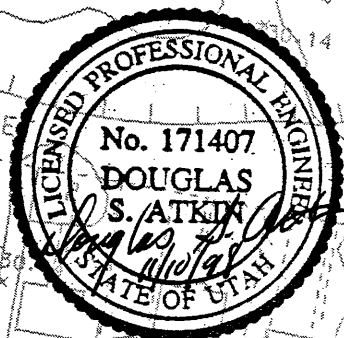
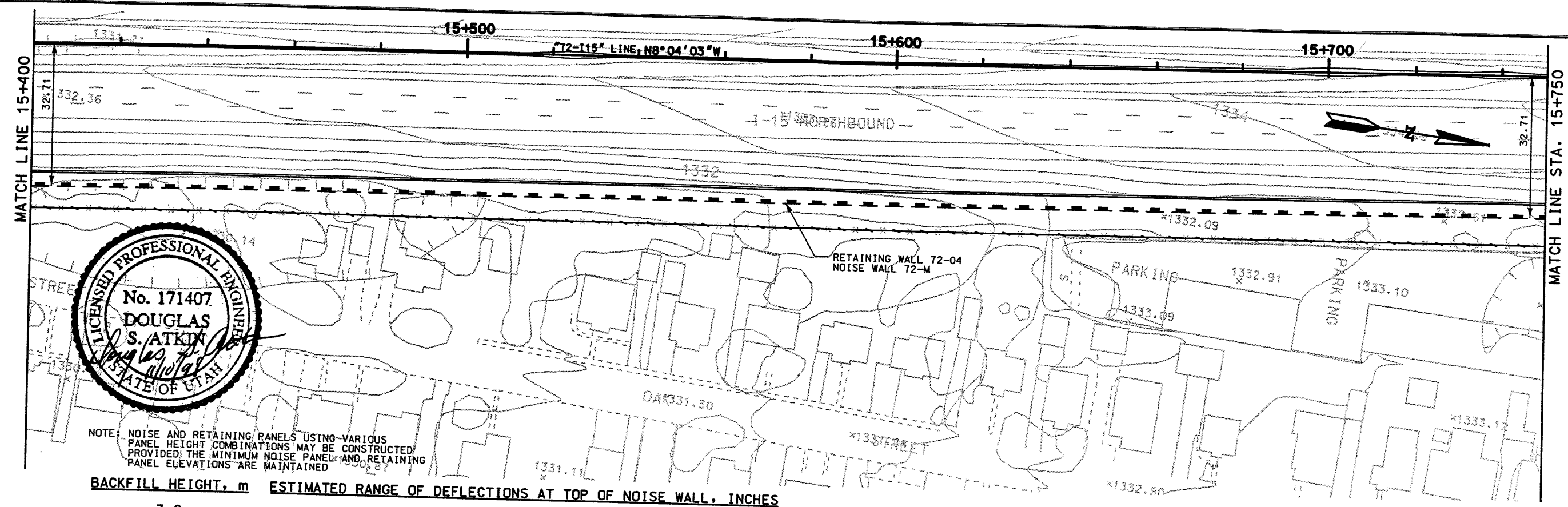


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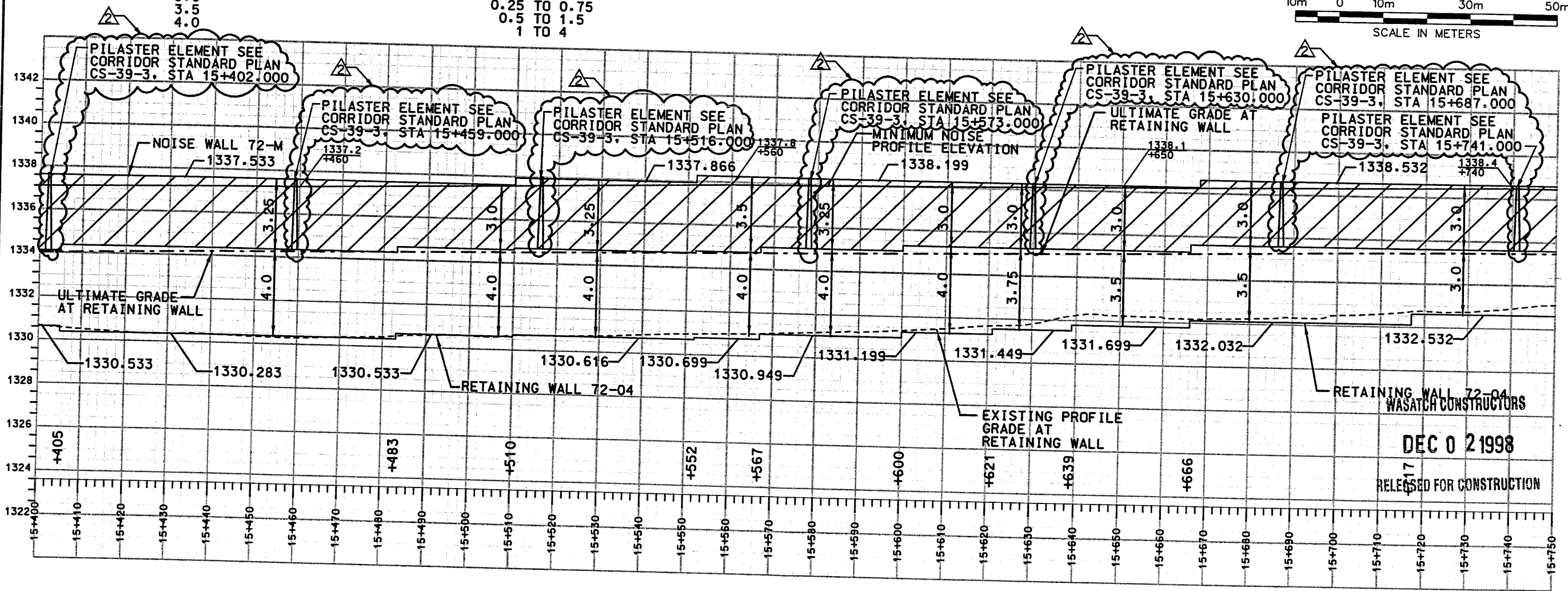
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NOTE: NOISE AND RETAINING PANELS USING VARIOUS PANEL HEIGHT COMBINATIONS MAY BE CONSTRUCTED PROVIDED THE MINIMUM NOISE PANEL AND RETAINING PANEL ELEVATIONS ARE MAINTAINED

BACKFILL HEIGHT, m ESTIMATED RANGE OF DEFLECTIONS AT TOP OF NOISE WALL, INCHES

- 3.0 0.25 TO 0.75
- 3.5 0.5 TO 1.5
- 4.0 1 TO 4

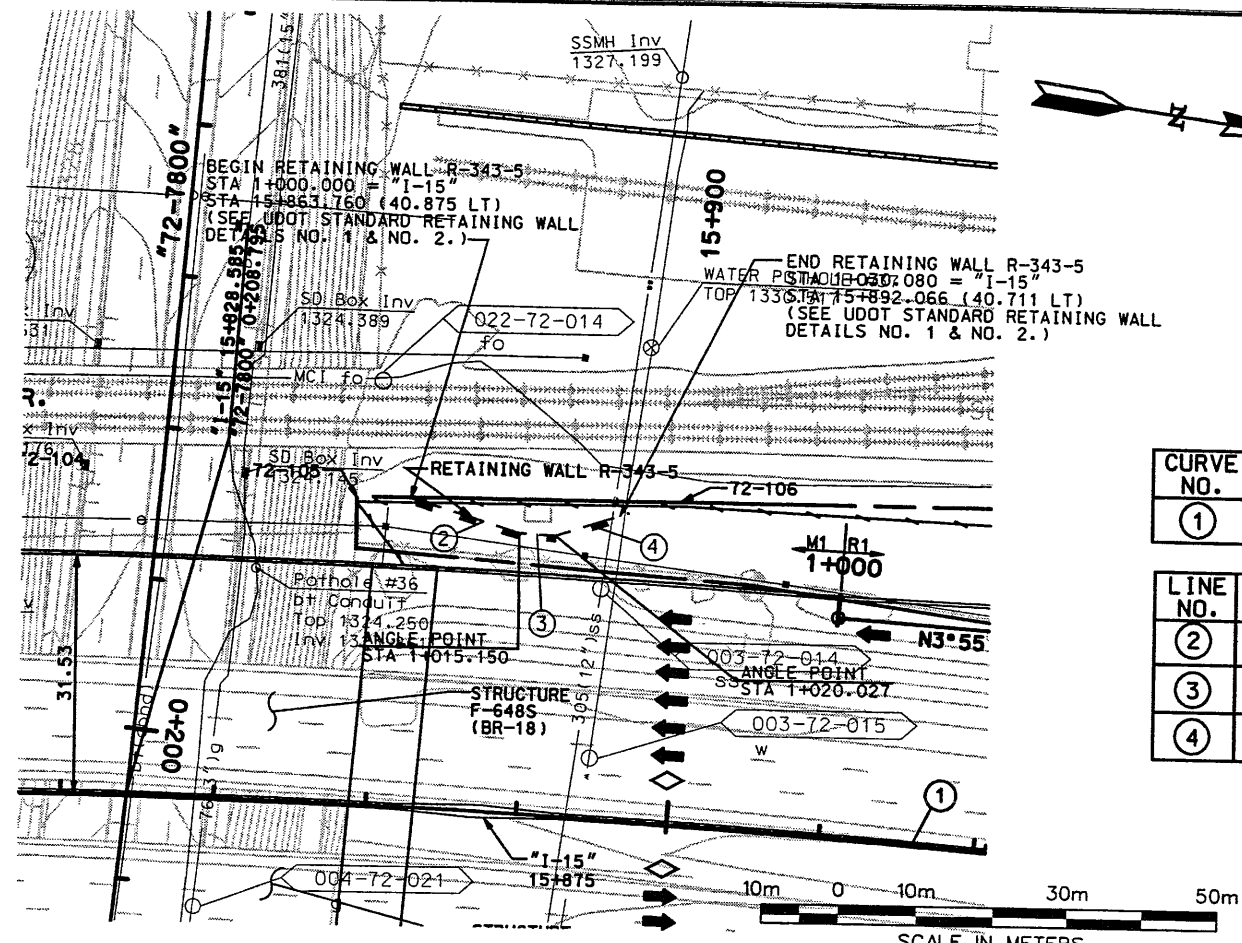


WASATCH CONSTRUCTORS
 DEC 0 2 1998
 RELEASED FOR CONSTRUCTION

APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	NO.	DATE
1	7-02-97	1	11-09-98
RELEASED FOR EARLY CONSTRUCTION		NOC-0281/DWG. NO. CHANGED FROM 1.2-WA04.02	
UTAH DEPARTMENT OF TRANSPORTATION			
URS Greiner		SVERDRUP/DE LEUW	
DESIGN	JUL 97	CHECK	EMR 6/97
PROJECT DESIGN ENGINEER	DATE	PROJECT DESIGN ENGINEER	DATE
DRN	TJP	DRN	TJP
PROJECT MANAGER	DATE	PROJECT MANAGER	DATE
1-15 CORRIDOR RECONSTRUCTION		SECTION 1.2	
SITUATION/LAYOUT		RET WALL 72-04	
PROJECT NUMBER		#SP-15-7(135)296	
SALT LAKE COUNTY			
1.2R-343-4.2			
SHT.	2	OF	2
REF.			

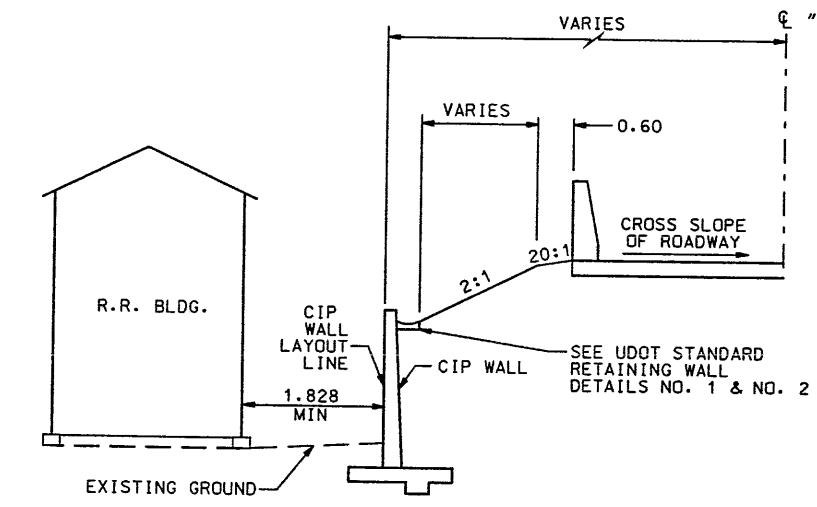
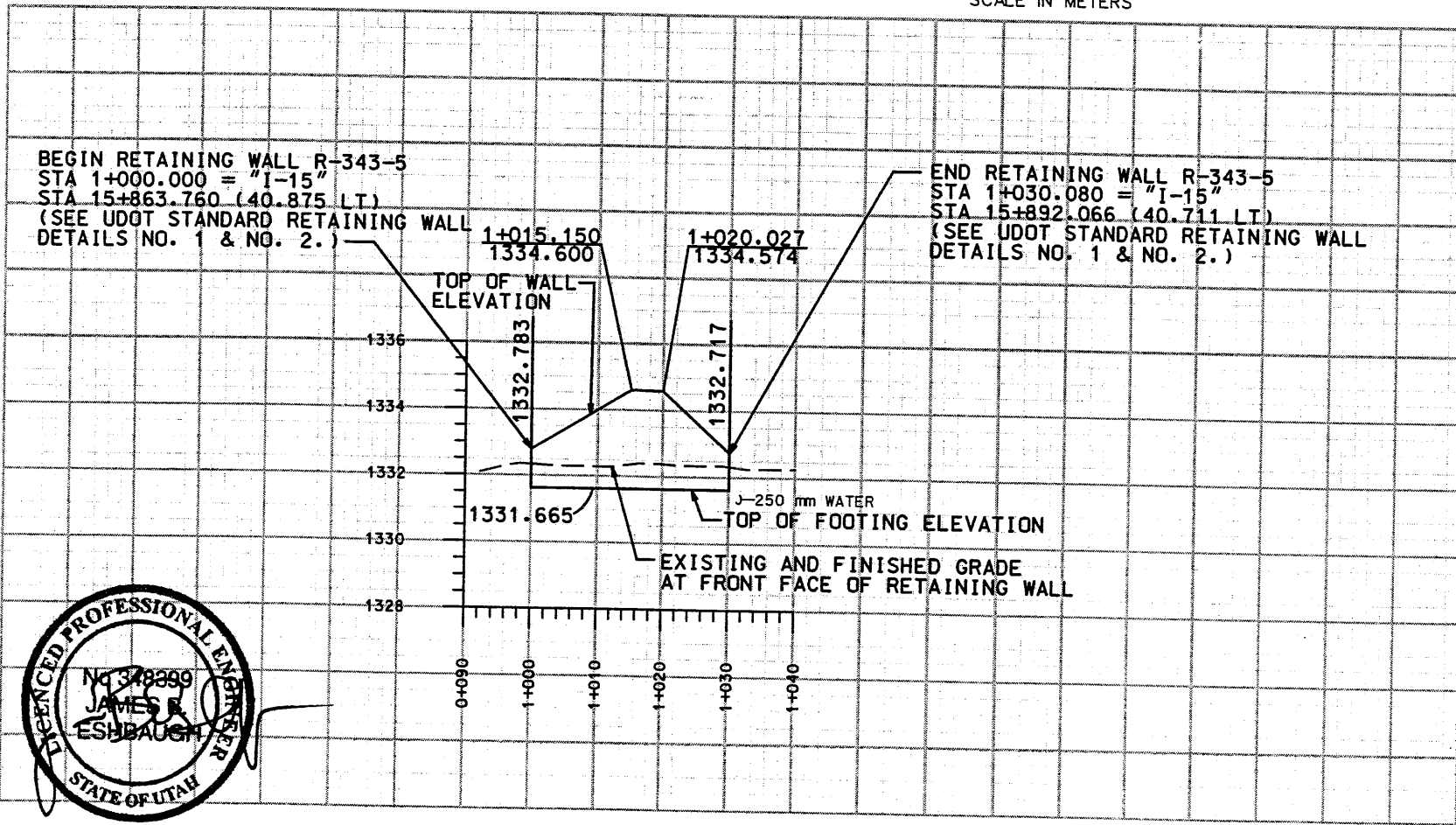
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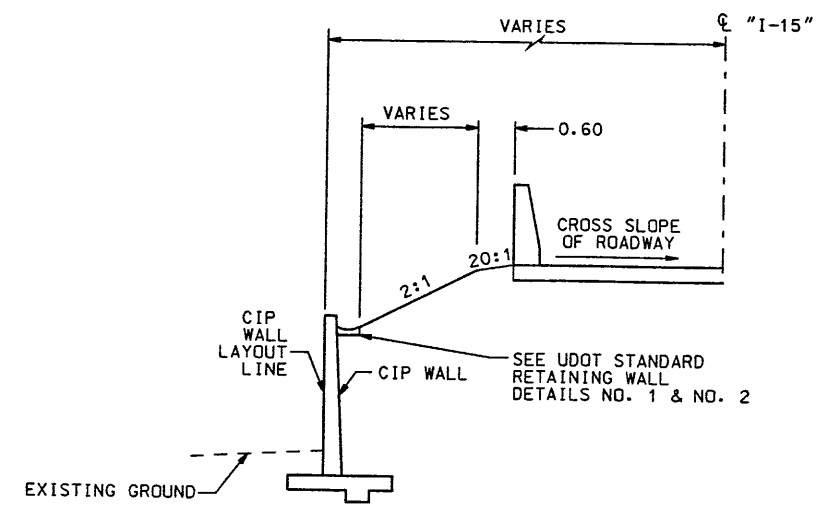


STATION LIMITS	C.I.P. DESIGN HEIGHT (m)
STA 1+000.000 TO STA 1+003.227	1.2
STA 1+003.227 TO STA 1+008.230	1.8
STA 1+008.230 TO STA 1+013.233	2.4
STA 1+013.233 TO STA 1+021.132	3.0
STA 1+021.132 TO STA 1+024.380	2.4
STA 1+024.380 TO STA 1+027.628	1.8
STA 1+027.628 TO STA 1+030.080	1.2

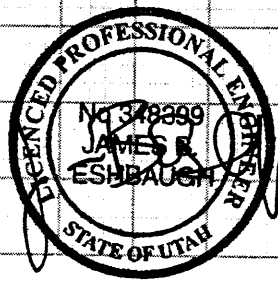
WASATCH CONSTRUCTORS
JUN - 8 1998
RELEASED FOR CONSTRUCTION



TYPICAL SECTION
 WALL R-343-5
 STA 1+015.150 TO STA 1+020.027



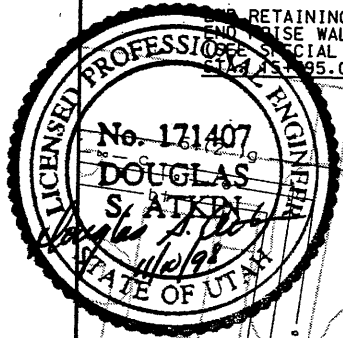
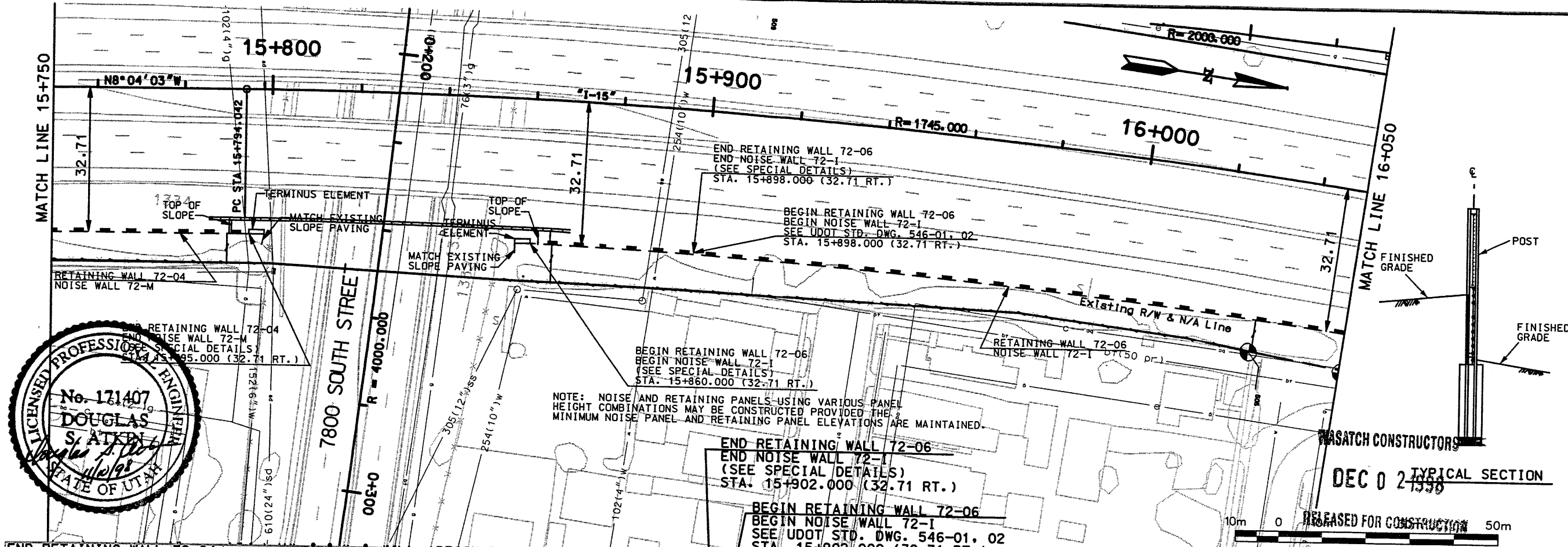
TYPICAL SECTION
 WALL R-343-5
 STA 1+000.000 TO STA 1+015.150
 STA 1+020.027 TO STA 1+030.080



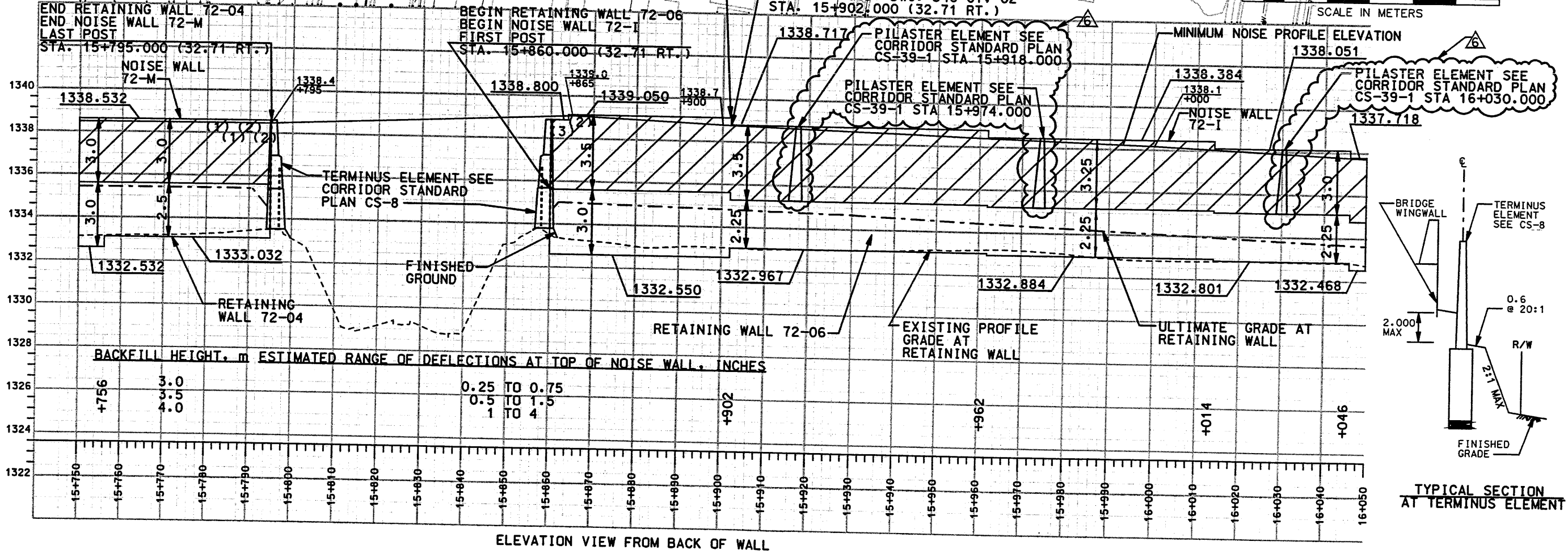
UTAH DEPARTMENT OF TRANSPORTATION		APPROVED FOR CONSTRUCTION	
DESIGNER	DATE	DESCRIPTION	NO.
URS Greiner SVERDRUP/DE LEU	12-1-97	INITIAL RELEASE	1
DESIGN	10/97	REVISION PER NOC-0185	6-5-98
PROJECT DESIGN ENGINEER	DATE	PROJECT MANAGER	DATE
RICK CHAPMAN	10/97	DON GRAY	10/97
APPROVAL RECORD	DATE	APPROVED	DATE
10/97	10/97	10/97	10/97
I-15 CORRIDOR RECONSTRUCTION		SECTION 1.2	
SIT/LAYOUT RET WALL R-343-12		PROJECT NUMBER #SP-15-7(135)296	
SALT LAKE COUNTY		DWG. NO. 1.2R-343-5.1	
SHT. 1 OF 1		REF.	

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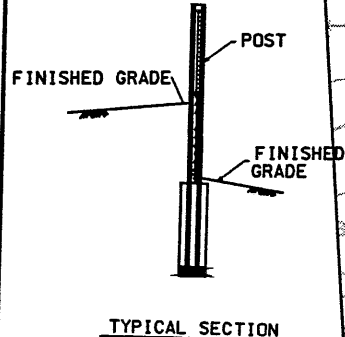
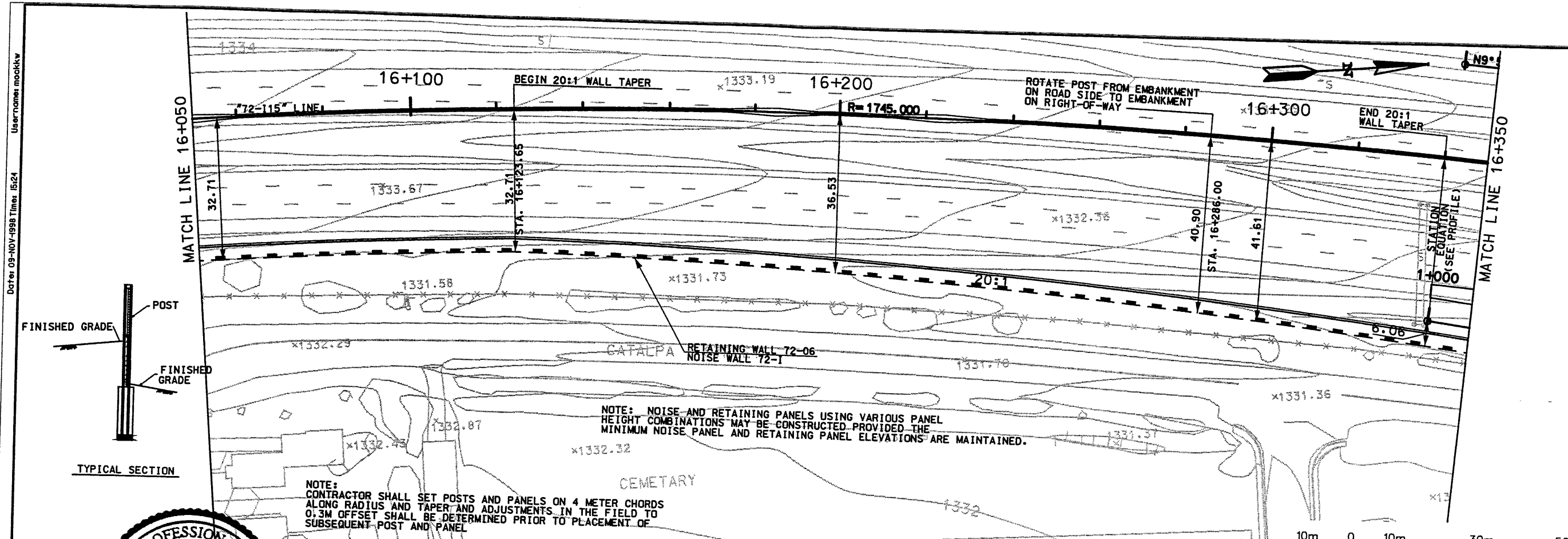
WASATCH CONSTRUCTORS
 DEC 02 1998
 TYPICAL SECTION



APPROVED FOR CONSTRUCTION	
NO.	DATE
1	7-9-98
2	11-09-98
DESCRIPTION	
ADDED WALL END TREATMENTS/DWG. NO. CHANGED FROM 1.2-MA06-03	
NOC-0281	
UTAH DEPARTMENT OF TRANSPORTATION	
URS Greiner	
SVERDRUP/DE LEUW	
DESIGN	JLH
CHECK	EMR
DATE	6/97
DRAWN	TJP
CHECK	EMR
DATE	6/97
PROJECT	MANAGER
DATE	
I-15 CORRIDOR RECONSTRUCTION	
SALT LAKE COUNTY	
SITUATION/LAYOUT	
RET WALL 72-04	
SECTION 1.2	
PROJECT NUMBER #SP-15-7(135)296	
DWG. NO. 1.2R-343-6.3	
SHT.	1 OF 3
REF.	

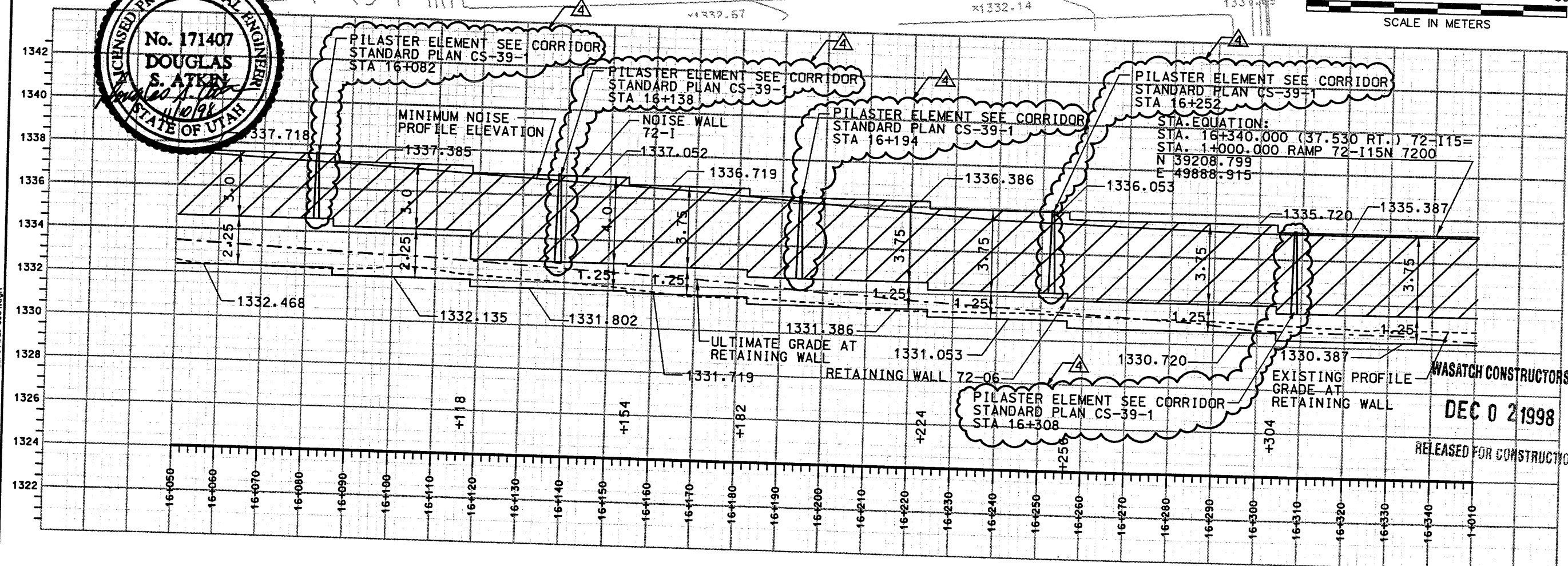
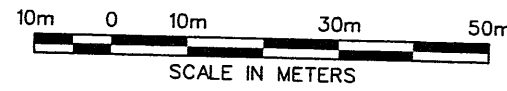
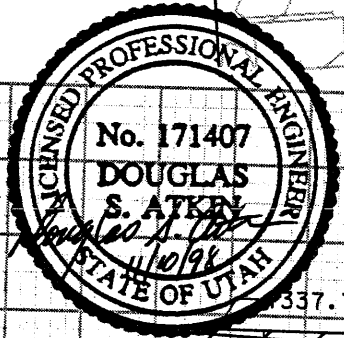
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Date: 09-NOV-1998 Time: 15:24 User: name.mookkw



NOTE: NOISE AND RETAINING PANELS USING VARIOUS PANEL HEIGHT COMBINATIONS MAY BE CONSTRUCTED PROVIDED THE MINIMUM NOISE PANEL AND RETAINING PANEL ELEVATIONS ARE MAINTAINED.

