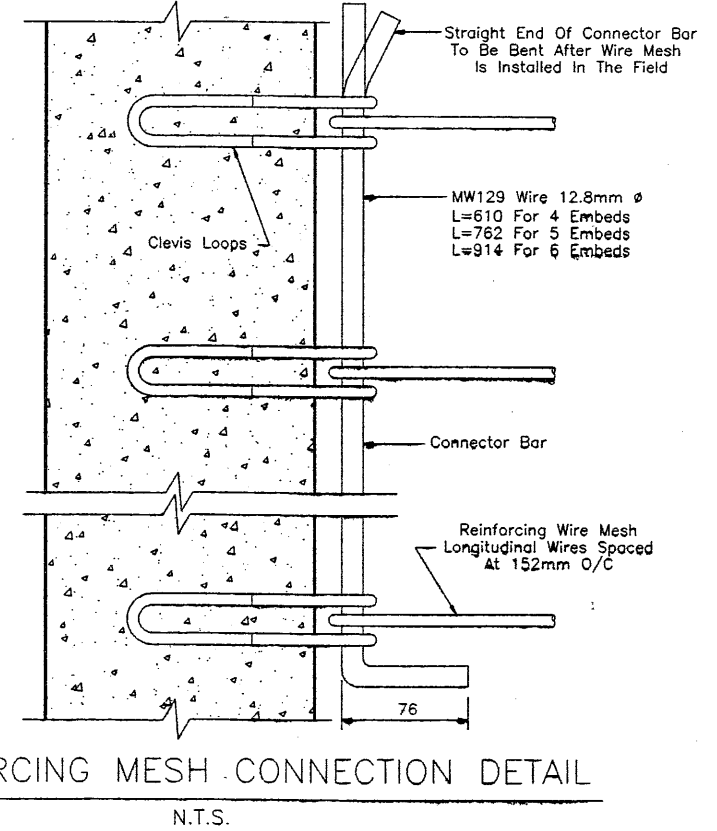
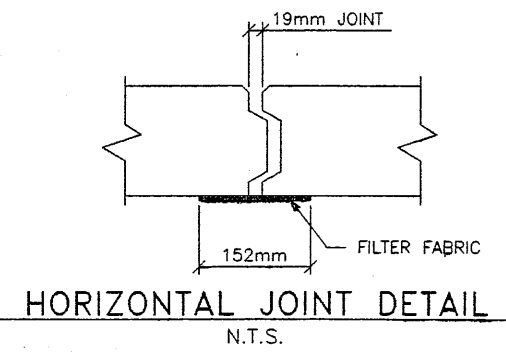
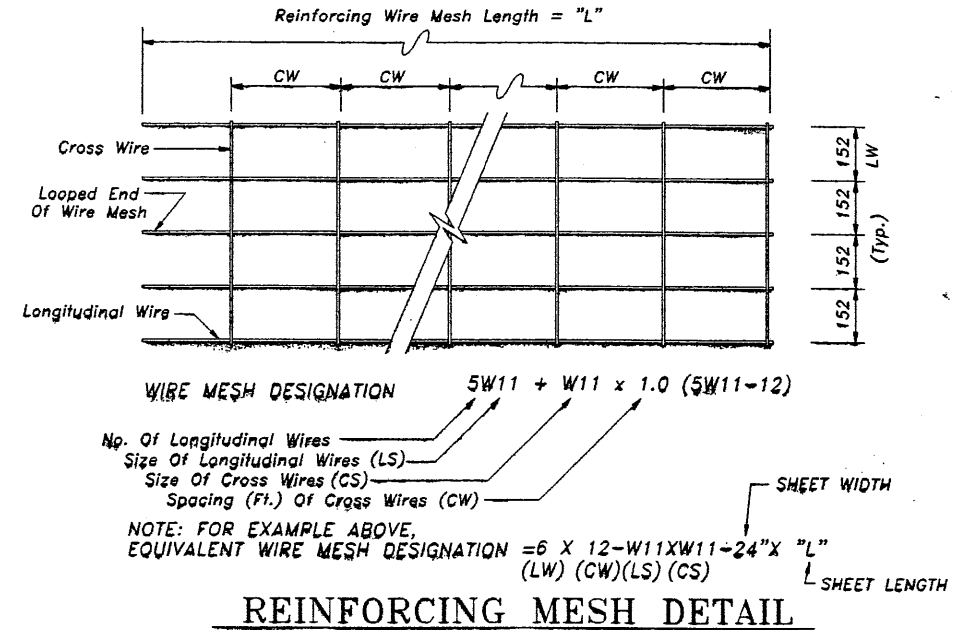
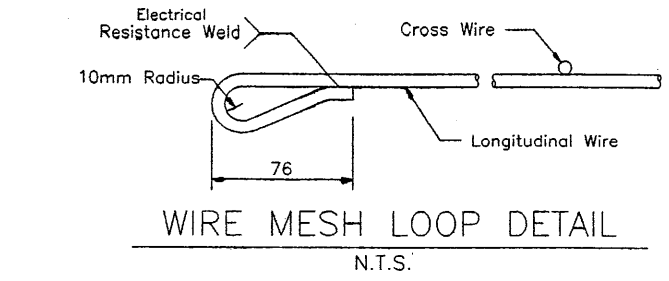
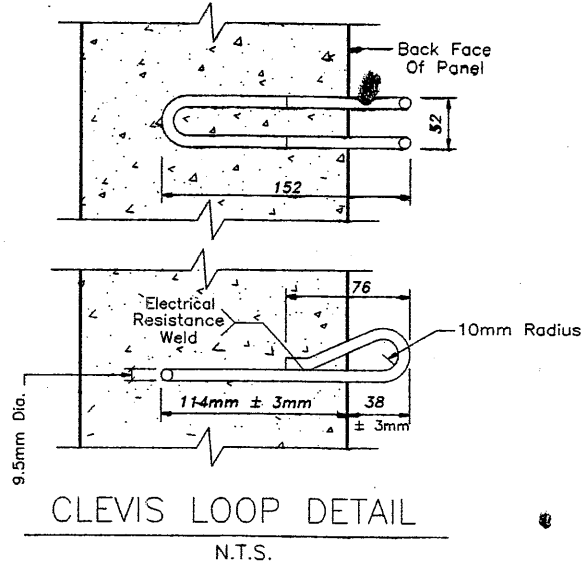
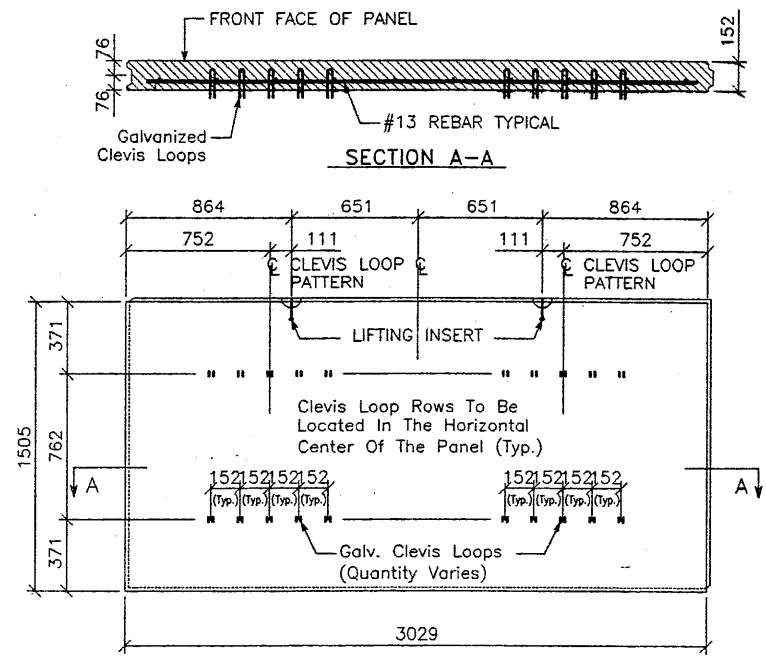
I-15 CORRIDOR RECONSTRUCTION		PROJECT NUMBER	
SITUATION/LAYOUT	SECTION	PROJECT NUMBER	QUANT.
RETAINING WALL R-344-6	SECTION 1.3	#SP-15-7(135)296	1314000

SALT LAKE COUNTY	
DWG. NO.	PROJECT NUMBER
1.3R-344-6.1	#SP-15-7(135)296

SHT.	OF
1	9

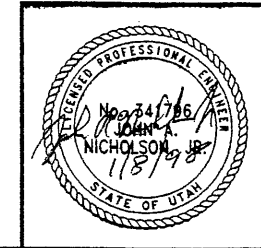
FINAL PL. 09-98 H:\RE-EARTH\PROJECT\239-0007\1998\SSSERIES\53-06\RE-

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲	01-09-98	RELEASE FOR CONSTRUCTION



APPLY ADHESIVE COATING TO PANELS ONLY. DO NOT APPLY ADHESIVE TO GEOTEXTILE OR WITHIN 51mm OF JOINT (TYP.)

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DES. 01-09-98	MM	RETAINED EARTH™	NO.	DATE	BY	CHK
DRN. 01-09-98	LOP					
CHK. 01-09-98	MM					

VSL CORPORATION
2840 Plaza Place, Suite 200
Raleigh, NC 27612
Telephone: (919) 761-6272
Fax: (919) 781-4989

ALANTA, GA / DALLAS, TX / RICHMOND, NC (CORPORATE OFFICE)
MINN. / SAN JOSE, CA / SPRINGFIELD, VA

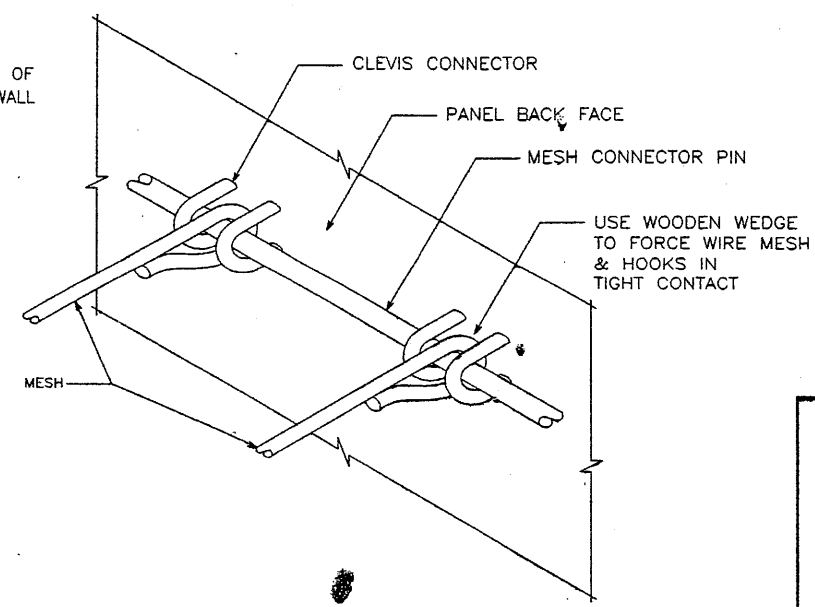
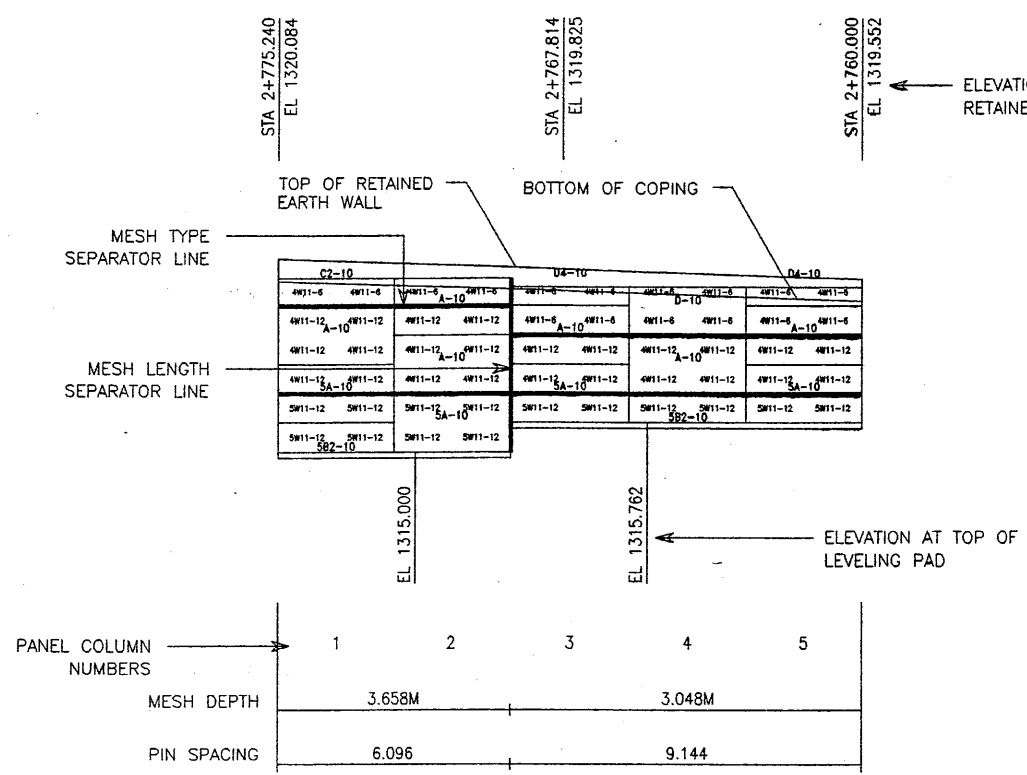
VSL

UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

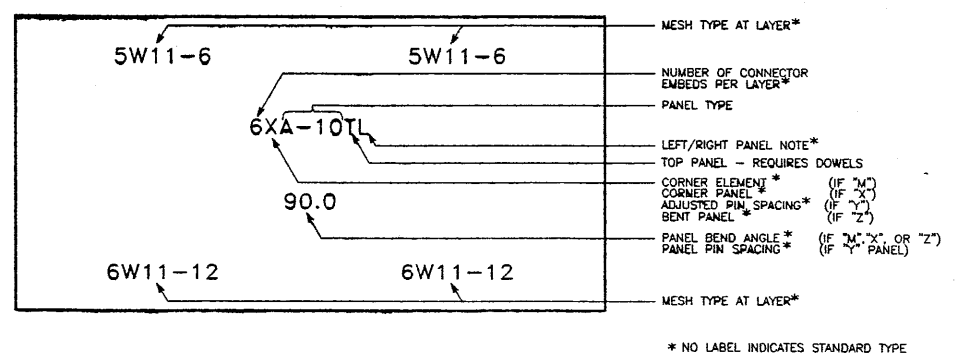
SCALE: 1.3R-344-6.3
JOB NO: 239-0007
RE-2 3/4

FINAL PLC 09-98 H:\RE_EARTH\PROJECT 239-0007\1998\5\SERIES\53-06\RE-3

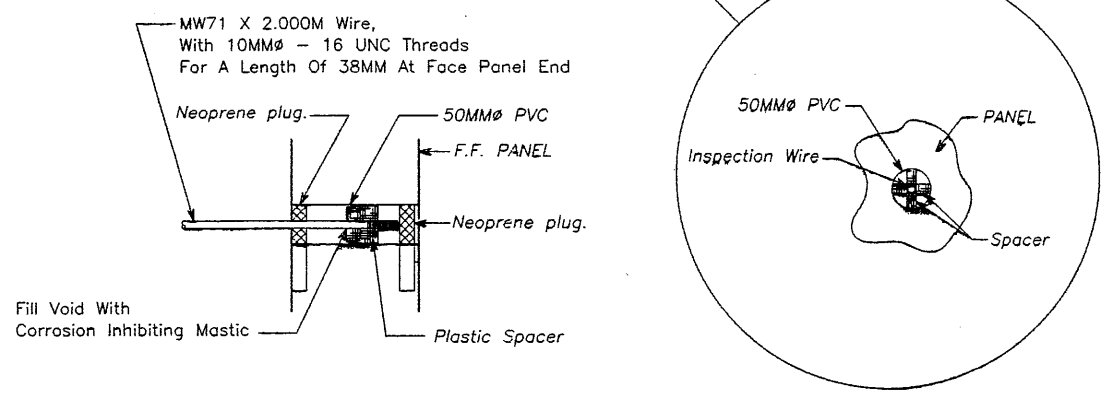
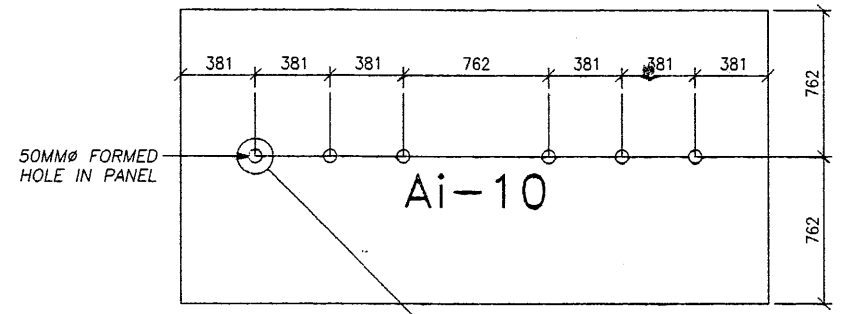
APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	01-09-98	RELEASE FOR CONSTRUCTION



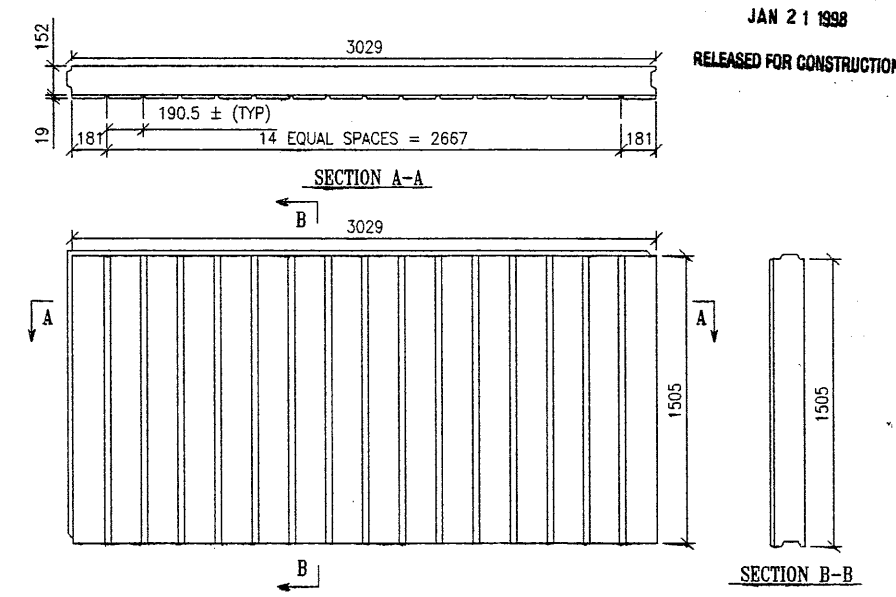
2 MESH CLEVIS CONNECTOR
VSL RETAINED EARTH IS PROTECTED UNDER U.S. PATENT 4,725,170.