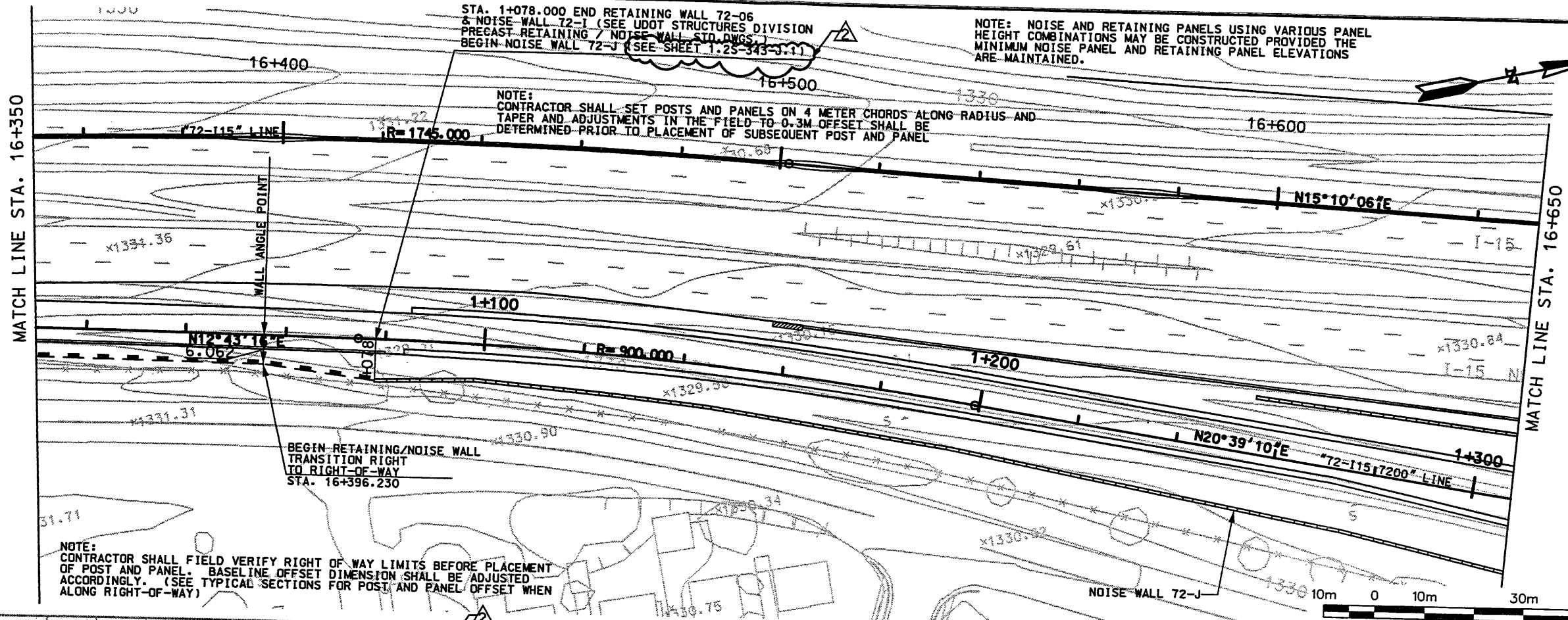
NOTE: CONTRACTOR SHALL SET POSTS AND PANELS ON 4 METER CHORDS ALONG RADIUS AND TAPER AND ADJUSTMENTS IN THE FIELD TO SUBSEQUENT POST AND PANEL



WASATCH CONSTRUCTORS
 DEC 0 2 1998
 RELEASED FOR CONSTRUCTION

APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	REVISION	
1	5-28-97	RELEASE FOR M.O.T. PHASE II ONLY	
2	6-11-97	REVISED BARRIER HEIGHT FOR NOISE ELEV. CHANGE	
3	8-30-97	REVISED PER PANEL MODIFICATIONS	
4	11-09-98	MOC-0281/DWG. NO. CHANGED FROM 1.2-WA06.04	
UTAH DEPARTMENT OF TRANSPORTATION			
SVERDRUP/DE LEUW			
DESIGN	JULI	6-08-97	CHECK TJP 6-07-97
PROJECT DESIGN ENGINEER	URS Greiner	6-07-97	CHECK TJP 6-08-97
DATE	6/27	DATE	6/27
APPROVED	RICK CHAPMAN	PROJECT MANAGER	
I-15 CORRIDOR RECONSTRUCTION			
SITUATION LAYOUT			
RET WALL 72-06			
SECTION 1.2			
PROJECT NUMBER	#SP-15-711351296		
SALT LAKE COUNTY			
DWG. NO. 1.2R-343-6.4			
SHT. OF			
REF.			

User Name: moorkw Date: 09-NOV-1998 Time: 15:25



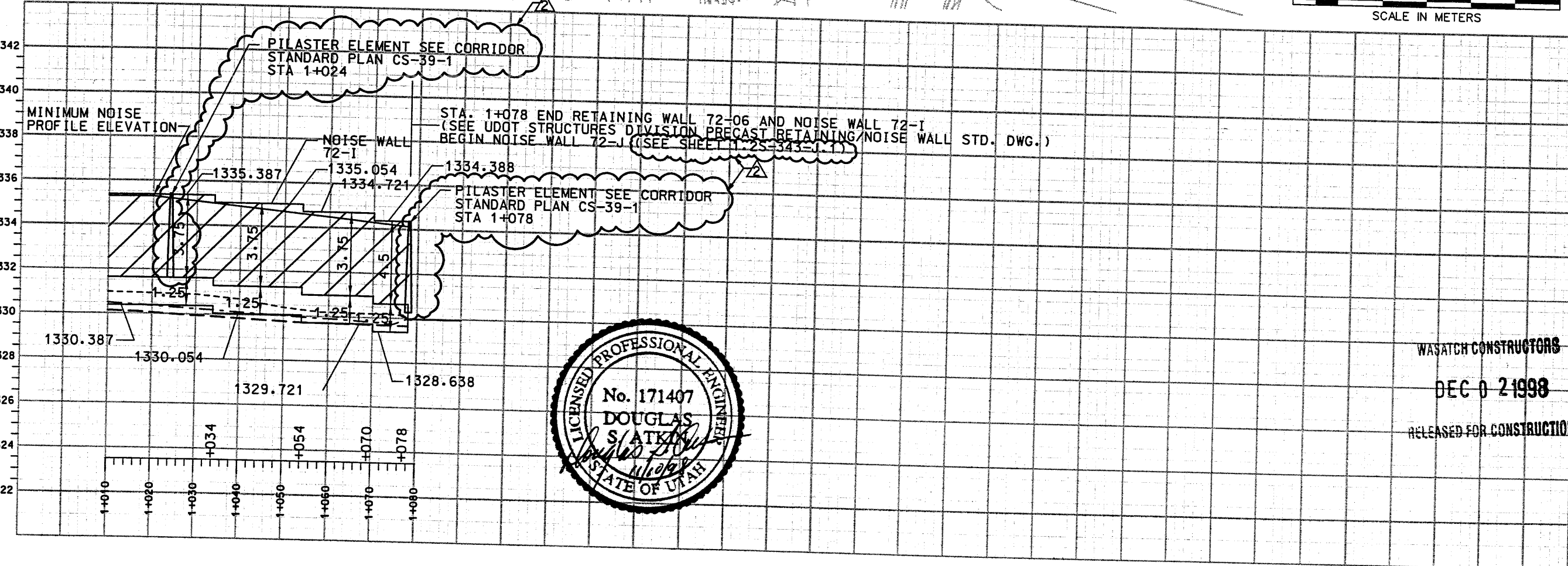
NOTE: CONTRACTOR SHALL FIELD VERIFY RIGHT OF WAY LIMITS BEFORE PLACEMENT OF POST AND PANEL. BASELINE OFFSET DIMENSION SHALL BE ADJUSTED ACCORDINGLY. (SEE TYPICAL SECTIONS FOR POST AND PANEL OFFSET WHEN ALONG RIGHT-OF-WAY)

STA. 1+078.000 END RETAINING WALL 72-06 & NOISE WALL 72-I (SEE UDOT STRUCTURES DIVISION PRECAST RETAINING / NOISE WALL STD. DWG.) BEGIN NOISE WALL 72-J (SEE SHEET 1.25-343-J.1)

NOTE: NOISE AND RETAINING PANELS USING VARIOUS PANEL HEIGHT COMBINATIONS MAY BE CONSTRUCTED PROVIDED THE MINIMUM NOISE PANEL AND RETAINING PANEL ELEVATIONS ARE MAINTAINED.

NOTE: CONTRACTOR SHALL SET POSTS AND PANELS ON 4 METER CHORDS ALONG RADIUS AND TAPER AND ADJUSTMENTS IN THE FIELD TO 0.3M OFFSET SHALL BE DETERMINED PRIOR TO PLACEMENT OF SUBSEQUENT POST AND PANEL

BEGIN RETAINING/NOISE WALL TRANSITION RIGHT TO RIGHT-OF-WAY STA. 16+396.230



WASATCH CONSTRUCTORS
 DEC 0 2 1998
 RELEASED FOR CONSTRUCTION

APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	NO.	DATE
Δ	6-30-97	Δ	11-09-98
RELEASE FOR EARLY CONSTRUCTION		NDC-0281/DWG. NO. CHANGED FROM 1.2-1406.05	
UTAH DEPARTMENT OF TRANSPORTATION			
URS Greiner SVERDRUP/DE LEUW			
DESIGN	JLH	5-12-97	CHECK
DRAWN	TJP	5-15-97	CHECK
QUANT.	JLH	5-27-97	CHECK
PROJECT NUMBER	#SP-15-711351296		
COUNTY	SALT LAKE		
DWG. NO.	1.2R-343-6.5		
SHT.	OF 3		
REF.			

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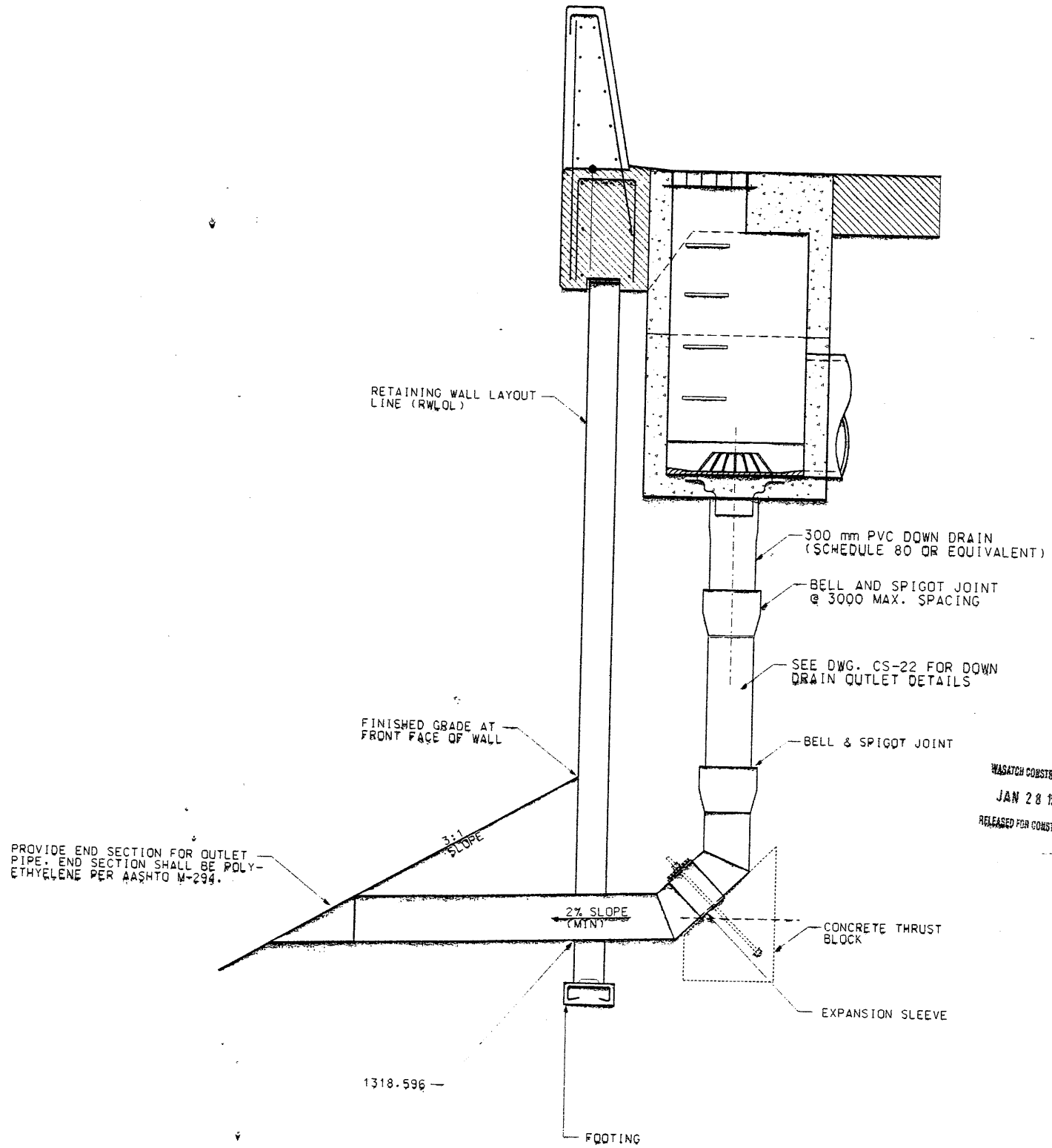
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 First Reference File Levels [1-20, 22, 24-30, 32, 34, 35, 37-62, 64]
 Second Reference File Levels [1-64]
 Third Reference File Levels [1-4, 6-64]

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Date: 23-JAN-1998 Time: 13:18

Username: jamisocw



PROVIDE END SECTION FOR OUTLET PIPE. END SECTION SHALL BE POLY-ETHYLENE PER AASHTO M-294.

WASATCH CONSTRUCTORS
 JAN 28 1998
 RELEASED FOR CONSTRUCTION

DOWN DRAIN DETAIL
 STA 1+143.397

I-15 CORRIDOR RECONSTRUCTION		UTAH DEPARTMENT OF TRANSPORTATION		APPROVED FOR CONSTRUCTION	
MISC DETAILS RET/WALL R-343-7		SVERDRUP/DE LEUW		NO. Δ	DATE 1-22-98
SECTION 1.2		DESIGN PV 11/97	CHECK JBE 11/97	INITIAL RELEASE <i>JBE</i>	
PROJECT NUMBER *SP-15-(135)296		DRANN PV 11/97	CHECK JBE 11/97		
		APPROVED 11/97	DATE	SECTION MANAGER 1212421	
SALT LAKE COUNTY		RICK CHAPMAN	PROJECT DESIGN ENGINEER		
DWC. NO. 1.2R-343-7.2A		DON GRALL	SECTION MANAGER		
SHT. 3 OF 14					

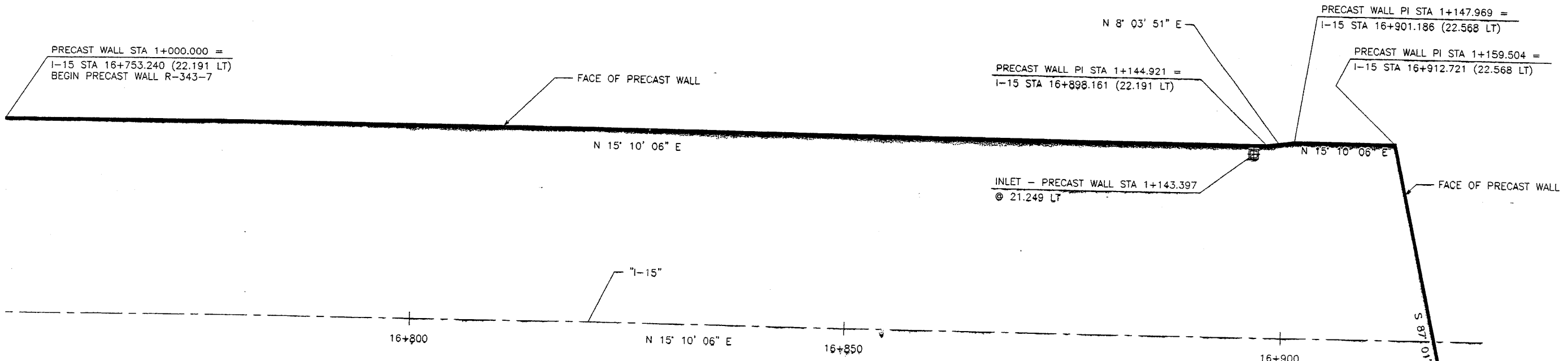
07 SUBMITL-2 RE-1

H:\RE_EARTH\PROJECT\239-0007\1998\725FP

1-98

FINAL PLOT

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	1/9/98	RELEASE FOR CONSTRUCTION



- GENERAL NOTES**
- ALL WALLS ARE SHOWN FRONT FACE. NOTE STATIONING.
 - PANEL TYPE IS DESIGNATED ON EACH PANEL. CONNECTOR LABELS INDICATE NUMBER OF CONNECTORS PER ROW.
EXAMPLE: 5B2-10 IS A "B2-10" PANEL WITH FIVE (5) CONNECTORS PER ROW. IF NO CONNECTORS ARE SHOWN, FOUR (4) CONNECTOR PANELS SHALL BE USED:
 - SOIL REINFORCING MESH TYPE IS DESIGNATED ON EACH PANEL. MESH LABELS INDICATE WIRE SIZE AND SPACING. LONGITUDINAL WIRE AND CROSSBAR SIZES ARE THE SAME UNLESS NOTED OTHERWISE.
EXAMPLE: 4W11-6 MESH HAS FOUR (4) W11 LONGITUDINAL WIRES WITH W11 CROSSBARS AT 6" CENTERS.
EXAMPLE: 4W20-12 MESH HAS FOUR (4) W20 LONGITUDINAL WIRES WITH W20 CROSSBARS AT 12" CENTERS.
EXAMPLE: 5W11-12 MESH HAS FIVE (4) W11 LONGITUDINAL WIRES WITH W11 CROSSBARS AT 12" CENTERS.
EXAMPLE: 5W20-24 MESH HAS FIVE (4) W20 LONGITUDINAL WIRES WITH W20 CROSSBARS AT 24" CENTERS.
EXAMPLE: 6W11-12 MESH HAS SIX (4) W11 LONGITUDINAL WIRES WITH W11 CROSSBARS AT 12" CENTERS.
 - SEE RETAINED EARTH INSTALLATION MANUAL FOR PROPER WALL ERECTION PROCEDURES AND GUIDELINES.
 - CONSTRUCTION PROCEDURES SHALL PREVENT BACKFILL SATURATION AND PONDING.
 - HEAVY EQUIPMENT SHALL NOT BE USED WITHIN ONE METER OF THE BACK OF THE RETAINED EARTH PANELS. HAND COMPACTORS SHALL BE USED IN THIS AREA.
 - CARE SHALL BE TAKEN TO PREVENT DAMAGE TO GALVANIZING. DAMAGED GALVANIZING SHALL BE COATED WITH ZINC RICH PAINT.
 - BEARING PADS AND FILTER FABRIC ARE NOT REQUIRED BETWEEN THE LEVELING PAD AND THE FIRST ROW OF PANELS. TEMPORARY WEDGES MAY BE USED TO PROVIDE PROPER ALIGNMENT.
 - VSL RETAINED EARTH IS PROTECTED UNDER U.S. PATENT 4,725,170.
 - ALL PANELS SHALL HAVE AN ARCHITECTURAL FINISH, SEE SHEET RE-3 FOR DETAIL.
 - 7W20 MESH IS MADE OF A 3W20 MESH COMBINED WITH A 4W20 MESH.

RETAINED EARTH INDEX	
RE-1	PLAN PRECAST FACE WALL R-343-7, NOTES & DESIGN CRITERIA
RE-2	TYPICAL CROSS SECTIONS
RE-3	TYPICAL CROSS SECTIONS
RE-4	TYPICAL CROSS SECTIONS
RE-5	TYPICAL CROSS SECTIONS
RE-6	SPECIAL DETAILS
RE-7	ELEVATION PRECAST WALL "R-343-7"
RE-8	ELEVATION PRECAST WALL "R-343-7"
RE-9	ELEVATION PRECAST WALL "R-343-7"
RE-10	ELEVATION PRECAST WALL "R-343-7"
RE-11	SPECIAL PANEL DETAILS

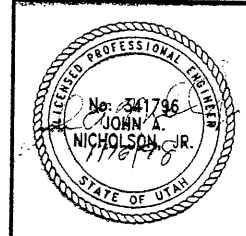
DESIGN PARAMETERS	
ANGLE OF INTERNAL FRICTION (SELECT) = 34°	
ANGLE OF INTERNAL FRICTION (BASE) = 30°	
ANGLE OF INTERNAL FRICTION (RANDOM) = 34°	
UNIT WEIGHT BACKFILL = 135 PCF.	
TRAFFIC SURCHARGE = 250 PSF	
SEISMIC ACCELERATION COFF. = 0.25g (TYP)	
SEISMIC ACCELERATION COFF. = 0.65g (AT BRIDGE ABUTMENTS)	

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

PLAN VIEW WALL "R-343-7"

SCALE: 1=250 (FULL SIZE)
SCALE: 1=500 (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

RETAINED EARTH™ WALLS
 PLAN VIEW PRECAST WALL "R-343-7"
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

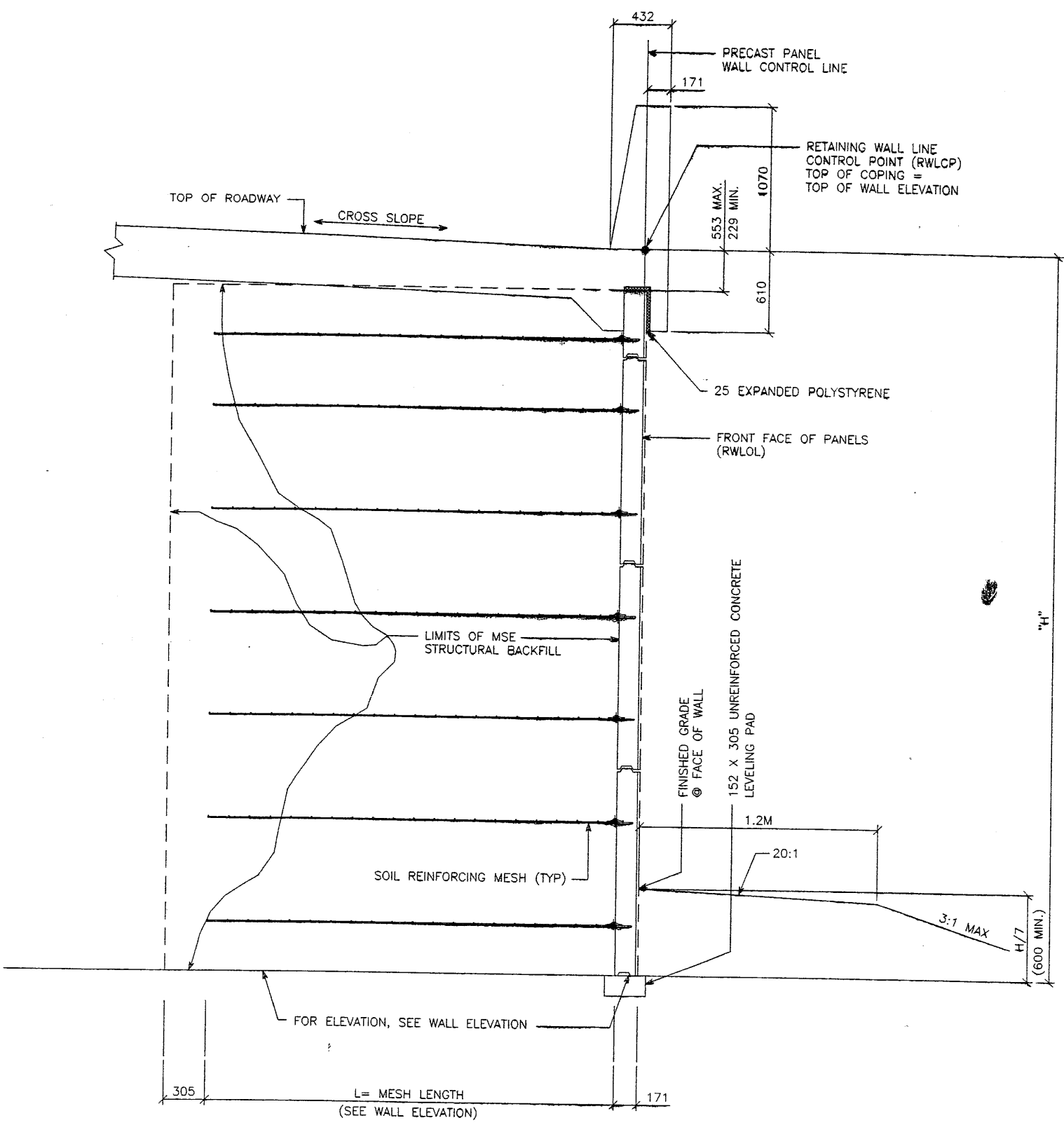
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JOB NO:	239-0007
	4/14
	RE-1

VSL CORPORATION
 2840 Plaza Place, Suite 200
 Raleigh, NC 27612 781-6722
 Telephone: (919) 781-6722
 Fax: (919) 781-6889

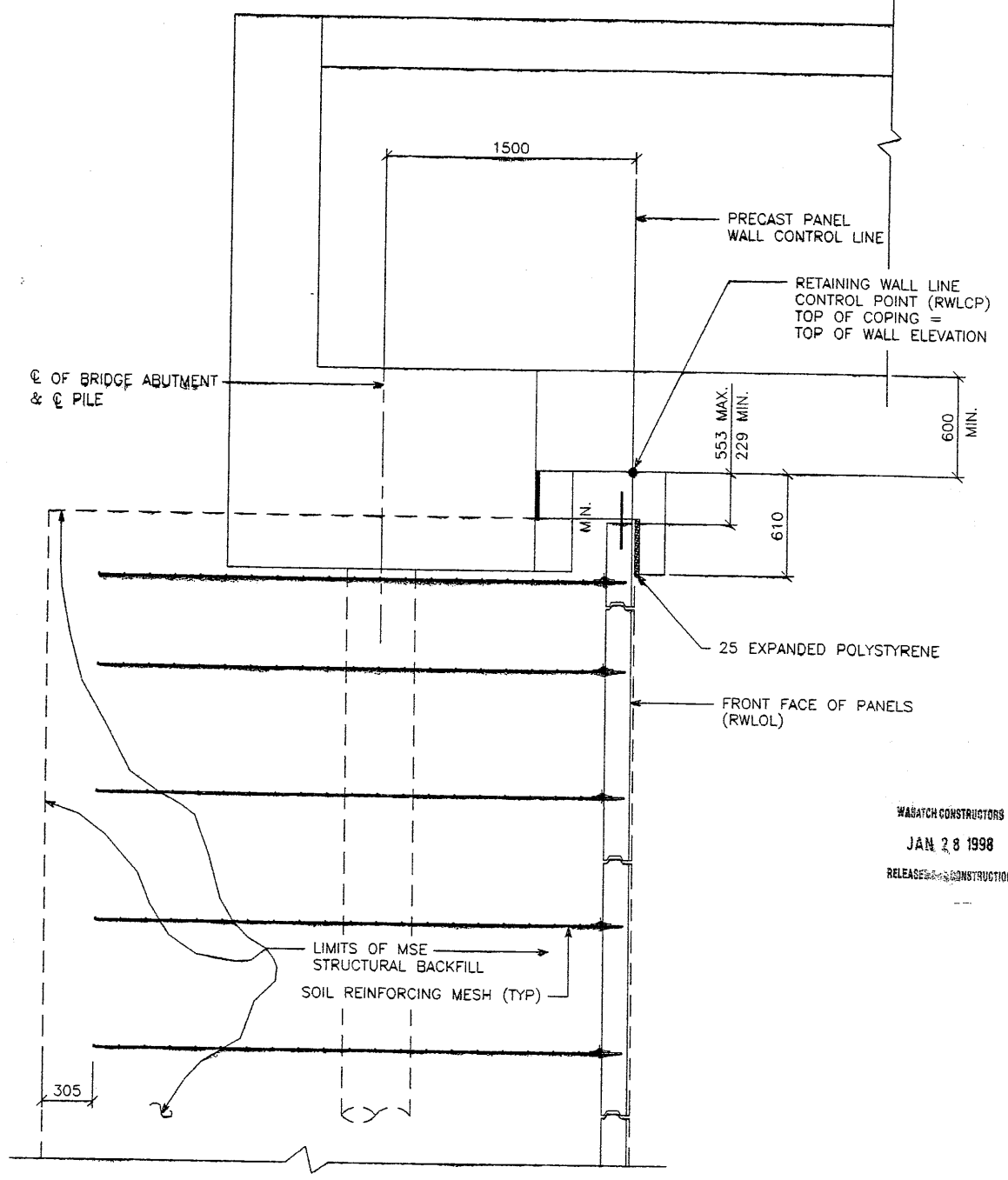
WASATCH CONSTRUCTORS
 JAN 28 1998
 RELEASED FOR CONSTRUCTION

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

NO.	DATE	REVISION	BY	CHK

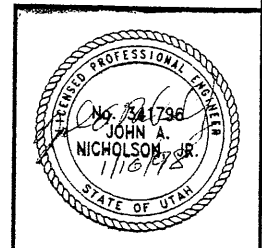


TYPICAL CROSS SECTION - STA 1+023.510 TO 1+144.921
 TYPICAL CROSS SECTION - STA 1+223.949 TO 1+231.533
 (SEE DWG. NO. 1.2R-343-7.2 FOR ADDITIONAL INFORMATION)
 SCALE: 1:20 (FULL SIZE)
 SCALE: 1:40 (HALF SIZE)



TYPICAL CROSS SECTION - STA 1+159.504 TO 1+209.366
 (SEE DWG. NO. 1.2R-343-7.2 FOR ADDITIONAL INFORMATION)
 SCALE: 1:20 (FULL SIZE)
 SCALE: 1:40 (HALF SIZE)

METRIC



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

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	1/9/98	RELEASE FOR CONSTRUCTION <i>OK</i>

DES.	MM	1-9-98	RETAINED EARTH™	NO.	DATE	BY	CHK
DRN.	RSW	1-9-98					
CHK.	MM	1-9-98					

VSL CORPORATION
 2810 Piedmont Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-6272
 Fax: (919) 781-6869

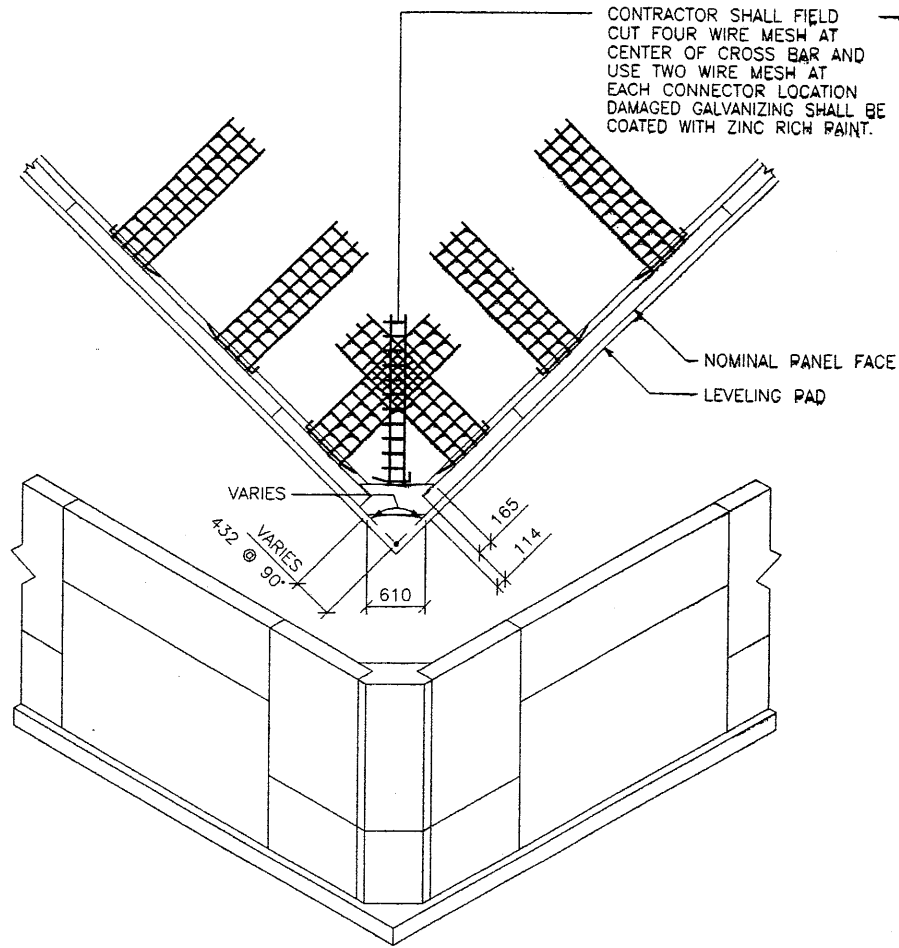
ATLANTA, GA / DALLAS, TX / DENVER, CO (CORPORATE OFFICE)
 MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA

WABATCH CONSTRUCTORS
 JAN 28 1998
 RELEASE FOR CONSTRUCTION

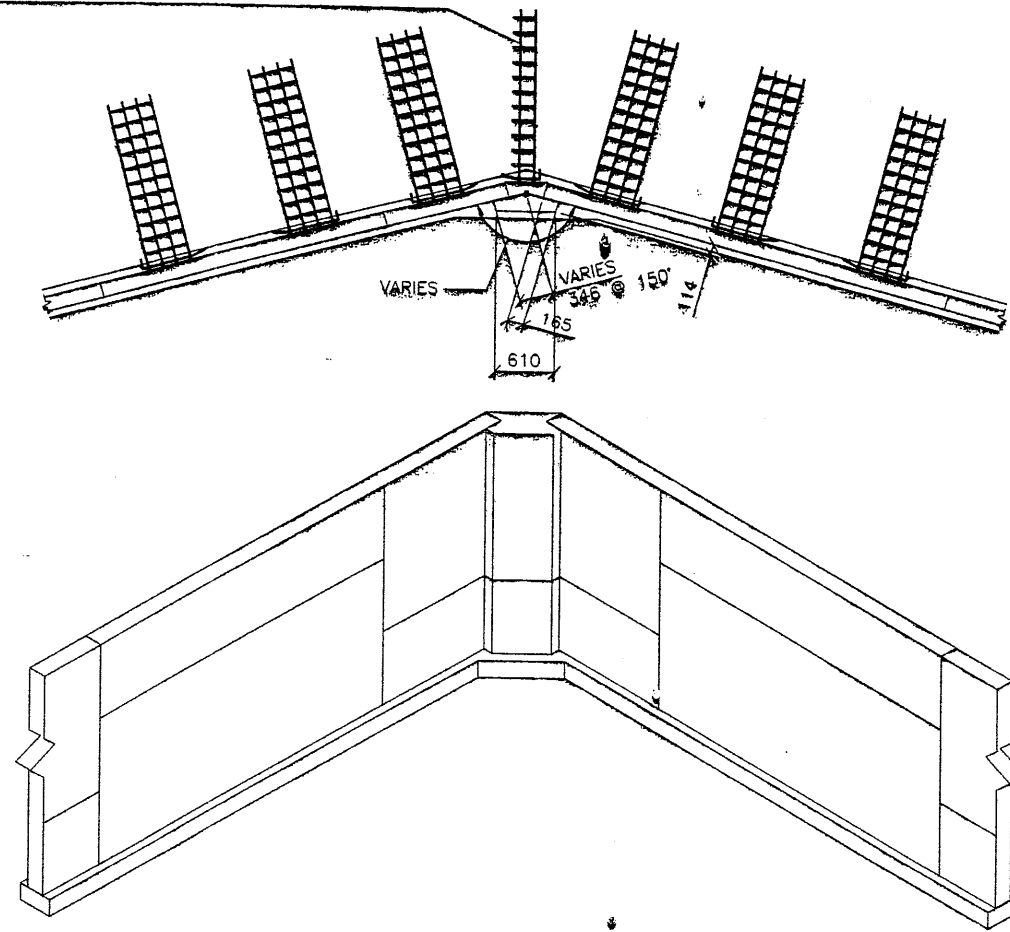
RETAINED EARTH™ WALLS
 WIRE FACED WALL "R-343-7"
 TYPICAL CROSS SECTION
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

SCALE:
 1.2R-343-7.4
 JOB NO:
 239-0007
 5/14
 RE-2

H:\RE_EARTH\PROJECT\239-0007\1998\72SERIES\72-08\SUP
 9-98
 FINAL PL



80 **OUTSIDE CORNER ELEMENT**
 PLAN VIEW / ISOMETRIC



80 **INSIDE CORNER ELEMENT**
 PLAN VIEW / ISOMETRIC

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲	1/9/98	RELEASE FOR CONSTRUCTION <i>OK</i>

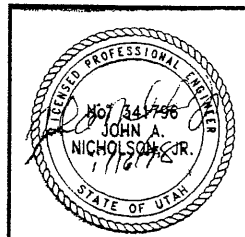
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1-9-98									
DRN.	1-9-98								
CHK.	1-9-98								

VSL CORPORATION
 2640 Plaza Plaza, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-6772
 Fax: (919) 781-6863

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

WASATCH CONSTRUCTORS
 JAN 28 1998
 RELEASED FOR CONSTRUCTION

METRIC

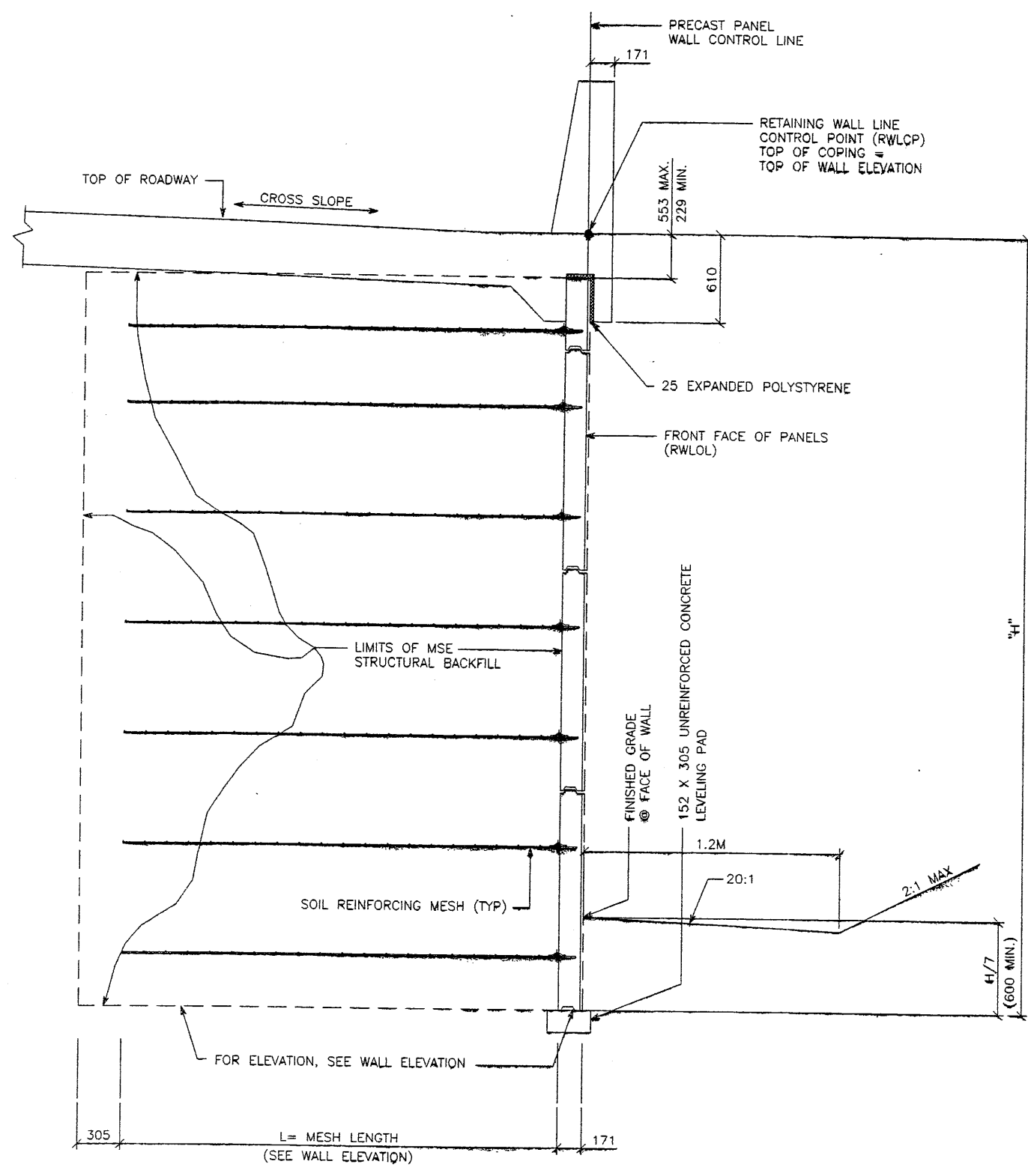


CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY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

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RETAINED EARTH™ WALLS
 PRECAST WALL "R-343-7"
 SPECIAL DETAILS
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

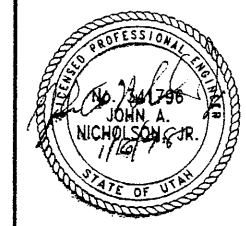
SCALE:	1.1R-343-7.6
JOB NO:	239-0007 / 14
	RE-4



TYPICAL CROSS SECTION - STA 1+000.000 TO 1+023.510
(SEE DWG. NO. 1.2R-343-7.2 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

WASATCH CONSTRUCTORS
JAN 28 1998
RELEASED FOR CONSTRUCTION.

RETAINED EARTH™ WALLS
WIRE FACED WALL "R-343-7"
TYPICAL CROSS SECTION
UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

SCALE: 1.2R-343-7.7
JOB NO: 239-0007 8/14
RE-5

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	1/9/98	RELEASE FOR CONSTRUCTION <i>se</i>

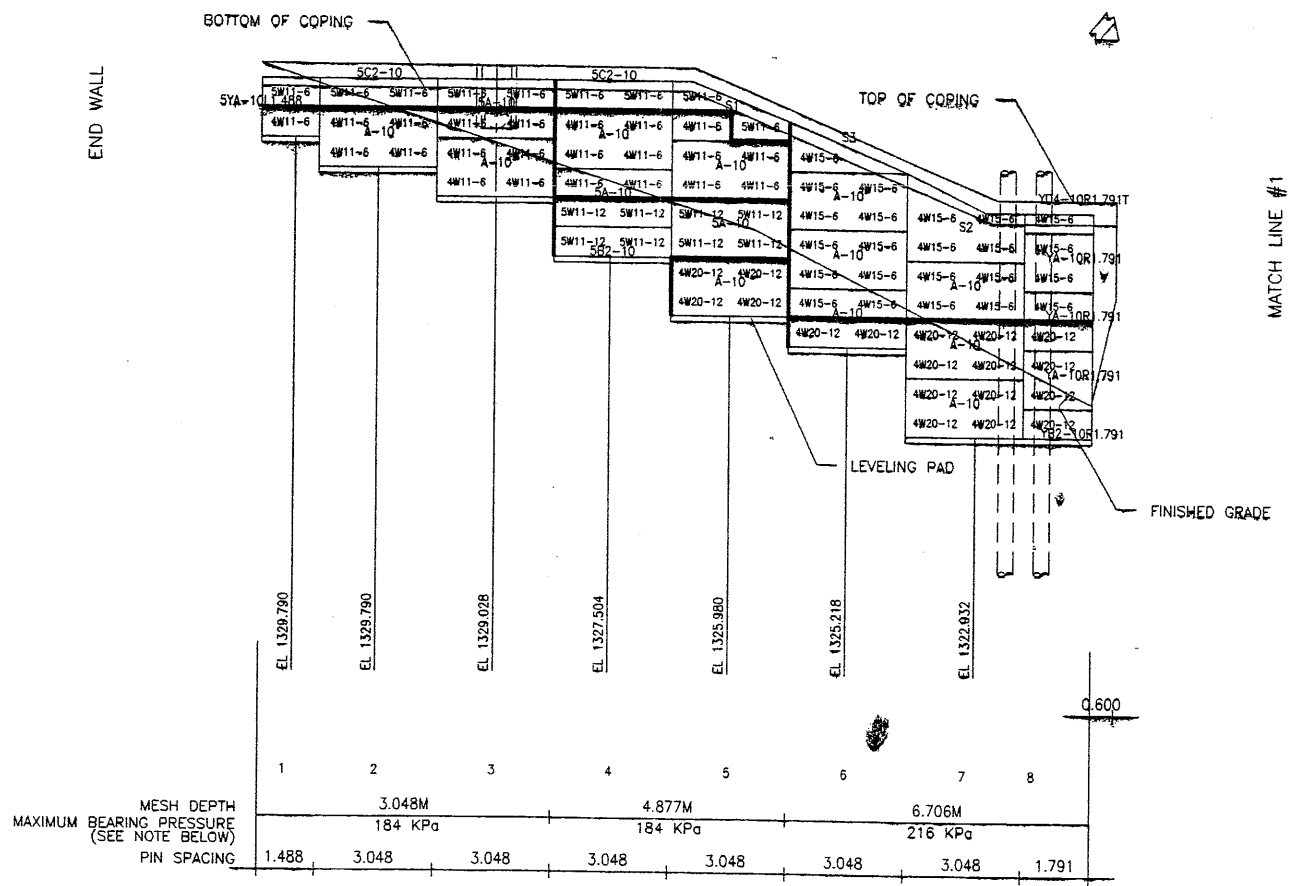
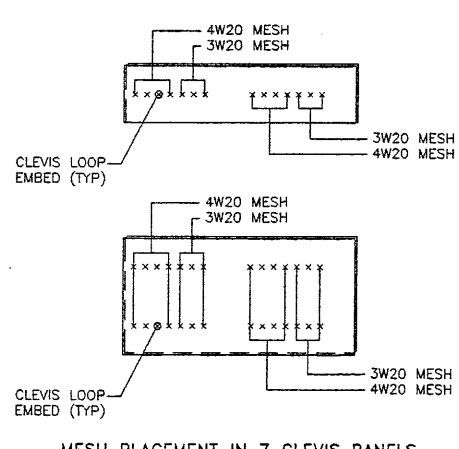
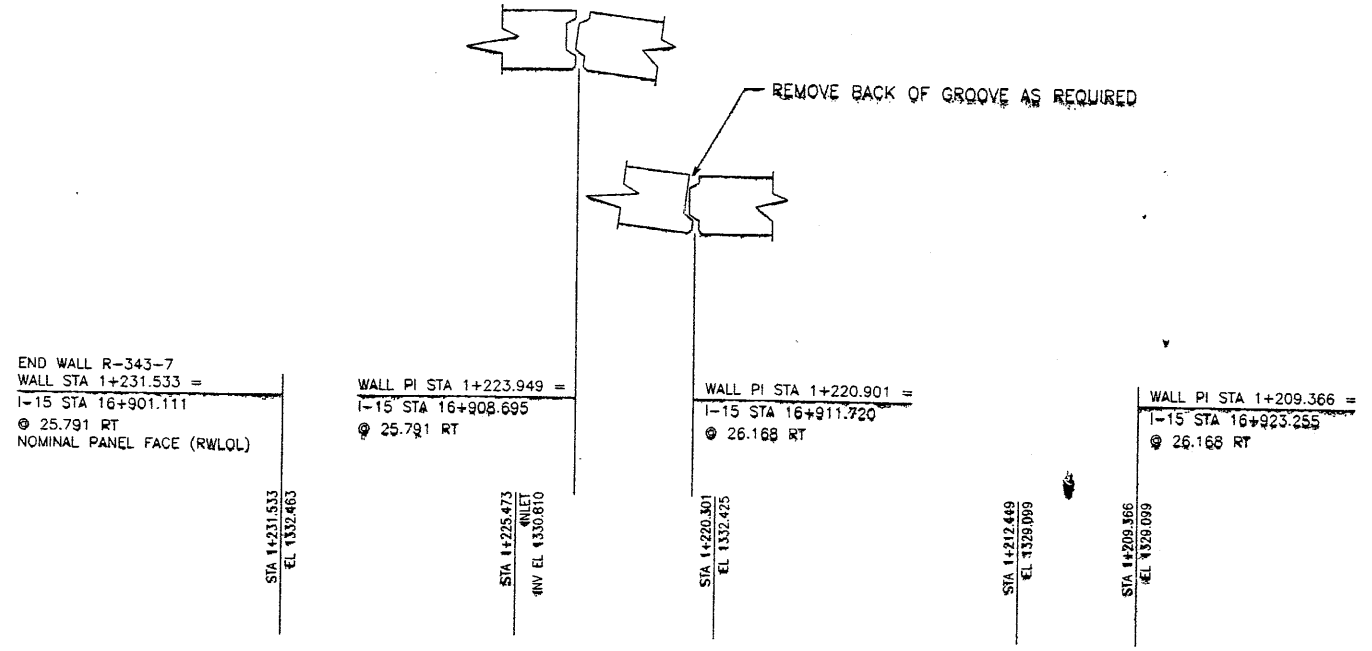
DES.	MM	RSW	MM	RETAINED EARTH™	NO.	DATE	REVISION	BY	CHK
DES. 1-9-98	MM	RSW	MM						
DRN 1-9-98									
CHK 1-9-98									

VSL CORPORATION
2840 Plaza Place, Suite 200
Raleigh, NC 27612
Telephone: (919) 781-6772
Fax: (919) 781-4969

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

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APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	1/9/98	RELEASE FOR CONSTRUCTION <i>oe</i>



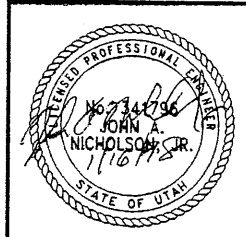
ELEVATION PRECAST WALL R-343-7

(FRONT FACE SHOWN) SCALE 1:100 (FULL SIZE)
 (TOTAL SURFACE AREA OF PANELS = 2,437.64 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.

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.

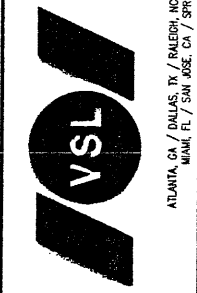
METRIC



RETAINED EARTH™ WALLS
 PRECAST WALL "R-343-7"
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

SCALE:	1.2R-343-7.8
JOB NO:	239-0007
DATE:	9/14
REVISION:	RE-6

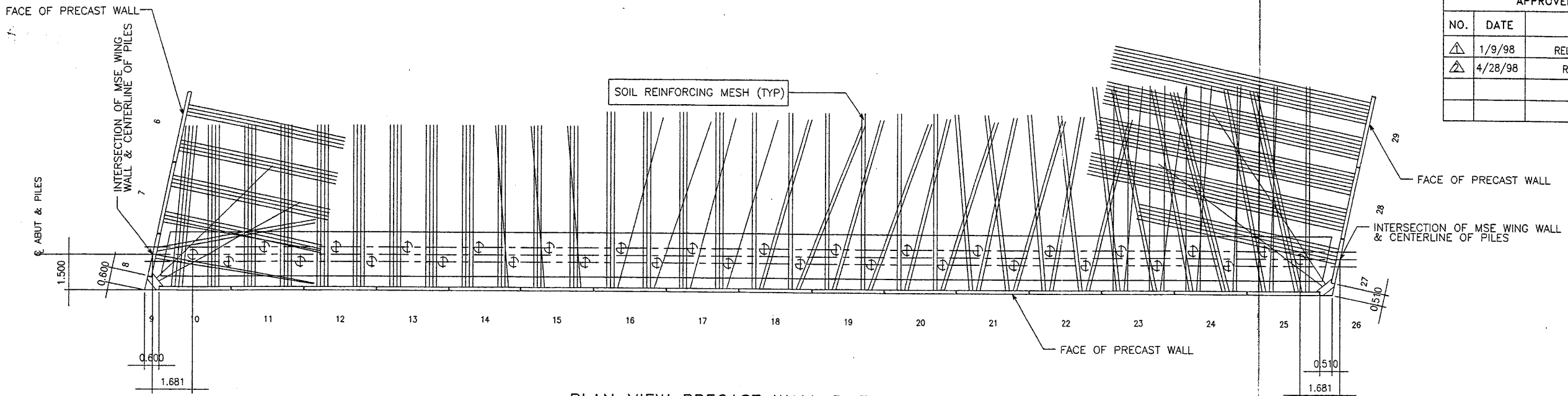
VSL CORPORATION
 2640 Plaza Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-6272
 Fax: (919) 781-4969



WABATCH CONSTRUCTORS
 JAN 28 1998
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APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	1/9/98	RELEASE FOR CONSTRUCTION
△	4/28/98	REVISED CORNER PANELS



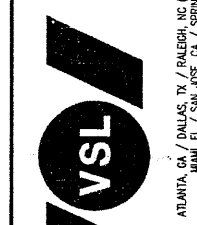
PLAN VIEW PRECAST WALL R-343-7

WALL PI STA 1+209.366 =
I-15 STA 16+923.255
● 26.168 RT.

WALL PI STA 1+159.504 =
I-15 STA 16+912.721
● 22.568 LT

WASATCH CONSTRUCTORS
MAY 04 1998
RELEASED FOR CONSTRUCTION

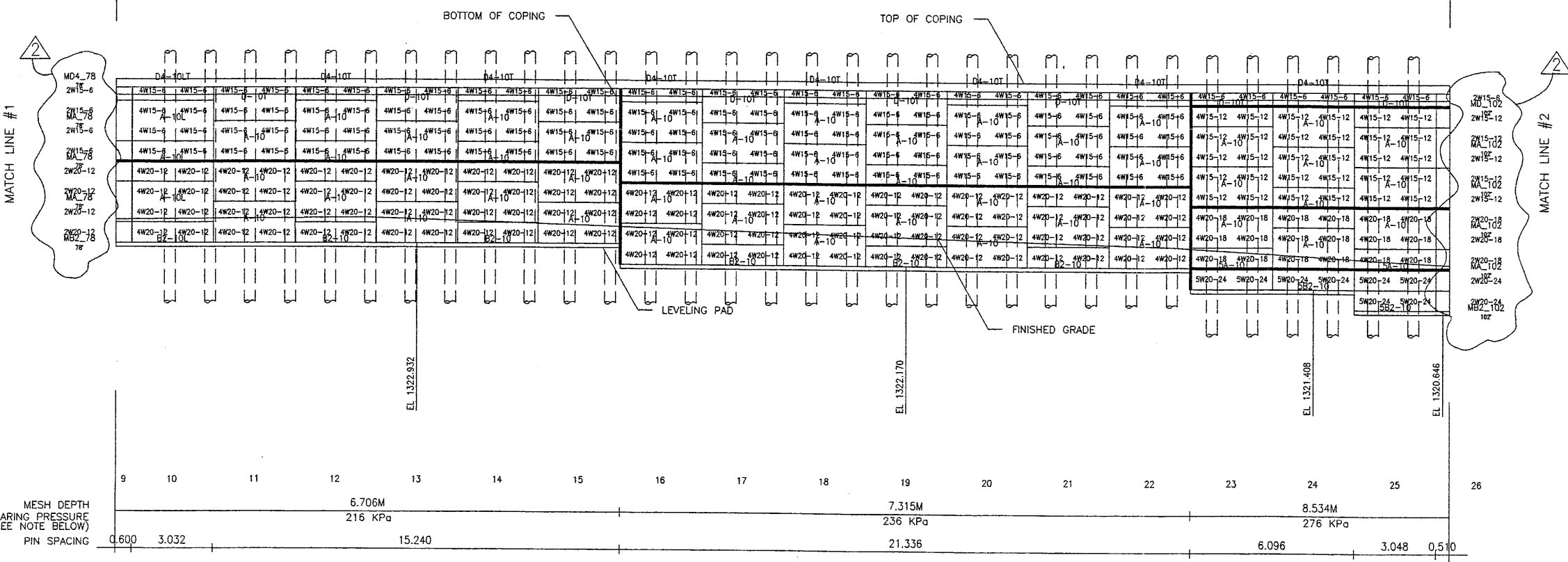
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2840 Plaza Place, Suite 200
Raleigh, NC 27612 781-6272
Telephone: (919) 781-4889
Fax: (919) 781-4889



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RETAINED EARTH™ WALLS
PRECAST WALL "R-343-7"
UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

SCALE:	1.2R-343-7.9
JOB NO:	239-0007/14
RE-7	

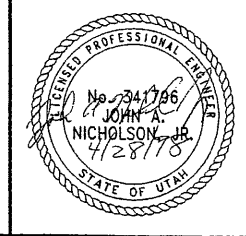


ELEVATION PRECAST WALL R-343-7

(FRONT FACE SHOWN)
(TOTAL SURFACE AREA OF PANELS = 2,437.64 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.

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.



7 SUBMIT-2/72-07

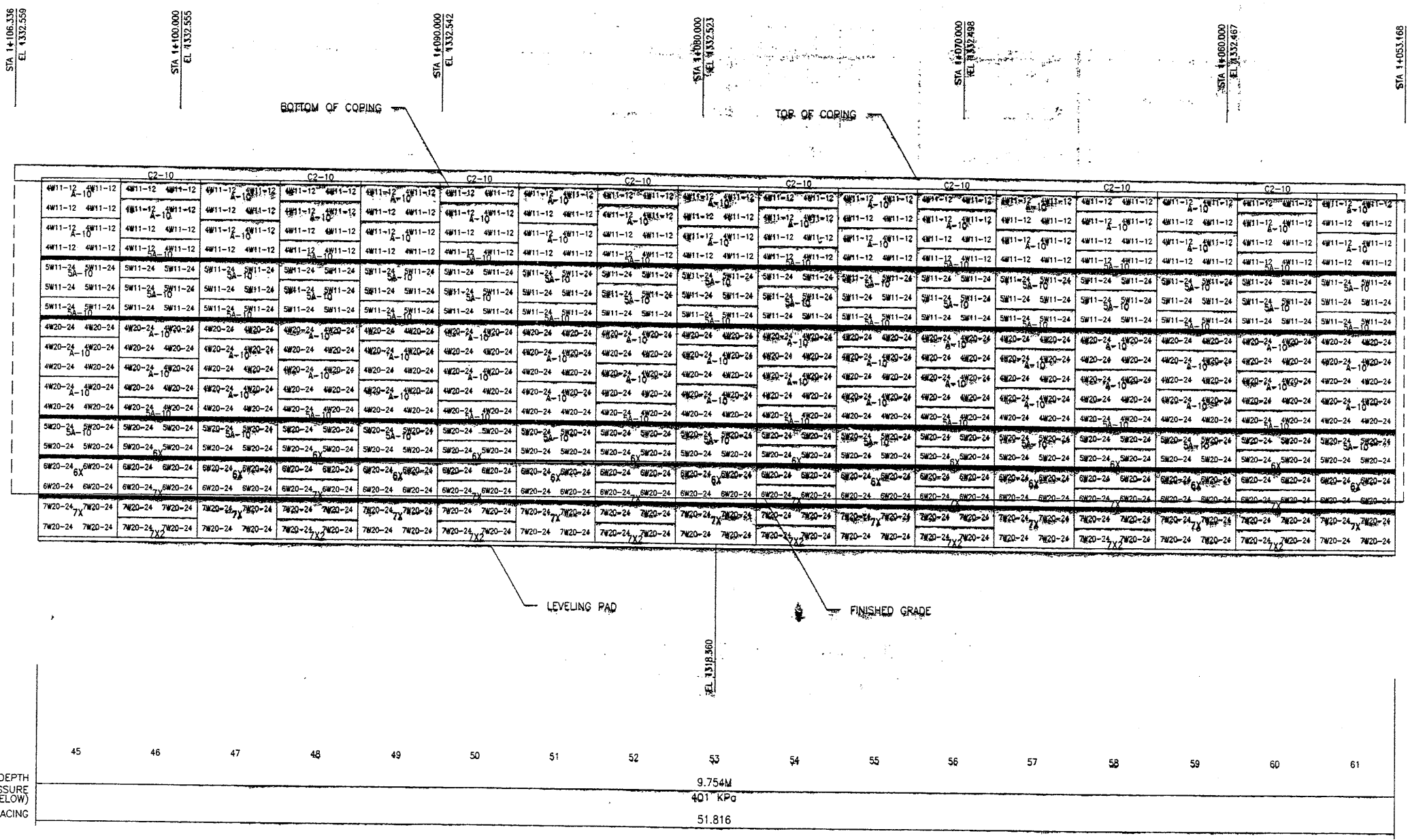
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1-9-98

FINAL

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APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	1/9/98	RELEASE FOR CONSTRUCTION



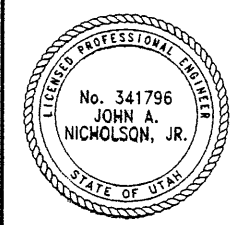
MESH DEPTH
MAXIMUM BEARING PRESSURE
(SEE NOTE BELOW)
PIN SPACING

ELEVATION PRECAST WALL R-343-7
(FRONT FACE SHOWN) SCALE 1:100 (FULL SIZE)
(TOTAL SURFACE AREA OF PANELS = 2,437.64 SM) SCALE 1:200 (HALF SIZE)

CONTRACTOR NOTE:
SEE DETAIL ON SHEET RE-6 FOR
PLACEMENT OF 7W20 MESH

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

METRIC



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STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE
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THE MANUFACTURER'S SPECIFICATION.

WATCH CONSTRUCTORS
JAN 28 1998
RELEASED FOR CONSTRUCTION

RETAINED EARTH™ WALLS
PRECAST WALL "R-343-7"
UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

SCALE: 1.2R-343-7.11
JOB NO: 239-0007
RE-9

VSL CORPORATION
2840 Plaza Place, Suite 200
Raleigh, NC 27612
Telephone: (919) 791-6272
Fax: (919) 791-4989

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MINNAPOLIS, MN / SAN ANGELO, TX / SPRINGFIELD, VA

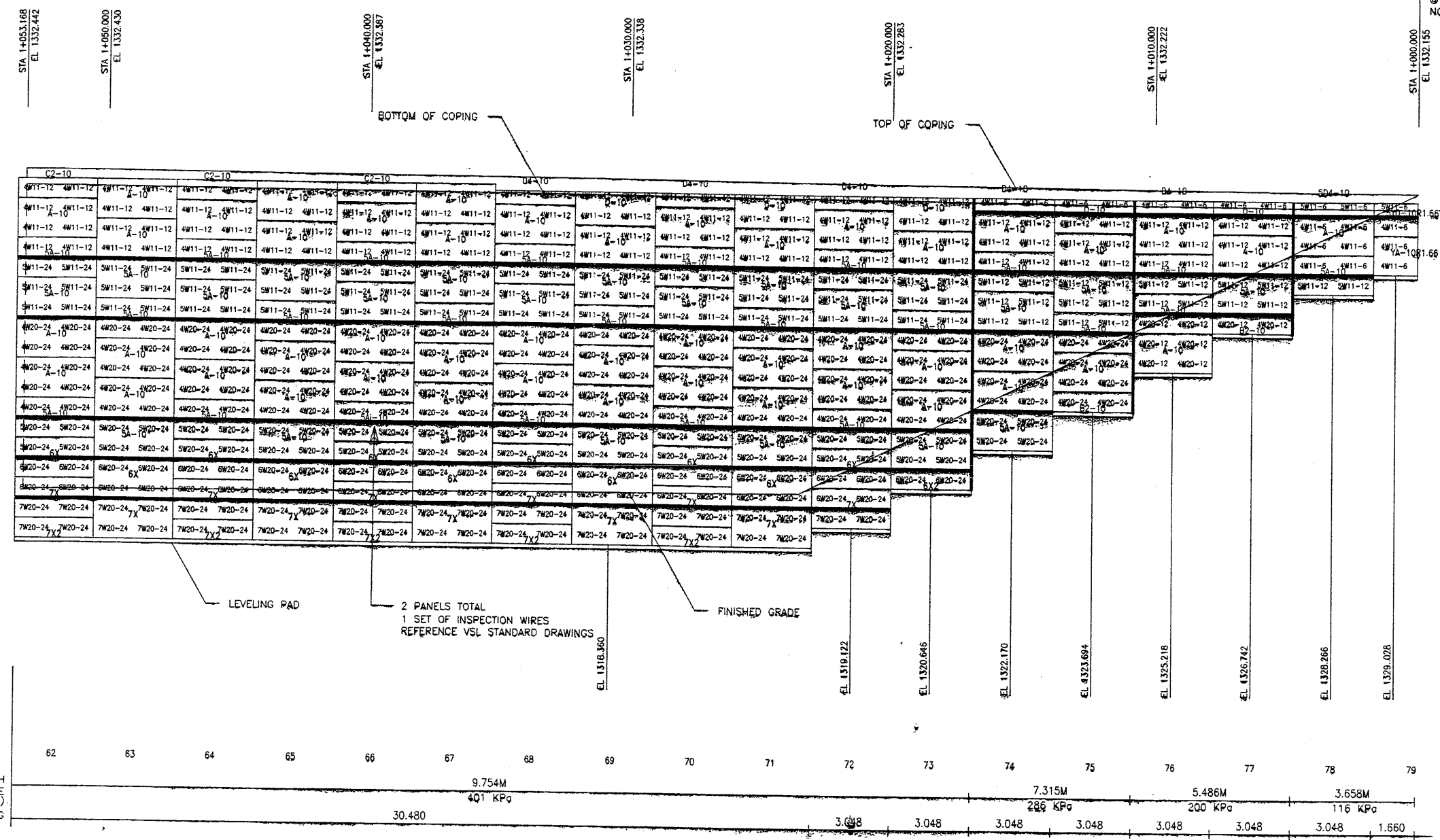
DES.	MM	RSW	MM	RETAINED EARTH™	NO.	DATE	BY	CHK
1-9-98								
3-9-98								
4-9-98								

NO.	DATE	DESCRIPTION
1	1/9/98	RELEASE FOR CONSTRUCTION

H:\RE_EARTH\PROJECT\239-0007\1998\72SERIES\IMTL-1\72-07
 FINAL PLOT 3-98

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	1/9/98	RELEASE FOR CONSTRUCTION

BEGIN WALL R-343-7
 WALL STA 1+000.000 =
 1-15 STA 16+753.240
 @ 22.191 LT
 NOMINAL PANEL FACE (RWL/L)

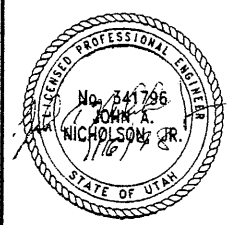


ELEVATION PRECAST WALL R-343-7
 (FRONT FACE SHOWN)
 (TOTAL SURFACE AREA OF PANELS = 2,437.64 SM)
 SCALE 1:100 (FULL SIZE)
 SCALE 1:200 (HALF SIZE)

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

CONTRACTOR NOTE:
 SEE DETAIL ON SHEET RE-6 FOR
 PLACEMENT OF 7W20 MESH

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 THE MANUFACTURER'S SPECIFICATION.