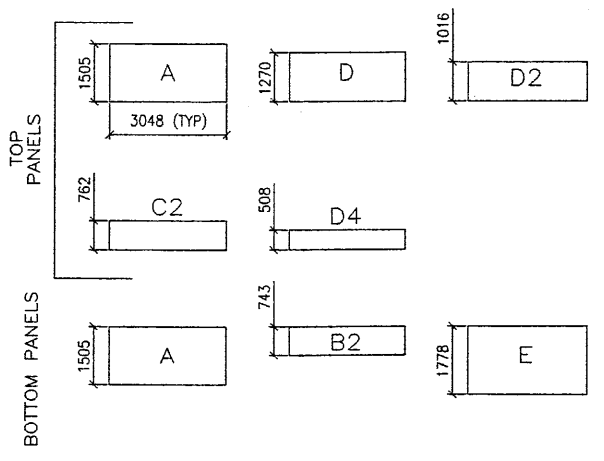
3 PANEL LABELS



5 INSPECTION WIRE DETAIL (PANEL FRONT FACE SHOWN)



6 ARCHITECTURAL PANEL FINISH (PANEL FRONT FACE SHOWN)



4 PANEL TYPES ALL DIMENSIONS ARE IN MILLIMETERS

WASATCH CONSTRUCTORS
JAN 21 1998
RELEASED FOR CONSTRUCTION

NO.	DATE	DESCRIPTION	REVISION	BY	CHK

RETAINED EARTH™

VSL CORPORATION
2640 Plaza Place, Suite 200
Raleigh, NC 27617 Tel: 919-4272
Fax: 919-781-4889

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

RETAINED EARTH™ WALLS
PRECAST WALL "R-344-6"
TYPICAL DETAILS

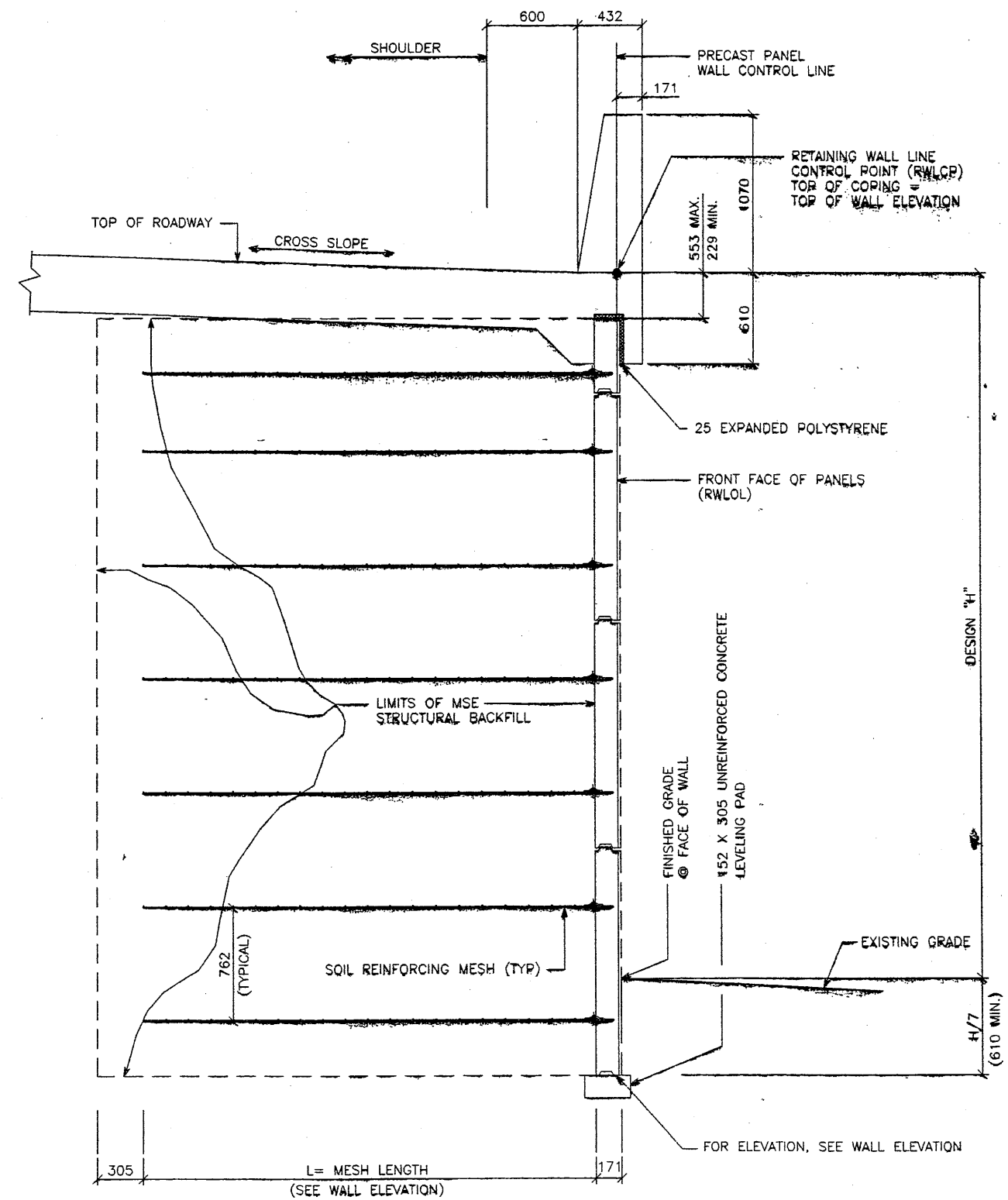
UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

SCALE: 1.3R-344-6.4
JOB NO: 239-0007
RE-34 1/2

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STATE OF UTAH
NICHOLSON JR.
11/8/98

H:\RE_EARTH\PROJECT\239-0007\1998\53SERIES\53-06\SUBMIT\4
 FINAL PLOT: -09-98



TYPICAL CROSS SECTION
 (MSE SINGLE STAGE WITH MOMENT SLAB)
 SCALE: 1:20 (FULL SIZE)
 SCALE: 1:40 (HALF SIZE)

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	01-09-98	RELEASE FOR CONSTRUCTION

WASATCH CONSTRUCTORS
 JAN 21 1998
 RELEASED FOR CONSTRUCTION

DES.	MM	DDO	MM	NO.	DATE	REVISION	CHK

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RETAINED EARTH™ WALLS
 WIRE FACED WALL "R-344-6"
 TYPICAL CROSS SECTION
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

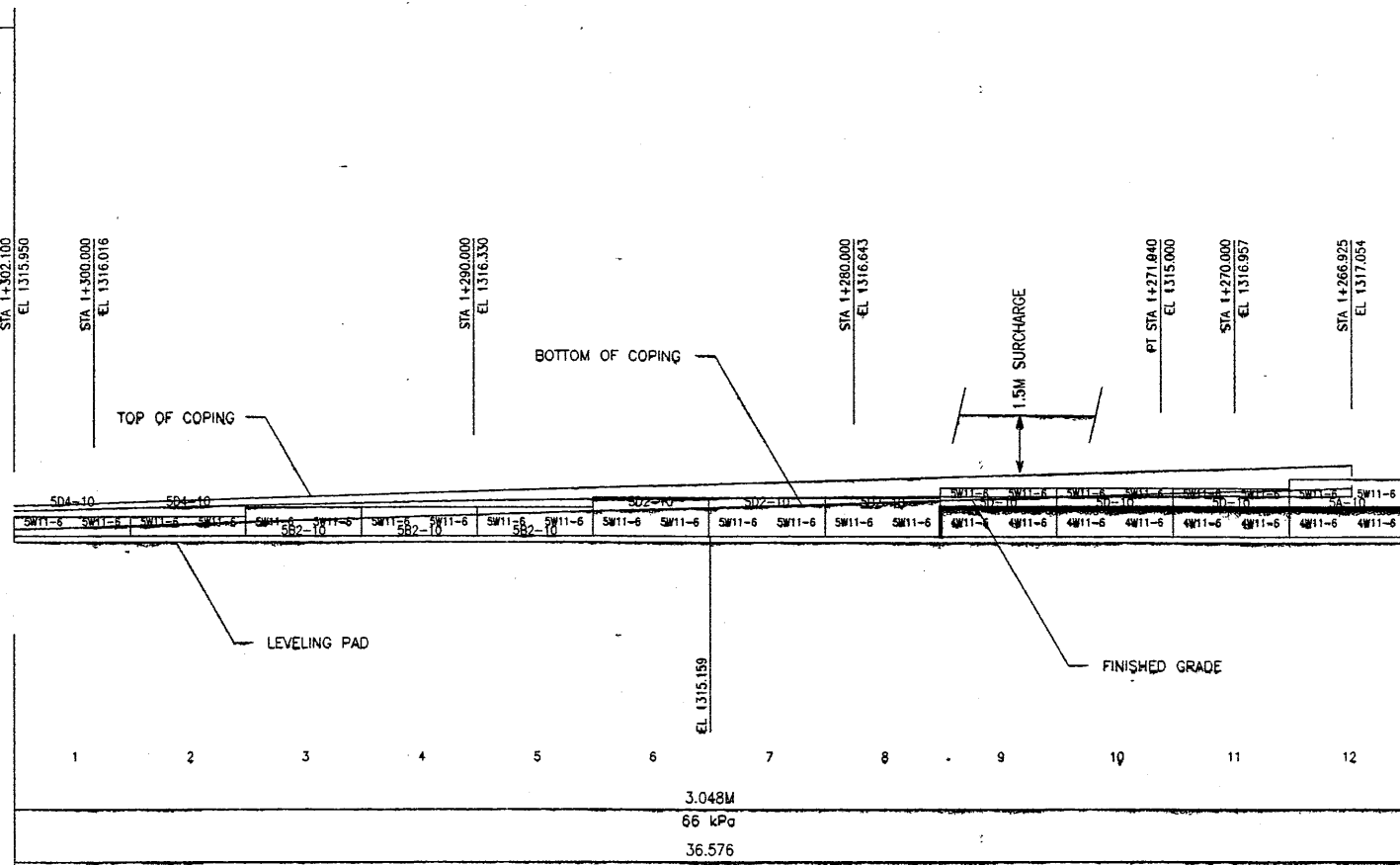
METRIC

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SCALE:	1.2R-344-6.5
JOB NO:	239-0007
	RE-4 5/9

WALL STA 1+302.100 =
 "53-A" STA 1+588.413
 @ 6.261 LT
 NOMINAL PANEL FACE (RWLOL)
 BEGIN PRECAST WALL "R-344-6"

BEGIN WALL R-344-6

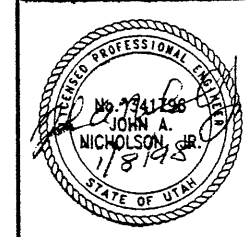


ELEVATION PRECAST WALL "R-344-6"
 (FRONT FACE SHOWN) SCALE 1:100 (FULL SIZE)
 (TOTAL SURFACE AREA OF PANELS = 376 SM) SCALE 1:200 (HALF SIZE)

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

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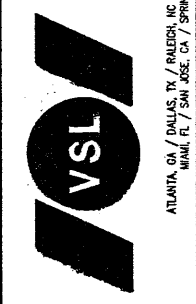
METRIC



APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	01-09-98	RELEASE FOR CONSTRUCTION

DES.	DRN.	CHK.	RETAINED EARTH™	NO.	DATE	BY	CHK
01-09-98	01-09-98	01-09-98	<input checked="" type="checkbox"/>				

VSL CORPORATION
 2840 Pineda Plaza, Suite 200
 Raleigh, NC 27617
 Phone: (919) 781-6272
 Fax: (919) 781-4689



WASATCH CONSTRUCTORS
 JAN 21 1998
 RELEASED FOR CONSTRUCTION

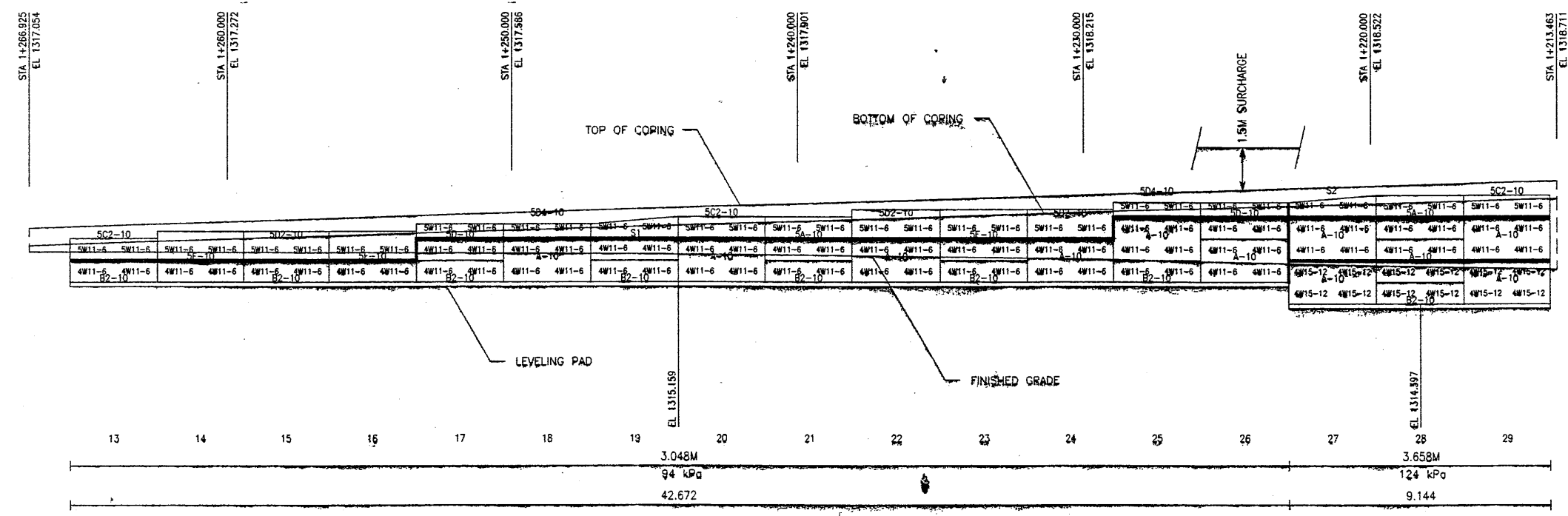
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RETAINED EARTH™ WALLS
 PRECAST WALL "R-344-6"
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

SCALE:	1:3R-344-6.6
JOB NO:	239-0007
	RE-5 ^{GA}

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	01-09-97	RELEASE FOR CONSTRUCTION

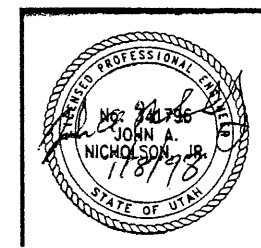
MATCH LINE #1



ELEVATION PRECAST WALL "R-344-6"
 (FRONT FACE SHOWN)
 (TOTAL SURFACE AREA OF PANELS = 376 SM)
 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.

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WARATCH CONSTRUCTORS
 JAN 21 1998
 RELEASED FOR CONSTRUCTION

NO.	DATE	DESCRIPTION	NO.	DATE	BY

DES.	01-09-98	MM
DRN.	01-09-98	LOP
CHK.	01-09-98	MM

RETAINED EARTH™

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

ADAMTA, CA / DANLAS, TX / RANDESH, NC (CORPORATE OFFICE)
 ADAMTA, FL / SAN JOSE, CA / SPRINGFIELD, VA

VSL

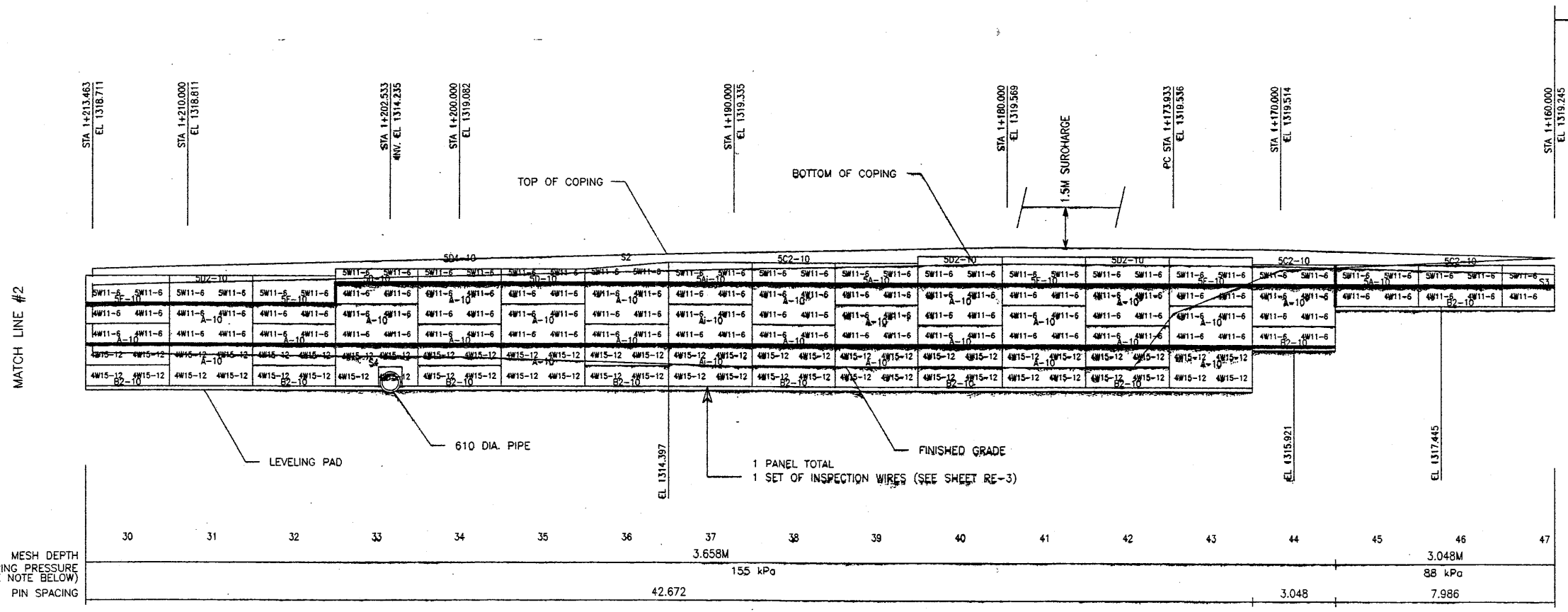
UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

SCALE:
 1.3R-344-6.7
 JOB NO:
 239-0007
 RE-6 7A

H:\RE_EARTH\PROJECT\0007\1998\53SERIES\53-06\53-06
 FINAL PL -09-98

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	01-09-98	RELEASE FOR CONSTRUCTION

DES.	DRN.	CHK.	NO.	DATE	REVISION	BY



ELEVATION PRECAST WALL "R-344-6"
 (FRONT FACE SHOWN) SCALE 1:100 (FULL SIZE)
 (TOTAL SURFACE AREA OF PANELS = 376 SM) SCALE 1:200 (HALF SIZE)

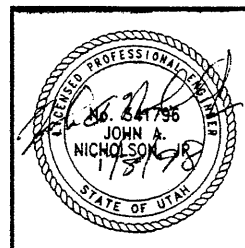
WALL STA 1+160.000 =
 "53-A" STA 1+446.035
 @ 6.585 LT
 NOMINAL PANEL FACE (RWLOL)
 END PRECAST WALL "R-344-6"

END WALL R-344-6

WASATCH CONSTRUCTORS
 JAN 21 1998
 RELEASED FOR CONSTRUCTION

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.