HASATCH CONSTRUCTORS
 JAN 28 1998
 RELEASED FOR CONSTRUCTION

DES.	MM	DRN	CHK	RETAINED EARTH™	NO.	DATE	BY	CHK
1-9-98	RSW	MM						
1-9-98	RSW	MM						
1-9-98	MM							

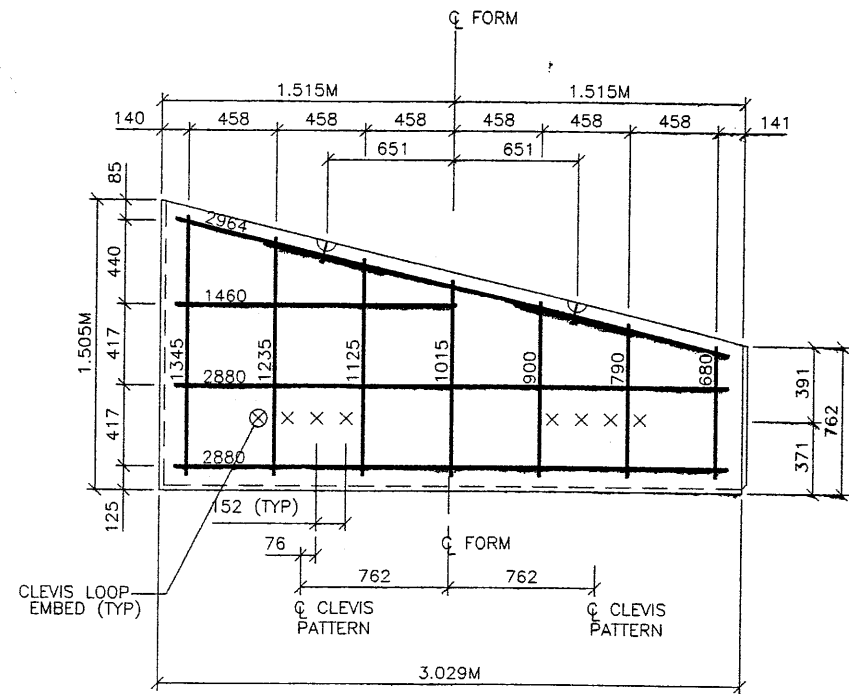
VSL CORPORATION
 2840 Plaza Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 791-6272
 Fax: (919) 981-4969

ATLANTA, GA / DALLAS, TX / BALTIMORE, MD (CORPORATE OFFICE)
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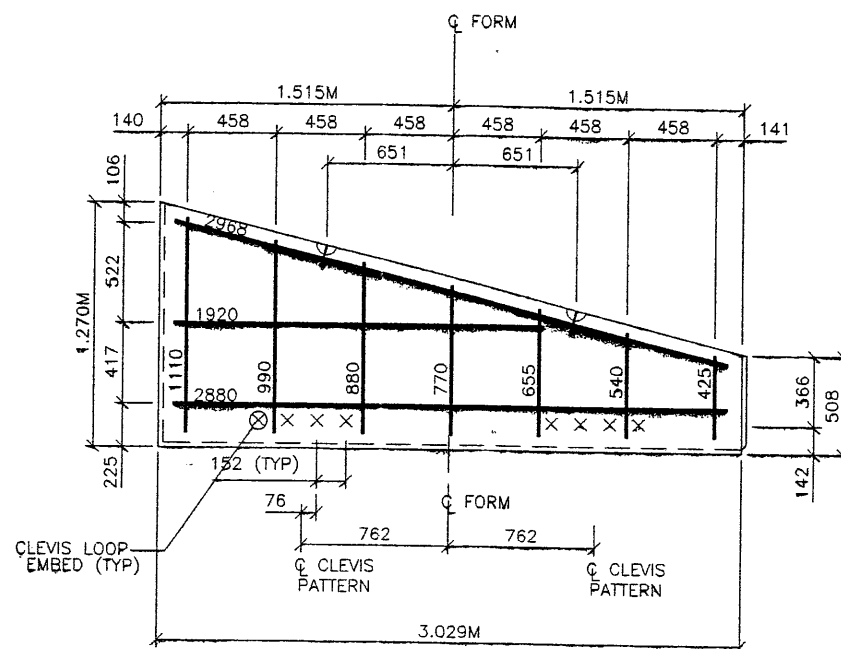
RETAINED EARTH™ WALLS
PRECAST WALL "R-343-7"
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

SCALE:
 1.2R-343-7.12
 JOB NO:
 239-0007 13/14
 RE-10

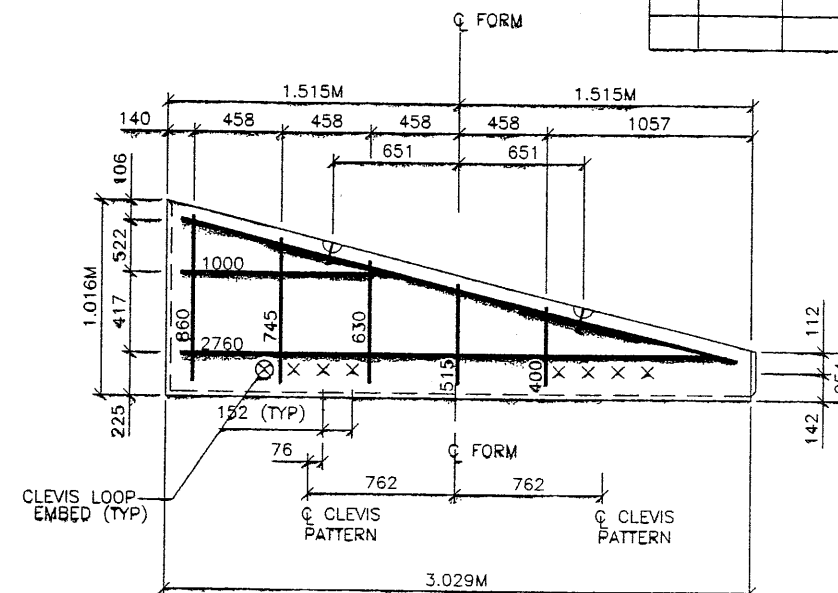
APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	1/9/98	RELEASE FOR CONSTRUCTION ✓



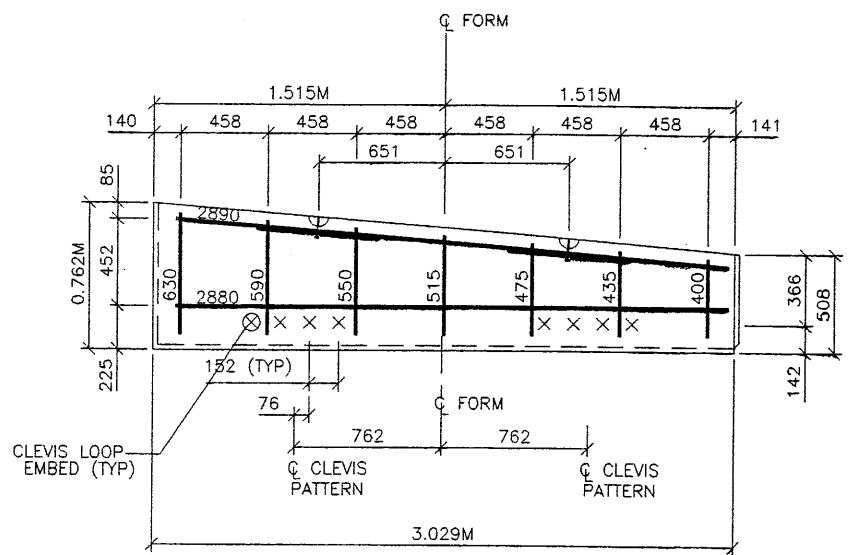
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(TYPE G11-10R OPPOSITE HAND)
(AREA = 3.484 SQ.M)



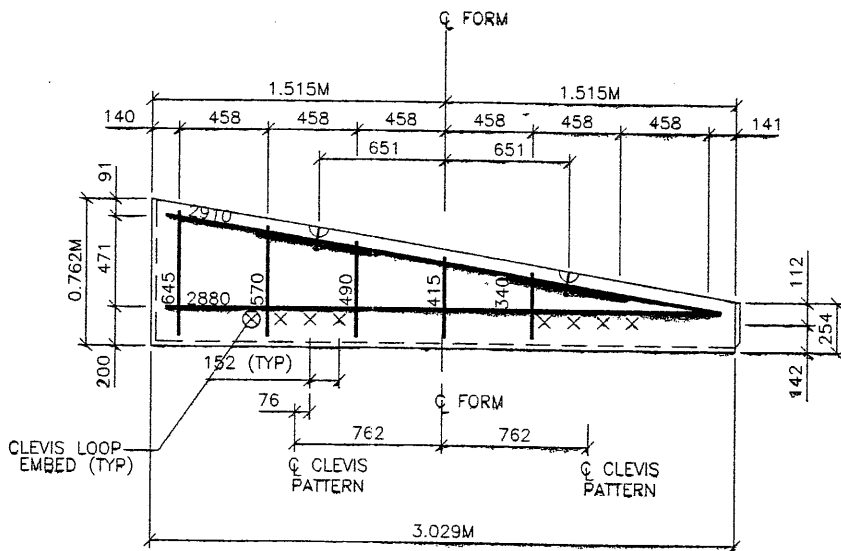
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(TYPE G12-10R OPPOSITE HAND)
(AREA = 2.710 SQ.M)



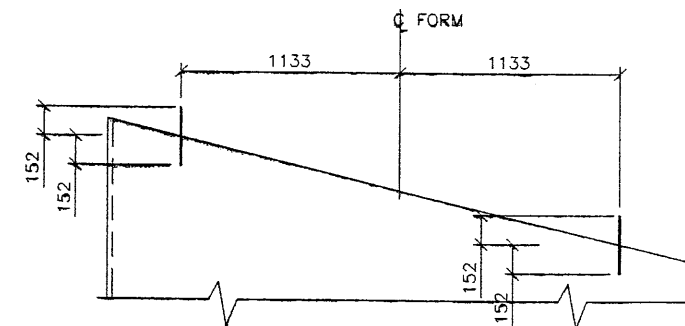
G13L TYPE G13-10L SHOWN
(TYPE G13-10R OPPOSITE HAND)
(AREA = 1.935 SQ.M)



G4L TYPE G4-10L SHOWN
(TYPE G4-10R OPPOSITE HAND)
(AREA = 1.935 SQ.M)



G9L TYPE G9-10L SHOWN
(TYPE G9-10R OPPOSITE HAND)
(AREA = 1.547 SQ.M)



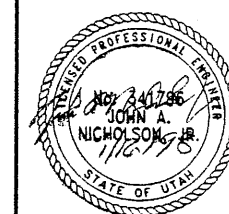
T TYPE T REBAR
G1-10LT, G1-10RT, G2-10LT, G2-10RT, G3-10LT, G3-10RT,
G4-10LT, G4-10RT, G6-10LT, G6-10RT, G7-10LT, G7-10RT,
G8-10LT, G8-10RT, G9-10LT, G9-10RT, G10-10LT, G10-10RT,
G11-10LT, G11-10RT, G12-10LT, G12-10RT,
G13-10LT & G13-10RT HAVE 2-#13x304mm DOWELS
(EPOXY COATED)

- 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 EPOXY COATED TO 0.5mm THICKNESS. REFER TO SPECIAL PROVISIONS, SECTION 508.
- CONCRETE PANELS TO HAVE 28 DAY COMPRESSIVE STRENGTH OF 27,500 KPa.
- EQUIVALENT WELDED WIRE FABRIC MAY BE USED.
- ALL PANELS TO USE 9.5mmØ CLEVIS LOOPS.
- VSL RETAINED EARTH™ IS PROTECTED UNDER PATENT 4,725,170.

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



REVISIONS:

NO.	DATE	DESCRIPTION

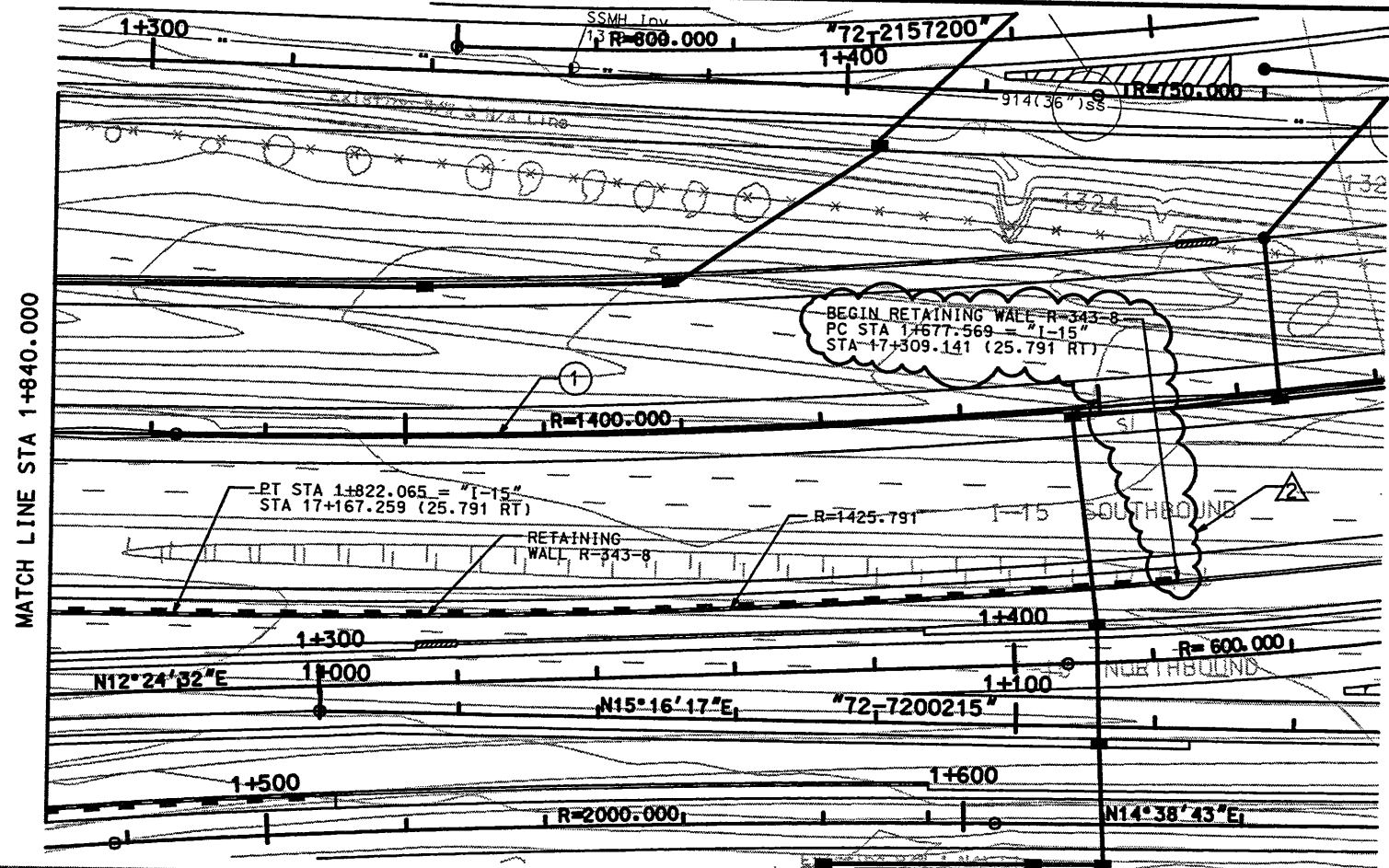
DESIGN: 1-9-98 MM
DRAWN: 1-9-98 RSW
CHECKED: 1-9-98 MM

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MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA

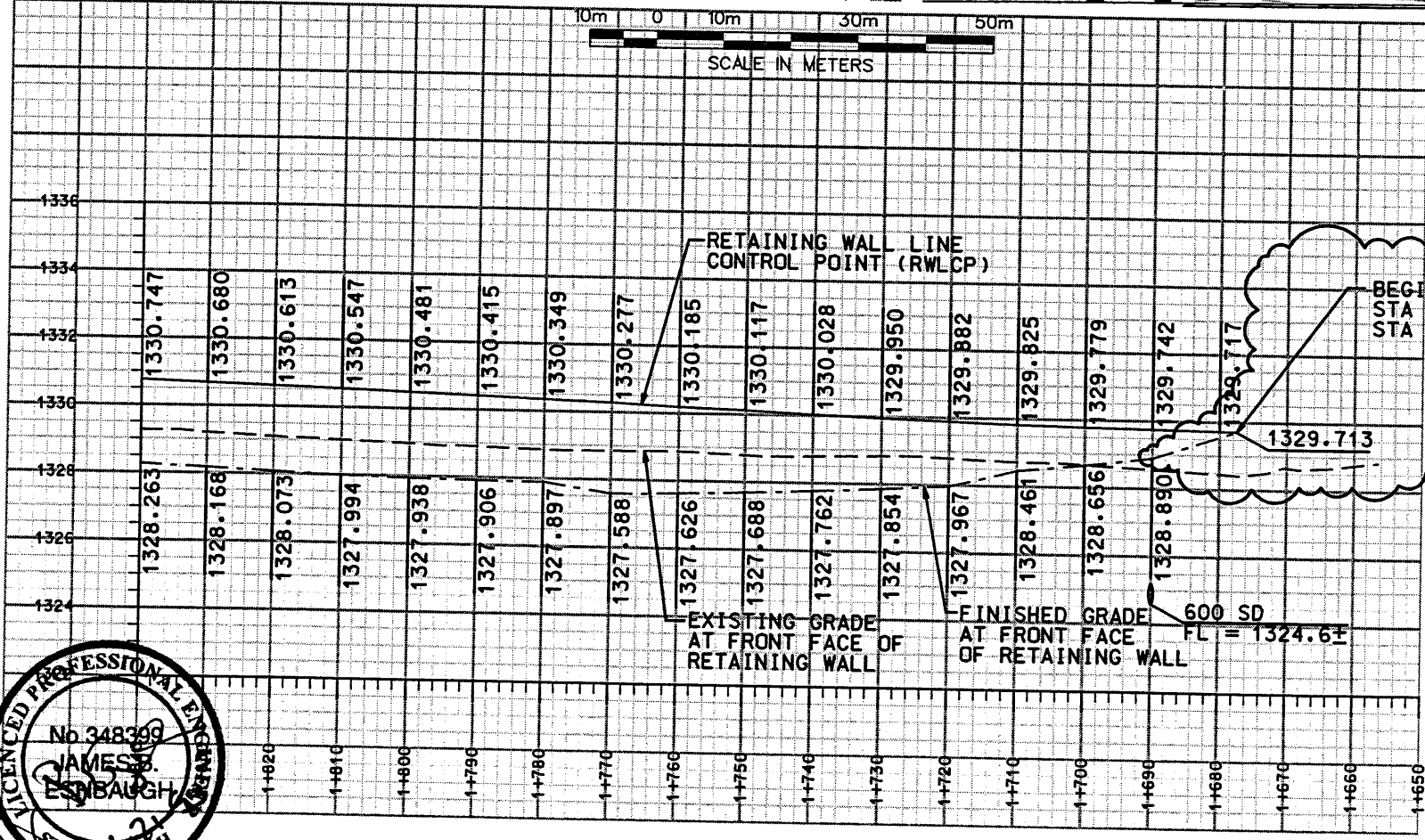
RETAINED EARTH™ WALLS
PRECAST WALL "33-09"
"G" PANEL REINFORCEMENT 1.524M x 3.048M
UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

SCALE: 1.2R-343-7.13
JOB NO: 239-0007/14
RE-11



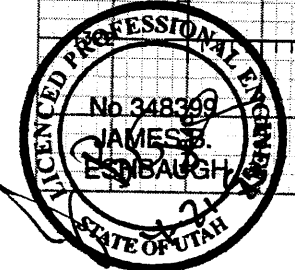
CURVE NO.	Δ	R	L	T
①	32° 31' 00"	1400.000	794.535	408.285

WASATCH CONSTRUCTORS
 APR 23 1998
 RELEASED FOR CONSTRUCTION



BEGIN RETAINING WALL R-343-8
 STA 1+677.569 = "I-15"
 STA 17+309.141 (25.791 RT)

NOTE:
 THE FOUNDATION BEARING MATERIALS SHOULD BE OBSERVED BY THE GEOTECHNICAL ENGINEERS 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.



ELEVATION VIEW FROM FRONT FACE OF RETAINING WALL

UTAH DEPARTMENT OF TRANSPORTATION
 URS Greiner
 SVERDRUP/DE LEUW

I-15 CORRIDOR RECONSTRUCTION
 SIT./LAYOUT RET WALL R-343-8
 SECTION 1.2
 PROJECT NUMBER #SP-15-7(1135)296

APPROVED FOR CONSTRUCTION

NO.	DATE	DESCRIPTION
1	1-26-98	INITIAL RELEASE
2	4-23-98	REDUCED WALL LENGTH

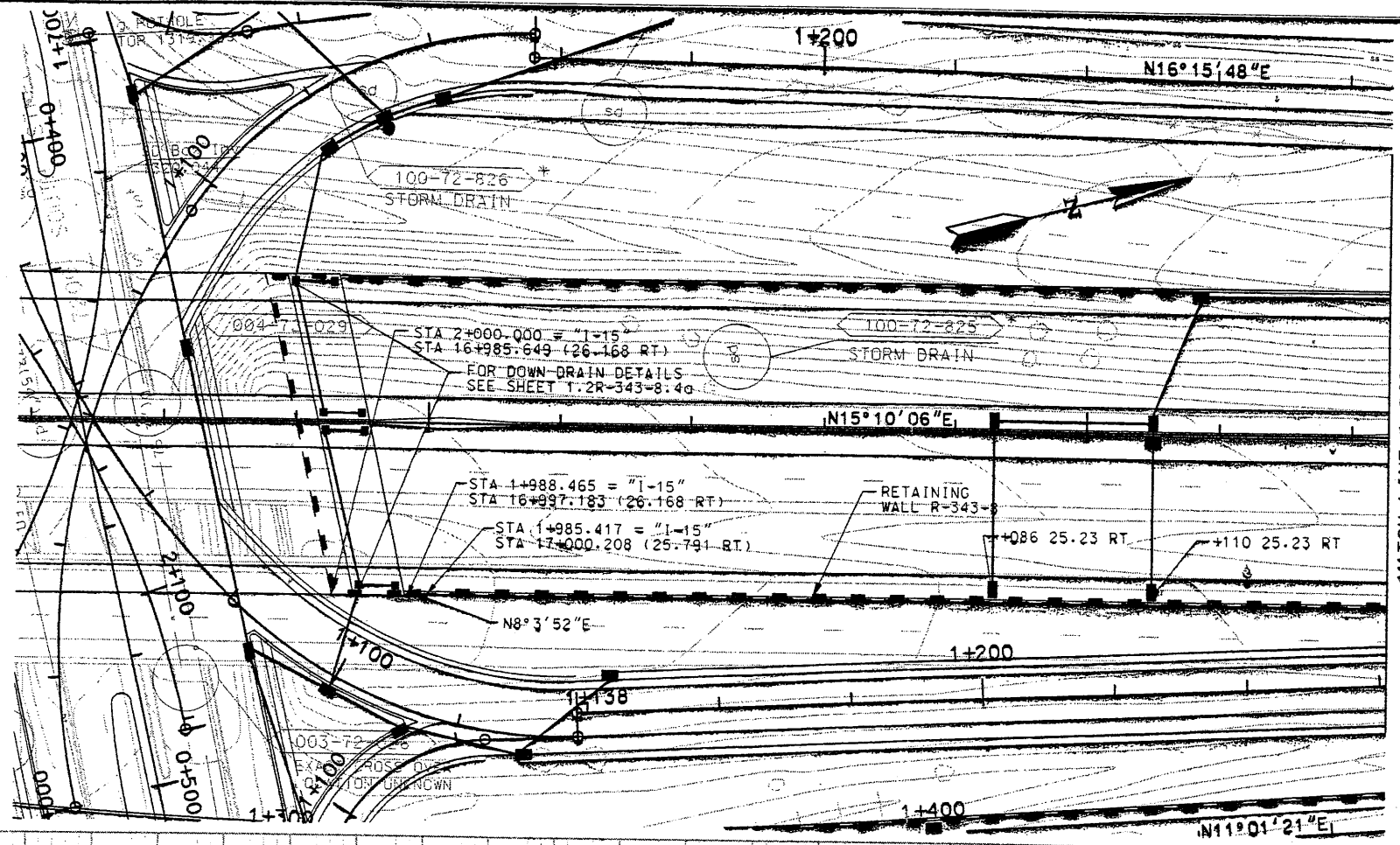
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DESIGN	CHK	10/97
CHK	CHK	10/97
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CHK	CHK	10/97
DESIGN	CHK	10/97
CHK	CHK	10/97

PROJECT MANAGER: 1212408

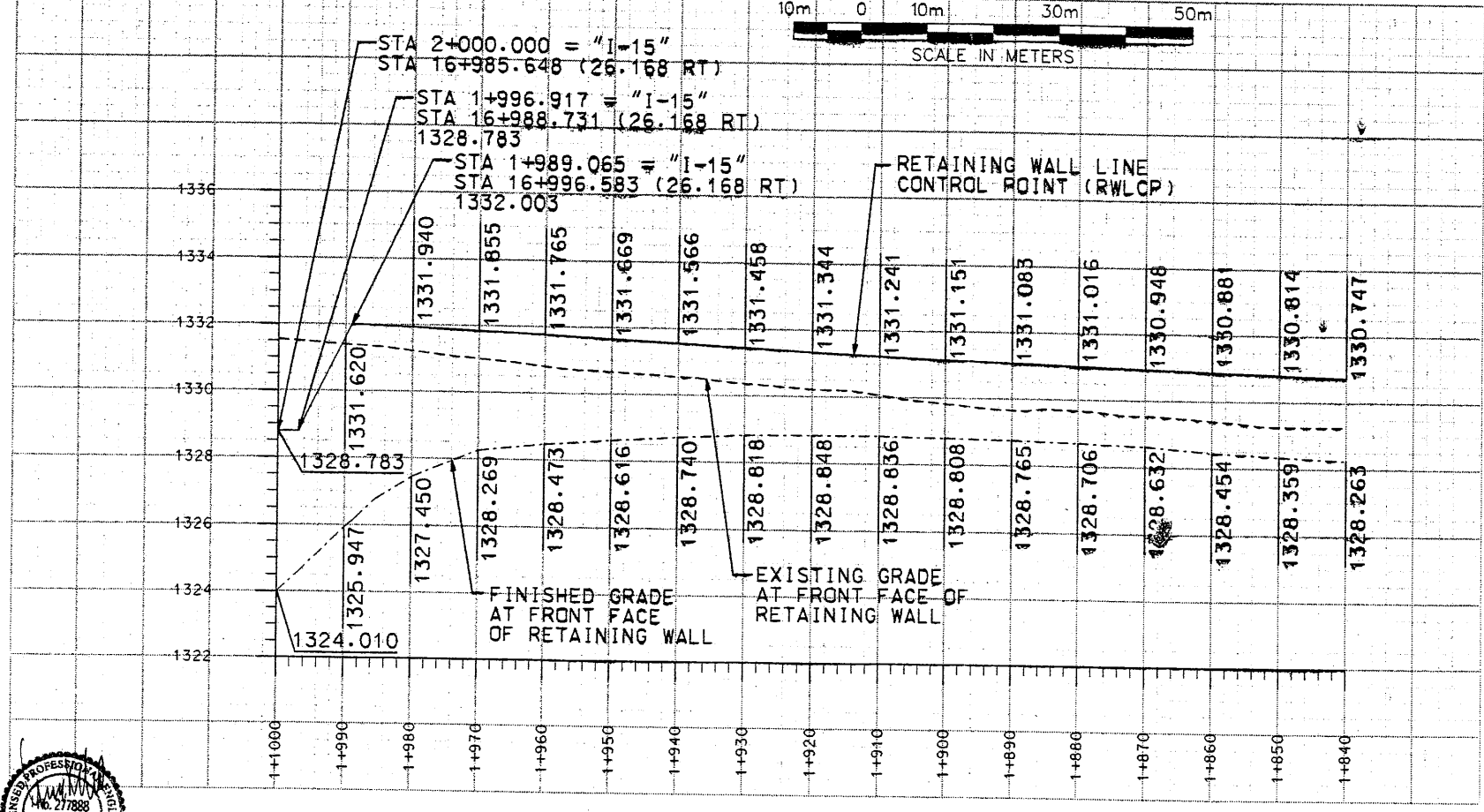
SALT LAKE COUNTY
 DWG. NO. 1.2-R-343-8.1
 SHT. 1 OF 21

Scale: 5000:00000000
 Rotation: 0.00000000
 Pen Tablet: N:\P1\01\1000\4100.pcn
 Queue: \CIVIL\IP2\oc9900\vellum
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 First Reference Filename: c:\dgn\ref\15x10p02.dgn
 First Reference File Levels: [I-6, 8-25, 27-64]
 Second Reference Filename: c:\dgn\ref\15x10p01.dgn
 Second Reference File Levels: [I-64]
 Third Reference Filename: c:\dgn\ref\15_rwd.dgn
 Third Reference File Levels: [I-5, 7-64]
 Filename: c:\dgn\115_codd\12_91\sheet_files\walls\72pp15.dgn

Date: 28-JAN-1998 Time: 14:47
 Username: stottfj



MATCH LINE 1+840.000

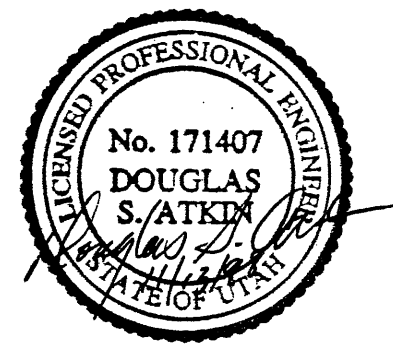
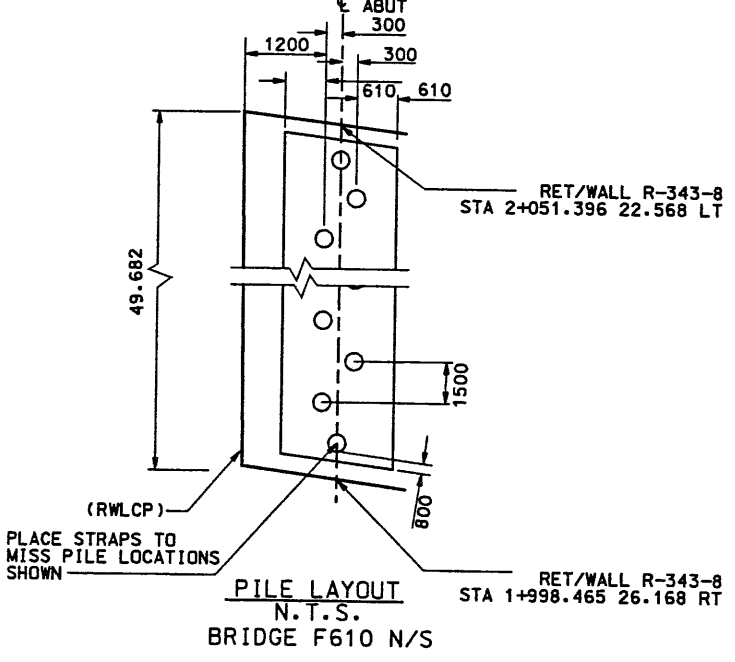
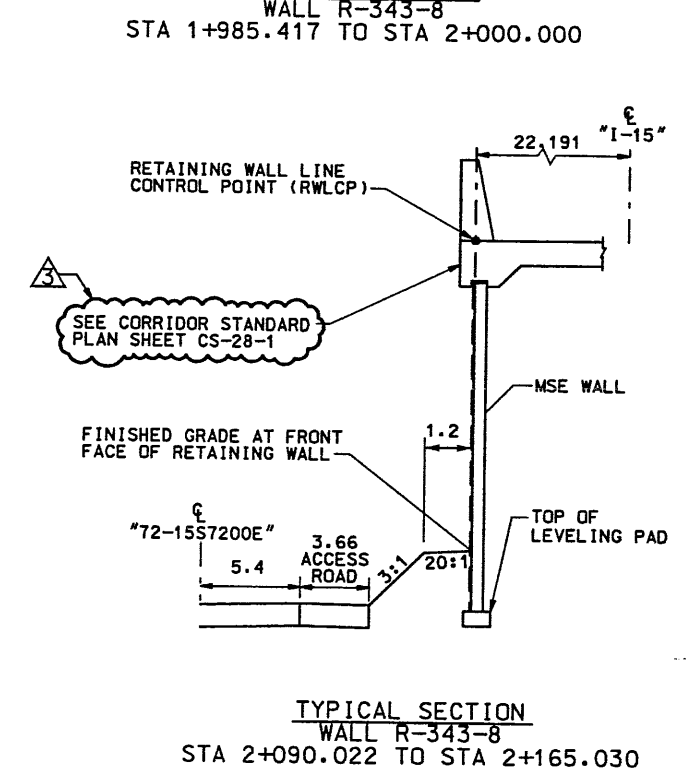
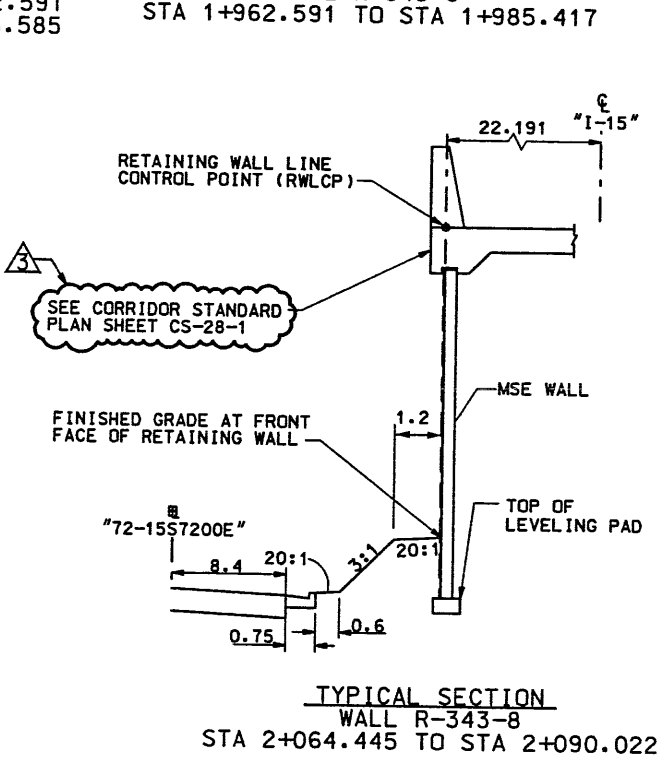
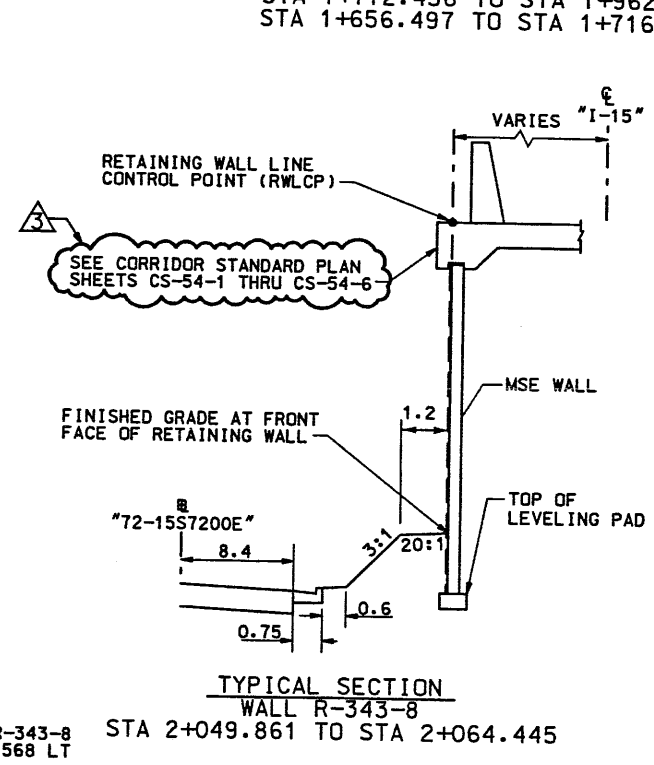
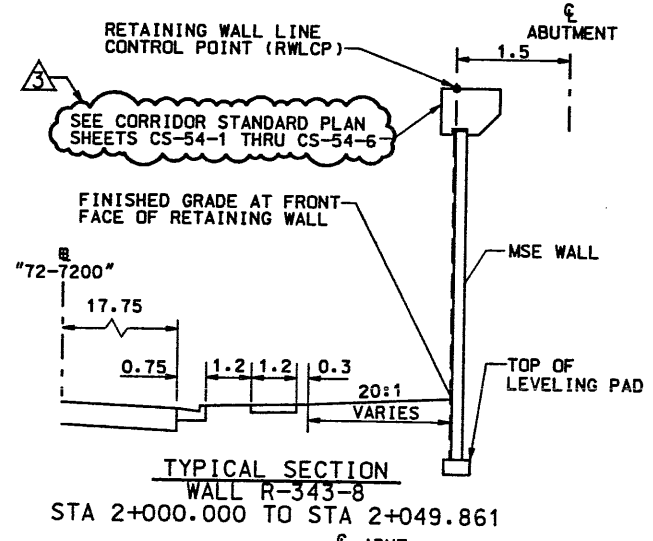
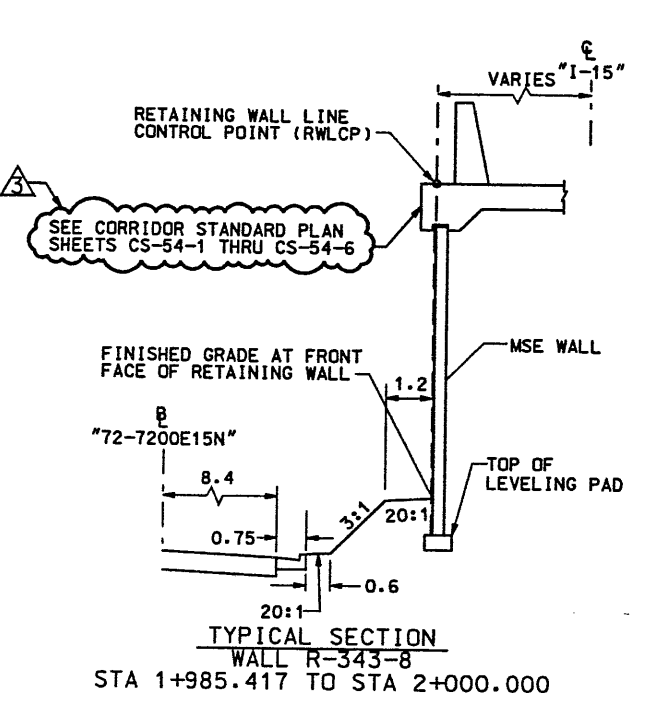
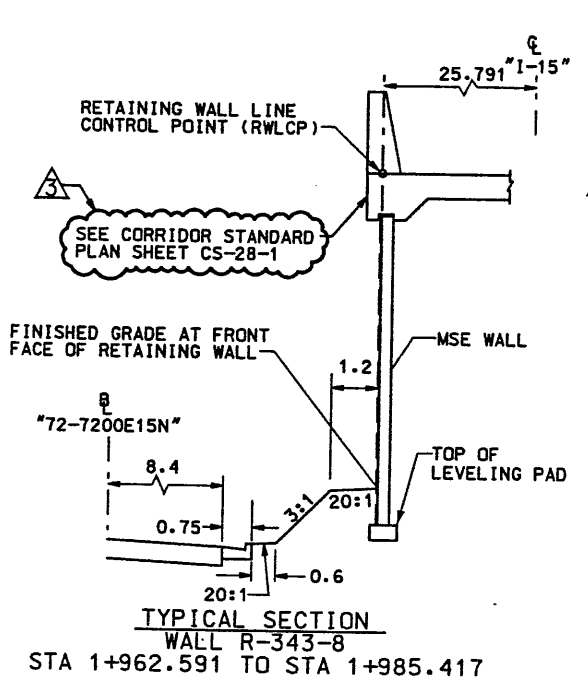
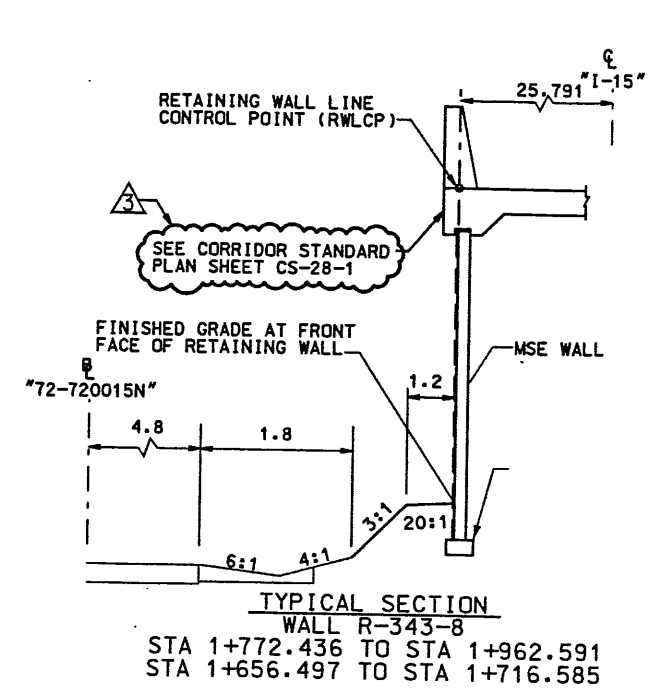
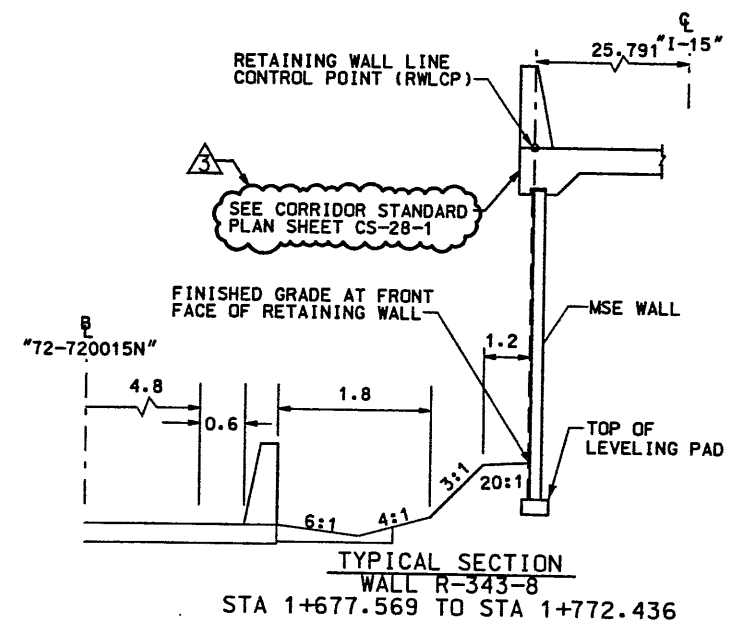


ELEVATION VIEW FROM FRONT FACE OF RETAINING WALL

WASATCH CONSTRUCTORS
 JAN 29 1998
 RELEASED FOR CONSTRUCTION

APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	INITIAL	RELEASE
Δ	1-26-98		
UTAH DEPARTMENT OF TRANSPORTATION		1212408	
URS Greiner		CHECK JBE 10/97	
SVERDRUP/DE LEUW		CHECK JBE 10/97	
DESIGN PRV 10/97		CHECK	
DRAWN PRV 10/97		CHECK	
PROJECT DESIGN ENGINEER		QUANT.	
APPROVED 10/97 RICK CHAPMAN		PROJECT MANAGER	
DATE 10/97		DATE	
I-15 CORRIDOR RECONSTRUCTION		PROJECT NUMBER	
SIT./LAYOUT RET WALL R-343-8		#SP-15-7(135)296	
SECTION 1.2		COUNTY	
DWG. NO.		SALT LAKE	
1.2-R-343-8.2		SHEET	
SHT. 2 OF 21		REF.	

User: moakky
 Date: 13-NOV-98 Time: 15:53
 Filename: c:\dgn\115_cadd\72_9t_sheer_files\wall\72_retwall-8.dgn



WASATCH CONSTRUCTORS
 NOV 24 1998
 RELEASED FOR CONSTRUCTION

APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	INITIAL RELEASE	REVISED WALL LENGTH
1	1-26-98		
2	4-23-98		
3	11-13-98		NOC-0294

UTAH DEPARTMENT OF TRANSPORTATION		URS Greiner		SVDRUP/DE LEUW	
DESIGN	CHECK	DESIGN	CHECK	DESIGN	CHECK
10/97	10/97	10/97	10/97	10/97	10/97
RICK CHAPMAN	JBE	RICK CHAPMAN	JBE	RICK CHAPMAN	JBE
PROJECT DESIGN ENGINEER		PROJECT DESIGN ENGINEER		PROJECT DESIGN ENGINEER	
APPROVED	DATE	APPROVED	DATE	APPROVED	DATE
10/97	10/97	10/97	10/97	10/97	10/97
DON GRAM		DON GRAM		DON GRAM	
PROJECT MANAGER		PROJECT MANAGER		PROJECT MANAGER	
QUANT.		QUANT.		QUANT.	
/		/		/	
1214000		1214000		1214000	

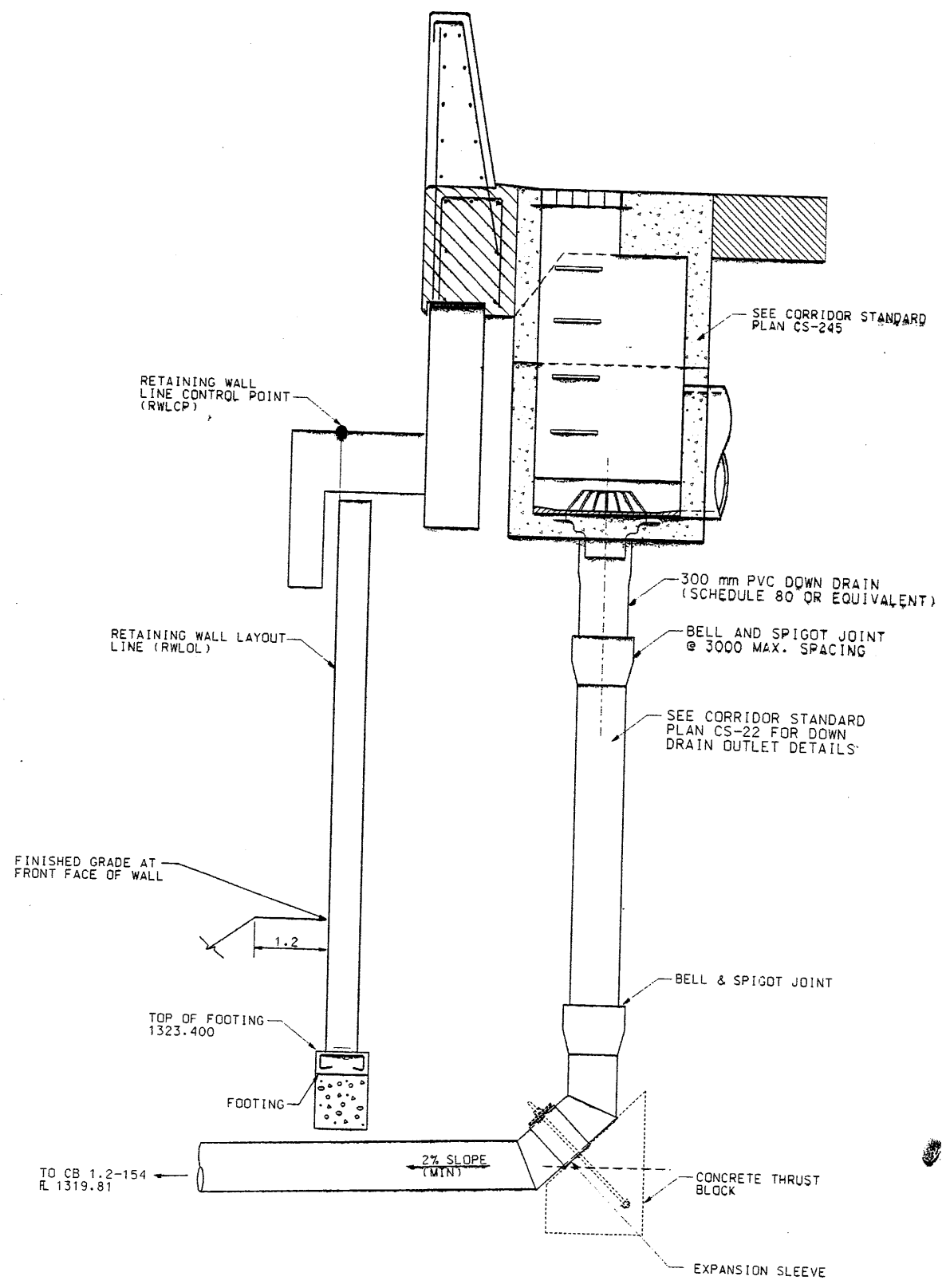
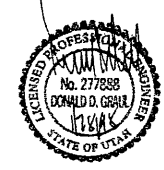
I-15 CORRIDOR RECONSTRUCTION	SECTION 1.2	PROJECT NUMBER
DETAILS RETAINING WALL R-343-8		#SP-15-7(135)296
SALT LAKE COUNTY	DWG. NO.	1.2R-343-8.4
SHT. 4	OF	21

Scale: 1/2" = 1'-0"
 Rotation: 0
 Pen: Tabletk: VSP1: 01: 0CE9: 00: pen
 Qube: V\CHIEF2: vce940: vellum

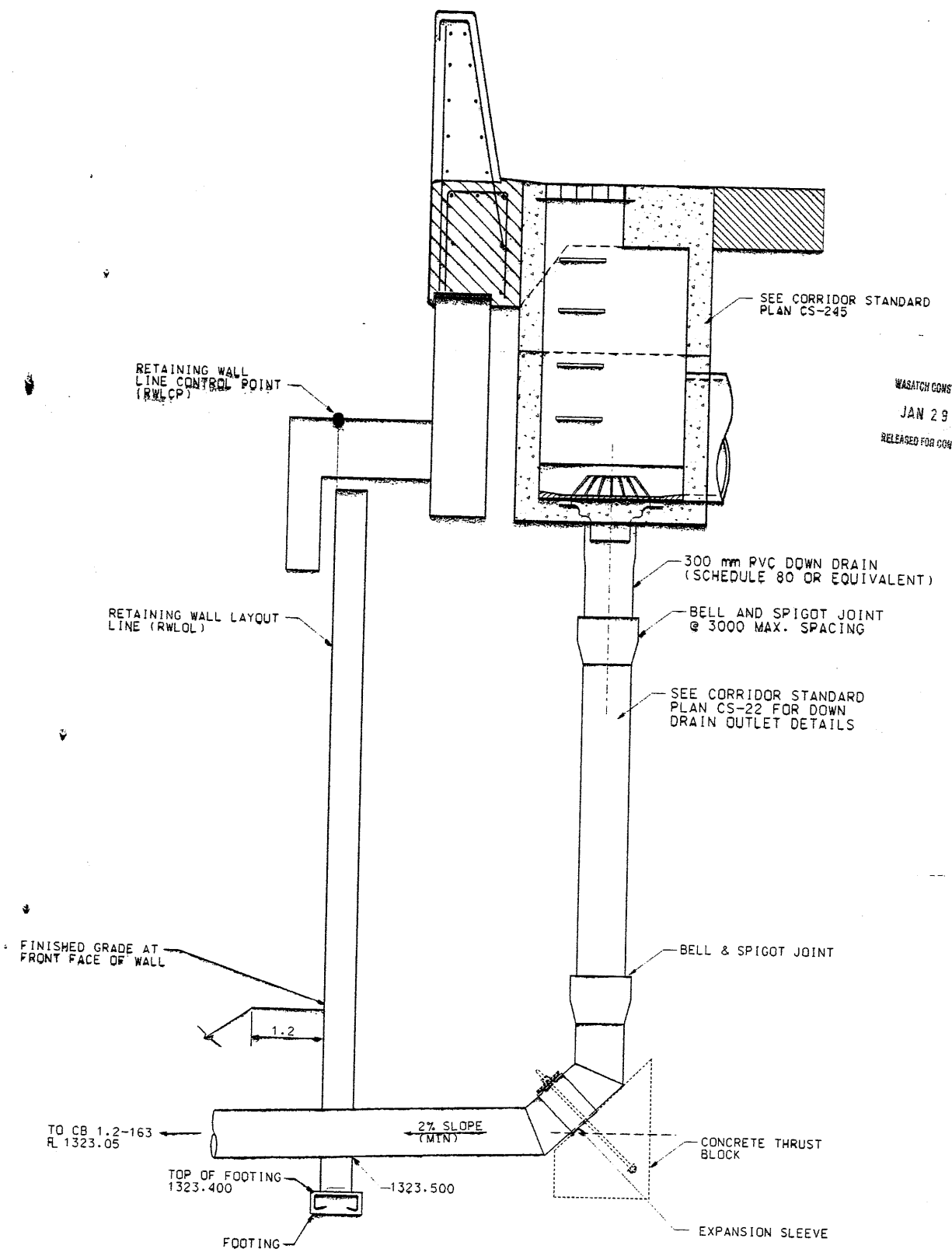
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 First Reference File: c:\dgn\ref\roadborder.dgn
 Second Reference File: Levels [1-20, 22, 24-30, 32, 34, 35, 37-62, 64]
 Third Reference File: c:\dgn\ref\vs-typical.09-2.dgn
 Fourth Reference File: c:\dgn\ref\vs-typical.02.dgn
 Fifth Reference File: Levels [1-4, 6-64]

File names: c:\dgn\15_cood\72_37_sheef_files\wall12_detail_10.dgn

Date: 28-JAN-1998 Time: 14:11
 Username: stottfrj



DOWN DRAIN DETAIL
 STA 2+054.160



DOWN DRAIN DETAIL
 STA 1+995.701

WASATCH CONSTRUCTORS
 JAN 29 1998
 RELEASED FOR CONSTRUCTION

APPROVED FOR CONSTRUCTION		DATE		INITIAL RELEASE	
NO. 1-27-98		DATE 1-27-98		INITIAL RELEASE	
UTAH DEPARTMENT OF TRANSPORTATION		SVERDRUP/DE LEUW		1212403	
I-15 CORRIDOR RECONSTRUCTION		DESIGN PV 11/97		CHECK JOB 11/97	
MISC DETAILS RET/WALL R-343-8		PROJECT DESIGN ENGINEER		CHECK JOB 11/97	
SECTION 1-2		APPROVED 11/97		CHECK	
PROJECT NUMBER #SP-15-7(135)296		DATE		SECTION MANAGER	
SALT LAKE COUNTY		DWG. NO.		1.2R-343-8.4a	
SHT. 5		OF 21			

DESIGN PARAMETERS	
ANGLE OF INTERNAL FRICTION (SELECT) = 34°	
ANGLE OF INTERNAL FRICTION (BASE) = 30°	
ANGLE OF INTERNAL FRICTION (RANDOM) = 34°	
UNIT WEIGHT BACKFILL = 135 PCF.	
TRAFFIC SURCHARGE = 250 PSF	
SEISMIC ACCELERATION COFF. = 0.25g (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	

CURVE DATA				
No.	RADIUS	LENGTH	TANGENT	△
①	1400.000	794.535	408.285	32°31'00"

All Dimensions Are in Meters Unless Noted Otherwise

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
①	01-12-98	RELEASE FOR CONSTRUCTION <i>OV</i>

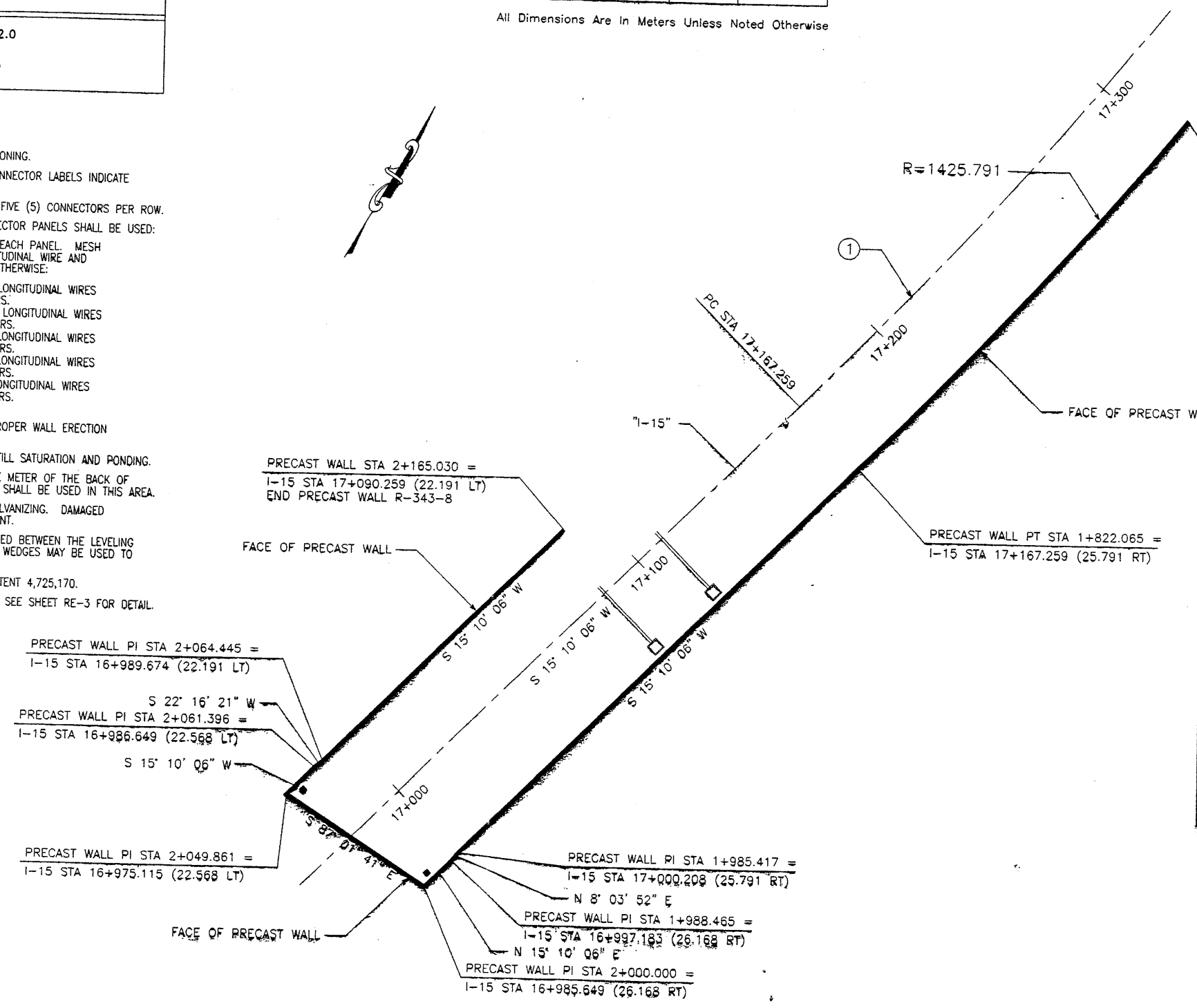
GENERAL NOTES

- ALL WALLS ARE SHOWN FRONT FACE. NOTE STATIONING.
- PANEL TYPE IS DESIGNATED ON EACH PANEL. CONNECTOR LABELS INDICATE NUMBER OF CONNECTORS PER ROW.
EXAMPLE: 5B2-10 IS A "B2-10" PANEL WITH FIVE (5) CONNECTORS PER ROW.
IF NO CONNECTORS ARE SHOWN, FOUR (4) CONNECTOR PANELS SHALL BE USED.
- SOIL REINFORCING MESH TYPE IS DESIGNATED ON EACH PANEL. MESH LABELS INDICATE WIRE SIZE AND SPACING. LONGITUDINAL WIRE AND CROSSBAR SIZES ARE THE SAME UNLESS NOTED OTHERWISE.
EXAMPLE: 4W11-6 MESH HAS FOUR (4) W11 LONGITUDINAL WIRES WITH W11 CROSSBARS AT 6" CENTERS.
EXAMPLE: 4W20-12 MESH HAS FOUR (4) W20 LONGITUDINAL WIRES WITH W20 CROSSBARS AT 12" CENTERS.
EXAMPLE: 5W11-12 MESH HAS FIVE (5) W11 LONGITUDINAL WIRES WITH W11 CROSSBARS AT 12" CENTERS.
EXAMPLE: 5W20-24 MESH HAS FIVE (5) W20 LONGITUDINAL WIRES WITH W20 CROSSBARS AT 24" CENTERS.
EXAMPLE: 6W11-12 MESH HAS SIX (6) W11 LONGITUDINAL WIRES WITH W11 CROSSBARS AT 12" CENTERS.
- SEE RETAINED EARTH INSTALLATION MANUAL FOR PROPER WALL ERECTION PROCEDURES AND GUIDELINES.
- CONSTRUCTION PROCEDURES SHALL PREVENT BACKFILL SATURATION AND PONDING.
- HEAVY EQUIPMENT SHALL NOT BE USED WITHIN ONE METER OF THE BACK OF THE RETAINED EARTH PANELS. HAND COMPACTORS SHALL BE USED IN THIS AREA.
- CARE SHALL BE TAKEN TO PREVENT DAMAGE TO GALVANIZING. DAMAGED GALVANIZING SHALL BE COATED WITH ZINC RICH PAINT.
- BEARING PADS AND FILTER FABRIC ARE NOT REQUIRED BETWEEN THE LEVELING PAD AND THE FIRST ROW OF PANELS. TEMPORARY WEDGES MAY BE USED TO PROVIDE PROPER ALIGNMENT.
- VSL RETAINED EARTH IS PROTECTED UNDER U.S. PATENT 4,725,170.
- ALL PANELS SHALL HAVE AN ARCHITECTURAL FINISH, SEE SHEET RE-3 FOR DETAIL.

H:\RE_EARTH\PROJECT\239-0007\1998\72SERIES\72-08\SUB

-12-98

FINAL PLC

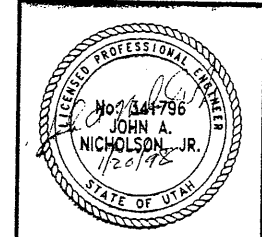


RETAINED EARTH INDEX	
RE-1	PLAN PRECAST FACE WALL R-343-8, NOTES & DESIGN CRITERIA
RE-2	TYPICAL CROSS SECTIONS
RE-3	TYPICAL CROSS SECTIONS
RE-4	TYPICAL CROSS SECTIONS
RE-5	ELEVATION PRECAST WALL "R-343-8"
RE-6	ELEVATION PRECAST WALL "R-343-8"
RE-7	ELEVATION PRECAST WALL "R-343-8"
RE-8	ELEVATION PRECAST WALL "R-343-8"
RE-9	ELEVATION PRECAST WALL "R-343-8"
RE-10	ELEVATION PRECAST WALL "R-343-8"
RE-11	ELEVATION PRECAST WALL "R-343-8"
RE-12	ELEVATION PRECAST WALL "R-343-8"
RE-13	ELEVATION PRECAST WALL "R-343-8"
RE-14	ELEVATION PRECAST WALL "R-343-8"
RE-15	SPECIAL PANEL DETAILS
RE-16	SPECIAL PANEL DETAILS

PLAN VIEW WALL "R-343-8"

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

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METRIC

RETAINED EARTH™ WALLS
PLAN VIEW PRECAST WALL "R-343-8"
UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

SCALE:
1.2R-343-8.5
JOB NO:
239-0007
RE-1

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2840 Pointe Plaza, Suite 200
Basking Ridge, NJ 07005
Tel: (908) 761-6272
Fax: (908) 761-1685

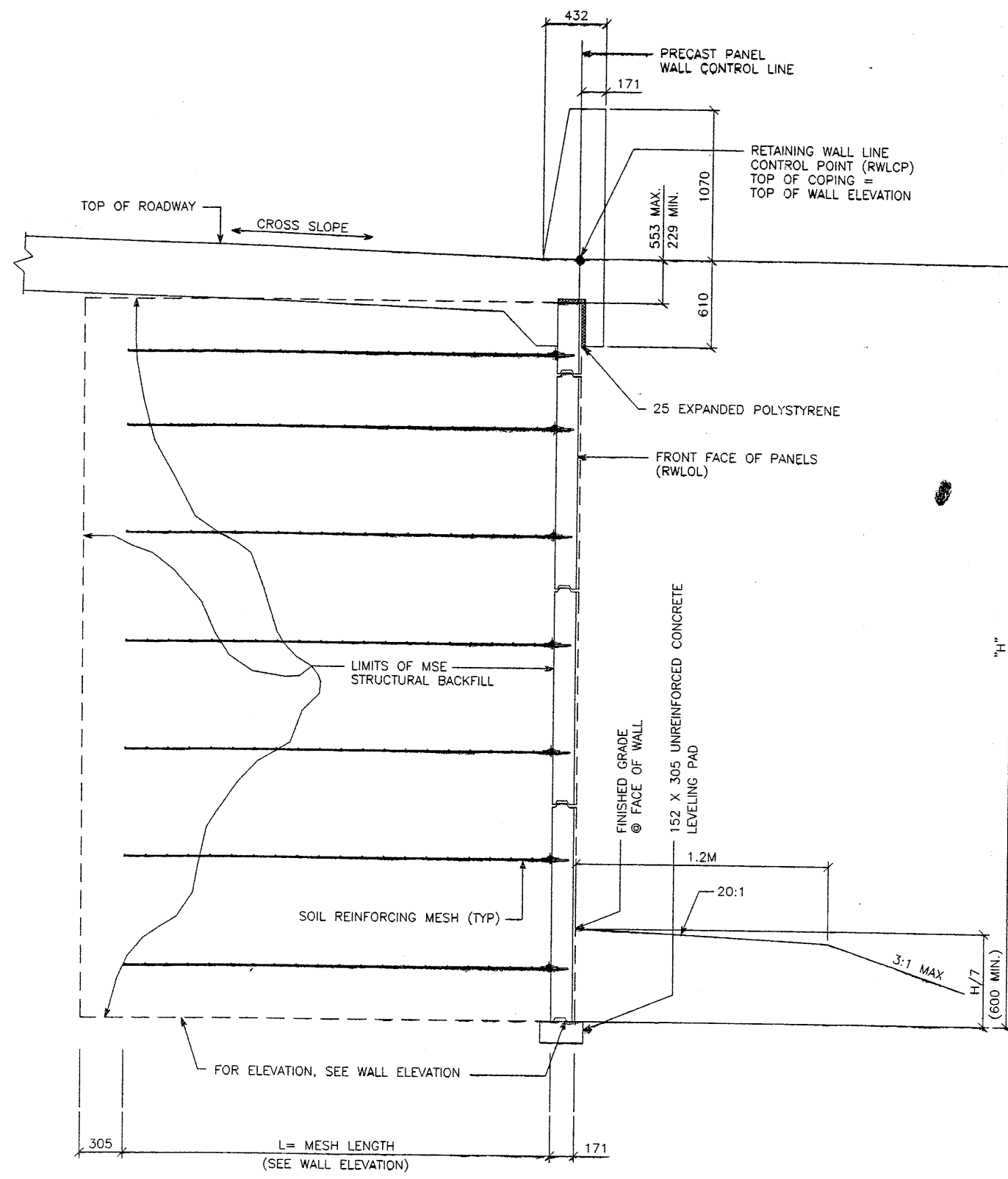
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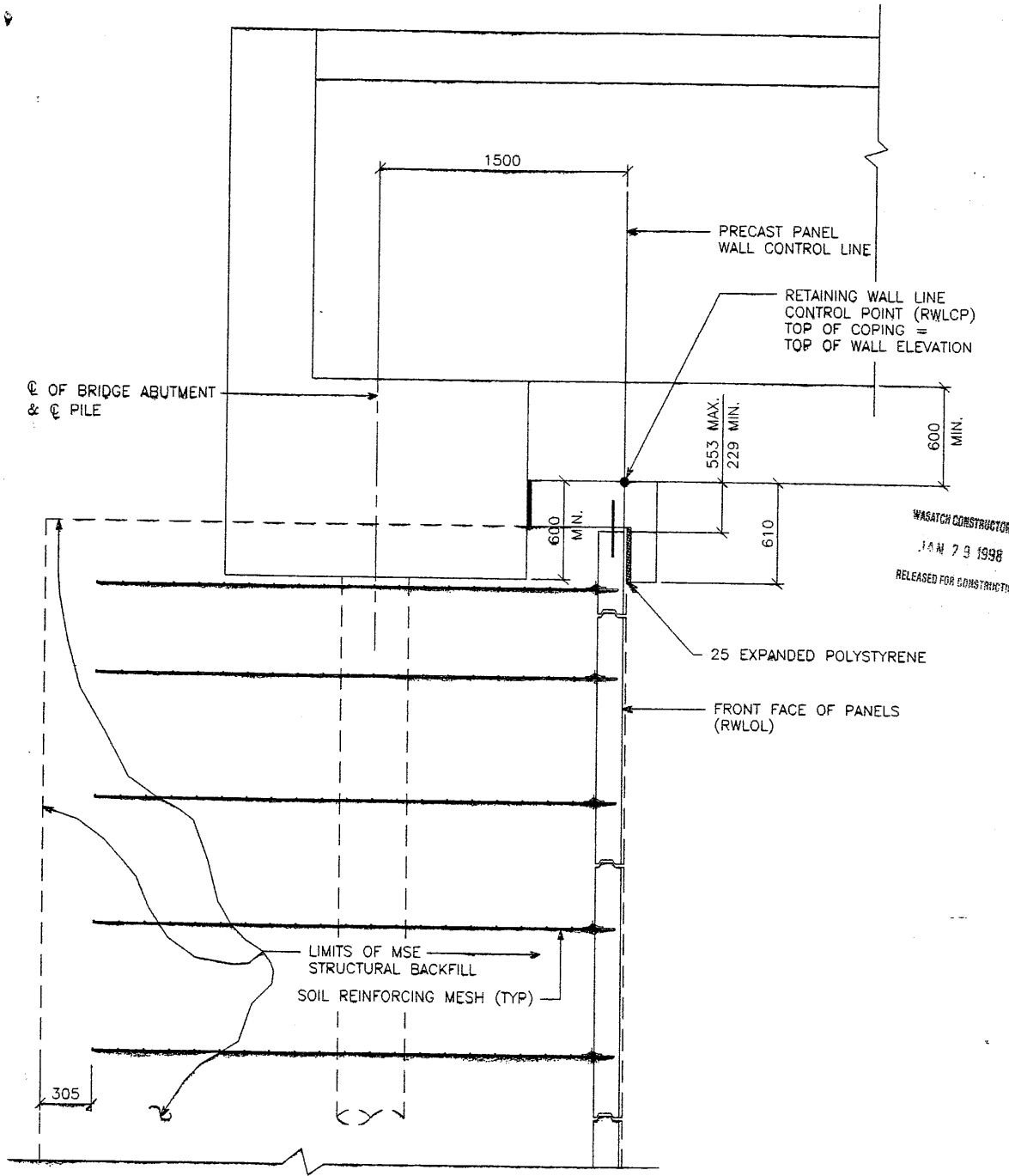
NO.	DATE	REVISION	BY	CHK

WASATCH CONSTRUCTORS
JAN 29 1998
RELEASED FOR CONSTRUCTION

H:\RE_EARTH\PROJECT\239-0007\1998\72SERIES\72-08\SUBM\ 12-98 FINAL PLOT



TYPICAL CROSS SECTION - STA 1+656.497 TO 1+985.417
 TYPICAL CROSS SECTION - STA 2+064.445 TO 2+090.022
 (SEE DWG. NO. 1.2R-343-8.4 FOR ADDITIONAL INFORMATION)
 SCALE: 1:20 (FULL SIZE)
 SCALE: 1:40 (HALF SIZE)



TYPICAL CROSS SECTION - STA 2+000.000 TO 2+049.861
 (SEE DWG. NO. 1.2R-343-8.X FOR ADDITIONAL INFORMATION)
 SCALE: 1:20 (FULL SIZE)
 SCALE: 1:40 (HALF SIZE)

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	01-12-98	RELEASE FOR CONSTRUCTION

NO.	DATE	REVISION	BY	CHK

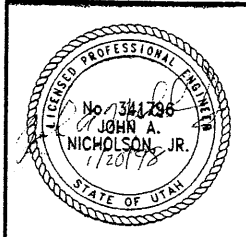
VSL CORPORATION
 2848 Pineda Plaza, Suite 200
 Irvine, CA 92614
 Telephone: (919) 761-6772
 Fax: (919) 761-4868

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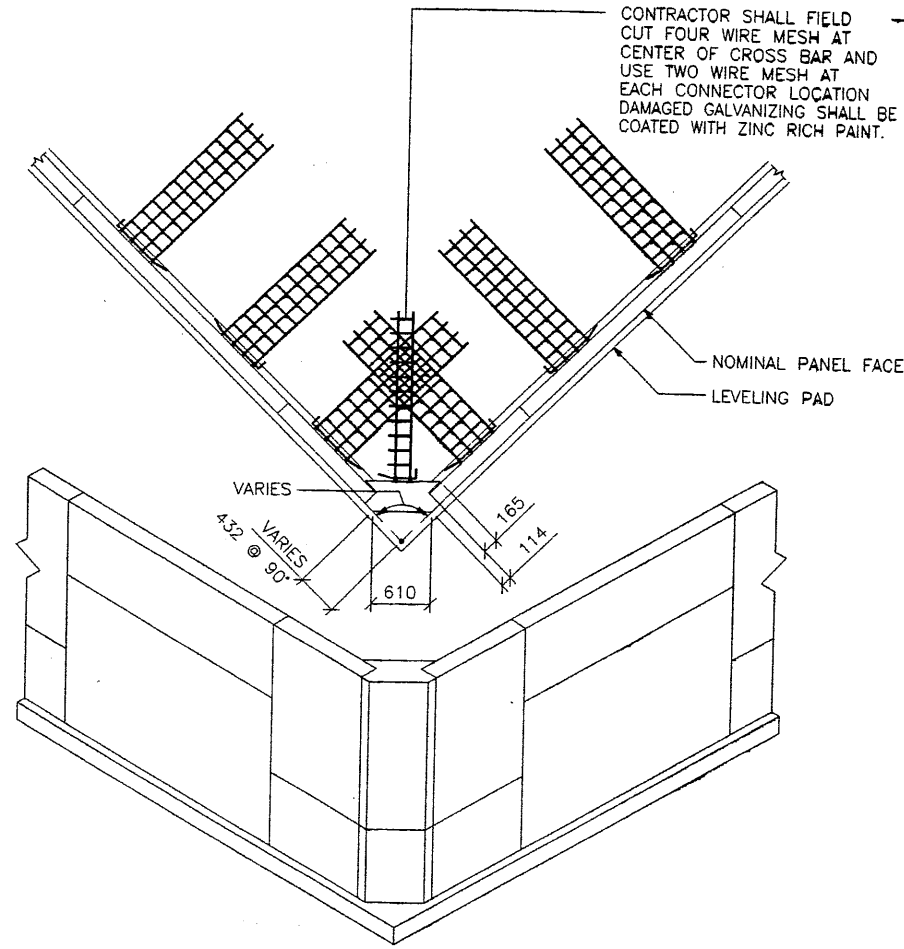
RETAINED EARTH™ WALLS
 WIRE FACED WALL "R-343-8"
 TYPICAL CROSS SECTION
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.