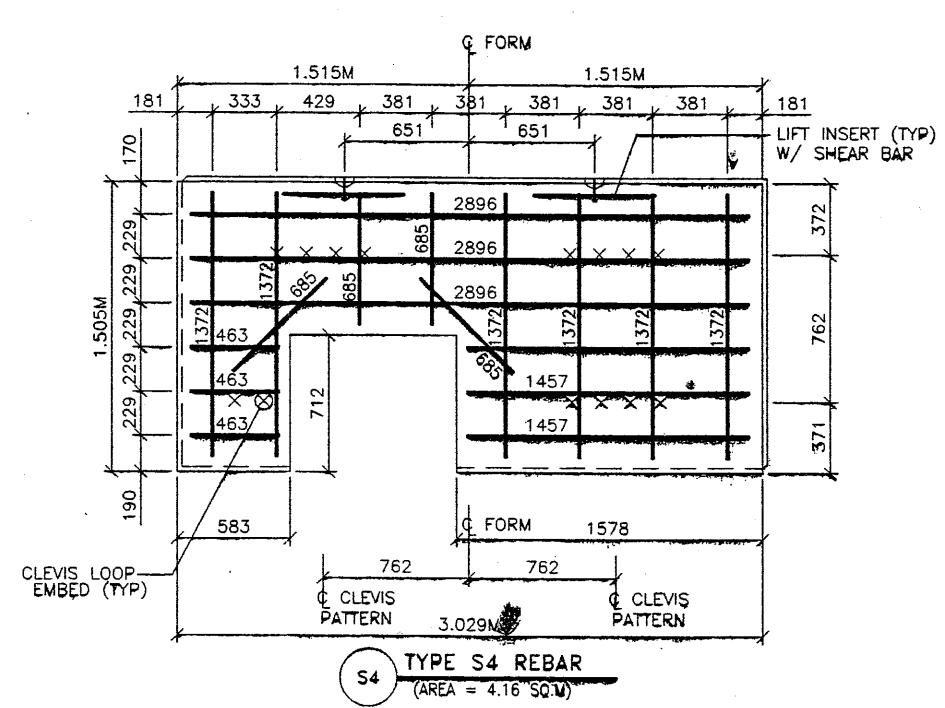
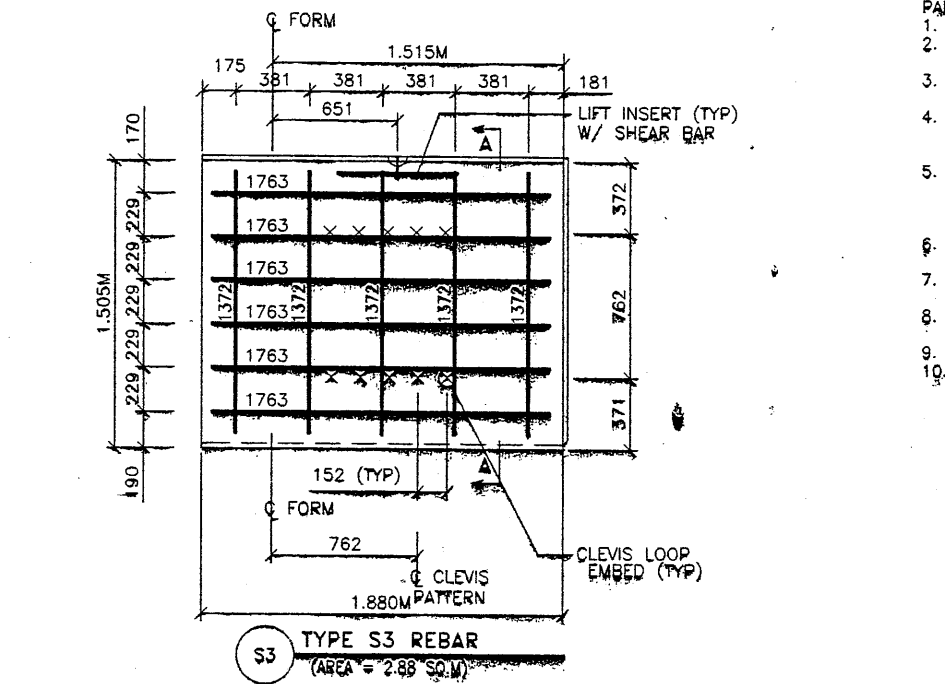
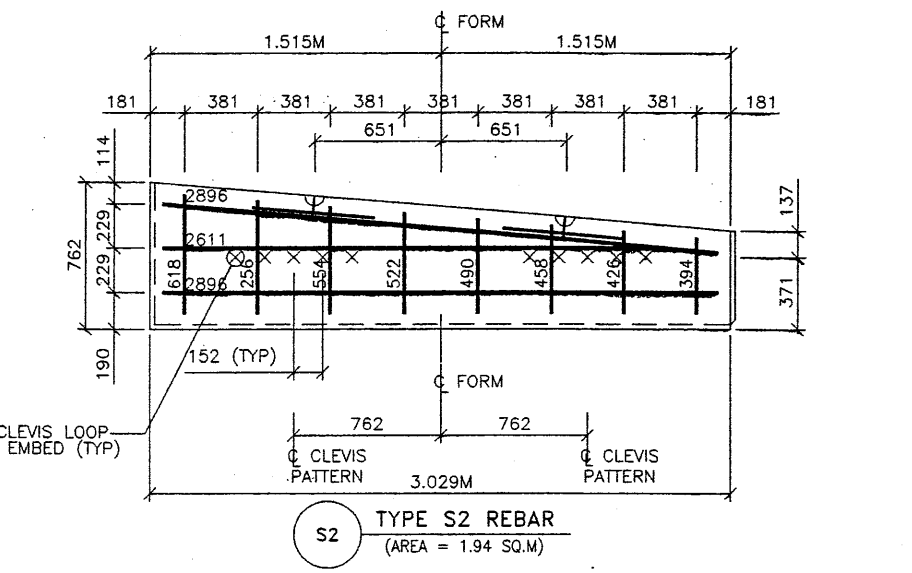
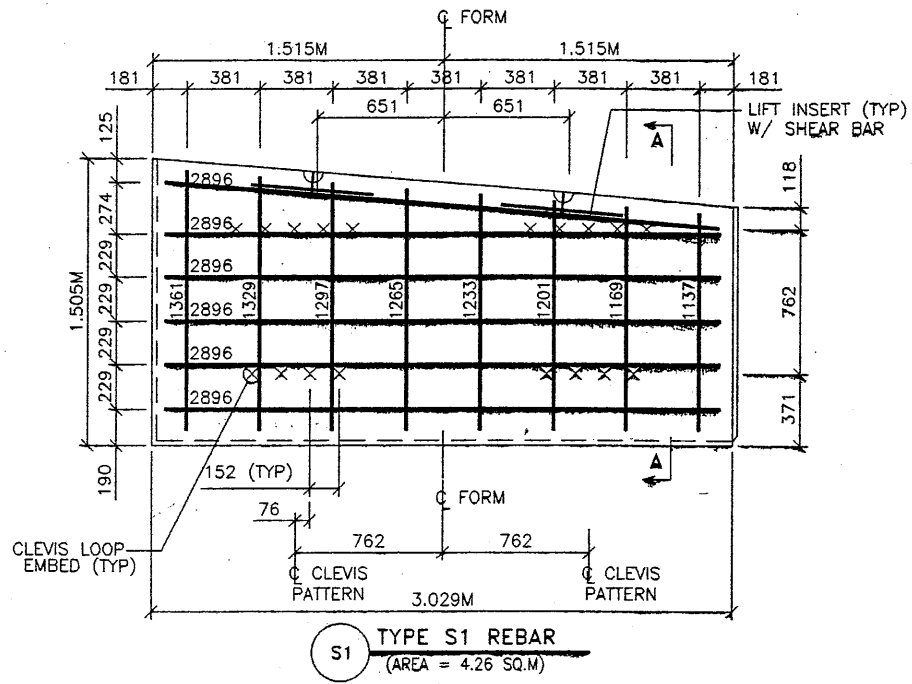


RETAINED EARTH™ WALLS
PRECAST WALL "R-344-6"
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

SCALE: 1.3R-344-6.8
 JOB NO: 239-0007
 RE-7 8/9

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

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

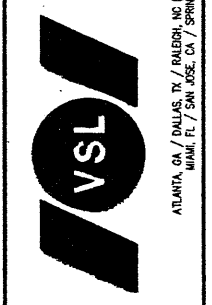


- PANEL REINFORCEMENT NOTES:**
1. PANELS ARE SHOWN BACK FACE.
 2. HORIZONTAL REINFORCEMENT SHALL HAVE 50 mm MINIMUM COVER TO THE BACK FACE.
 3. ALL REINFORCEMENT SHALL HAVE 50 mm MINIMUM COVER TO THE SIDES.
 4. ALL REINFORCING BARS ARE #13 METRIC. LABELS ON EACH BAR INDICATE LENGTH. EXAMPLE: 1345 IS 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 9.5mmØ CLEVIS LOOPS.
 10. VSL RETAINED EARTH™ IS PROTECTED UNDER PATENT 4,725,170.

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	01-09-98	RELEASE FOR CONSTRUCTION

DES.	DRN.	CHK.	RETAINED EARTH™	NO.	DATE	REVISION	BY	CHK
JN	LDP	JN	VSL					

VSL CORPORATION
2840 Plaza Place, Suite 200
Raleigh, NC 27617
Telephone: (919) 761-6772
Fax: (919) 761-4969

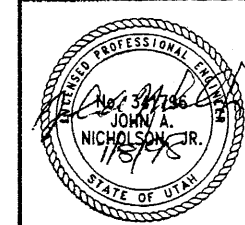


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WARATCH CONSTRUCTORS
JAN 21 1998
RELEASED FOR CONSTRUCTION

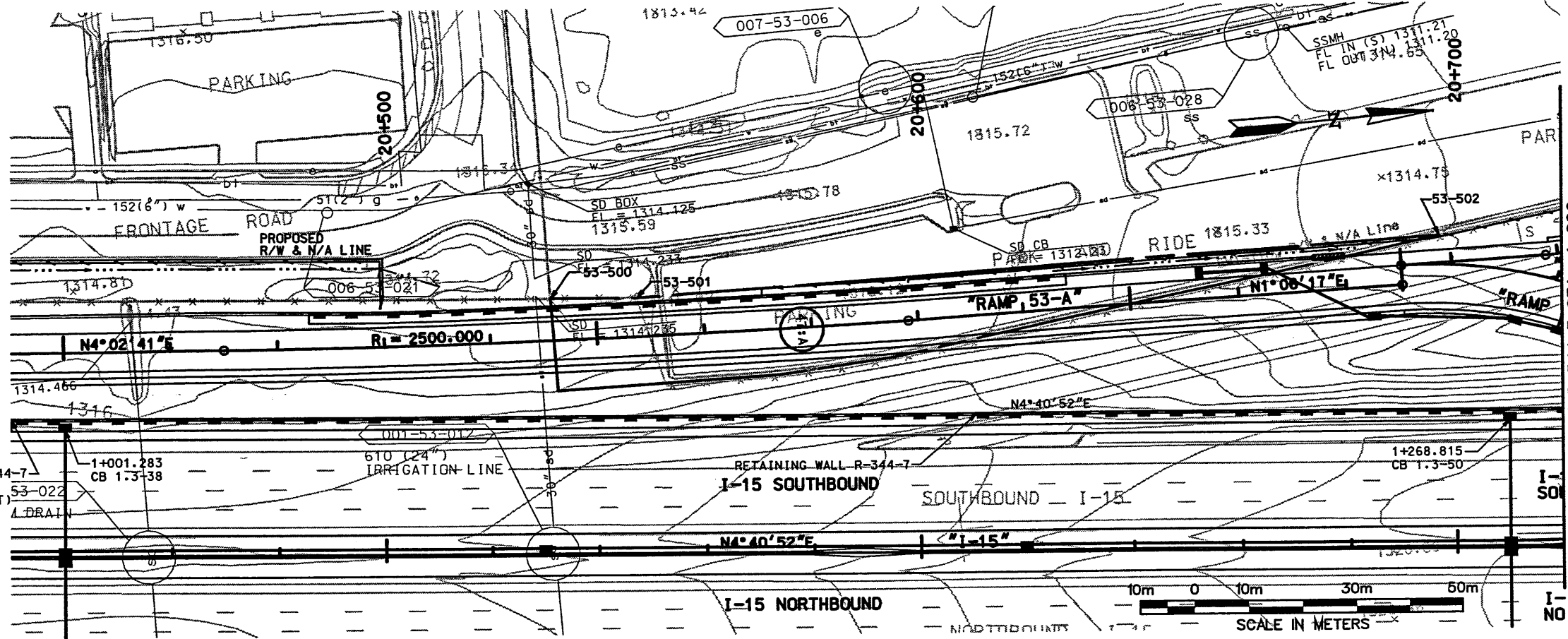
RETAINED EARTH™ WALLS
PRECAST WALL "R-344-6"
SPECIAL PANEL REINFORCEMENT
UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

METRIC



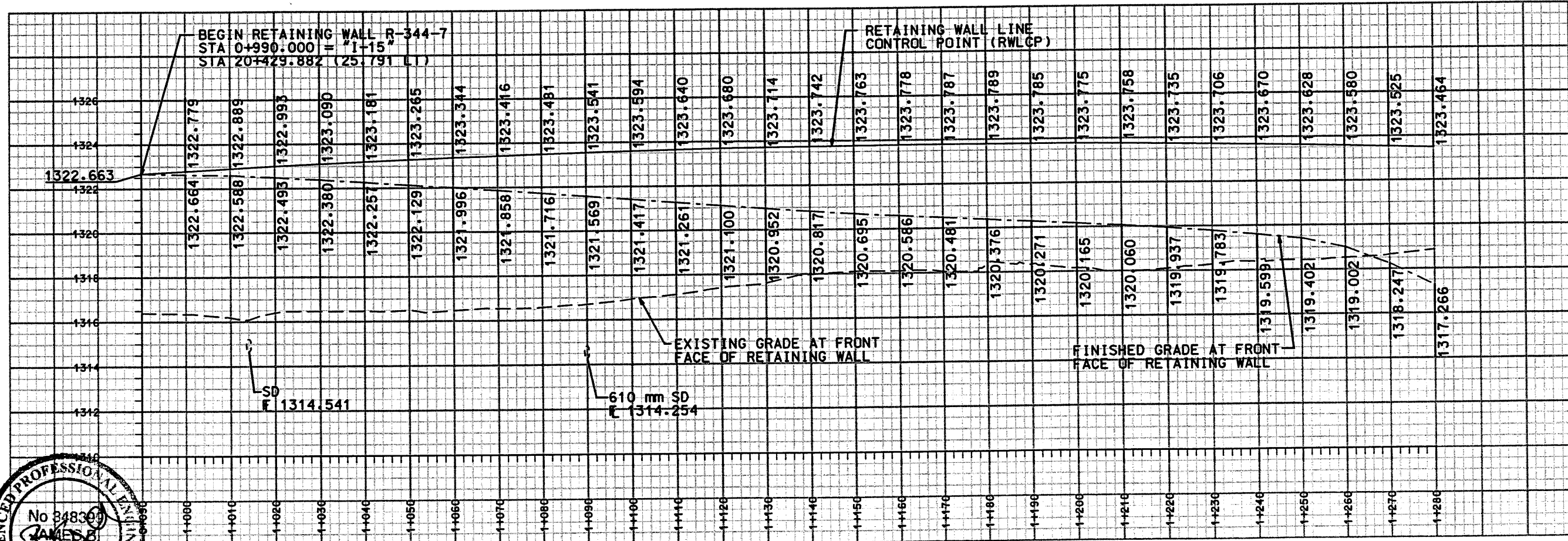
CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY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

SCALE:	1.3R-344-6.9
JOB NO.:	239-0007
	RE-89A

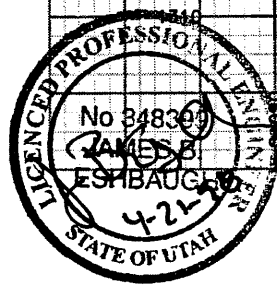


WASATCH CONSTRUCTORS
 APR 23 1998
 RELEASED FOR CONSTRUCTION

BEGIN RETAINING WALL R-344-7
 STA 0+990.000 = "I-15"
 STA 20+429.882 (25.791 LT)



ELEVATION VIEW FROM BACK FACE OF WALL



UTAH DEPARTMENT OF TRANSPORTATION
 URS Greiner
 SVERRUP/DE LEUW

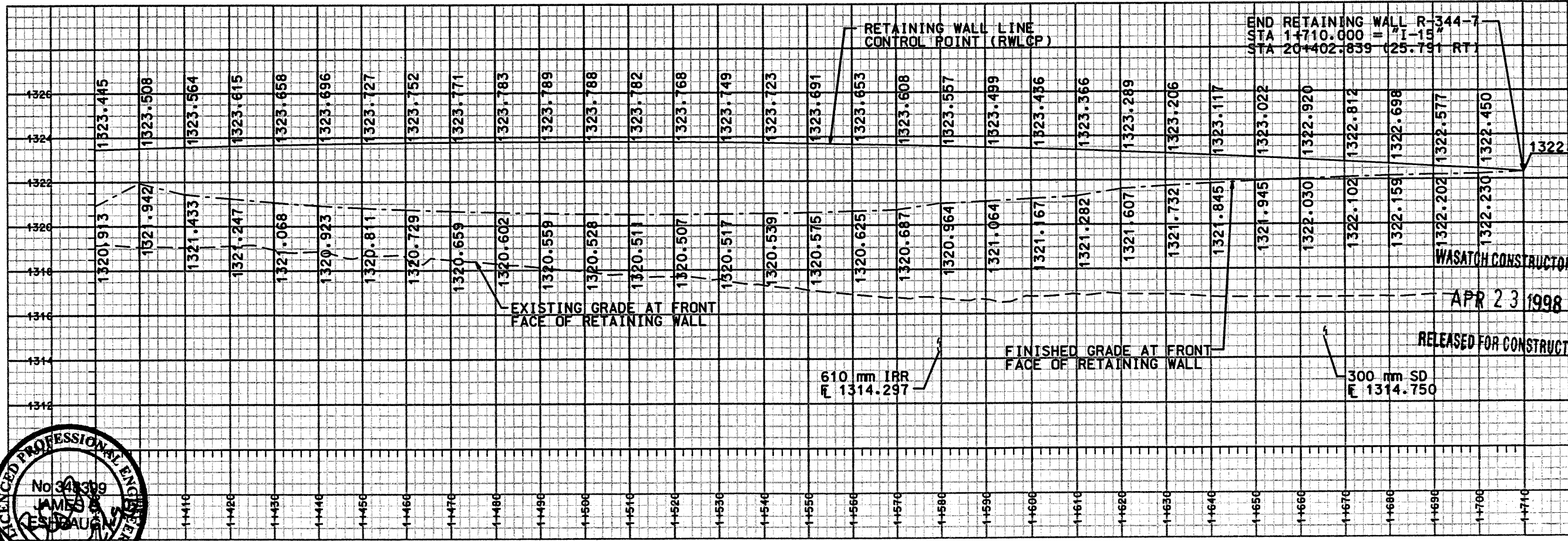
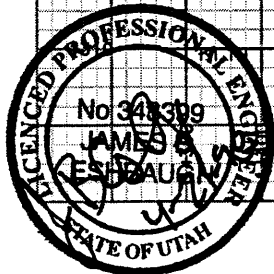
I-15 CORRIDOR RECONSTRUCTION
 SITUATION/LAYOUT
 RETAINING WALL R-344-7
 SECTION 1-3
 PROJECT NUMBER #SP-15-7(135)296

SALT LAKE COUNTY
 DWG. NO. 1.3R-344-7.1
 SHT. 1 OF 2

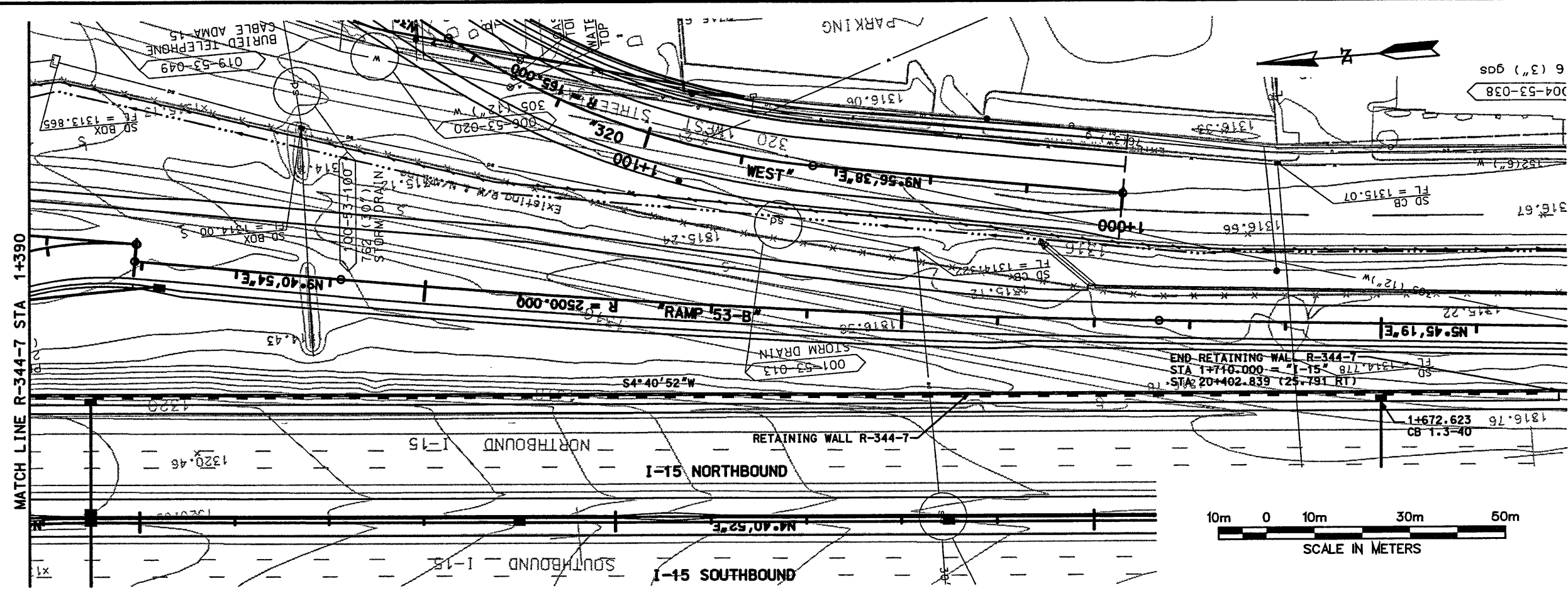
NO.	DATE	DESCRIPTION	APPROVED FOR CONSTRUCTION
1	4-21-98	INITIAL RELEASE	
2			
3			

CHECK JUNE 1/98
 DESIGN JIM ESHBAUGH
 DRAWN PROJECT DESIGN ENGINEER
 APPROVED DATE DON ORVAL PROJECT MANAGER

1313402



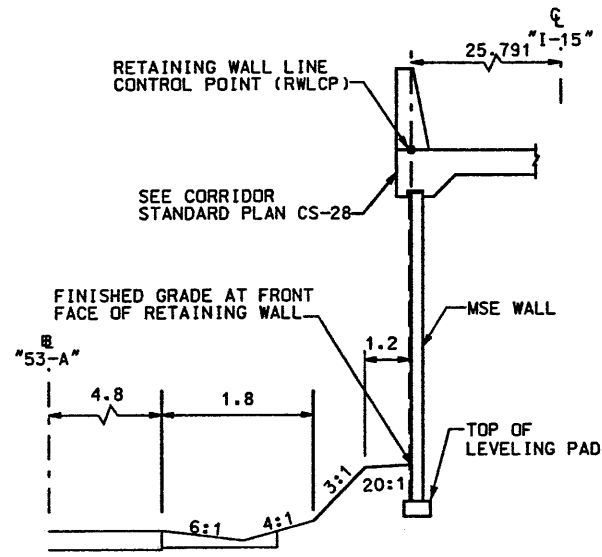
ELEVATION VIEW FROM BACK FACE OF WALL



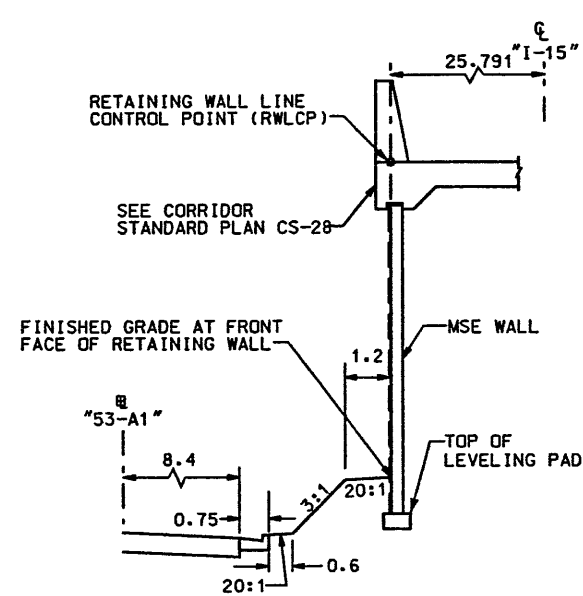
APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	INITIAL	RELEASE
1	4-21-97		
UTAH DEPARTMENT OF TRANSPORTATION		DESIGNER: UPS Greiner	
SVERDRUP/DE LEUW		DRAWN: JIM ENBAUGH	
PROJECT ENGINEER		DATE: 1/98	
PROJECT MANAGER		DATE: 1/98	
QUANT.		1313402	
I-15 CORRIDOR RECONSTRUCTION		SITUATION/LAYOUT	
RETAINING WALL R-344-7		SECTION 1.3	
PROJECT NUMBER		#SP-15-(7135)296	
SALT LAKE COUNTY		DWG. NO. 1.3R-344-7.3	
SHT. 3	OF 24		
REF.			

Username: stottrj

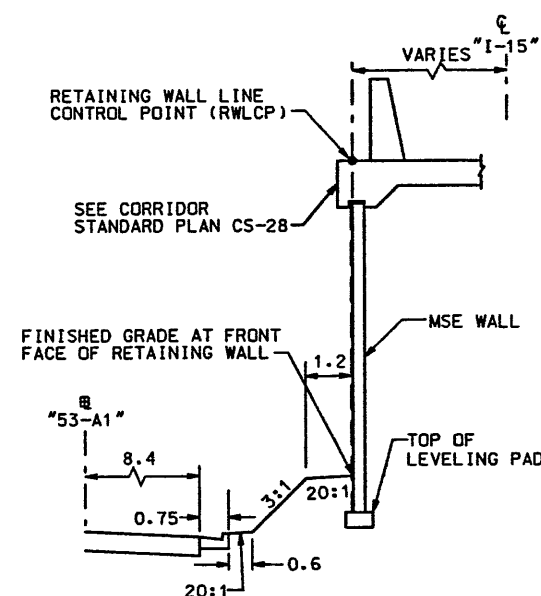
Date: 21-APR-1998 Times 16:54



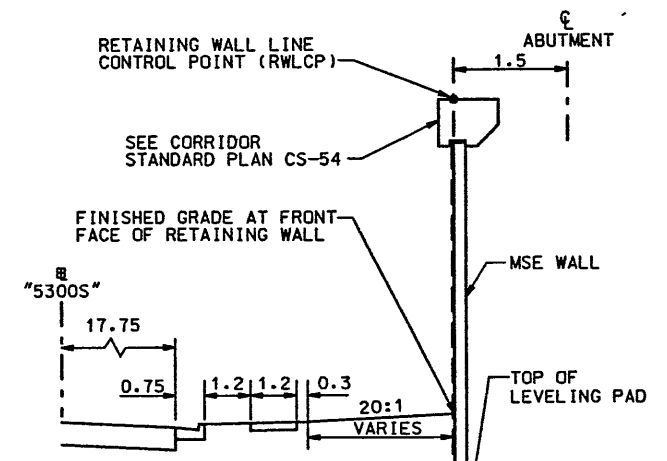
TYPICAL SECTION
WALL R-344-7
STA 0+990.000 TO STA 1+250.444



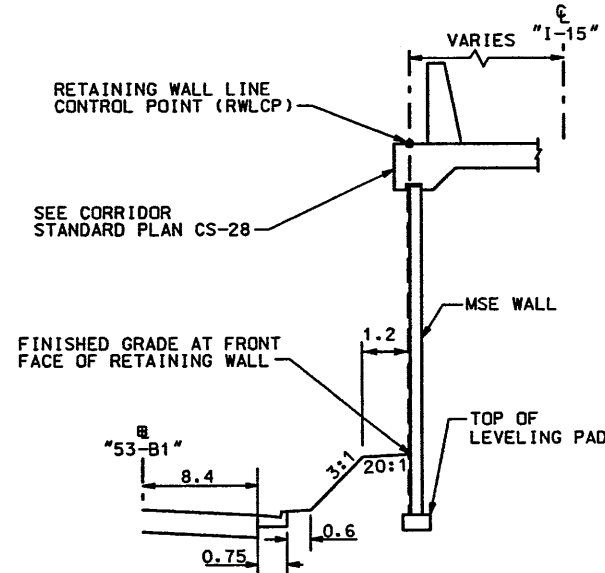
TYPICAL SECTION
WALL R-344-7
STA 1+250.444 TO STA 1+289.250



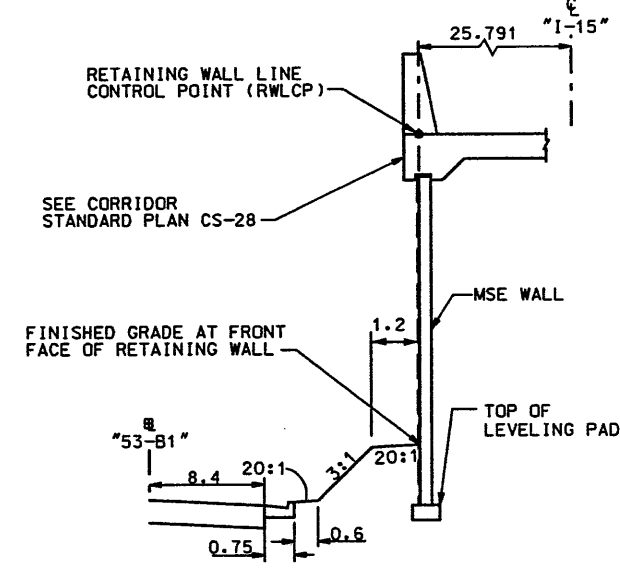
TYPICAL SECTION
WALL R-344-7
STA 1+289.250 TO STA 1+304.050



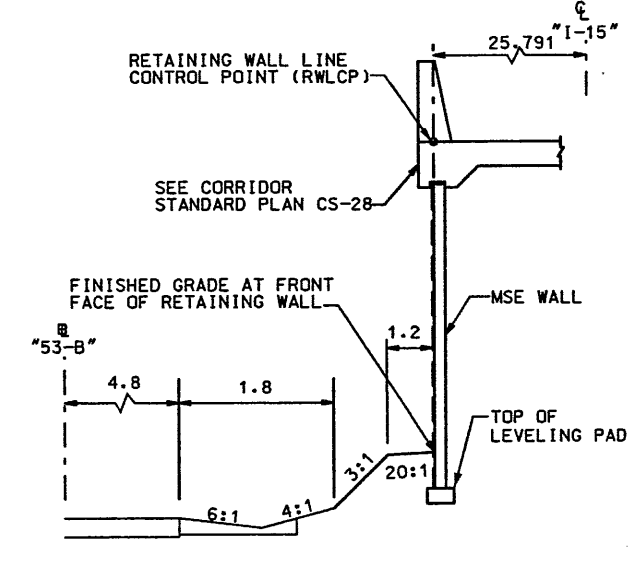
TYPICAL SECTION
WALL R-344-7
STA 1+304.050 TO STA 1+357.595



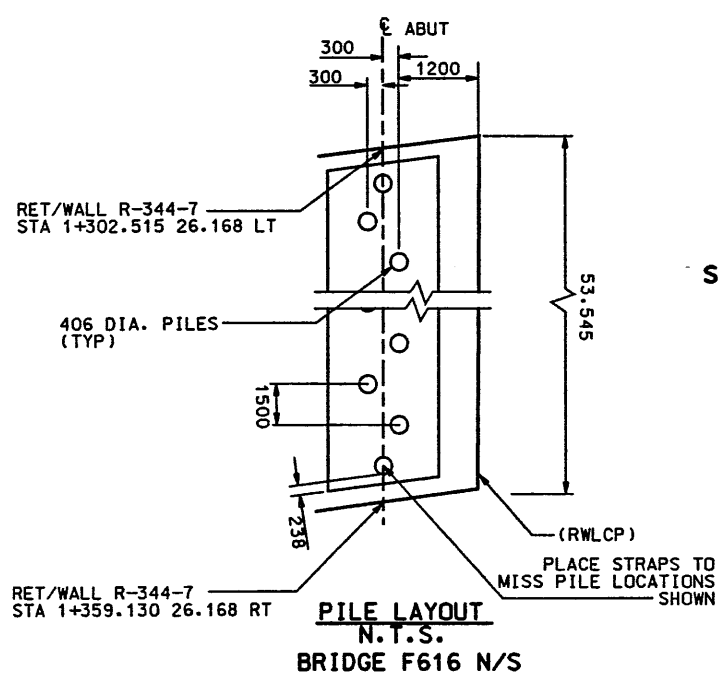
TYPICAL SECTION
WALL R-344-7
STA 1+357.595 TO STA 1+372.395



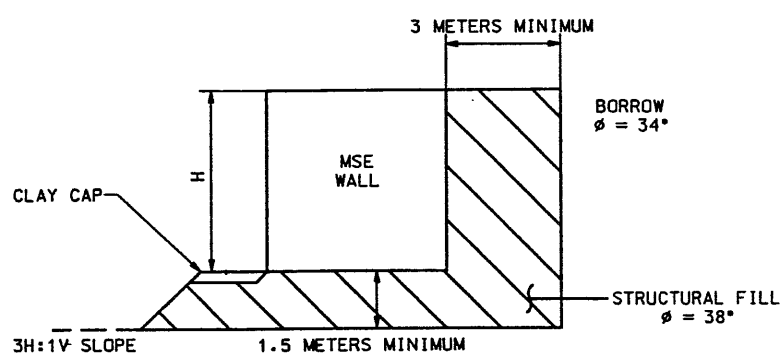
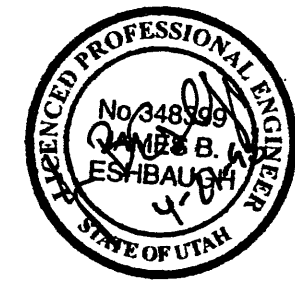
TYPICAL SECTION
WALL R-344-7
STA 1+372.395 TO STA 1+411.420



TYPICAL SECTION
WALL R-344-7
STA 1+411.420 TO STA 1+710.000



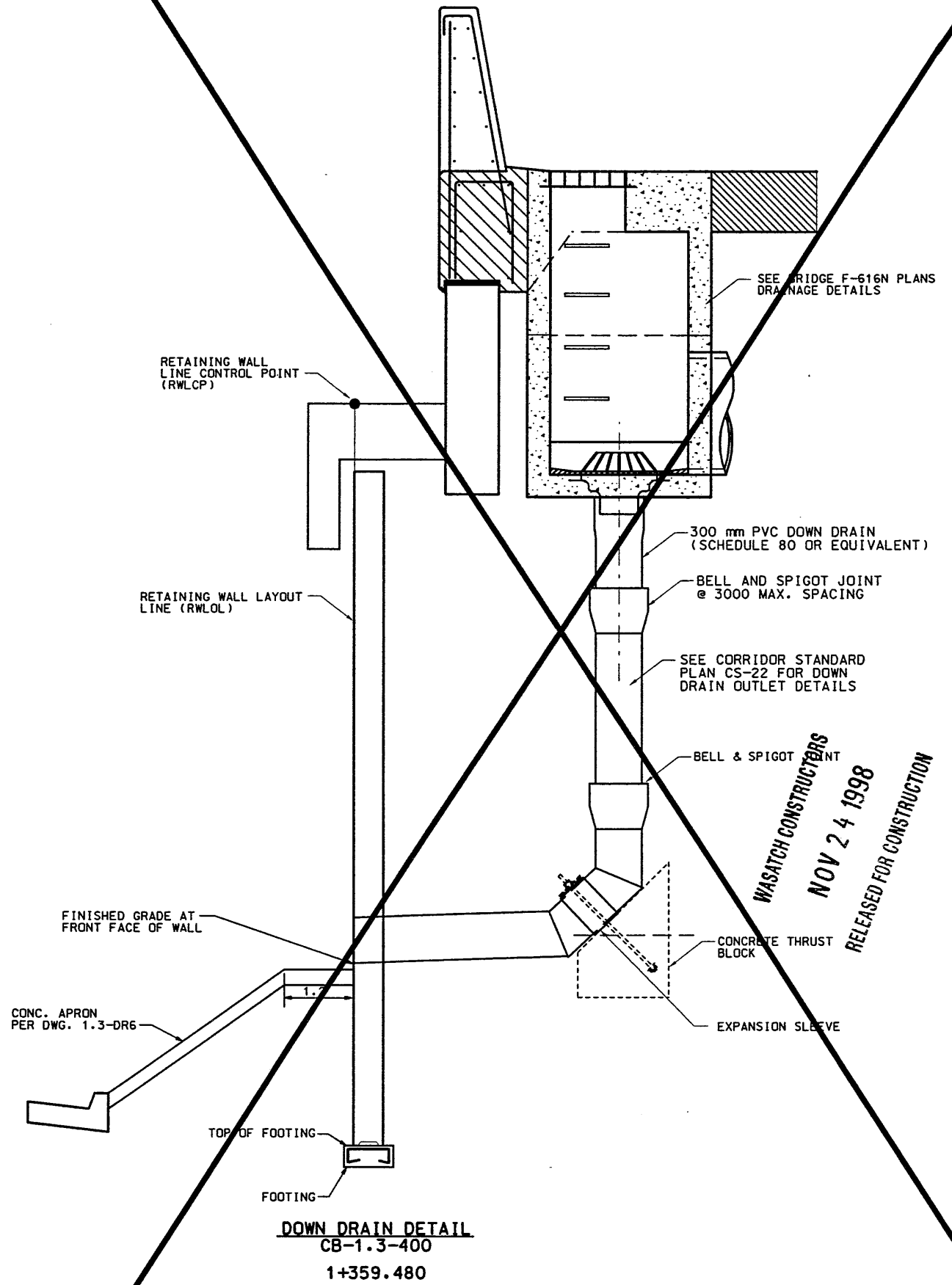
PILE LAYOUT
N.T.S.
BRIDGE F616 N/S



OVER EXCAVATION DETAIL

WASATCH CONSTRUCTORS
APR 23 1998
RELEASED FOR CONSTRUCTION

APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	INITIAL	RELEASE
A	4-21-98		
UTAH DEPARTMENT OF TRANSPORTATION			
URS Greiner			
SVERDRUP/DE LEUW			
DESIGN	CHK	DATE	QUANT.
1/98	1/98	1/98	1/98
JIM ESHBAUGH	PROJECT DESIGN ENGINEER	DON ORAM	PROJECT MANAGER
1/98	1/98	1/98	1/98
APPROVAL	DATE	APPROVED	DATE
RECORD			
1-15 CORRIDOR RECONSTRUCTION		PROJECT NUMBER	
DETAIL SHEET		#SP-15-7(135)296	
RETAINING WALL R-344-7			
SECTION 1.3			
SALT LAKE COUNTY			
DWG. NO.			
1.3R-344-7.4			
SHT.	4	OF	23
REF.			



DOWN DRAIN DETAIL
 CB-1.3-400
 1+359.480

WASATCH CONSTRUCTORS
NOV 24 1998
 RELEASED FOR CONSTRUCTION

1-15 CORRIDOR RECONSTRUCTION		UTAH DEPARTMENT OF TRANSPORTATION		APPROVED FOR CONSTRUCTION	
MISC DETAILS RET/WALL R-344-7		SECTION 1.3		NO. DATE	
SALT LAKE COUNTY		PROJECT NUMBER #SP-15-7(135)296		4-21-98	
DWG. NO. 1.3R-344-7.5		SVERDRUP/DE LEUW		11-13-98	
SHT. 5 OF 5		DESIGN PV 2/98		INITIAL RELEASE	
		DRAWN PV 2/98		MOC-0181 / SHEET DELETED	
		QUANT.		1314000	
		DATE 2/98		CHECK JBE 2/98	
		DATE 2/98		CHECK JBE 2/98	
		DATE		CHECK	
		PROJECT DESIGN ENGINEER		SECTION MANAGER	
		JIM ESHAUGH		DON ORRILL	
		DATE		DATE	

ICE (X-UTAH.DWG)

H:\RE_EARTH\PROJECT\239-0007\53SERIES\53-07\RE-1

FINAL PLOT 03-13-98

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	4-06-97	RELEASE FOR CONSTRUCTION

RETAINED EARTH INDEX	
RE-1	PLAN PRECAST WALL R-344-7, NOTES & DESIGN CRITERIA
RE-2	TYPICAL CROSS SECTION
RE-3	TYPICAL CROSS SECTION
RE-4	TYPICAL CROSS SECTION
RE-5	TYPICAL CROSS SECTION
RE-6	PRECAST WALL R-344-7
RE-7	PRECAST WALL R-344-7
RE-8	PRECAST WALL R-344-7
RE-9	PRECAST WALL R-344-7
RE-10	PRECAST WALL R-344-7
RE-11	PRECAST WALL R-344-7
RE-12	PRECAST WALL R-344-7
RE-13	PRECAST WALL R-344-7
RE-14	PRECAST WALL R-344-7
RE-15	PRECAST WALL R-344-7
RE-16	SPECIAL DETAILS
RE-17	SPECIAL DETAILS
RE-18	SPECIAL DETAILS

WASATCH CONSTRUCTORS
 APR 23 1998
 RELEASED FOR CONSTRUCTION

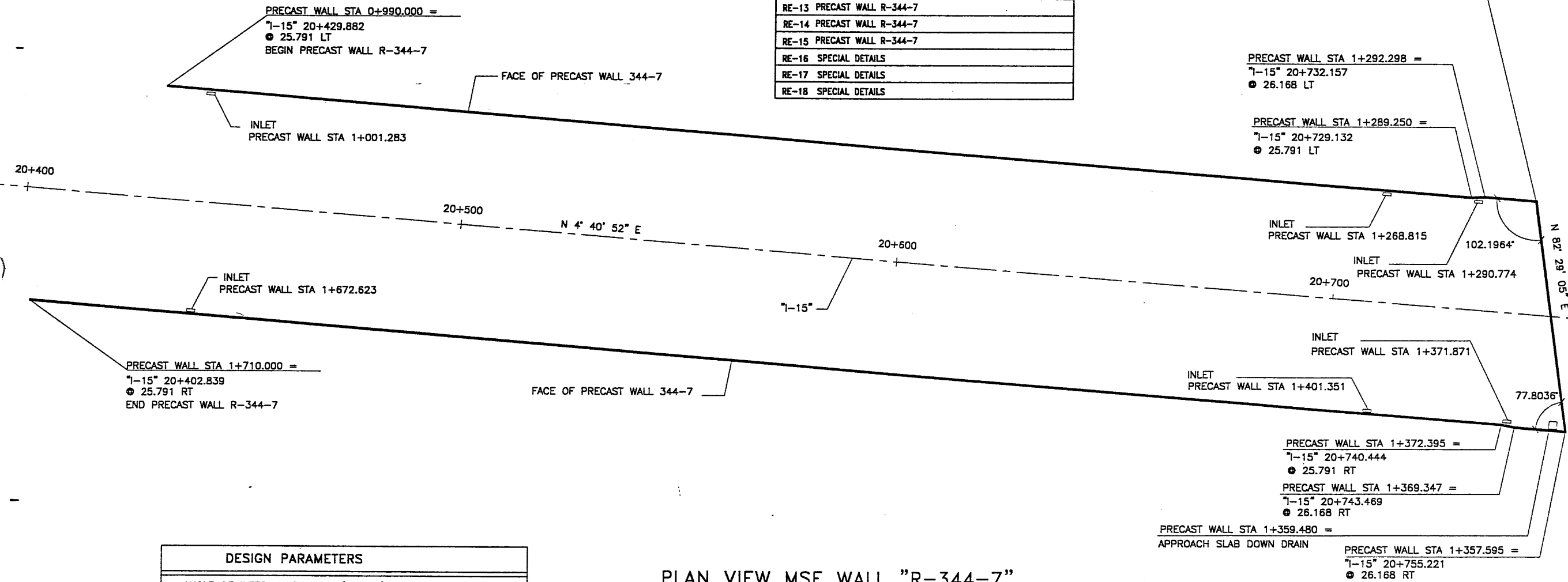
NO.	DATE	DESCRIPTION	BY
1	03-13-98	MM	
2	03-13-98	RSW	
3	03-13-98	MM	

DES.	DRN	CHK	RETAINED EARTH™

VSL CORPORATION	
2840 Plaza Pkwy, Suite 200	Atlanta, GA / DANLUS, TN / RALEIGH, NC (CORPORATE OFFICE)
Raleigh, NC 27617	MINN. IT, SAN JOSE, CA / SPRINGFIELD, VA
Telephone: (919) 781-8272	
Fax: (919) 781-4889	

RETAINED EARTH™ WALLS	
PLAN VIEW MSE WALL "R-344-7"	
UTAH I-15 INTERCHANGE	
SALT LAKE COUNTY, UTAH	
UTAH DEPARTMENT OF TRANSP.	