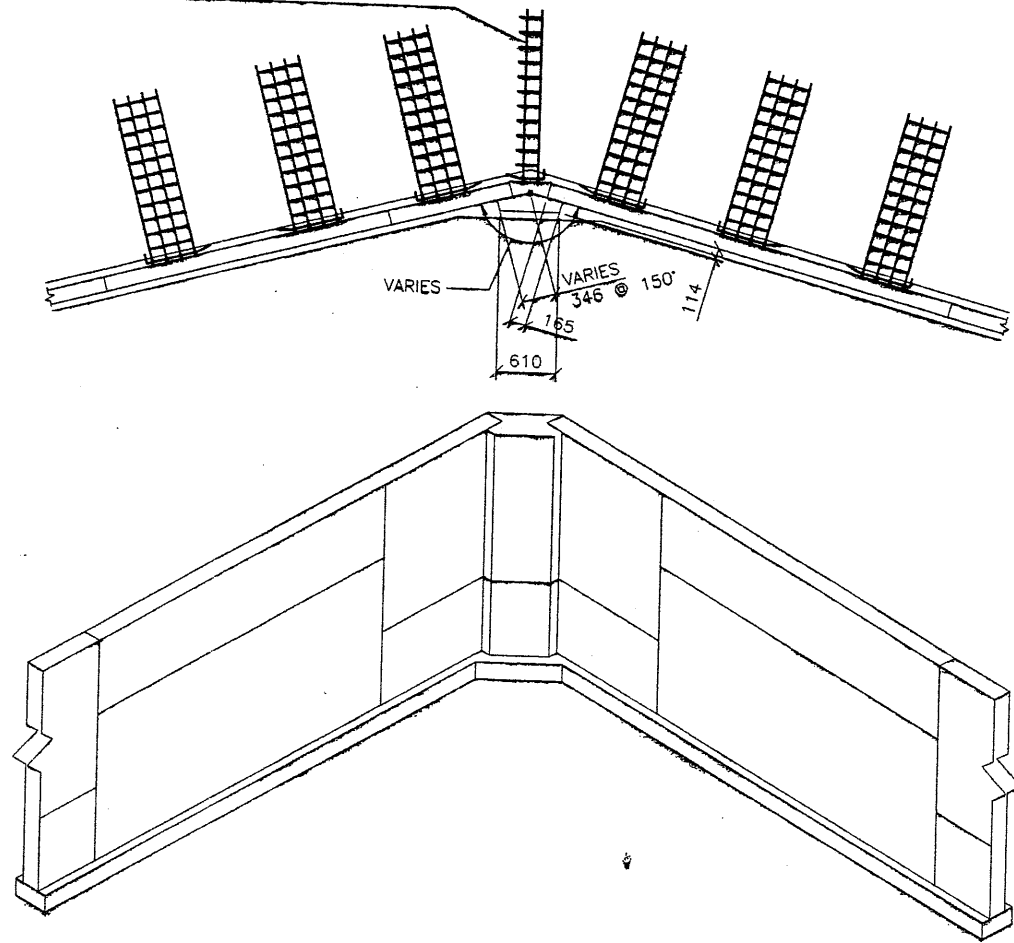
CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY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

SCALE:	1.2R-343-8.6
JOB NO.:	239-0007
DATE:	7/21
REVISION:	RE-2

H:\RE_EARTH\PROJECT_239-0007\1998\72SERIES\72-08\SUP
12-98
FINAL PLT.CE



80 OUTSIDE CORNER ELEMENT
PLAN VIEW / ISOMETRIC



80 INSIDE CORNER ELEMENT
PLAN VIEW / ISOMETRIC

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	01-12-98	RELEASE FOR CONSTRUCTION

WASATCH CONSTRUCTORS
JAN 29 1998
RELEASED FOR CONSTRUCTION

DES.	01-12-96	MM	RETAINED EARTH™	NO.	DATE	CHK
DRN.	01-12-98	DDO				
CHK.	01-12-98	MM				

VSL CORPORATION
2640 Pineda Place, Suite 200
Raleigh, NC 27612
Telephone: (919) 81-4272
Fax: (919) 81-4889

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RETAINED EARTH™ WALLS
PRECAST WALL "R-343-8"
SPECIAL DETAILS

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

SCALE: 1.1R-343-8.8
JOB NO: 239-0007
RE-4

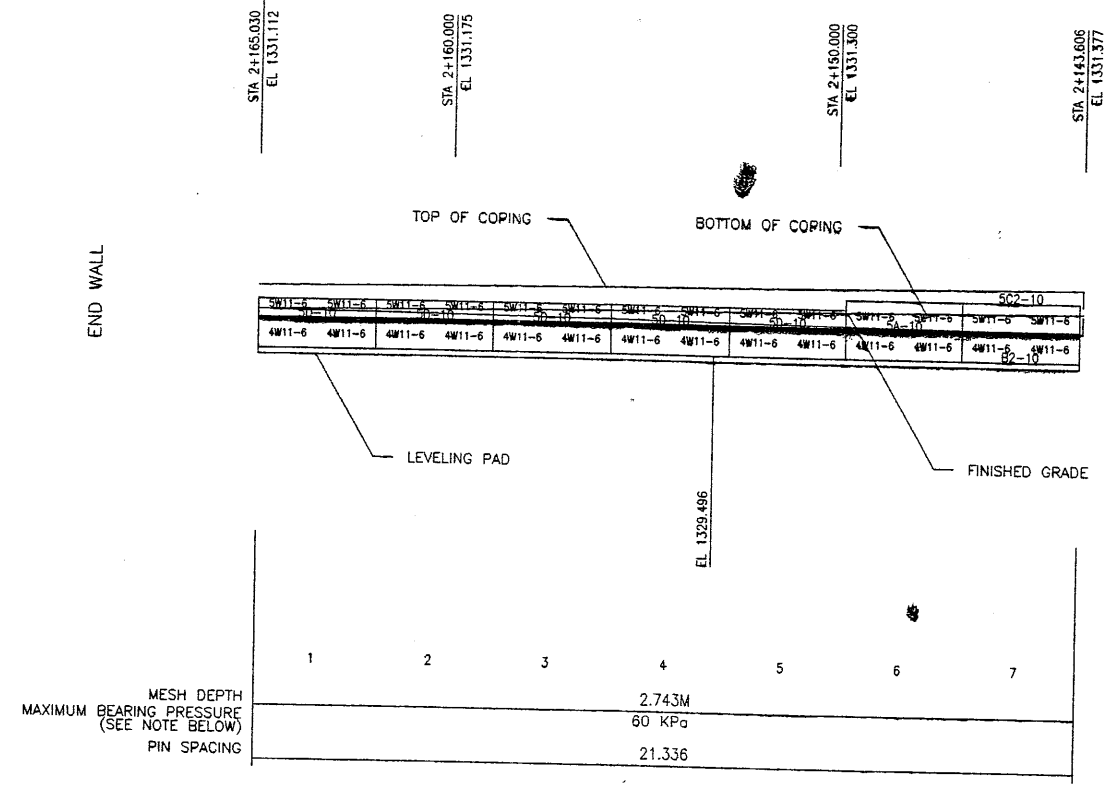
METRIC

REGISTERED PROFESSIONAL ENGINEER
No. 341086
JOHN A. NICHOLSON, JR.
1/20/98
STATE OF UTAH

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

END WALL R-343-8
 WALL STA 2+165.030 =
 I-15 STA 17+090.259
 @ 22.191 LT
 NOMINAL PANEL FACE (RWLOL)



ELEVATION PRECAST WALL R-343-8
 (FRONT FACE SHOWN) SCALE 1:100 (FULL SIZE)
 (TOTAL SURFACE AREA OF PANELS = 1,613.46 SM) SCALE 1:200 (HALF SIZE)

MESH DEPTH 2.743M
 MAXIMUM BEARING PRESSURE (SEE NOTE BELOW) 60 KPa
 PIN SPACING 21.336

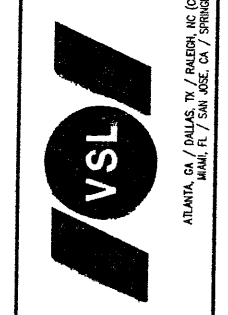
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APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	01-12-98	RELEASE FOR CONSTRUCTION

WASATCH CONSTRUCTORS
 JAN 29 1998
 RELEASED FOR CONSTRUCTION

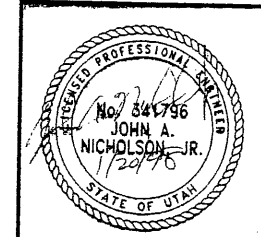
DES.	MM	DRN.	DDO	CHK.	MM	REVISION	NO.	DATE	BY	CHK

VSL CORPORATION
 2840 Plaza Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-6272
 Fax: (919) 781-4889



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RETAINED EARTH™ WALLS
 PRECAST WALL "R-343-8"
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

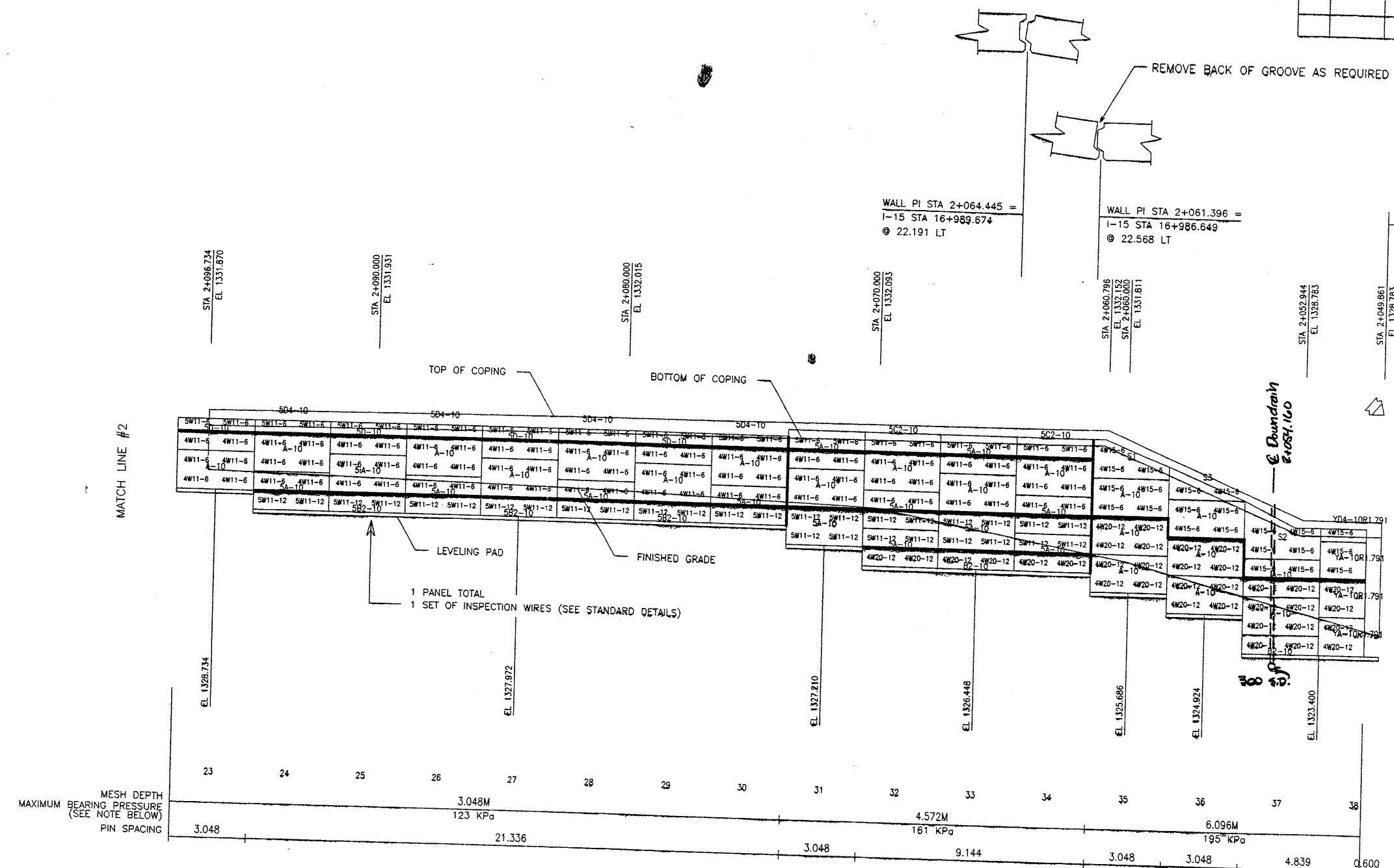
SCALE:	1:2R-343-8.9
JOB NO:	239-0007
	RE-5

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FINAL PI

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	01-12-98	RELEASE FOR CONSTRUCTION



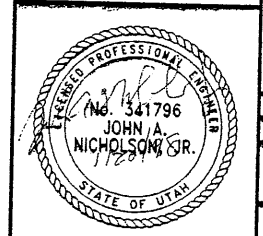
ELEVATION PRECAST WALL R-343-8

(FRONT FACE SHOWN) SCALE 1:100 (FULL SIZE)
SCALE 1:200 (HALF SIZE)
(TOTAL SURFACE AREA OF PANELS = 1,613.46 SM)

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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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-343-8"
UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

SCALE: 1:2R-343-8.11
JOB NO: 239-0007
RE-7

WASATCH CONSTRUCTORS
JAN 29 1998
RELEASED FOR CONSTRUCTION

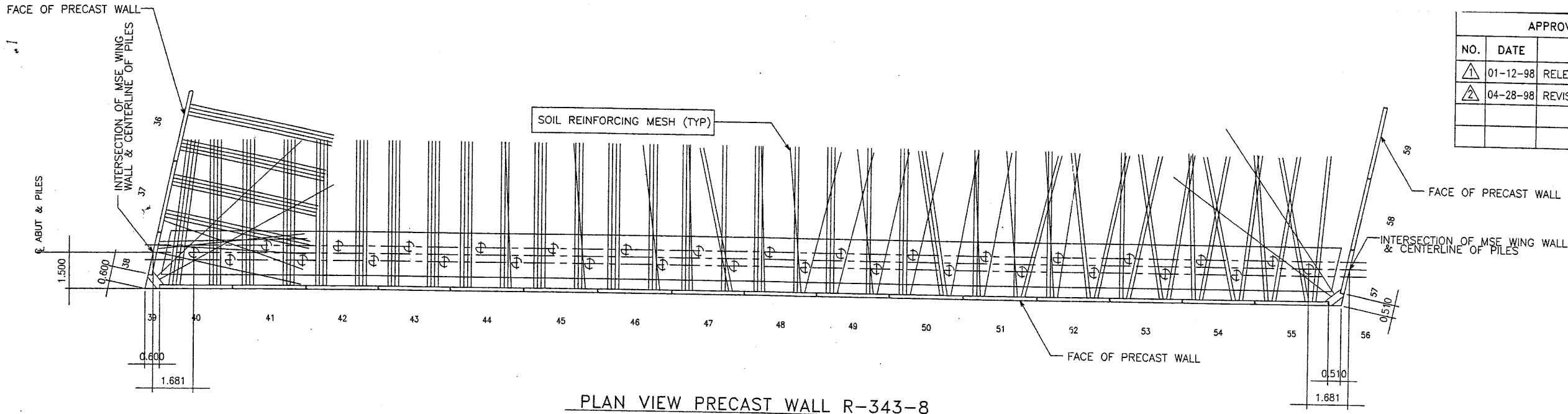
VSL CORPORATION
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Raleigh, NC 27612
Phone: (919) 781-4272
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DES.	MM	DRN.	DDO	CHK.	RETAINED EARTH™	NO.	DATE	BY	CHK
01-12-98		01-12-98		01-12-98					

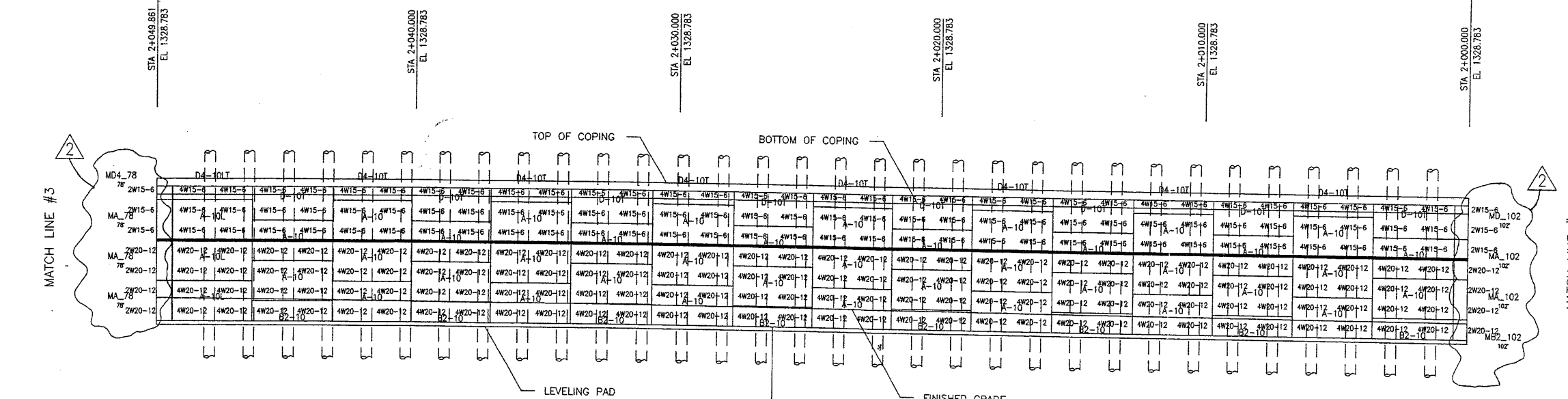


PLAN VIEW PRECAST WALL R-343-8

WALL PI STA 2+049.861 =
I-15 STA 16+975.115
@ 22.568 LT

WALL PI STA 2+000.000 =
I-15 STA 16+985.648
@ 26.168 RT

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	01-12-98	RELEASE FOR CONSTRUCTION
2	04-28-98	REVISED CORNER PANELS



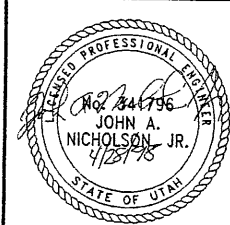
ELEVATION PRECAST WALL R-343-8

(FRONT FACE SHOWN)
SCALE 1:100 (FULL SIZE)
SCALE 1:200 (HALF SIZE)
(TOTAL SURFACE AREA OF PANELS = 1,613.46 SM)

MESH DEPTH
MAXIMUM BEARING PRESSURE
(SEE NOTE BELOW)
PIN SPACING 0.600

STATION	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
MESH DEPTH																		
MAXIMUM BEARING PRESSURE												6.096M						
PIN SPACING	0.600											0.600						

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.

REVISION		NO.	DATE	BY	CHK
DES.	01-12-98	MM			
DRN.	01-12-98	DDO			
CHK.	01-12-98	MM			

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

RETAINED EARTH™ WALLS
PRECAST WALL "R-343-8"

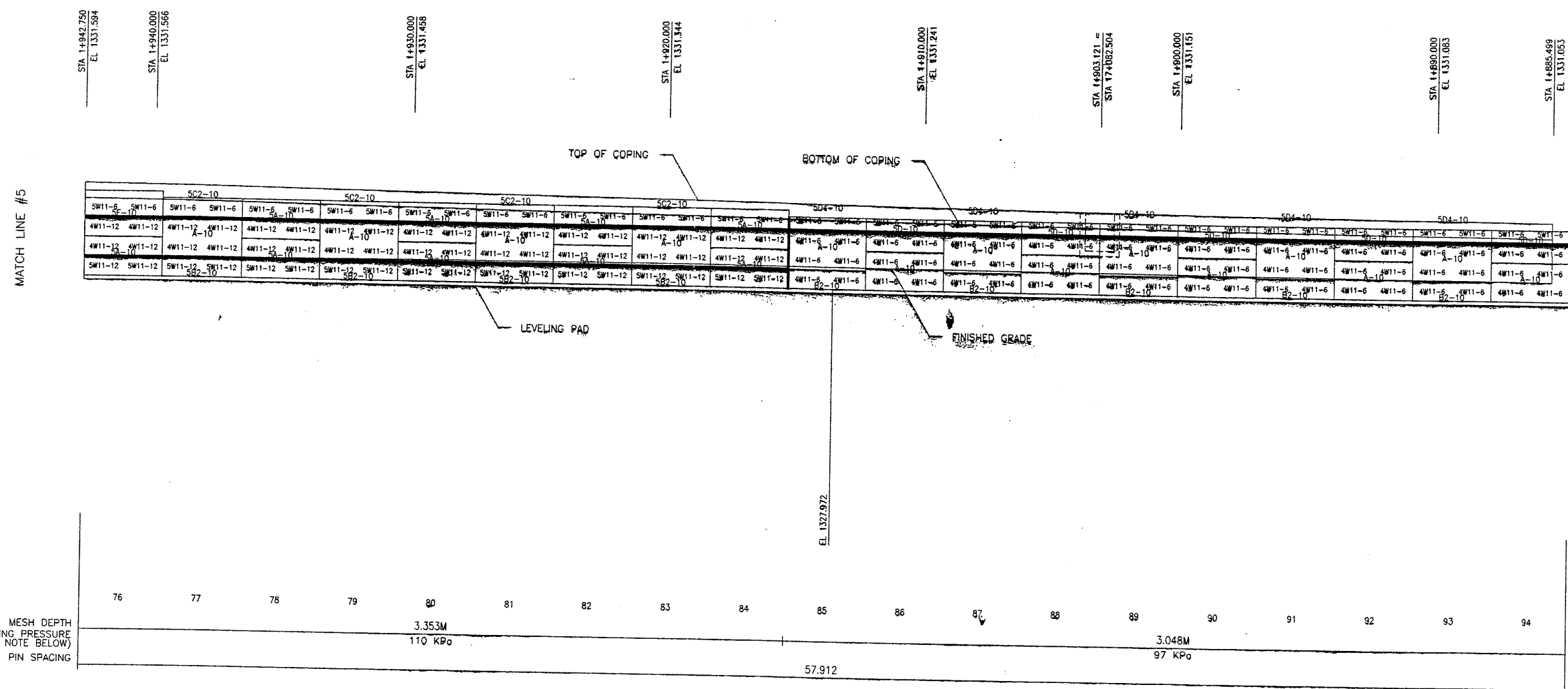
SCALE:
1.2R-343-8.12
JOB NO:
239-0007
RE-8

H:\VRL_EARTH\PROJECT\239-0007\1998\72SERIES\72-08.SUBMIT

12-XX-97

FINAL

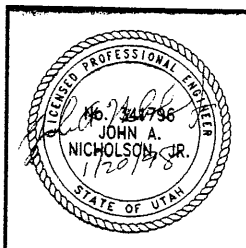
APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	01-12-98	RELEASE FOR CONSTRUCTION



ELEVATION PRECAST WALL R-343-8
 (FRONT FACE SHOWN) SCALE 1:100 (FULL SIZE)
 (TOTAL SURFACE AREA OF PANELS = 1,613.46 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.

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-343-8"
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

SCALE:	1.2R-343-8.14
JOB NO:	239-0007 15/21
	RE-10



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

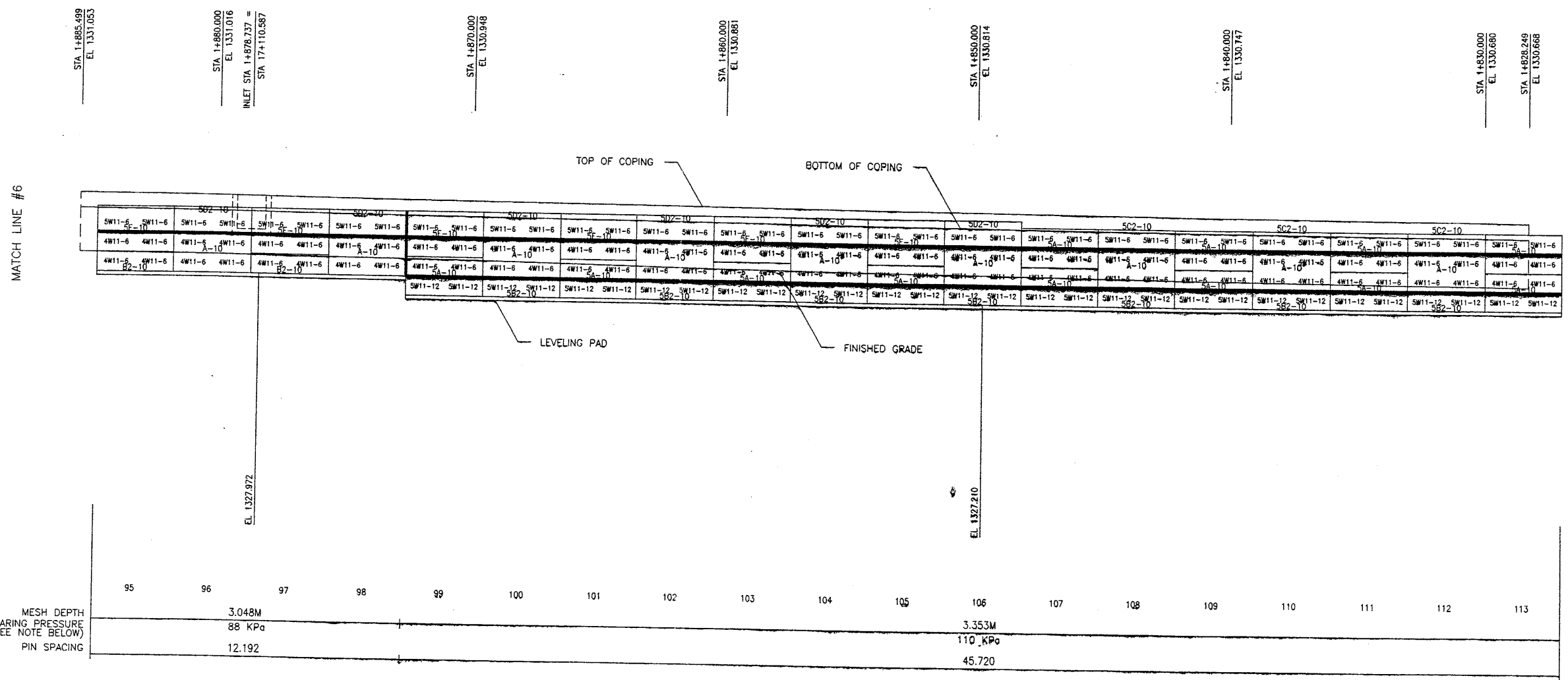
ATLANTA, GA / DALLAS, TX / BALDWIN, NC (CORPORATE OFFICE)
 MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA

WASATCH CONSTRUCTORS
 JAN 29 1998
 RELEASED FOR CONSTRUCTION

DES.	NO.	DATE	DESCRIPTION	BY	CHK
MM					
DDO					
MM					

FINAL PLOT XX-97 H:\RE-EARTH\PROJECT\239-0007\1998\7SERIES\72-08\SUBMIT-2\7

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
▲	01-12-98	RELEASE FOR CONSTRUCTION



ELEVATION PRECAST WALL R-343-8
 (FRONT FACE SHOWN) SCALE 1:100 (FULL SIZE)
 (TOTAL SURFACE AREA OF PANELS = 1,613.46 SM) SCALE 1:200 (HALF SIZE)

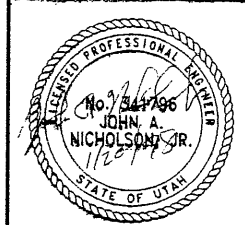
MESH DEPTH 3.048M
 MAXIMUM BEARING PRESSURE (SEE NOTE BELOW) 88 KPa
 PIN SPACING 12.192

95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113
											3.353M							
											110 KPa							
											45.720							

METRIC

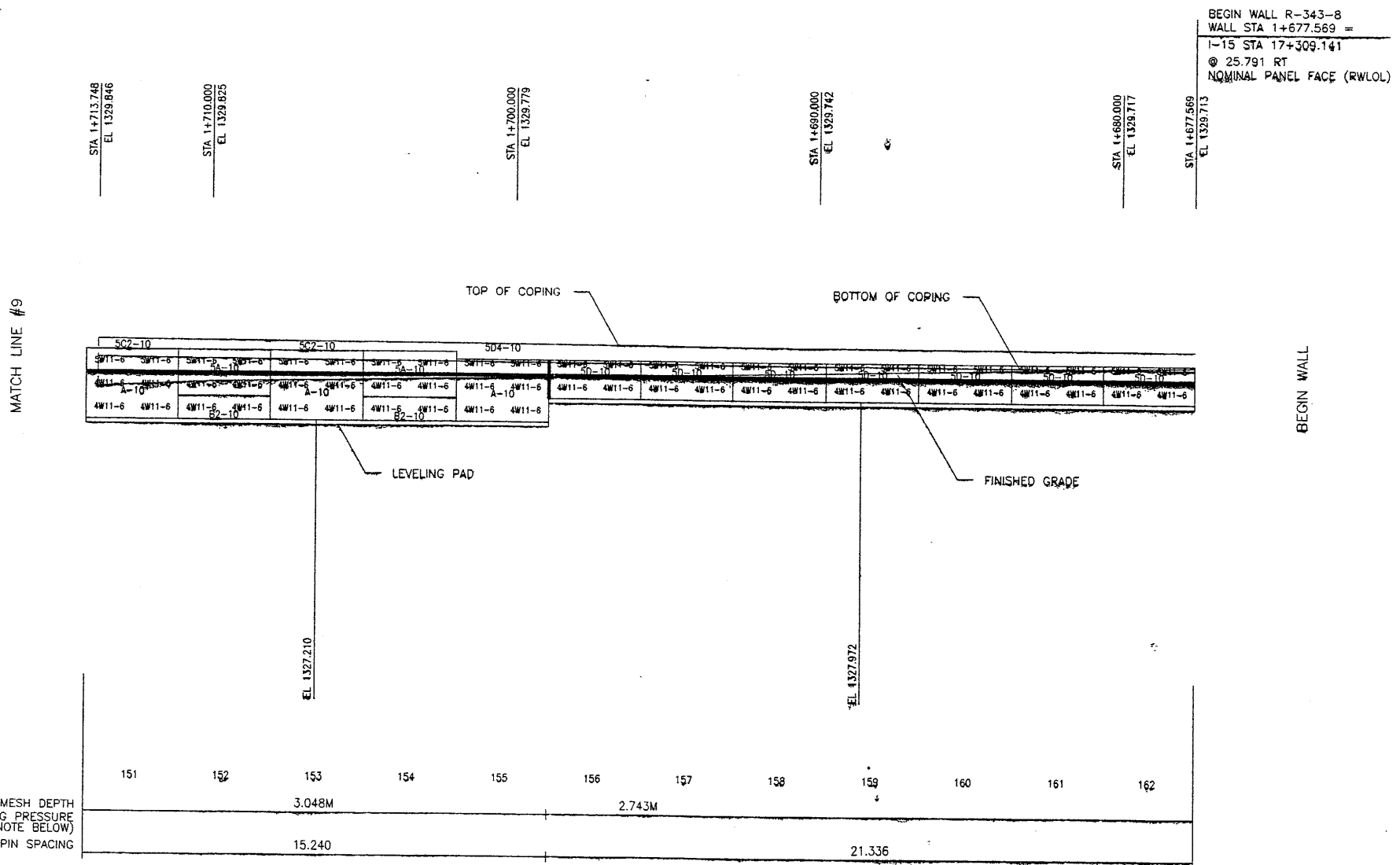
APPROVER NOTE:
 MAXIMUM FINAL UNFACTORED BEARING PRESSURES
 ARE INDICATED BELOW "MESH DEPTH LINE"
 REVIEWER TO VERIFY MAXIMUM BEARING
 CAPACITY OF FOUNDATION.

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.



DES:	01-12-98	MM	NO.	DATE	BY	CHK
DRN:	01-12-98	DDO	NO.	DATE	BY	CHK
CHK:	01-12-98	MM	NO.	DATE	BY	CHK
RETAINED EARTH™						
<p>VSL CORPORATION 2840 Plaza Place, Suite 200 Raleigh, NC 27612 TEL: 4772 Fax: (919) 781-4889</p>						
<p>ATLANTA, GA / DALLAS, TX / RALEIGH, NC (CORPORATE OFFICE) MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA</p>						
<p>WASATCH CONSTRUCTORS JAN 29 1998 RELEASED FOR CONSTRUCTION</p>						
<p>RETAINED EARTH™ WALLS PRECAST WALL "R-343-8" UTAH I-15 INTERCHANGE SALT LAKE COUNTY, UTAH UTAH DEPARTMENT OF TRANSP.</p>						
<p>SCALE: 1.2R-343-8.15 JOB NO: 239-0007 RE-11</p>						

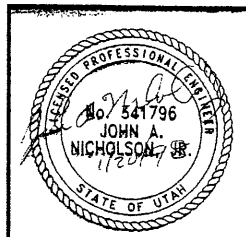
APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	01-12-98	RELEASE FOR CONSTRUCTION



ELEVATION PRECAST WALL R-343-8
 (FRONT FACE SHOWN) SCALE 1:100 (FULL SIZE)
 (TOTAL SURFACE AREA OF PANELS = 1.613.46 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.