DWG. NO.	1.3R-344-7.6
JOB NO.	239-0007
SHT. NO.	RE-1 7/24

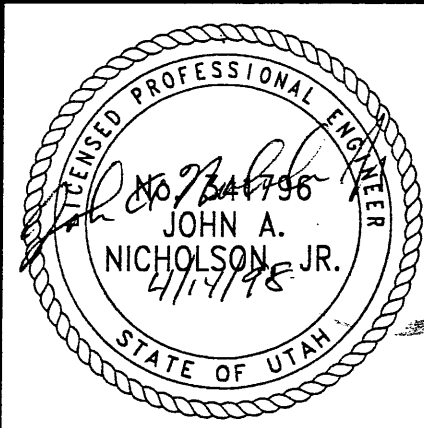


DESIGN PARAMETERS
ANGLE OF INTERNAL FRICTION (SELECT) = 34°
ANGLE OF INTERNAL FRICTION (BASE) = 38°
ANGLE OF INTERNAL FRICTION (RANDOM) = 38°
UNIT WEIGHT BACKFILL = 135 PCF. (21.2 KN/M ³)
TRAFFIC SURCHARGE = 250 PSF (12 KPa)
SEISMIC ACCELERATION COFF. = 0.27g (TYP)
SEISMIC ACCELERATION COFF. = 0.65g (AT BRIDGE ABUTMENTS)

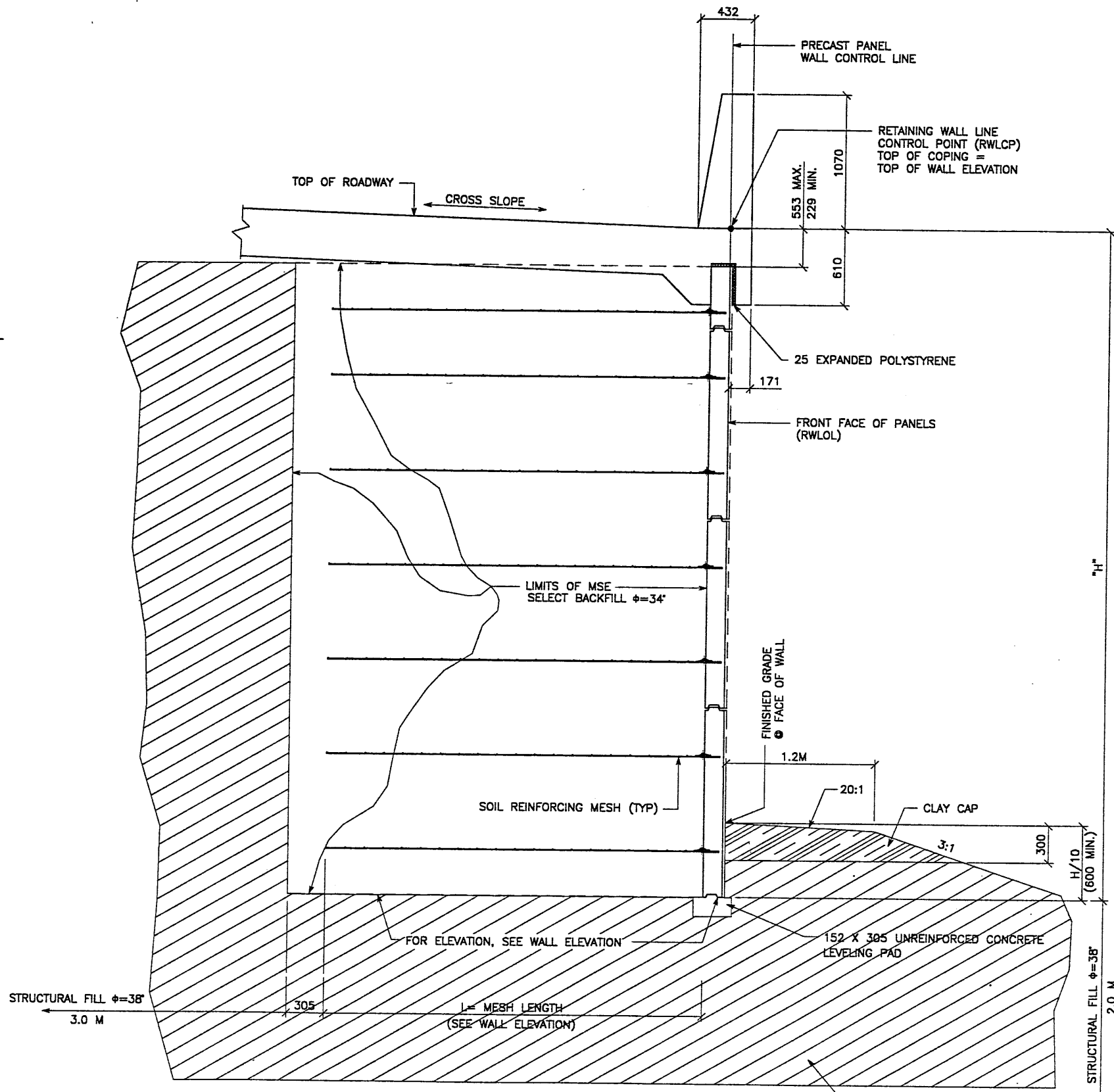
DESIGN CRITERIA
SAFETY FACTOR (OVERTURNING) = 2.0
SAFETY FACTOR (SLIDING) = 1.5
SAFETY FACTOR (PULLOUT) = 1.5
DESIGN LIFE = 75 YEARS

PLAN VIEW MSE WALL "R-344-7"
 SCALE: 1=500 (FULL SIZE)
 SCALE: 1=1000 (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.



TYPICAL CROSS SECTION
 STA 0+990.000 TO 1+289.250
 STA 1+372.395 TO 1+710.000
 (SEE DWG. NO. 1.3R-344-7.4 FOR ADDITIONAL INFORMATION)
 SCALE: 1:20 (FULL SIZE)
 SCALE: 1:40 (HALF SIZE)

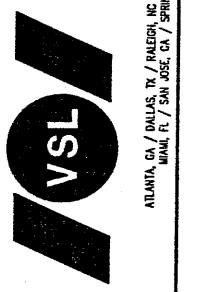
CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY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

METRIC

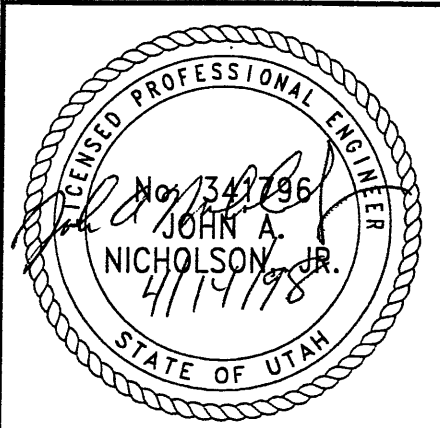
APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	4-06-97	RELEASE FOR CONSTRUCTION

DES.	DRN.	CHK.	NO.	DATE	REVISION	BY
03-13-98	03-13-98	03-13-98				
MM	RSW	MM				

VSL CORPORATION
 2500 Plaza Plaza, Suite 200
 Raleigh, NC 27617-7814-6772
 Fax: (919) 781-4869



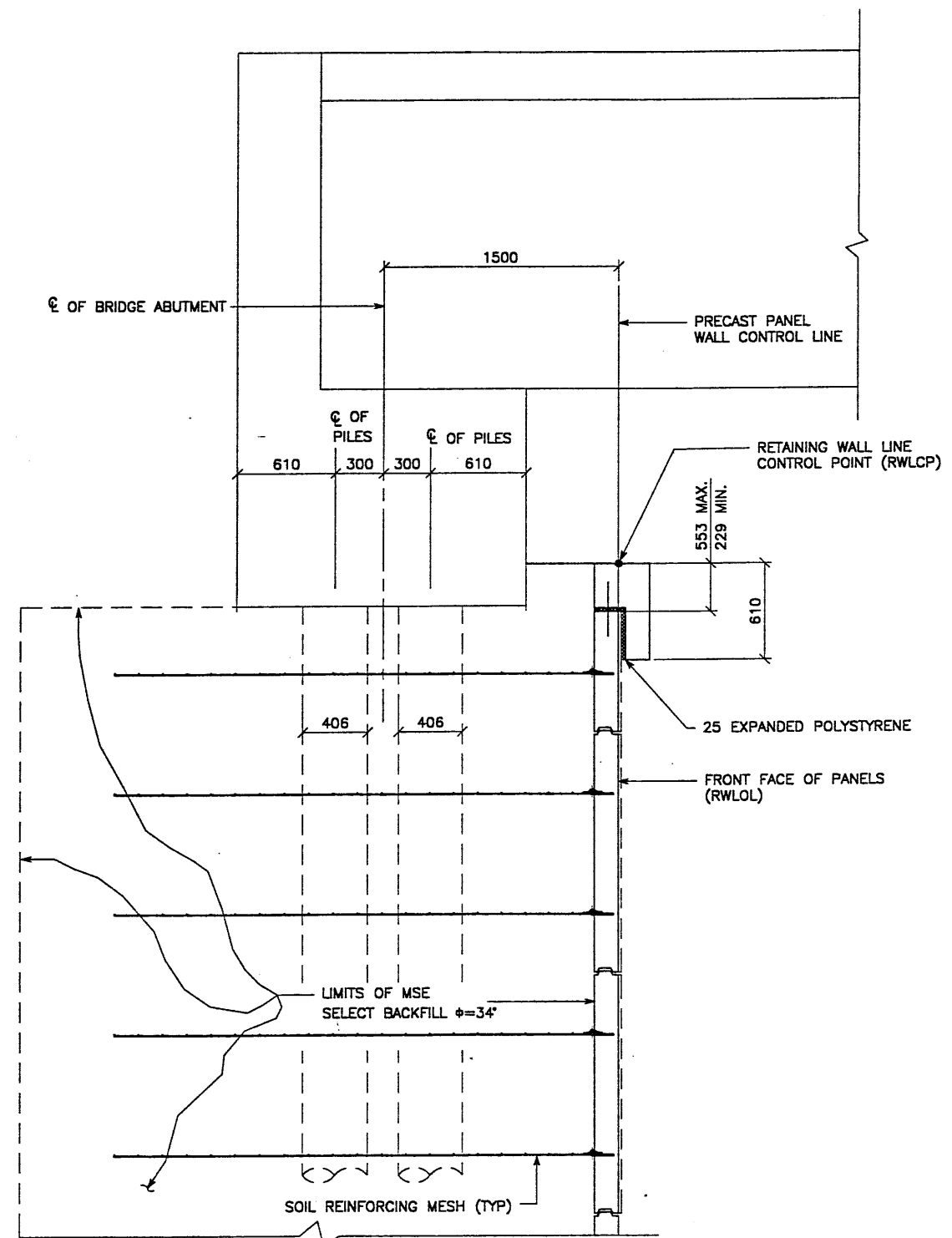
WASATCH CONSTRUCTORS
 APR 23 1998
 RELEASED FOR CONSTRUCTION



RETAINED EARTH™ WALLS
 PRECAST WALL "R-344-7"
 TYPICAL CROSS SECTION
 UTAH I-15 RECONSTRUCTION
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO.	1.3R-344-7.7
JOB NO.	239-0007
SHT. NO.	RE-2 3/24

H:\RE_EARTH\PROJECT\239-0007\53SERIES\53-07\RE-4
 FINAL PLOT 03-13-98



TYPICAL CROSS SECTION - STA 1+304.050 TO 1+357.595
 (SEE DWG. NO. 1.3R-344-7.4 FOR ADDITIONAL INFORMATION)
 SCALE: 1:20 (FULL SIZE)
 SCALE: 1:40 (HALF SIZE)

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲	4-06-97	RELEASE FOR CONSTRUCTION

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

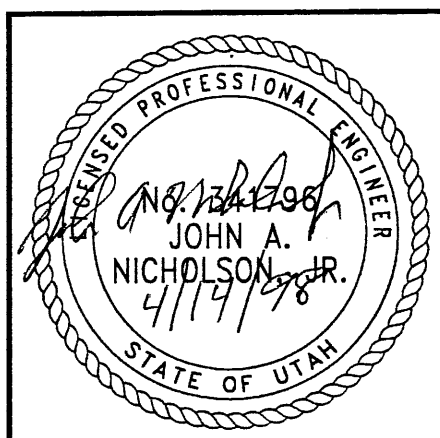
VSL CORPORATION
 2840 Peach Road, Suite 200
 Raleigh, NC 27603
 Telephone: (919) 781-8272
 Fax: (919) 781-4688

VSL

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

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WASATCH CONSTRUCTORS
APR 23 1998
RELEASED FOR CONSTRUCTION



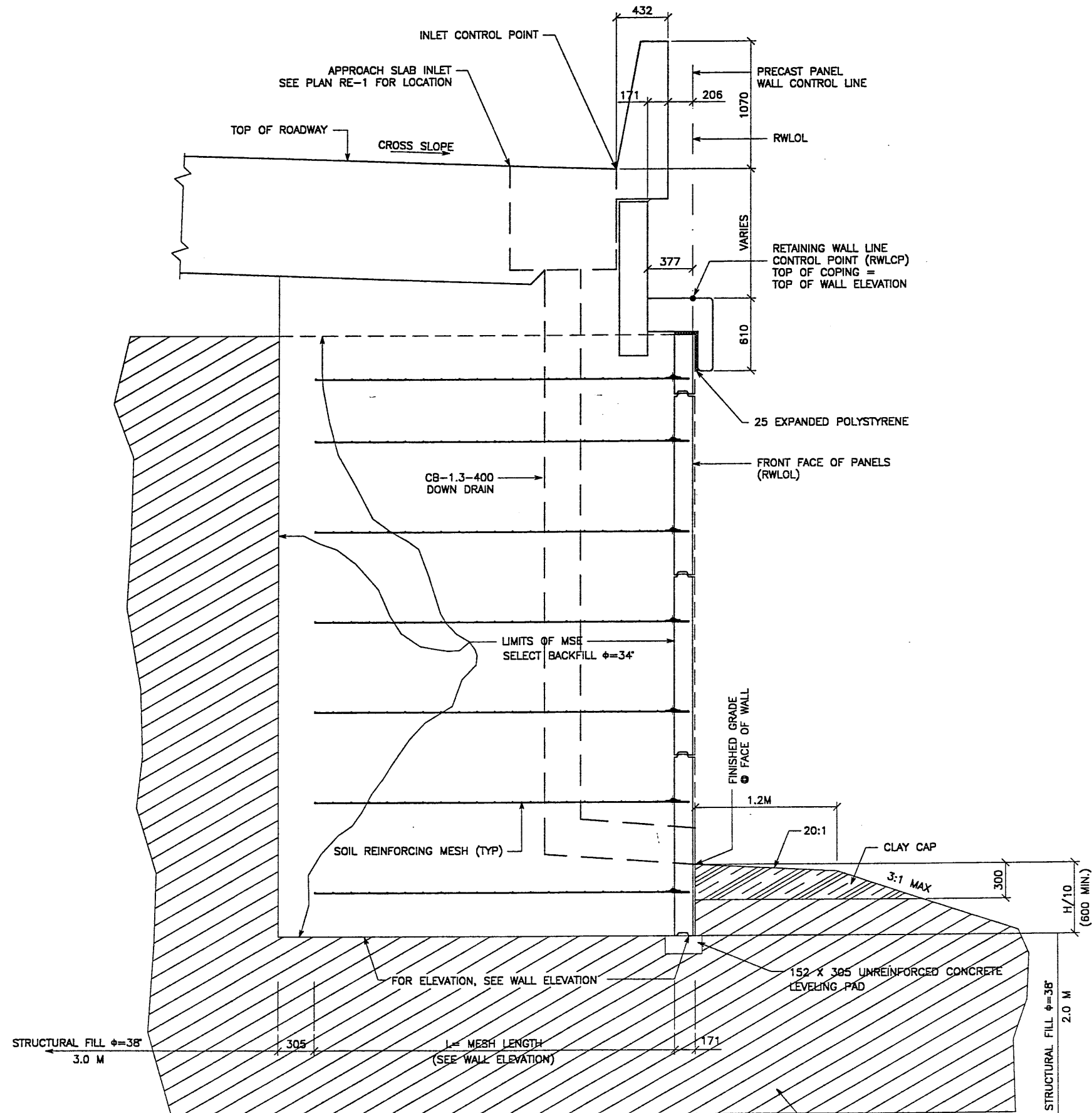
RETAINED EARTH™ WALLS
PRECAST WALL "R-344-7"
TYPICAL CROSS SECTION

UTAH 1-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

DWG. NO.	1.3R-344-7.9
JOB NO.	239-0007
SHT. NO.	RE-4 (C) 2/4

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.



TYPICAL CROSS SECTION AT DOWN DRAIN
 STA 1+359.480
 (SEE DWG. NO. 1.3R-344-7.4 FOR ADDITIONAL INFORMATION)
 SCALE: 1:20 (FULL SIZE)
 SCALE: 1:40 (HALF SIZE)

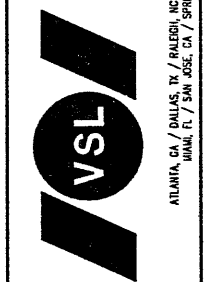
CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY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

METRIC

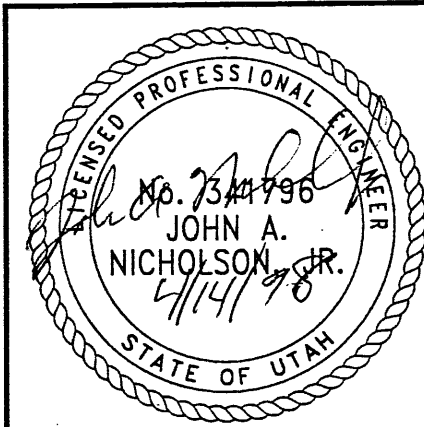
APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	4-06-97	RELEASE FOR CONSTRUCTION <i>SW</i>

DES.	MM	RSW	MM	RETAINED EARTH™
03-13-98	MM	RSW	MM	VSL
DRN. 03-13-98				
CHK. 03-13-98				

VSL CORPORATION
 2840 Plaza Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-9272
 Fax: (919) 781-4889



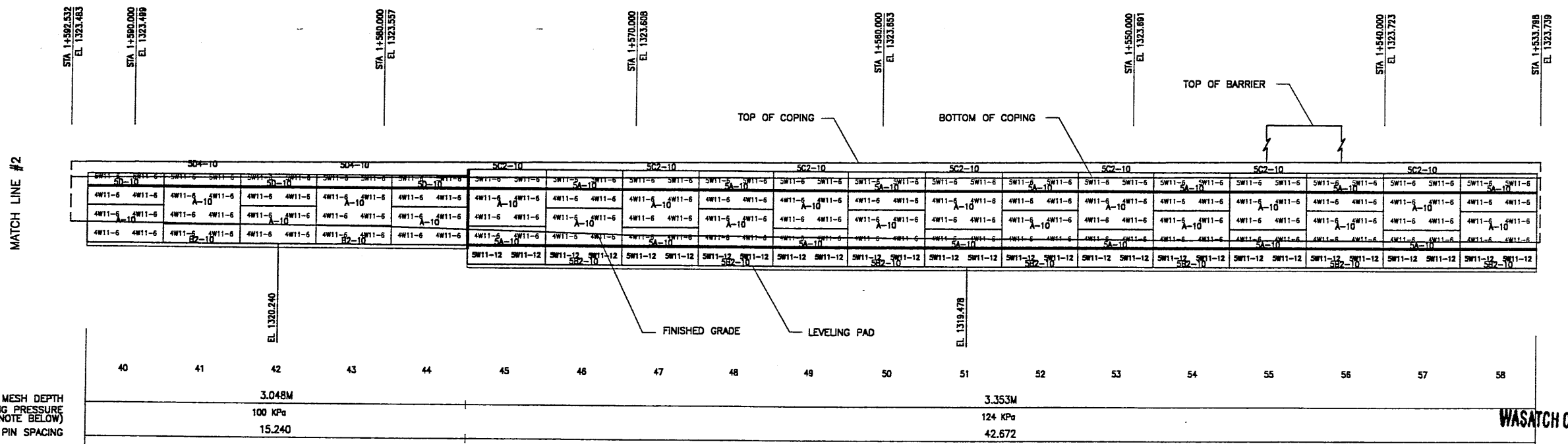
WASATCH CONSTRUCTORS
 APR 23 1998
 RELEASED FOR CONSTRUCTION



RETAINED EARTH™ WALLS
 PRECAST WALL "R-344-7"
 TYPICAL CROSS SECTION
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO.
 1.3R-344-7.10
 JOB NO.
 239-0007
 SHT. NO.
 RE-5 1/24

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	4-06-97	RELEASE FOR CONSTRUCTION <i>CV</i>



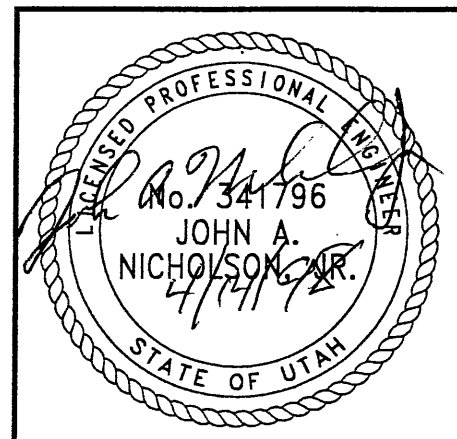
ELEVATION PRECAST WALL R-344-7
 (FRONT FACE SHOWN)
 (TOTAL SURFACE AREA OF PANELS = 2,539.42 SM)

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.



WASATCH CONSTRUCTORS
 APR 23 1998
 RELEASED FOR CONSTRUCTION

NO.	DATE	REVISION	BY	CHK

DES.	MM	03-13-98
DRN.	RSW	03-13-98
CHK.	MM	03-13-98

RETAINED EARTH™

VSL CORPORATION
 2840 River Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 761-6272
 Fax: (919) 761-6669

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

RETAINED EARTH™ WALLS
 PRECAST WALL "R-344-7"
 UTAH I-15 RECONSTRUCTION
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

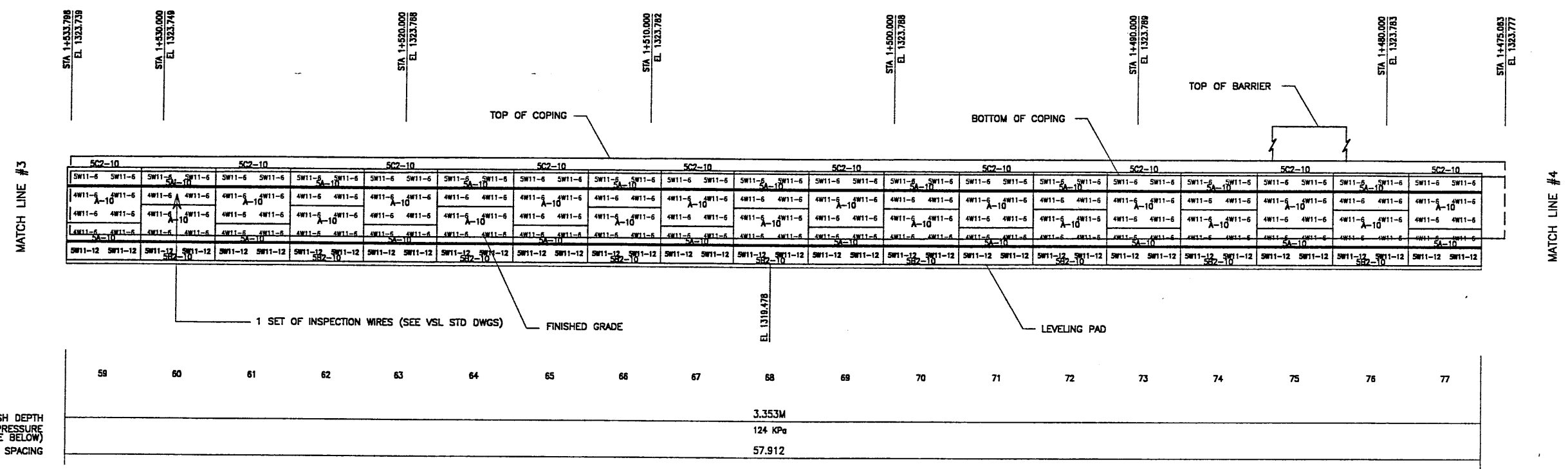
DWG. NO.
 1.3R-344-7.12

JOB NO.
 239-0007

SHT. NO.
 RE-713/24

FINAL PLOT 03-12-98 H:\RE_EARTH\PROJECT\239-0007\199" ES\53-07\53-07EA INCE (X-UTAH.DWG)

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	4-06-97	RELEASE FOR CONSTRUCTION



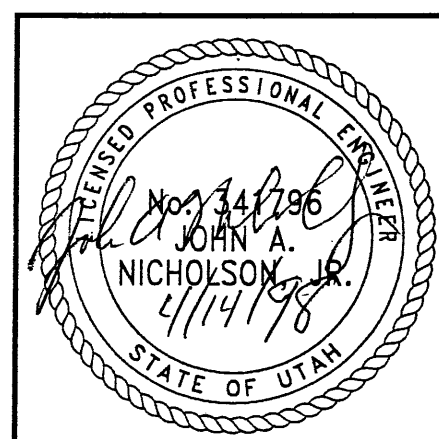
ELEVATION PRECAST WALL R-344-7

(FRONT FACE SHOWN)
 (TOTAL SURFACE AREA OF PANELS = 2,539.42 SM) 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.
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 OF CONSTRUCTION, AND QUALITY OF PREFABRICATED MATERIALS CONFORM TO
 THE MANUFACTURER'S SPECIFICATION.



WASATCH CONSTRUCTORS
 APR 23 1998
 RELEASED FOR CONSTRUCTION

NO.	DATE	DESCRIPTION	BY
1	4-06-97	RELEASE FOR CONSTRUCTION	CHK

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

RETAINED EARTH™

VSL CORPORATION
 2840 Pines Plaza, Suite 200
 Raleigh, NC 27612 781-6272
 Telephone: (919) 781-6272
 Fax: (919) 781-6669

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

UTAH 1-15 RECONSTRUCTION
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO.
 1.3R-344-7.13

JOB NO.
 239-0007


SHT. NO.
 RE-8 14/24

FINAL PLOT 03-12-98 H:\RE_EARTH\PROJECT\239-0007\199\53-07\53-07EA VICE (X-UTAH.DWG)

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	4-06-97	RELEASE FOR CONSTRUCTION

DES.	MM	DRN.	RSW	CHK.	RETAINED EARTH™	NO.	DATE	REVISION	BY	CHK
03-13-98	MM	03-13-98	RSW	03-13-98	MM					

VSL CORPORATION
 2840 Plaza Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-8772
 Fax: (919) 781-4989

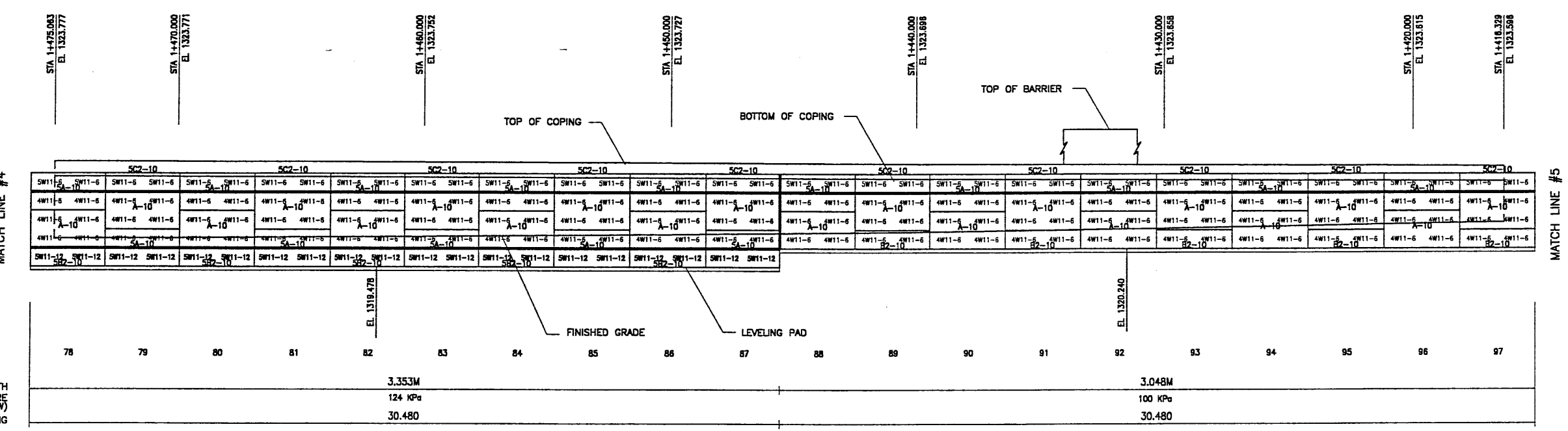


ATLANTA, GA / DALLAS, TX / RALEIGH, NC (CORPORATE OFFICE)
 MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA

VSL Corporation (VSL) does a direct proprietary design and analysis of retaining walls and foundations. The design and analysis are based on the VSL Retained Earth™ design method. The design and analysis are based on the VSL Retained Earth™ design method. The design and analysis are based on the VSL Retained Earth™ design method.

RETAINED EARTH™ WALLS
PRECAST WALL "R-344-7"
UTAH 1-15 RECONSTRUCTION
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

DWG. NO. 1.3R-344-7.14
 JOB NO. 239-0007
 SHEET NO. RE-915/24



ELEVATION PRECAST WALL R-344-7
 (FRONT FACE SHOWN)
 (TOTAL SURFACE AREA OF PANELS = 2,539.42 SM)

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

METRIC

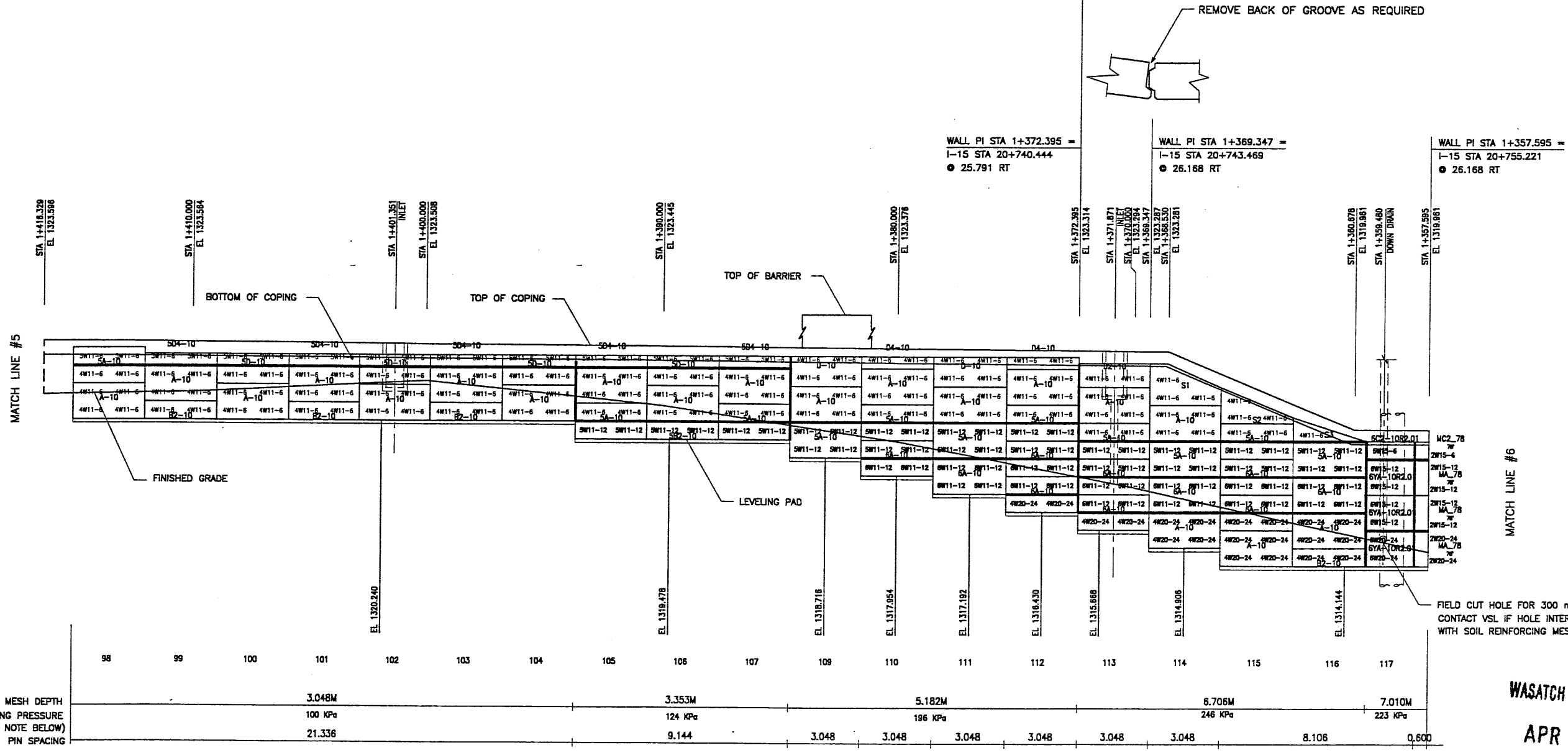
STATE OF UTAH
 LICENSED PROFESSIONAL ENGINEER
 JOHN A. NICHOLSON, JR.
 No. 341798

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.

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	4-06-97	RELEASE FOR CONSTRUCTION

NO.	DATE	REVISION



ELEVATION PRECAST WALL R-344-7

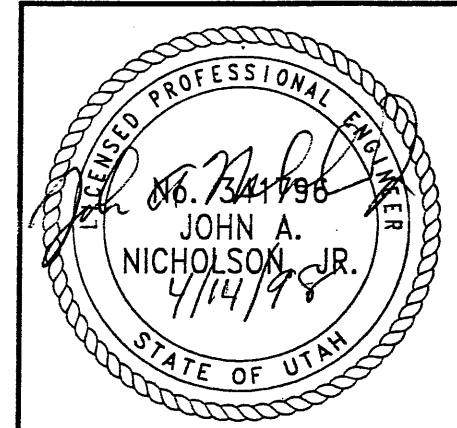
(FRONT FACE SHOWN)
(TOTAL SURFACE AREA OF PANELS = 2,539.42 SM)

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

METRIC

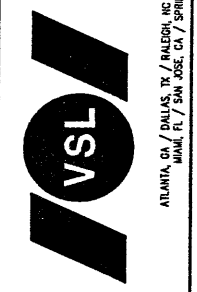
APPROVER NOTE:
MAXIMUM FINAL UNFACTORED BEARING PRESSURES
ARE INDICATED BELOW MESH DEPTH LINE
REVIEWER TO VERIFY MAXIMUM BEARING
CAPACITY OF FOUNDATION.

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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
APR 23 1998
RELEASED FOR CONSTRUCTION

VSL CORPORATION
2510 Pasa Place, Suite 200
Bridgeton, NJ 08302-7811
Tel: (609) 781-6772
Fax: (609) 781-6669

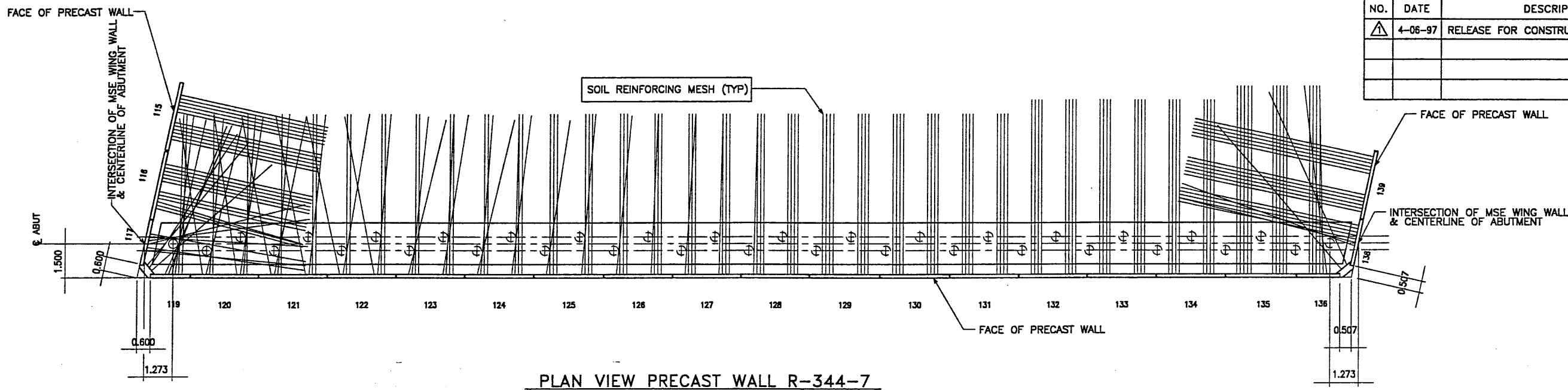


USE: Construction quality control. This drawing is an integral part of the contract documents. It is to be read in conjunction with the specifications and other drawings. The use of this drawing in any other project, or for any other purpose, without the written consent of VSL is strictly prohibited. VSL ASSUMES NO LIABILITY THEREFOR.

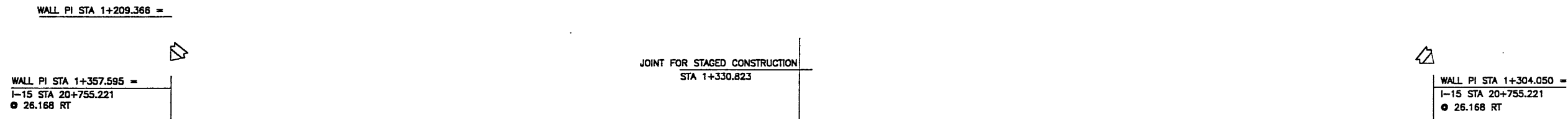
RETAINED EARTH™ WALLS PRECAST WALL "R-344-7"
UTAH I-15 RECONSTRUCTION SALT LAKE COUNTY, UTAH UTAH DEPARTMENT OF TRANSP.
DWG. NO. 1.3R-344-7.15
JOB NO. 239-0007
SHT. NO. RE-10 ¹⁶ / ₂₄

H:\RE_EARTH\PROJECT\239-0007\1998\153-07\53-07EA FINAL PLOT 03-12-98

APPROVED FOR CONSTRUCTION			
NO.	DATE	DESCRIPTION	CHK
▲	4-06-97	RELEASE FOR CONSTRUCTION	<i>[Signature]</i>



PLAN VIEW PRECAST WALL R-344-7



ELEVATION PRECAST WALL R-344-7

(FRONT FACE SHOWN)
(TOTAL SURFACE AREA OF PANELS = 2,539.42 SM)

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

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.