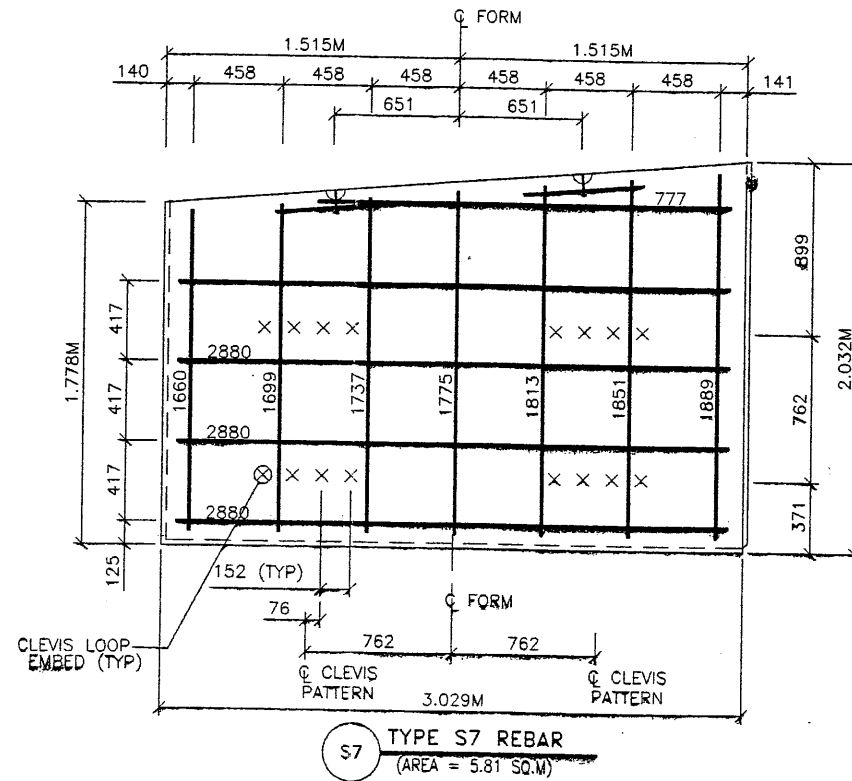
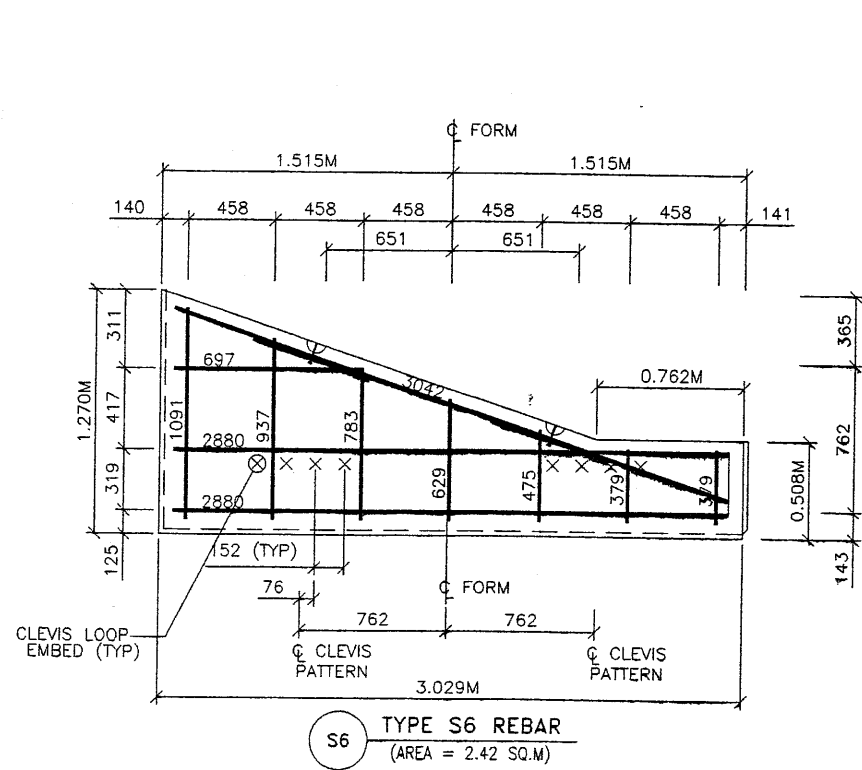
CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY.
 EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE
 STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE
 ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS
 OF CONSTRUCTION, AND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



METRIC

HASATCH CONSTRUCTORS
 JAN 29 1998
 RELEASED FOR CONSTRUCTION

DES. 01-12-98 MM		RETAINED EARTH™	NO.	DATE	BY	CHK
DRN. 01-12-98 DDO						
CHK. 01-12-98 MM						
<p>VSL CORPORATION 3800 Plaza Place, Suite 200 Raleigh, NC 27617 Telephone: (919) 781-6772 Fax: (919) 781-6869</p> <p>ATLANTA, GA / DALLAS, TX / BALTIMORE, MD (CORPORATE OFFICE) MIAMI, FL / SAN JOSE, CA / SPRINGFIELD, VA</p>						
<p>UTAH I-15 INTERCHANGE SALT LAKE COUNTY, UTAH UTAH DEPARTMENT OF TRANSP.</p>						
SCALE: 1.2R-343-8.18		JOB NO: 239-0007 19/21				
RE-14						

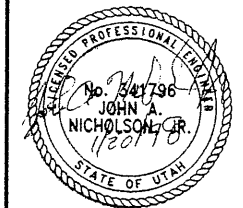


PANEL REINFORCEMENT NOTES:

- 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 EPOXY COATED TO 0.5mm THICKNESS. REFER TO SPECIAL PROVISIONS, SECTION 508.
- CONCRETE PANELS TO HAVE 28 DAY COMPRESSIVE STRENGTH OF 27,500 KPa.
- EQUIVALENT WELDED WIRE FABRIC MAY BE USED.
- ALL PANELS TO USE 9.5mmØ CLEVIS LOOPS.
- VSL RETAINED EARTH™ IS PROTECTED UNDER PATENT 4,725,170.

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



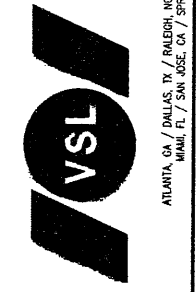
RETAINED EARTH™ WALLS
 PRECAST WALL "343-8"
 SPECIAL PANEL REINFORCEMENT
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

SCALE:
 1:2R-343-8.20
 JOB NO:
 239-0007 2/H
 RE-16

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	01-12-98	RELEASE FOR CONSTRUCTION

DES.	MM
01-12-98	MM
DRN.	LOP
01-12-98	LOP
CHK.	MM
01-12-98	MM

VSL CORPORATION
 2840 Plaza Drive
 Dallas, Texas 75244
 Telephone: (919) 781-6272
 Fax: (919) 781-6869

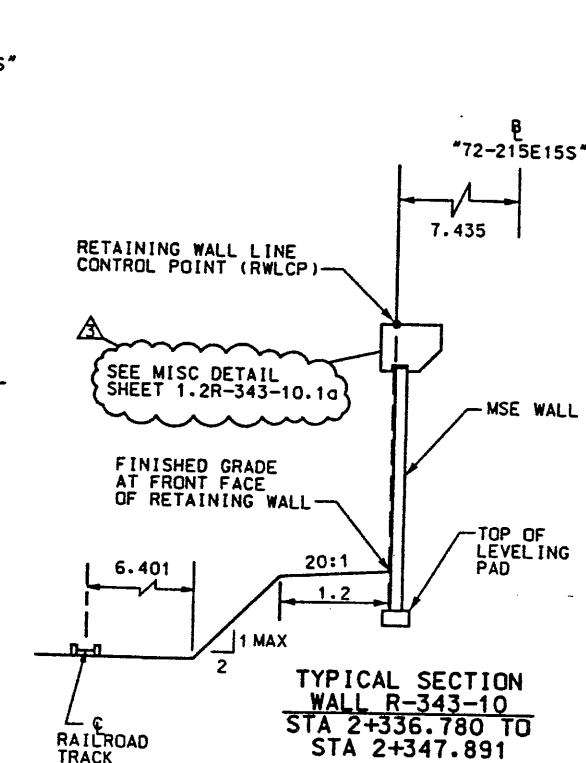
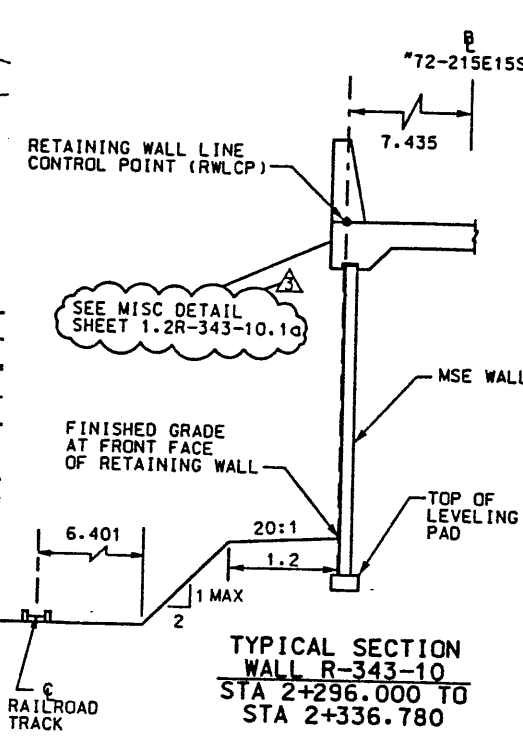
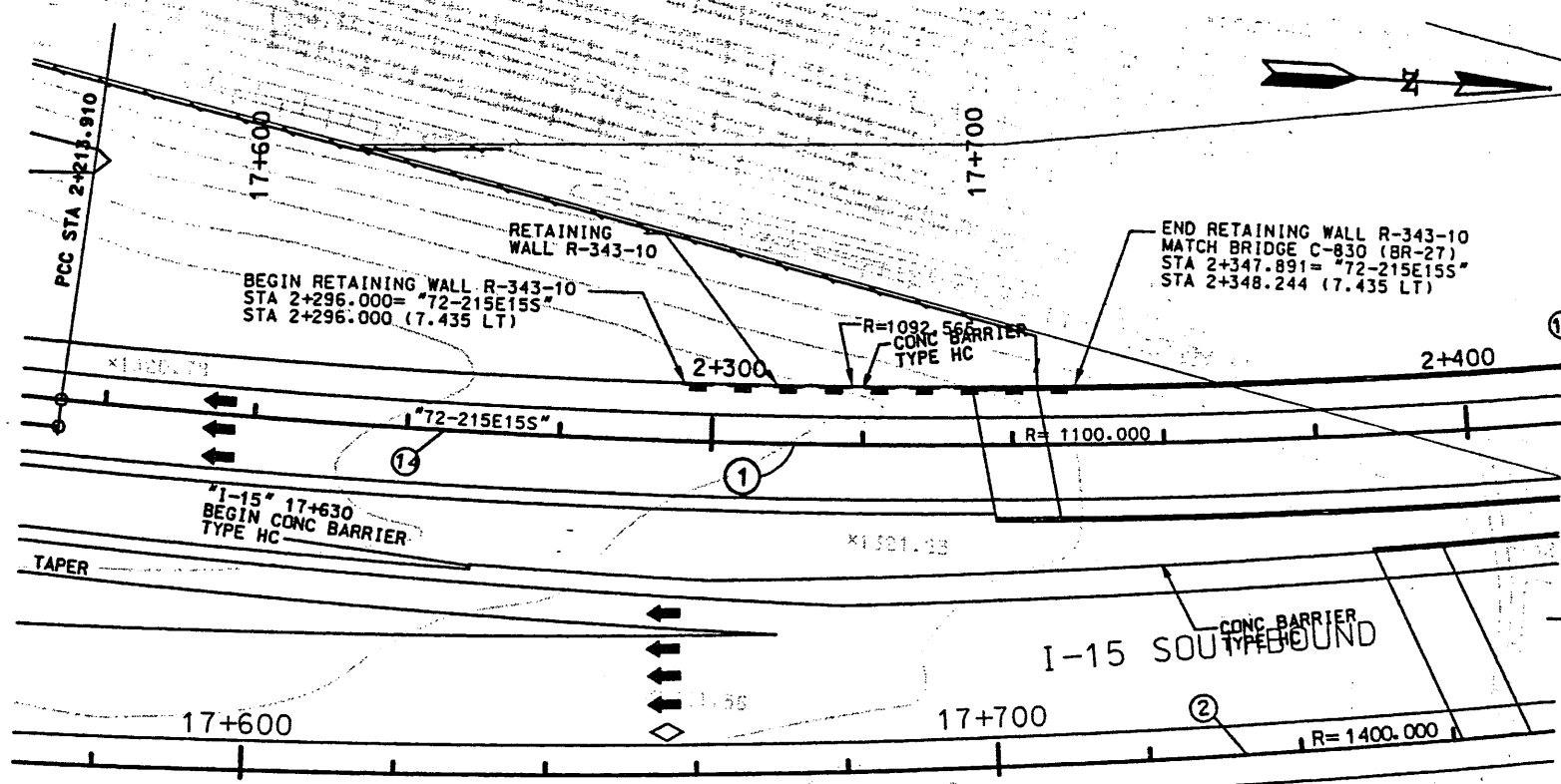


WASATCH CONSTRUCTORS
 JAN 29 1998
 RELEASED FOR CONSTRUCTION

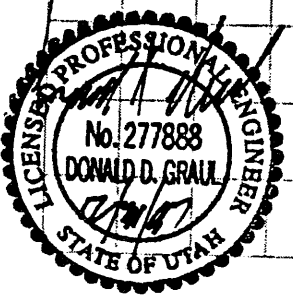
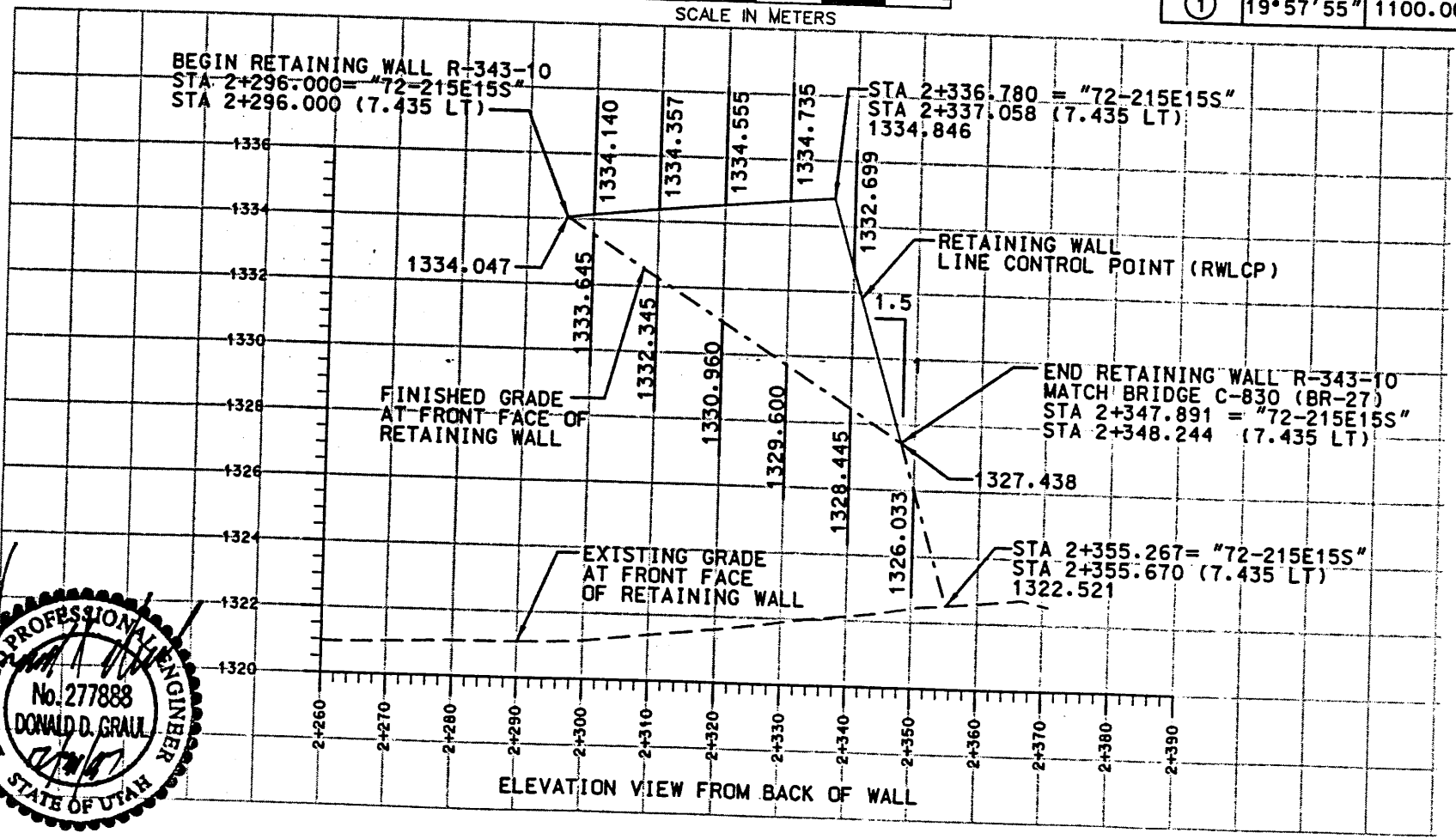
VSL Corporation (VSL) claims a patent in the U.S. and other countries for its Retained Earth™ system. The use of this system in any project, or any reproduction thereof, is restricted to the licensed user. Any other use is strictly prohibited. VSL DISCLAIMS ANY LIABILITY THEREFOR.

Users: stoffrj

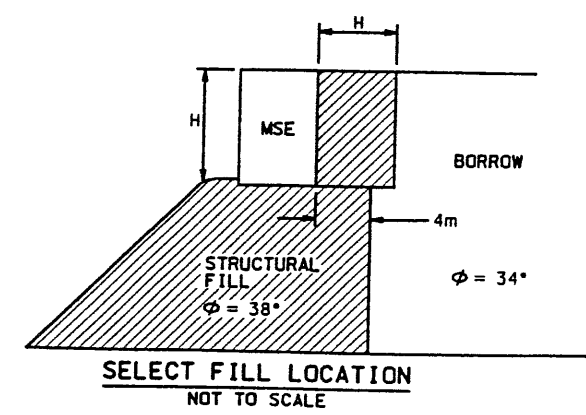
Date: 30-DEC-97 Time: 15:53



CURVE NO.	Δ	R	L	T
①	19°57'55"	1100.000	383.308	193.617



WASATCH CONSTRUCTORS
 JAN 02 1998
 RELEASED FOR CONSTRUCTION



APPROVED FOR CONSTRUCTION		DESCRIPTION	
NO.	DATE	INITIAL RELEASE	REVISED FOR WALL/BIDGE INTERFACE
Δ	9-12-97		
Δ	12-4-97		
Δ	12-31-97		

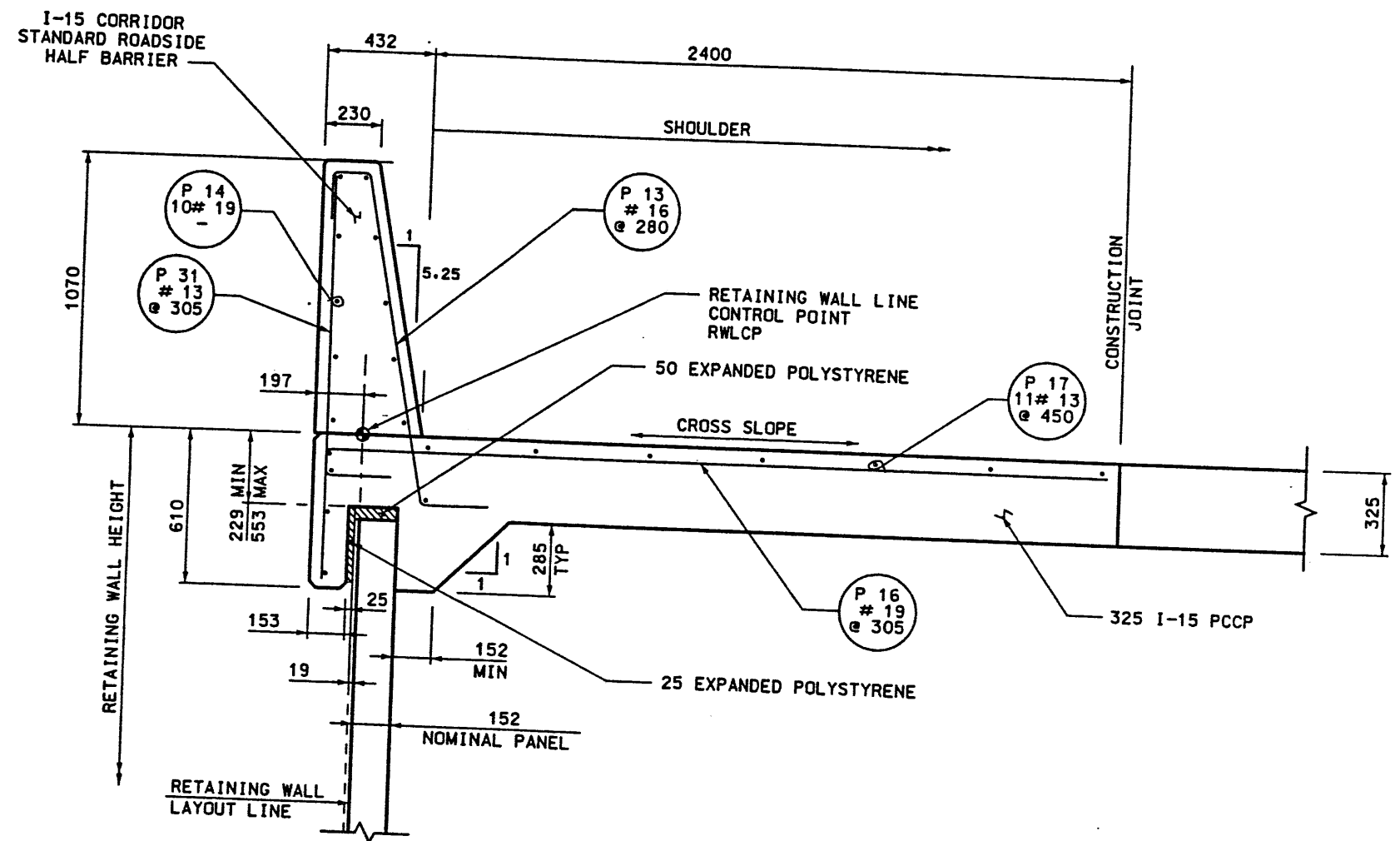
DESIGN	JE	9/97	CHECK	JIM	9/97
DRAWN	DK	9/97	CHECK	DK	9/97
QUANT.			CHECK		

PROJECT NUMBER	1212310
UTAH DEPARTMENT OF TRANSPORTATION	URS Greiner
SVERDRUP/DE LEUW	

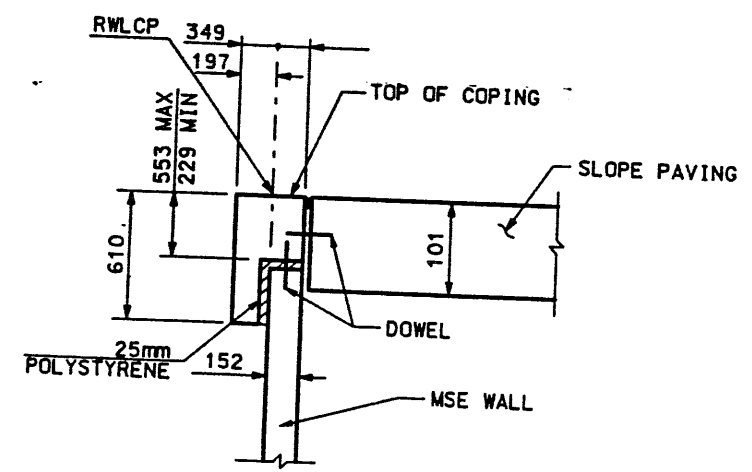
APPROVAL RECORD	9/97	DON GRAUL	PROJECT DESIGN ENGINEER
APPROVED	8/97	ALIC CHAPMAN	PROJECT MANAGER

I-15 CORRIDOR RECONSTRUCTION	SITUATION/LAYOUT
RET WALL R-343-10	SECTION 1.2
COUNTY	SALT LAKE
DWG. NO.	1.2R-343-10.1
SHT. 1 OF 8	

Date: 30-DEC-1997 Time: 10:26 Username: atotr1



MSE SINGLE STAGE WITH BARRIER ON MOMENT SLAB
NO SCALE



CROSS SECTION C-C WITH ABUTMENT SLOPE (NON SPU)
SLOPE PAVING / COPING DETAILS
NO SCALE

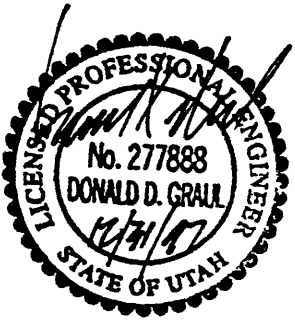
BARRIER REINFORCING STEEL SCHEDULE				
MARK	LOCATION	SIZE NO.	LENGTH	SKETCH
P13	OUTSIDE	16	1994	
P14	OUTSIDE LONGITUDINAL	19	VARIES	
P15	OUTSIDE	13	VARIES	
P16	OUTSIDE BARRIER ON MSE WALL	19	3240	
P17	OUTSIDE BARRIER ON MSE WALL	13	VARIES	
P18	OUTSIDE BARRIER	19	2340	
P30		16	2440	
P31		13	1370	
P32		19	4310 MAX	

- NOTES:**
- 50mm MINIMUM COVER OVER REINFORCING.
 - USE 325 PCCP $f'c=27.5 \text{ MPa}$ (4,000 PSI) FOR MOMENT SLAB.

WASATCH CONSTRUCTORS

JAN 02 1998

RELEASED FOR CONSTRUCTION



APPROVED FOR CONSTRUCTION

UTAH DEPARTMENT OF TRANSPORTATION

SVERDRUP/DE LEUW

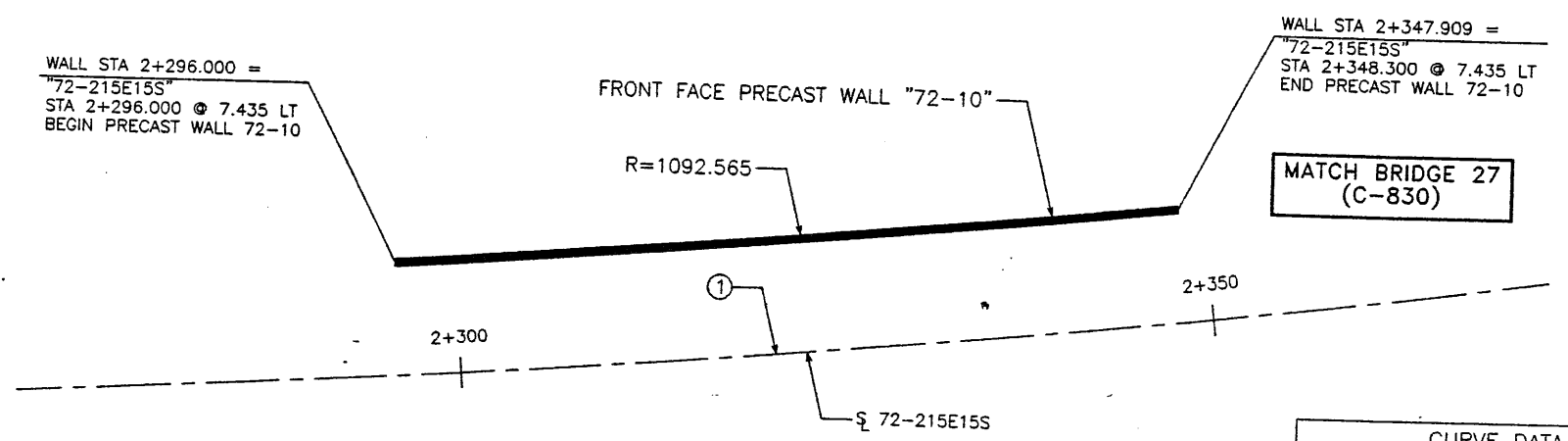
DESIGN: ME 12/97 CHECK: JE 12/97
 DRAW: RS 12/97 CHECK: JE 12/97
 QUANT.: 1212310

APPROVAL RECORD: 12/97 DATE: 12/97 PROJECT DESIGN ENGINEER: DON GRAUL SECTION MANAGER: [Signature]
 APPROVED: 12/97 DATE: 12/97

I-15 CORRIDOR RECONSTRUCTION
 MISC. DETAILS
 RET. WALL R-343-10
 SECTION 1.2
 PROJECT NUMBER #SP-15-7(135)296

SALT LAKE COUNTY
 DWG. NO. 1.2R-343-10.1a
 SHT. 2 OF 8

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	9/15/97	RELEASE FOR CONSTRUCTION



WALL STA 2+296.000 =
"72-215E15S"
STA 2+296.000 @ 7.435 LT
BEGIN PRECAST WALL 72-10

FRONT FACE PRECAST WALL "72-10"

R=1092.565

WALL STA 2+347.909 =
"72-215E15S"
STA 2+348.300 @ 7.435 LT
END PRECAST WALL 72-10

MATCH BRIDGE 27
(C-830)

2+300

2+350

72-215E15S

CURVE DATA				
No.	RADIUS	LENGTH	TANGENT	Δ
1	1100.000	383.308	193.617	19°57'55"

All Dimensions Are In Meters Unless Noted Otherwise

PLAN VIEW WALL "72-10"

SCALE: 1=250 (FULL SIZE)
SCALE: 1=500 (HALF SIZE)

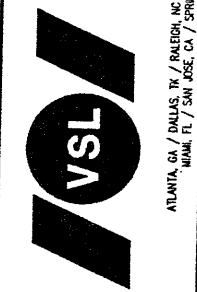
- GENERAL NOTES**
- ALL WALLS ARE SHOWN FRONT FACE. NOTE STATIONING.
 - PANEL TYPE IS DESIGNATED ON EACH PANEL. CONNECTOR LABELS INDICATE NUMBER OF CONNECTORS PER SOIL REINFORCING MESH LOCATION.
EXAMPLE: 5B2-10 IS A "B2-10" PANEL WITH FIVE (5) CONNECTORS PER SOIL REINFORCING MESH LOCATION.
IF NO CONNECTORS ARE SHOWN, FOUR (4) CONNECTOR PANELS SHALL BE USED.
 - SOIL REINFORCING MESH TYPE IS DESIGNATED ON EACH PANEL. MESH LABELS INDICATE WIRE SIZE AND SPACING. LONGITUDINAL WIRE AND CROSSBAR SIZES ARE THE SAME UNLESS NOTED OTHERWISE.
EXAMPLE: 4W11-6 MESH HAS FOUR (4) W11 LONGITUDINAL WIRES WITH W11 CROSSBARS AT 6" CENTERS.
EXAMPLE: 4W20-12 MESH HAS FOUR (4) W20 LONGITUDINAL WIRES WITH W20 CROSSBARS AT 12" CENTERS.
EXAMPLE: 5W11-6 MESH HAS FIVE (5) W11 LONGITUDINAL WIRES WITH W11 CROSSBARS AT 6" CENTERS.
EXAMPLE: 5W11-12 MESH HAS FIVE (5) W11 LONGITUDINAL WIRES WITH W11 CROSSBARS AT 12" CENTERS.
EXAMPLE: 6W11-12 MESH HAS SIX (6) W11 LONGITUDINAL WIRES WITH W11 CROSSBARS AT 12" CENTERS.
IF NO MESH IS SHOWN, 4W11-6 MESH SHALL BE USED.
 - SEE RETAINED EARTH INSTALLATION MANUAL FOR PROPER WALL ERECTION PROCEDURES AND GUIDELINES.
 - CONSTRUCTION PROCEDURES SHALL PREVENT BACKFILL SATURATION AND PONDING.
 - HEAVY EQUIPMENT SHALL NOT BE USED WITHIN ONE METER OF THE BACK OF THE RETAINED EARTH PANELS. HAND COMPACTORS SHALL BE USED IN THIS AREA.
 - CARE SHALL BE TAKEN TO PREVENT DAMAGE TO GALVANIZING. DAMAGED GALVANIZING SHALL BE COATED WITH ZINC RICH PAINT.
 - BEARING PADS AND FILTER FABRIC ARE NOT REQUIRED BETWEEN THE LEVELING PAD AND THE FIRST ROW OF PANELS. TEMPORARY WEDGES MAY BE USED TO PROVIDE PROPER ALIGNMENT.
 - VSL RETAINED EARTH IS PROTECTED UNDER U.S. PATENT 4,725,170.
 - ALL PANELS SHALL HAVE AN ARCHITECTURAL FINISH, SEE SHEET RE-3 FOR DETAIL.

RETAINED EARTH INDEX	
RE-1	PLAN PRECAST FACE WALL 72-10, NOTES & DESIGN CRITERIA
RE-2	TYPICAL DETAILS
RE-3	TYPICAL DETAILS
RE-4	TYPICAL CROSS SECTIONS
RE-5	ELEVATION PRECAST WALL "72-10"
RE-6	TYPICAL PANEL REINFORCEMENT
RE-7	SPECIAL PANEL DETAILS
RE-8	SPECIAL PANEL DETAILS

DESIGN PARAMETERS	
ANGLE OF INTERNAL FRICTION (SELECT)	= 34°
ANGLE OF INTERNAL FRICTION (BASE)	= 30°
ANGLE OF INTERNAL FRICTION (RANDOM)	= 34°
UNIT WEIGHT BACKFILL	= 135 PCF.
TRAFFIC SURCHARGE	= 250 PSF
SEISMIC ACCELERATION COFF.	= 0.12g (TYP)
SEISMIC ACCELERATION COFF.	= 0.32g (AT BRIDGE ABUTMENTS)
DESIGN CRITERIA	
SAFETY FACTOR (OVERTURNING)	= 2.0
SAFETY FACTOR (SLIDING)	= 1.5
SAFETY FACTOR (PULLOUT)	= 1.5
DESIGN LIFE	= 75 YEARS

WASATCH CONSTRUCTORS
SEP 17 1997
RELEASED FOR CONSTRUCTION

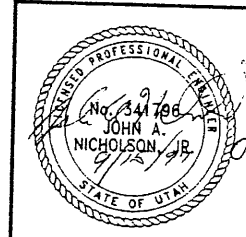
VSL CORPORATION
2840 Plaza Place, Suite 200
Raleigh, NC 27612
Telephone: (919) 781-6872
Fax: (919) 781-6869



VSL Retained Earth™ (RE™) claims a 100% proprietary right in all aspects of the system. The use of the system on the part of any contractor is a license granted by VSL. Any other use is strictly prohibited and VSL will take legal action to enforce this. THEREFORE, IT IS THE POLICY OF VSL TO PROTECT THIS RIGHT.