NO.	DATE	DESCRIPTION	CHK

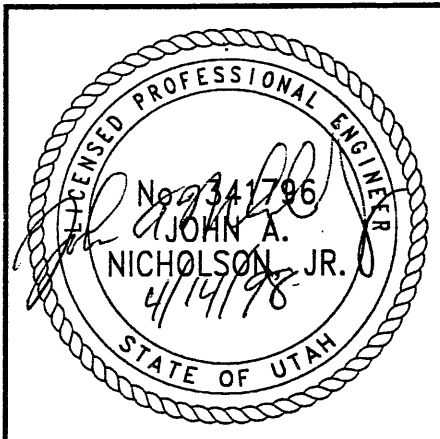
NO.	DATE	REVISION

VSL CORPORATION
 2810 Peachtree Dunwoody
 Atlanta, GA 30328
 Telephone: (404) 781-8272
 Fac: (404) 781-4859

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



WASATCH CONSTRUCTORS
 APR 23 1998
 RELEASED FOR CONSTRUCTION



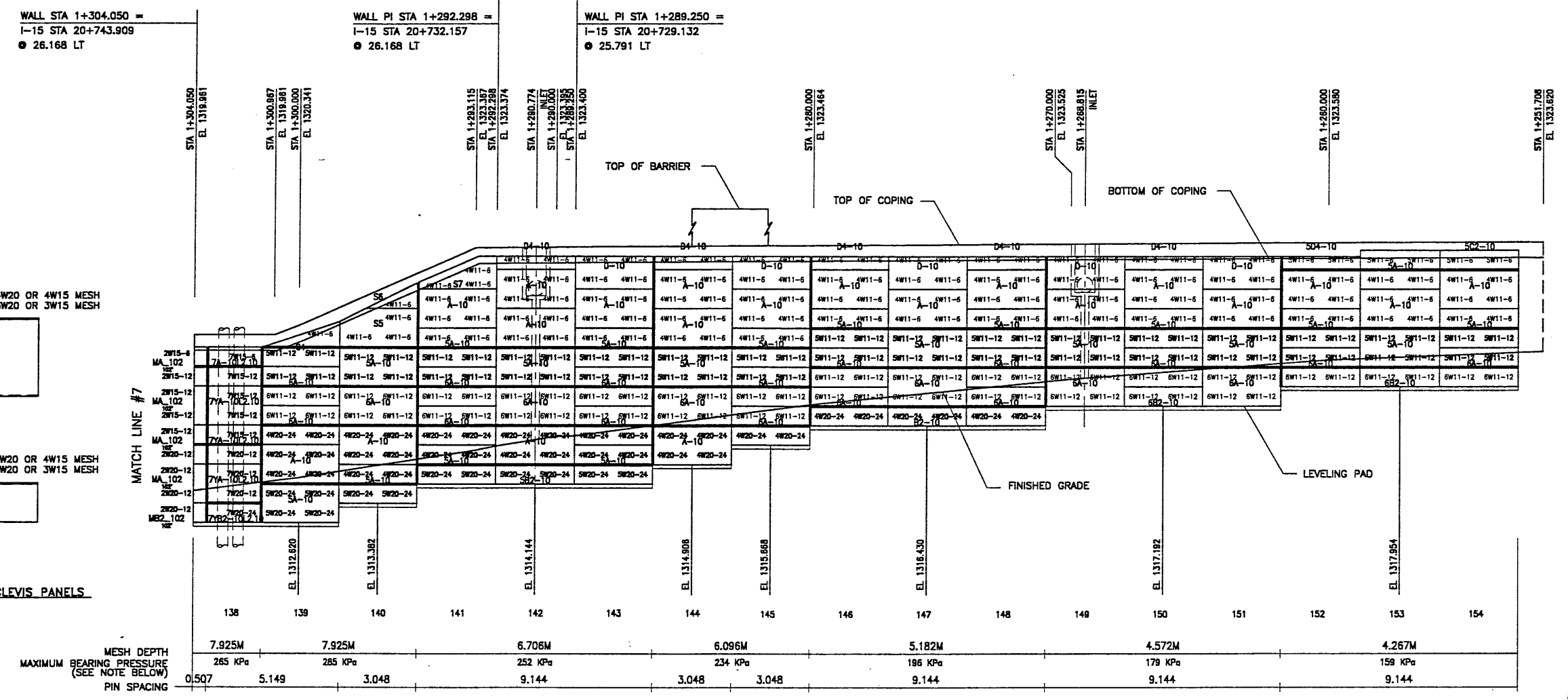
RETAINED EARTH™ WALLS
 PRECAST WALL "R-344-7"
 UTAH I-15 RECONSTRUCTION
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO.	1.3R-344-7.16
JOB NO.	239-0007
SHT. NO.	RE-1117/24

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

FINAL 03-12-98 H:\RE_EARTH\PROJECT\239-0007\53-07\53-07W

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	4-06-97	RELEASE FOR CONSTRUCTION

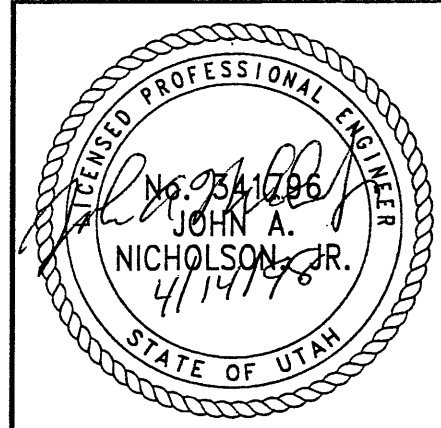


ELEVATION PRECAST WALL R-344-7
 (FRONT FACE SHOWN)
 (TOTAL SURFACE AREA OF PANELS = 2,539.42 SM)
 SCALE 1:100 (FULL SIZE)
 SCALE 1:200 (HALF SIZE)

METRIC

APPROVER NOTE:
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 REVIEWER TO VERIFY MAXIMUM BEARING
 CAPACITY OF FOUNDATION.

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WASATCH CONSTRUCTORS
APR 23 1998
RELEASED FOR CONSTRUCTION

DES.	MM	03-13-98	MM	03-13-98	MM	03-13-98	RETAINED EARTH™	NO.	DATE	REVISION	CHK
DRN.	RSW	03-13-98	MM	03-13-98	MM	03-13-98	VSL				
CHK.	MM	03-13-98									

VSL CORPORATION
 2840 Plaza Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-6872
 Fax: (919) 781-6869

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

RETAINED EARTH™ WALLS
PRECAST WALL "R-344-7"
UTAH I-15 RECONSTRUCTION
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

DWG. NO.
1.3R-344-7.17

JOB NO.
239-0007

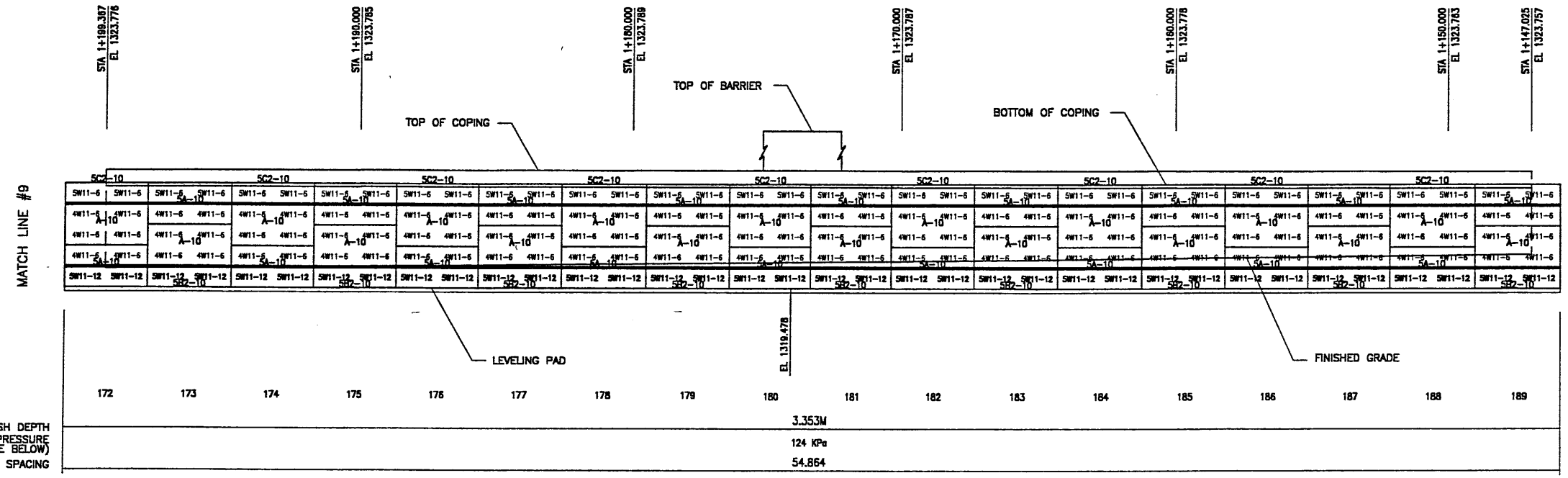
SHT. NO.
RE-12

ENCE (X-UTAH.DWG)

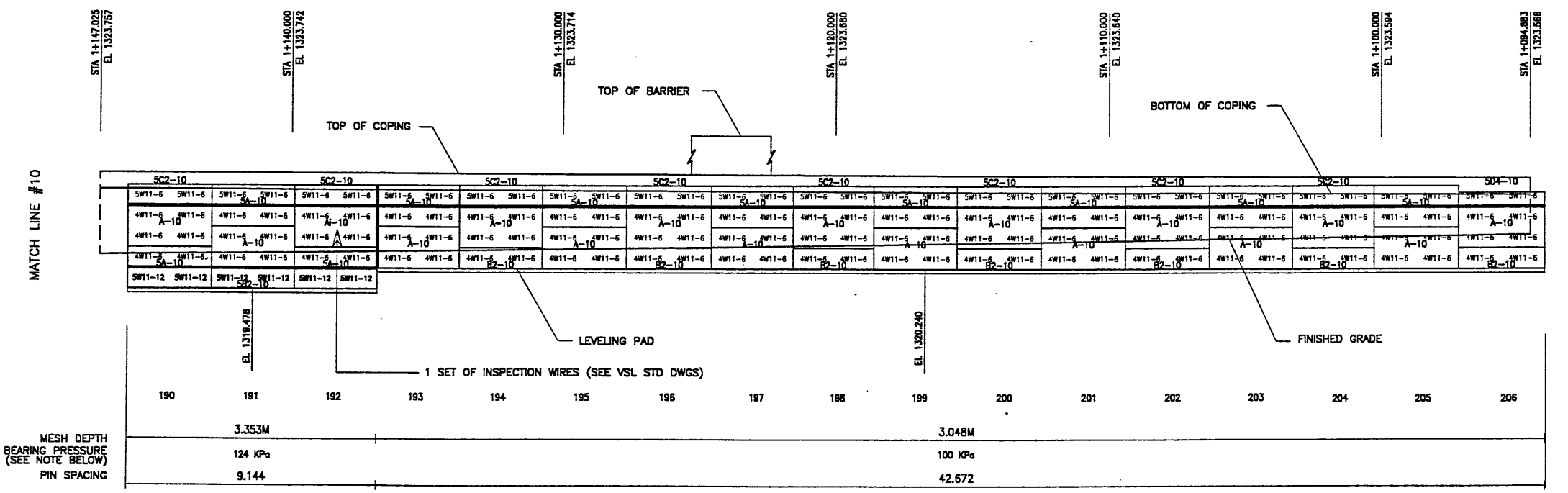
H:\RE_EARTH\PROJECT\239-000\53SERIES\53-07\53-07W

FINAL PLOT 03-12-98

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	4-06-97	RELEASE FOR CONSTRUCTION



ELEVATION PRECAST WALL R-344-7



ELEVATION PRECAST WALL R-344-7

(FRONT FACE SHOWN)
 (TOTAL SURFACE AREA OF PANELS = 2,539.42 SM)
 SCALE 1:100 (FULL SIZE)
 SCALE 1:200 (HALF SIZE)

METRIC

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

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

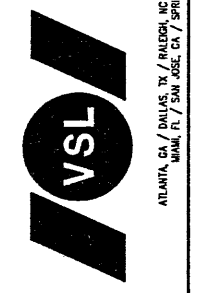
APPROVER NOTE:
 MAXIMUM FINAL UNFACTORED BEARING PRESSURES
 ARE INDICATED BELOW "MESH DEPTH LINE".
 REVIEWER TO VERIFY MAXIMUM BEARING
 CAPACITY OF FOUNDATION.

MATCH LINE #10

MATCH LINE #11

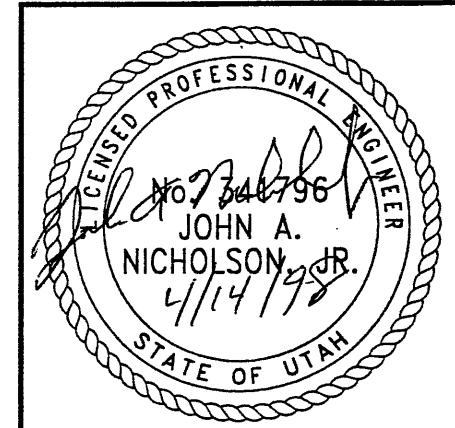
NO.	DATE	REVISION

VSL CORPORATION
 2810 Ross Blvd, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-8272
 Fax: (919) 781-4869



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

WASATCH CONSTRUCTORS
 APR 23 1998
 RELEASED FOR CONSTRUCTION

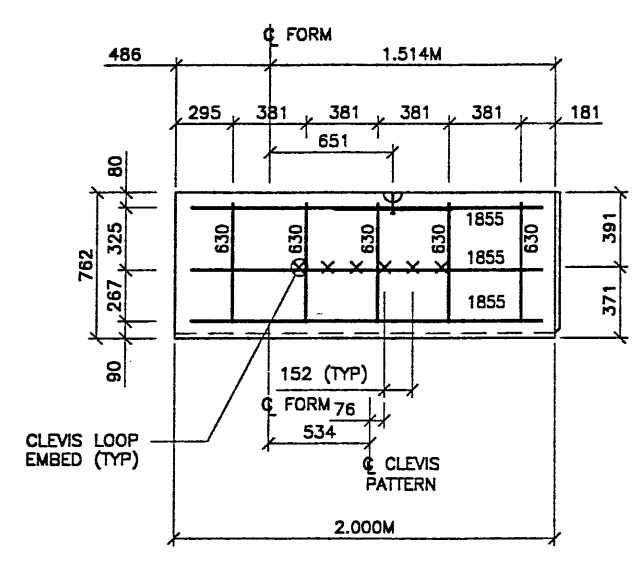


RETAINED EARTH™ WALLS
 PRECAST WALL "R-344-7"
 UTAH I-15 RECONSTRUCTION
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

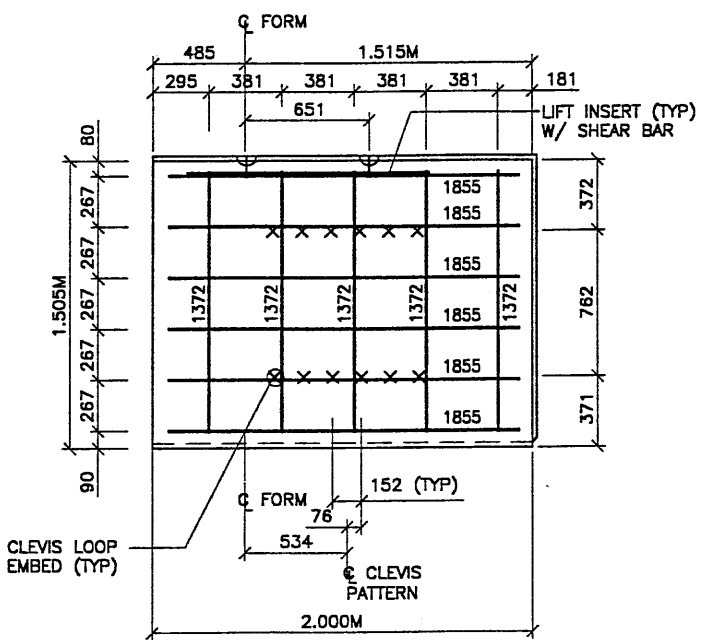
DWG. NO.	1.3R-344-7.19
JOB NO.	239-0007
SHT. NO.	RE-14

FINAL AT 03-13-98 H:\RE-EARTH\PROJECT\239-0007\1998\3SERIES\53-07\VF DWG (X-UTM.DWG)

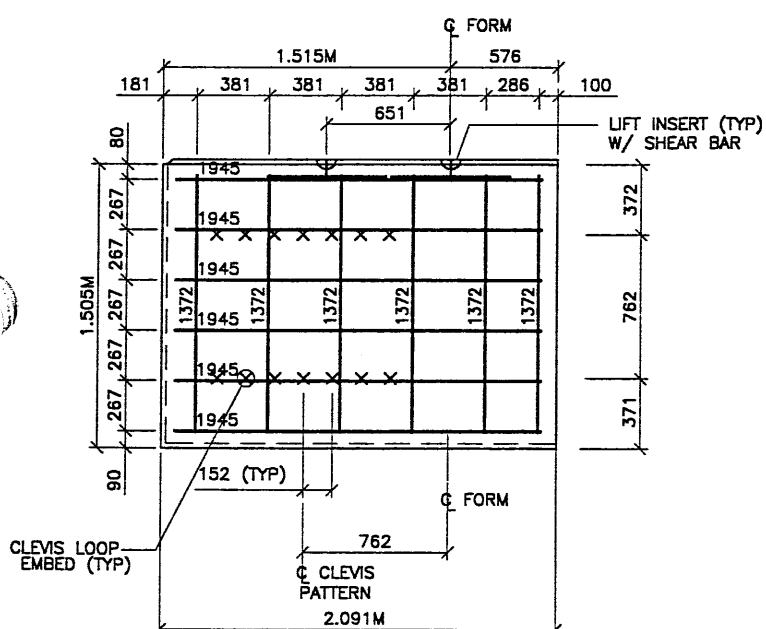
- PANEL REINFORCEMENT NOTES:**
- PANELS ARE SHOWN BACK FACE.
 - HORIZONTAL REINFORCEMENT SHALL HAVE 50 mm MINIMUM COVER TO THE BACK FACE.
 - ALL REINFORCEMENT SHALL HAVE 50 mm MINIMUM COVER TO THE SIDES.
 - ALL REINFORCING BARS ARE #13 METRIC. LABELS ON EACH BAR INDICATE LENGTH. EXAMPLE: 1345 IS A #13 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 27,500 KPa.
 - EQUIVALENT WELDED WIRE FABRIC MAY BE USED.
 - ALL PANELS TO USE 9.5mm# 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.



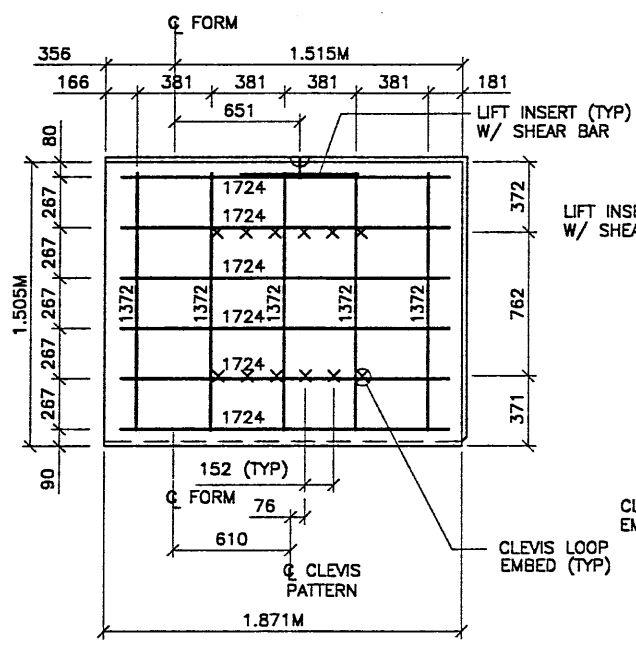
TYPE 6YC2-10R 2.01 REBAR
(AREA = 1.53 SQ.M)



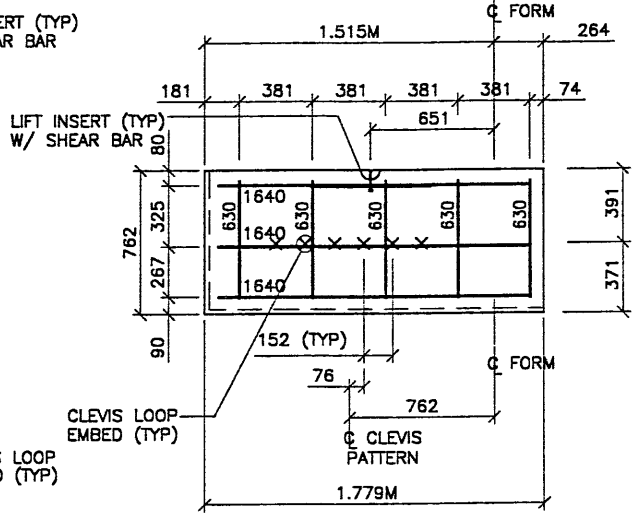
TYPE 6YA-10R 2.01 REBAR
(AREA = 3.06 SQ.M)



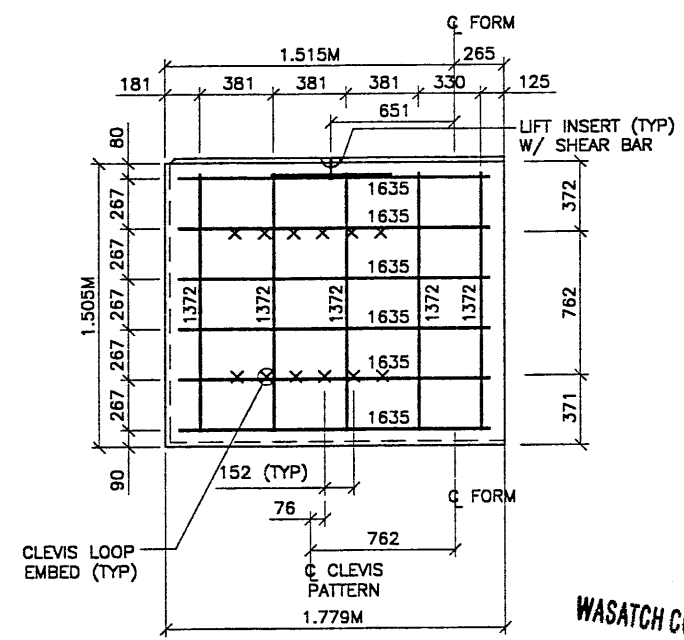
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(AREA = 3.20 SQ.M)



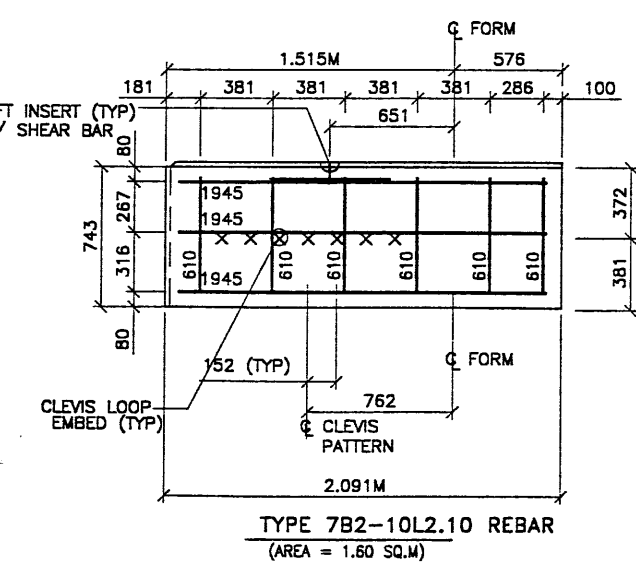
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(AREA = 2.87 SQ.M)



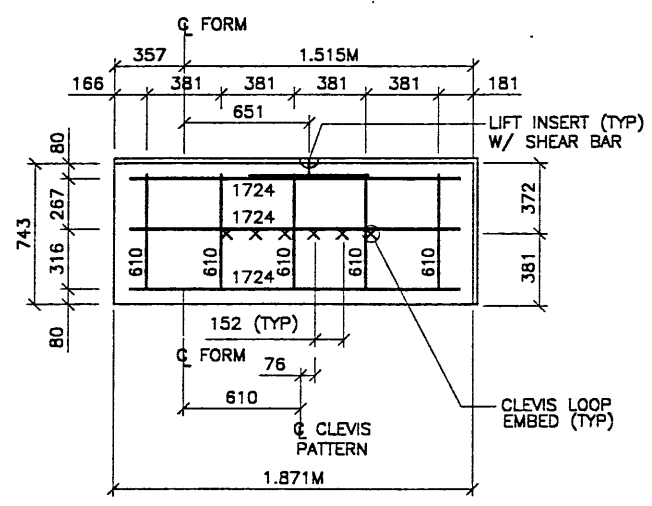
TYPE 6YC2-10L 1.79 REBAR
(AREA = 1.36 SQ.M)



TYPE 6YA-10L 1.79 REBAR
(AREA = 2.73 SQ.M)



TYPE 7B2-10L2.10 REBAR
(AREA = 1.60 SQ.M)

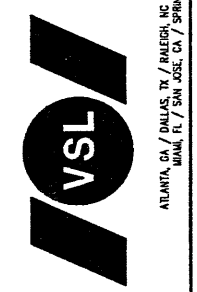


TYPE 6YB2-10R1.88 REBAR
(AREA = 1.43 SQ.M)

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	4-06-97	RELEASE FOR CONSTRUCTION

DES.	MM	DRN.	RSW	CHK.	MM	NO.	DATE	REVISION	BY	CHK
	03-13-98									

VSL CORPORATION
2940 Price Road, Suite 200
Raleigh, NC 27617
Telephone: (919) 781-8272
Fax: (919) 781-4869

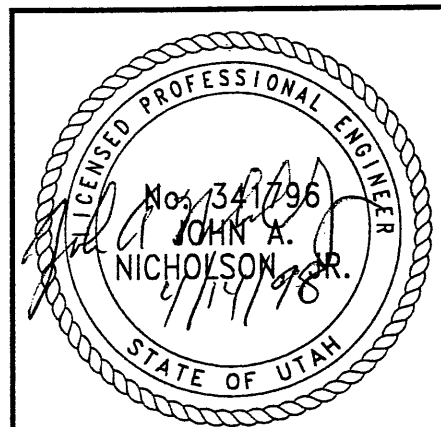


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WASATCH CONSTRUCTORS

APR 23 1998

RELEASED FOR CONSTRUCTION



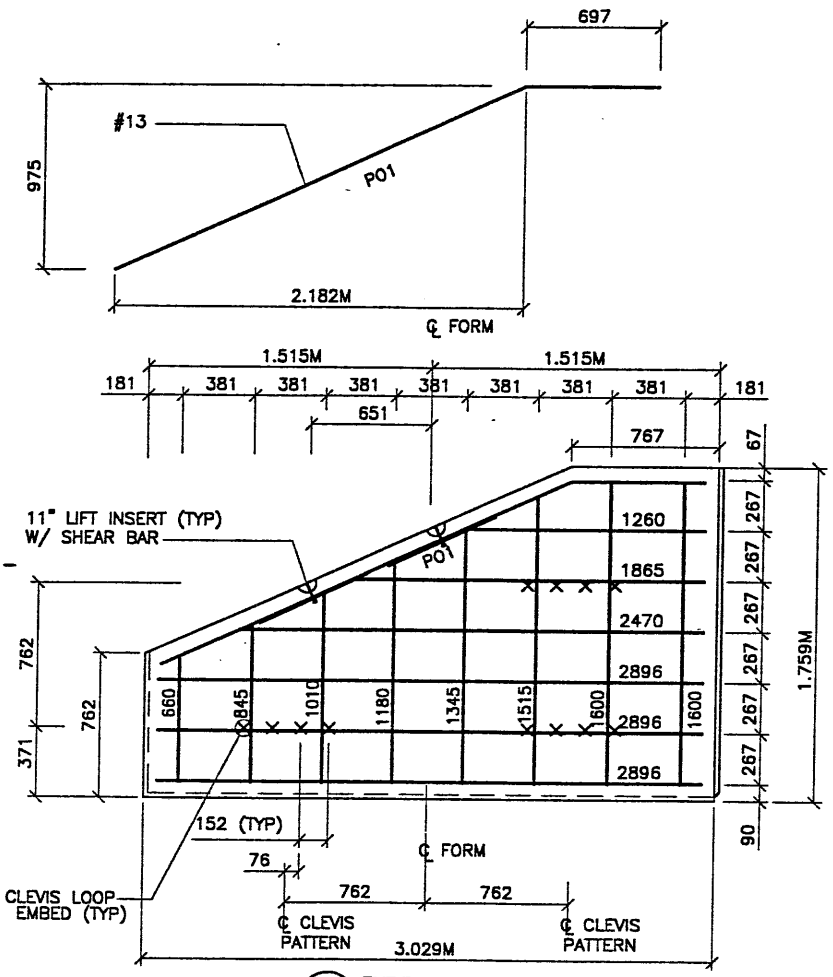
CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY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

METRIC

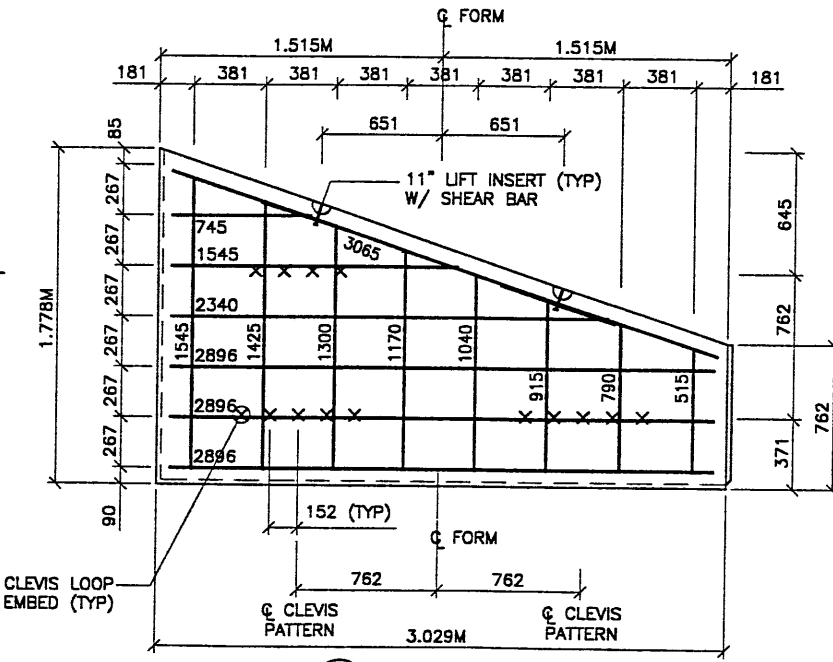
RETAINED EARTH™ WALLS
PRECAST WALL "R-344-7"
SPECIAL PANEL REINFORCEMENT
UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

DWG. NO. 1.3R-344-7.21
JOB NO. 239-0007
SHT. NO. RE-16

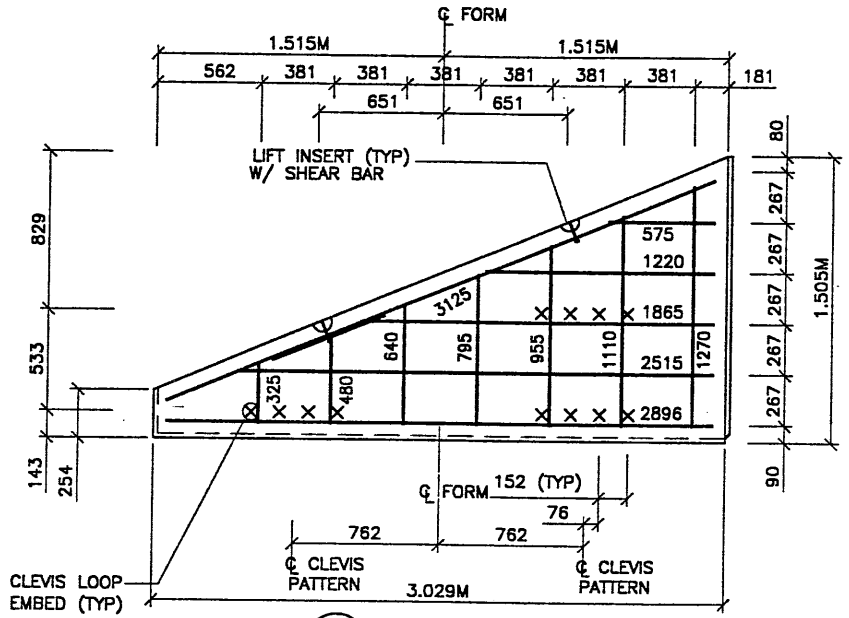
FINAL Q1 03-12-98 H:\RE_EARTH\PROJECT\239-0007\1998\53SERIES\53-0715' FENCE (X-UTAILDING)



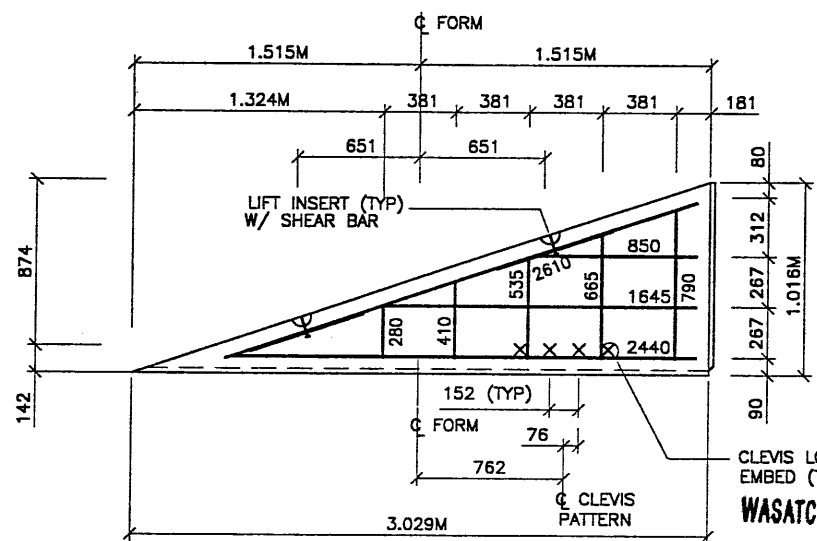
S1 TYPE S1 REBAR
(AREA = 4.26 SQ.M)



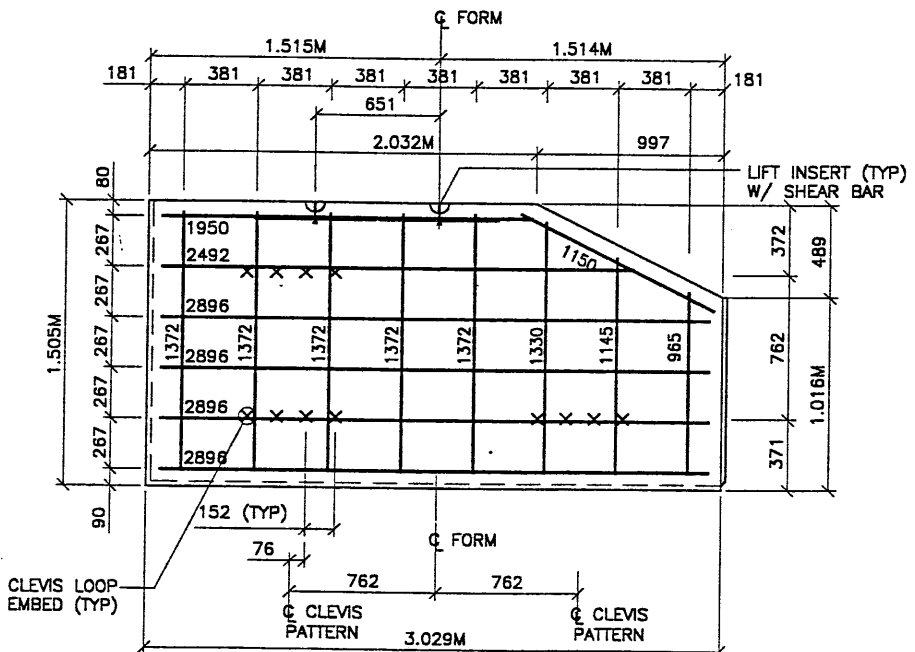
S4 TYPE S4 REBAR
(AREA = 3.87 SQ.M)



S2 TYPE S2 REBAR
(AREA = 2.71 SQ.M)



S3 TYPE S3 REBAR
(AREA = 1.55 SQ.M)



S5 TYPE S5 REBAR
(AREA = 4.39 SQ.M)

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	4-06-97	RELEASE FOR CONSTRUCTION

NO.	DATE	REVISION	BY	CHK

VSL CORPORATION
2840 Pico Place, Suite 200
Raleigh, NC 27612
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Fax: (919) 781-8669

ATLANTA, GA / DALLAS, TX / ELICHA, US (CORPORATE OFFICE)
MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, MA

DES. 03-12-98
DRN. 03-12-98
CHK. 03-12-98

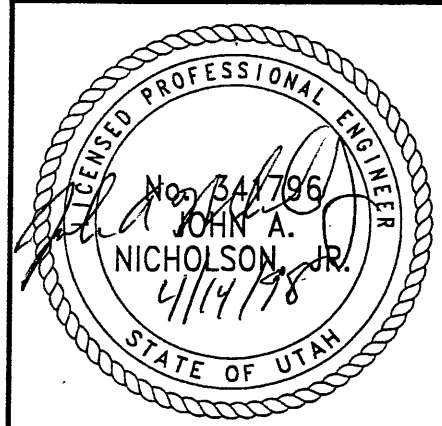
RETAINED EARTH™

WASATCH CONSTRUCTORS
APR 23 1998
RELEASED FOR 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 1.
 - CONCRETE PANELS TO HAVE 28 DAY COMPRESSIVE STRENGTH OF 27,500 KPa.
 - EQUIVALENT WELDED WIRE FABRIC MAY BE USED.
 - ALL PANELS TO USE 9.5mm# 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.

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.

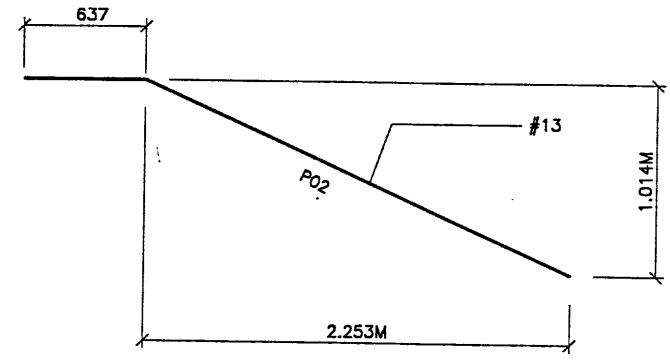
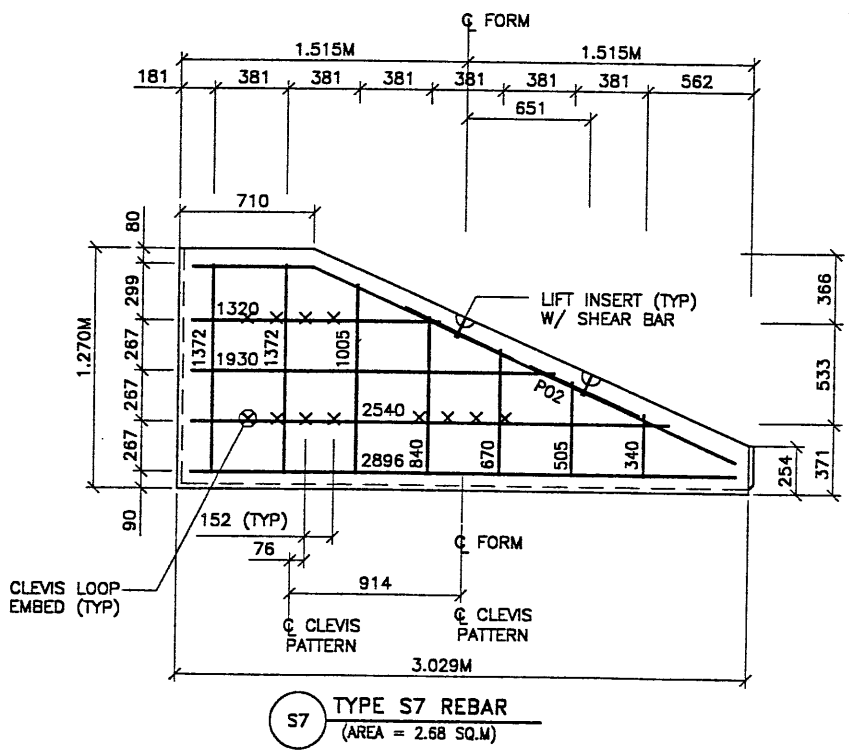
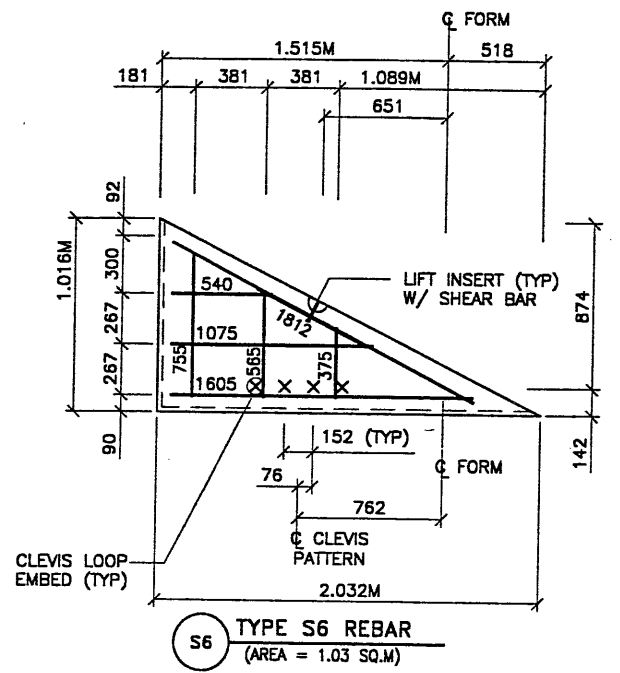


RETAINED EARTH™ WALLS
PRECAST WALL "R-344-7"
SPECIAL PANEL REINFORCEMENT
UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

DWG. NO.
1.3R-344-7.22

JOB NO.
239-0007

SHT. NO.
RE-1723/24



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APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	4-06-97	RELEASE FOR CONSTRUCTION

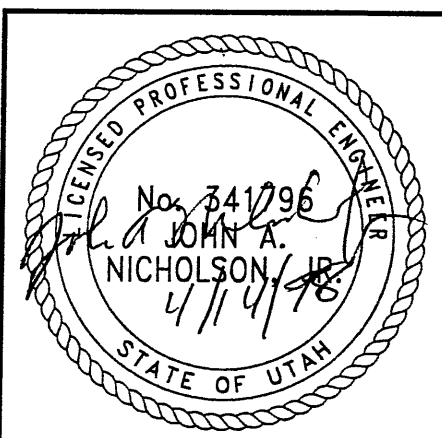
DES.	MM	DRN.	RSW	CHK.	MM	NO.	DATE	REVISION	BY	CHK
	03/12/98									
	03/12/98									
	03/12/98									

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WASATCH CONSTRUCTORS
 APR 23 1998
 RELEASED FOR CONSTRUCTION



RETAINED EARTH™ WALLS
 PRECAST WALL "344-07"
 SPECIAL PANEL REINFORCEMENT
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

DWG. NO.	1.3R-344-7.23
JOB NO.	239-0007
SHT. NO.	RE-18 24/24

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METRIC