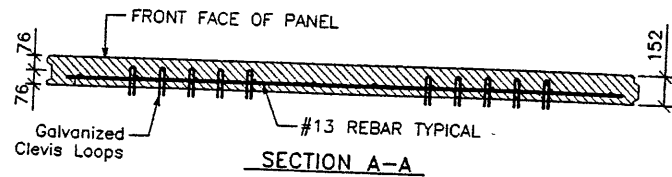
RETAINED EARTH™ WALLS
PLAN VIEW PRECAST WALL "72-10"
UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

METRIC

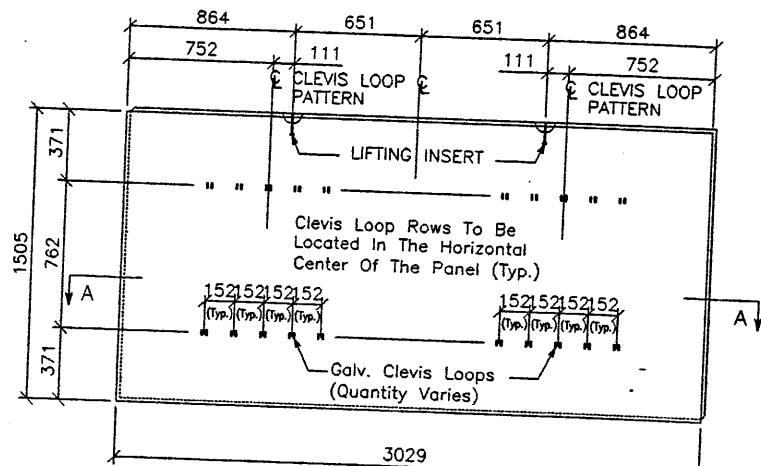


CERTIFIED FOR INTERNAL STABILITY OF RETAINED EARTH™ STRUCTURES ONLY. EXTERNAL STABILITY, INCLUDING BUT NOT LIMITED TO FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE RETAINED EARTH™ MASS, METHODS OF CONSTRUCTION, AND QUALITY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

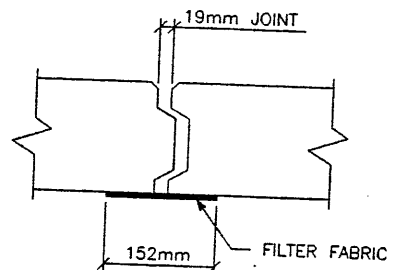
DWG. NO.	1.2R-343-10.2
JOB NO.	239-0007
SHT NO.	RE-1



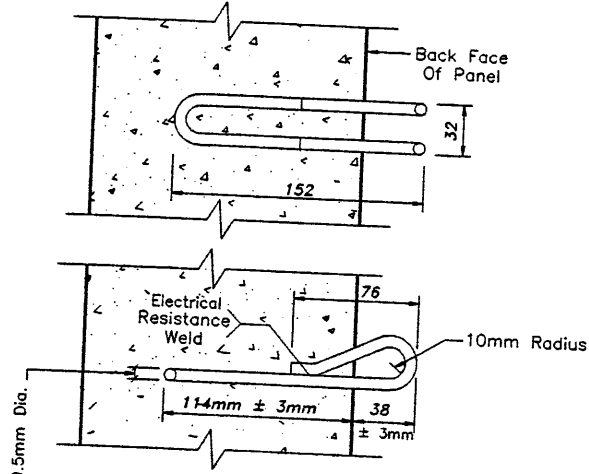
SECTION A-A



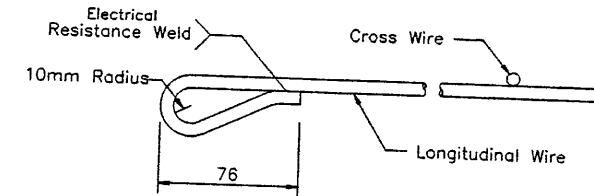
STANDARD "5A-10" PANEL
Back Face View



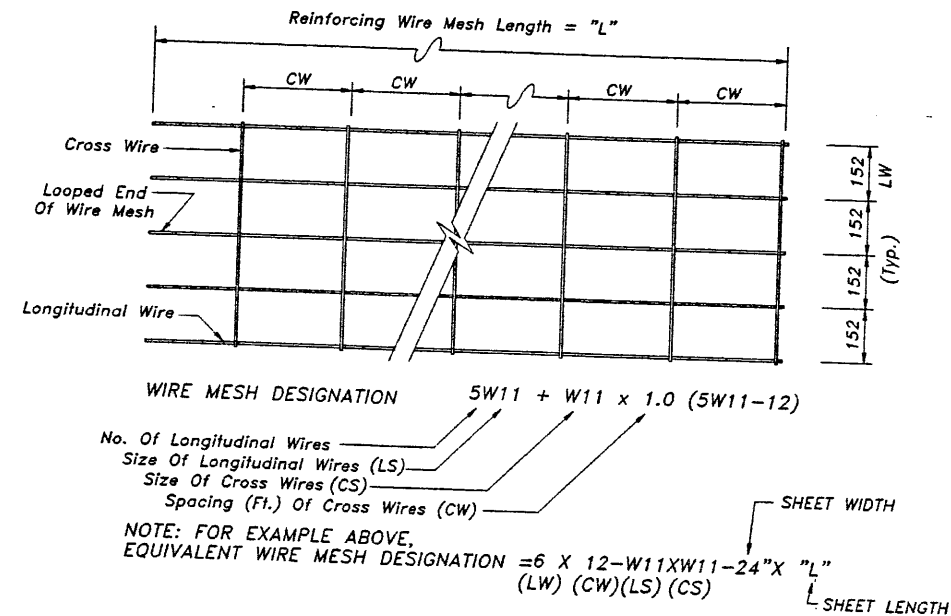
HORIZONTAL JOINT DETAIL
N.T.S.



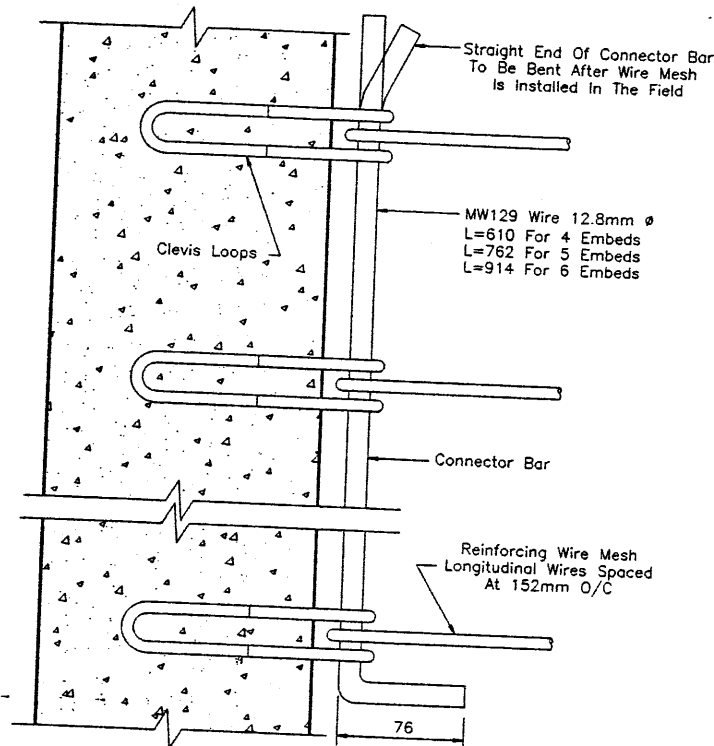
CLEVIS LOOP DETAIL
N.T.S.



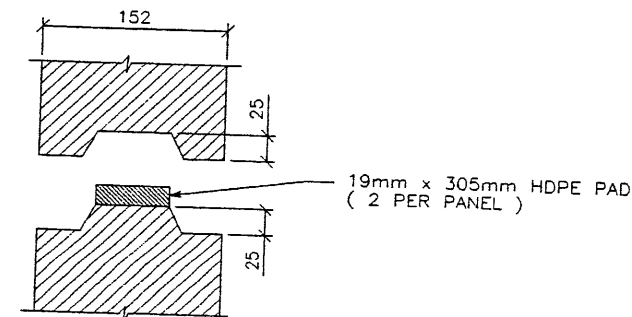
WIRE MESH LOOP DETAIL
N.T.S.



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

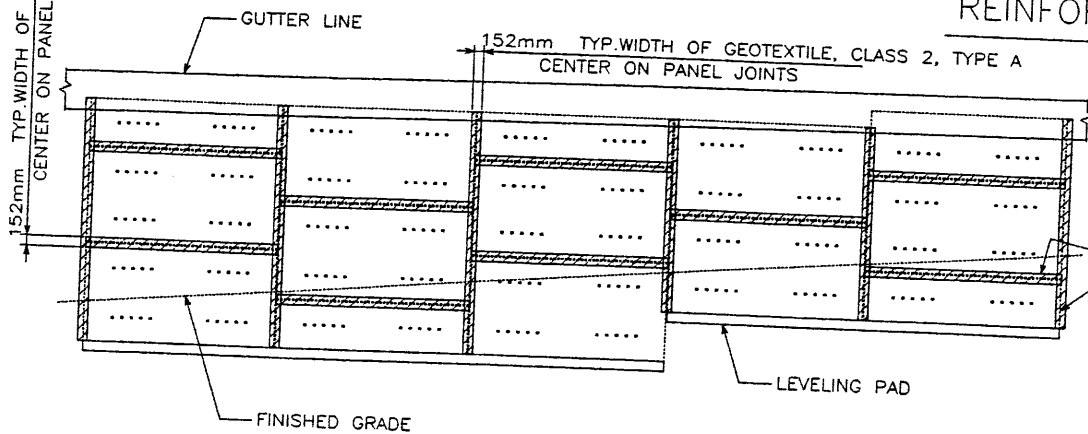


REINFORCING MESH CONNECTION DETAIL
N.T.S.



PANEL JOINT DETAIL
N.T.S.

E:\APPROVAL\239-0007\2SERIES\72-10\RE



PARTIAL WALL ELEVATION

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

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	9/15/97	RELEASE FOR CONSTRUCTION

WASATCH CONSTRUCTORS
SEP 17 1997
RELEASED FOR CONSTRUCTION

NO.	DATE	REVISION	BY	CHK

VSL CORPORATION
2840 Peach Plaza, Suite 200
Raleigh, NC 27613
Telephone: (919) 781-6772
Fax: (919) 781-4869

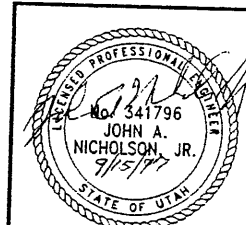


ALANTA, GA / DANLUS, TX / RALEIGH, NC (CORPORATE OFFICE)
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RETAINED EARTH™ WALLS
PRECAST WALL "72-10"
TYPICAL DETAILS
UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

DWG. NO.	1.2R-343-10.3
JOB NO.	239-0007
SHT. NO.	4/8



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METRIC

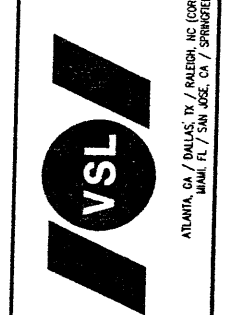
RE-2

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	9/15/97	RELEASE FOR CONSTRUCTION

ASATCH CONSTRUCTORS
 SEP 17 1997
 RELEASED FOR CONSTRUCTION

NO.	DATE	REVISION	CHK

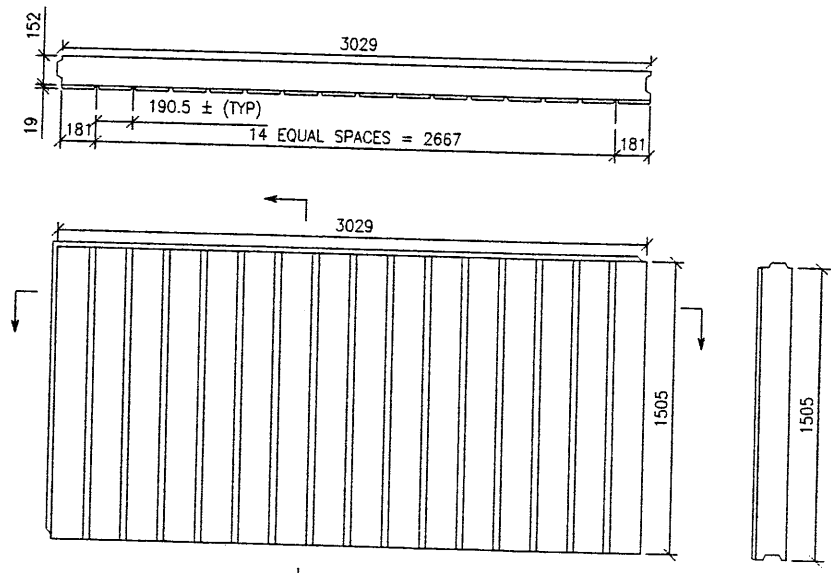
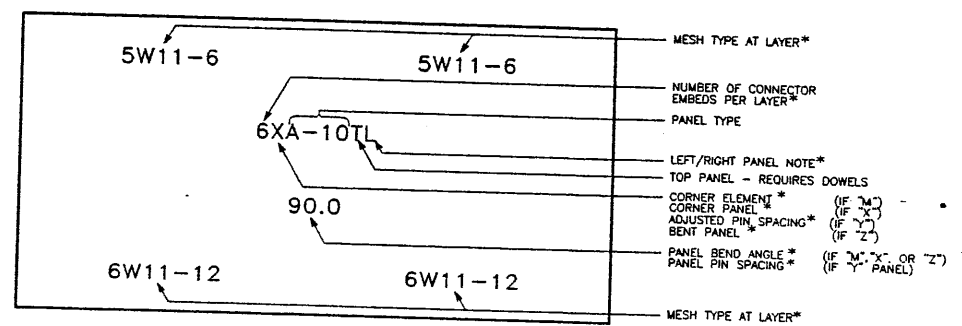
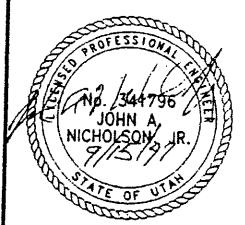
VSL CORPORATION
 2840 Plaza Place, Suite 200
 Raleigh, NC 27612
 Telephone: (919) 781-8772
 Fax: (919) 781-1999



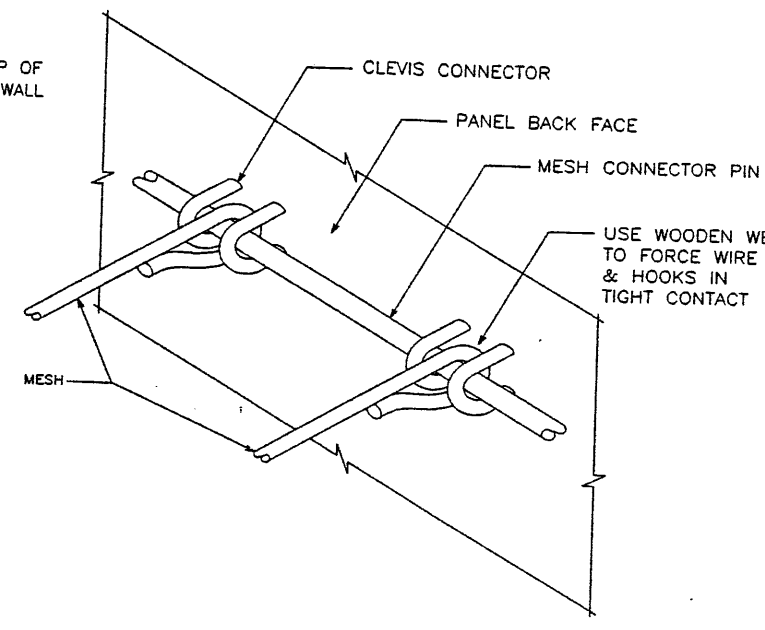
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RETAINED EARTH™ WALLS
 PRECAST WALL "72-10"
 TYPICAL DETAILS
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

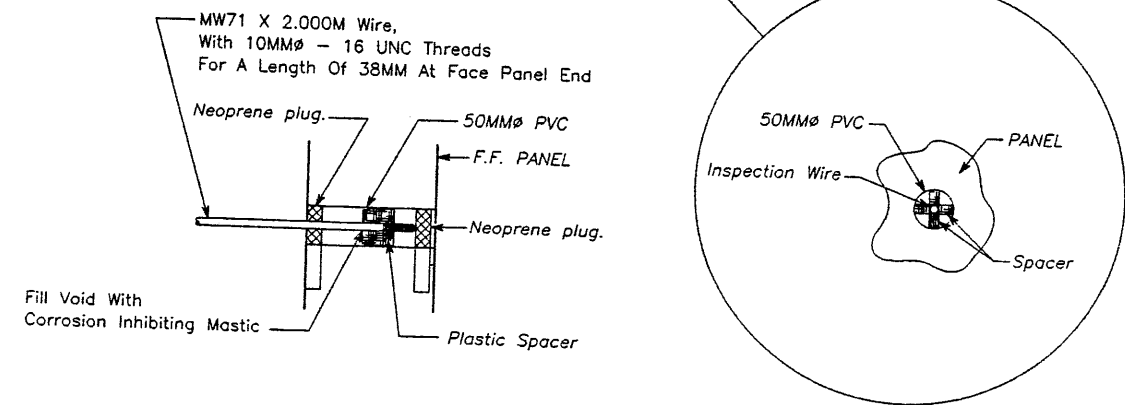
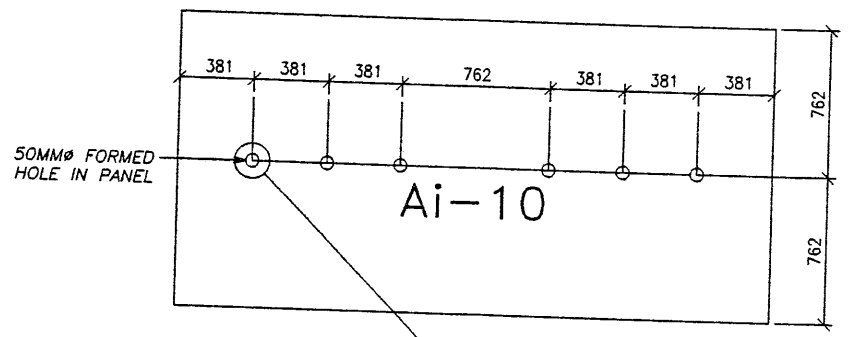
DWG. NO.	1.2R-343-10.4
JOB NO.	239-0007/8
SHT. NO.	RE-3



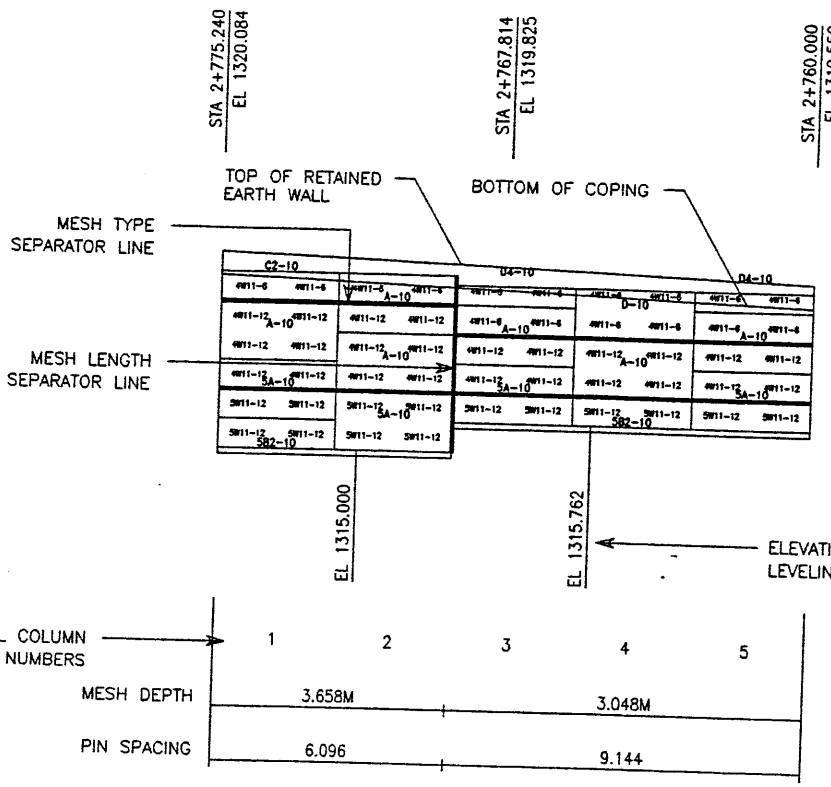
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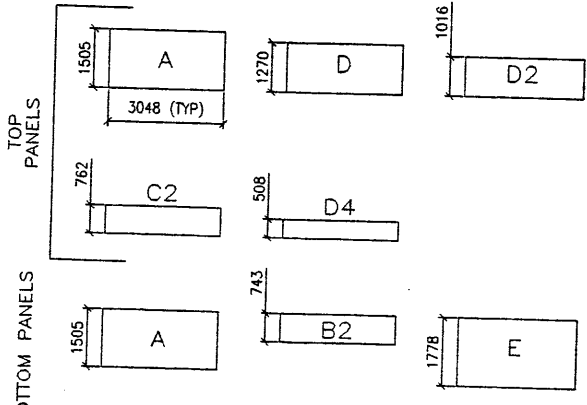
2
 VSL RETAINED EARTH IS PROTECTED UNDER U.S. PATENT 4,725,170.



5



1



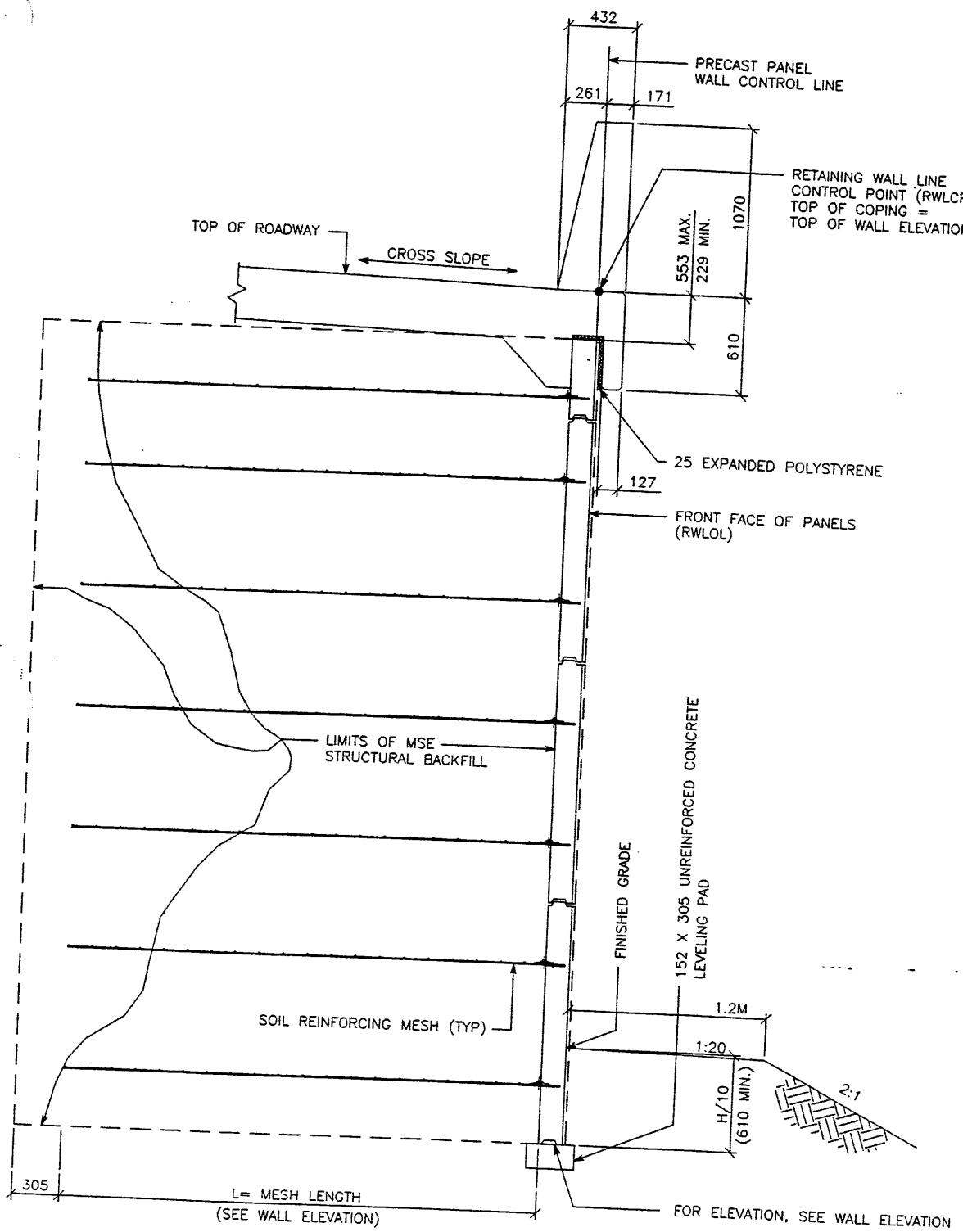
4

ALL DIMENSIONS ARE IN MILLIMETERS

METRIC

E:\PROJECT\239-0007\72SERIES\72-10\RE-3

9-03-97



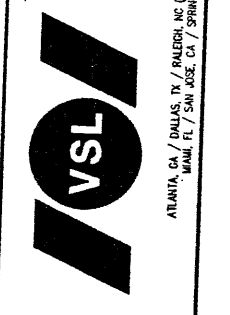
TYPICAL CROSS SECTION
 (MSE SINGLE STAGE WITH MOMENT SLAB)
 SCALE: 1:20 (FULL SIZE)
 SCALE: 1:40 (HALF SIZE)

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	9/15/97	RELEASE FOR CONSTRUCTION

WASATCH CONSTRUCTORS
 SEP 17 1997
 RELEASED FOR CONSTRUCTION

NO.	DATE	REVISION	BY	CHK

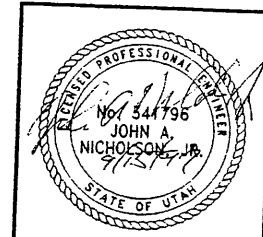
DES. 09-03-97 MM
 DRN. 09-03-97 DDO
 CHK. 09-03-97 MM
 RETAINED EARTH™



VSL CORPORATION warrants that the design and construction of the structure shown on this drawing shall conform to the specifications and standards set forth in the contract documents. The use of the design and construction shown on this drawing is based on the information provided to VSL CORPORATION. VSL CORPORATION is not responsible for the design and construction of the structure shown on this drawing if it is used for any purpose other than that intended. Any other use is strictly prohibited. VSL CORPORATION DISCLAIMS ANY LIABILITY THEREFOR.

RETAINED EARTH™ WALLS
 PRECAST WALL "72-10"
 TYPICAL CROSS SECTION
 UTAH I-15 INTERCHANGE
 SALT LAKE COUNTY, UTAH
 UTAH DEPARTMENT OF TRANSP.

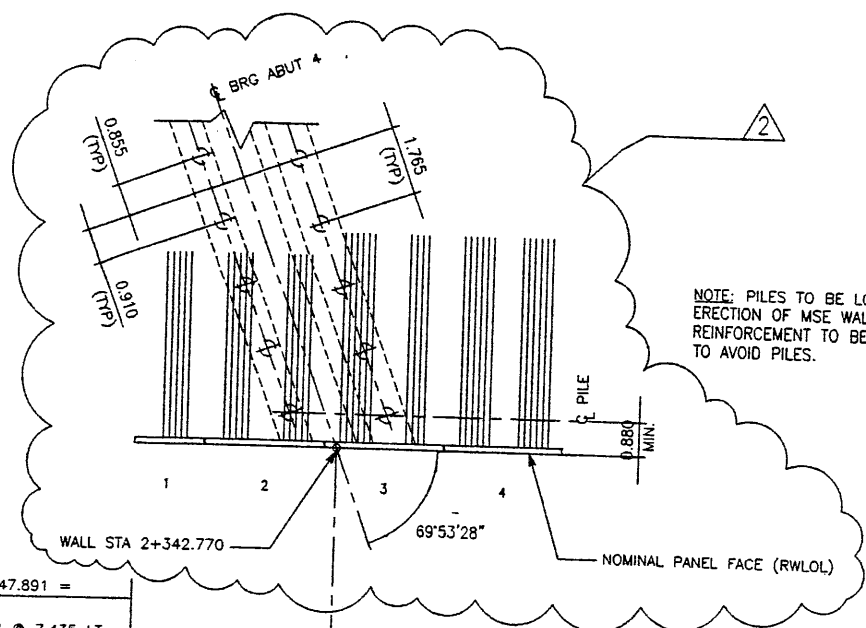
METRIC



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DWG NO.	1.2R-343-10.5
JOB NO.	239-0007 6/8
SHT NO.	RE-4

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
△	9/15/97	RELEASE FOR CONSTRUCTION
△	11/4/97	WALL/BRG INTERFACE REVISIONS



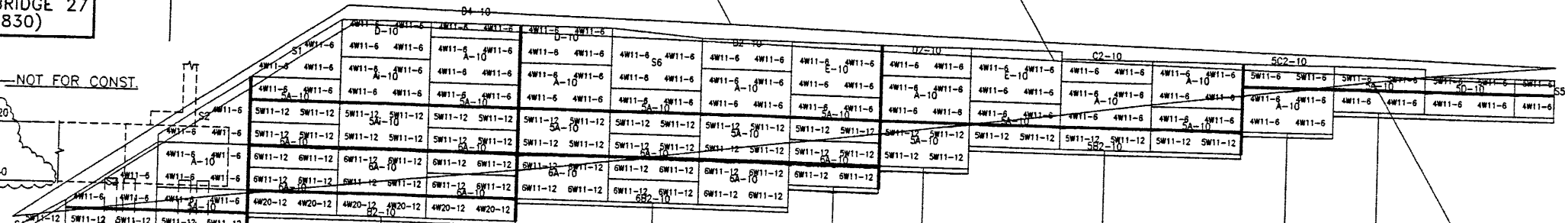
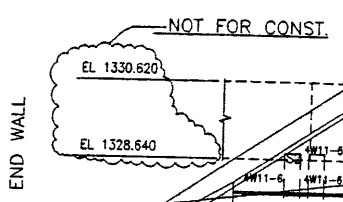
NOTE: PILES TO BE LOCATED PRIOR TO ERECTION OF MSE WALL. SOIL REINFORCEMENT TO BE FIELD ADJUSTED TO AVOID PILES.

SPECIAL NOTE: PANEL CONNECTIONS AT ABUTMENT TO BE DETERMINED IN THE FUTURE.

WALL STA 2+347.891 =
"72-215E155"
STA 2+348.244 @ 7.435 LT
NOMINAL PANEL FACE (RWLOL)

WALL STA 2+296.000 =
"72-215E155"
STA 2+296.000 @ 7.435 LT
NOMINAL PANEL FACE (RWLOL)

MATCH BRIDGE 27
(C-830)

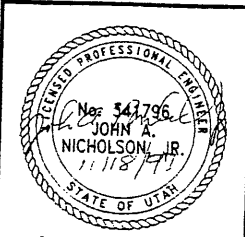


Panel No.	Panel Description	Length (M)	Mesh Depth (mm)	Max. Bearing Pressure (kPa)	Pin Spacing (mm)
1	4W11-6	4.877	115	115	1800
2	4W11-6	3.048	115	115	3048
3	4W11-6	3.048	115	115	3048
4	4W11-6	9.144	200	200	9144
5	4W11-6	4.877	174	174	9144
6	4W11-6	3.048	174	174	3048
7	4W11-6	3.048	174	174	3048
8	4W11-6	3.658	134	134	9144
9	4W11-6	2.438	86	86	3048
10	4W11-6	7.437	86	86	7437

ELEVATION PRECAST WALL 72-10
(FRONT FACE SHOWN)
SCALE 1:100 (FULL SIZE)
SCALE 1:200 (HALF SIZE)
(TOTAL SURFACE AREA OF PANELS = 206.59 SM)

WASATCH CONSTRUCTORS
DEC 05 1997
RELEASED FOR CONSTRUCTION

METRIC

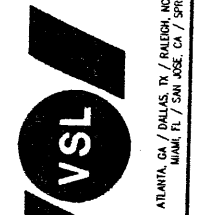


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RETAINED EARTH™ WALLS
PRECAST WALL "72-10"
I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

SCALE:	1.2R-343-10.6
JOB NO:	239-0007
DATE:	7/8
REVISION:	RE-5

VSL CORPORATION
2840 Phoebe Place, Suite 200
Baltimore, MD 21286
Telephone: (410) 781-6272
Fax: (410) 781-4869



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2\W72-10

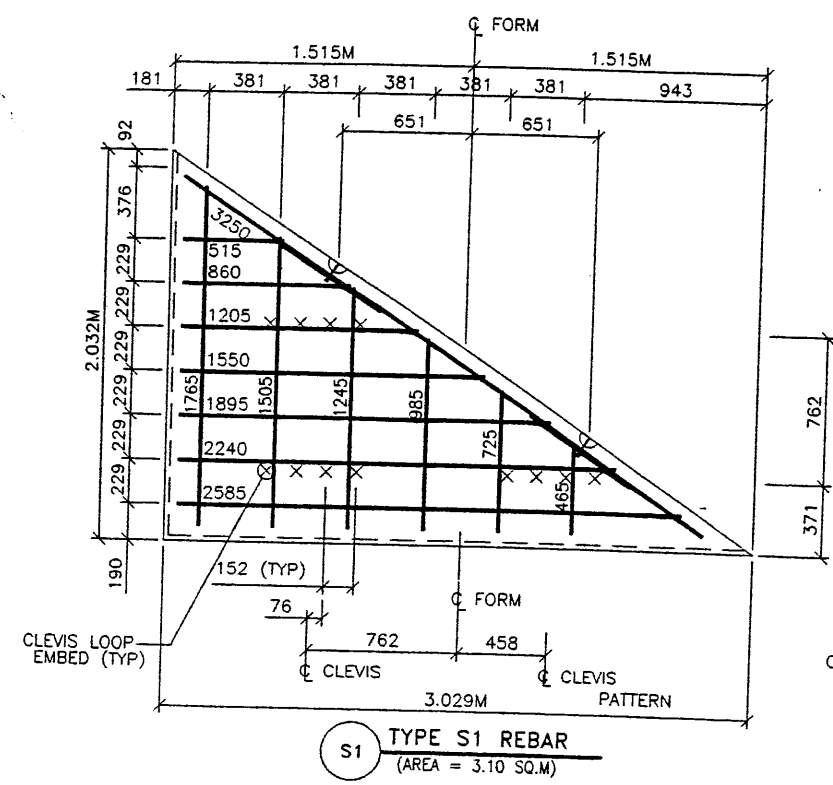
H:\RE_EARTH\PROJECT\239-0007\2SERIES\72-10

12-97

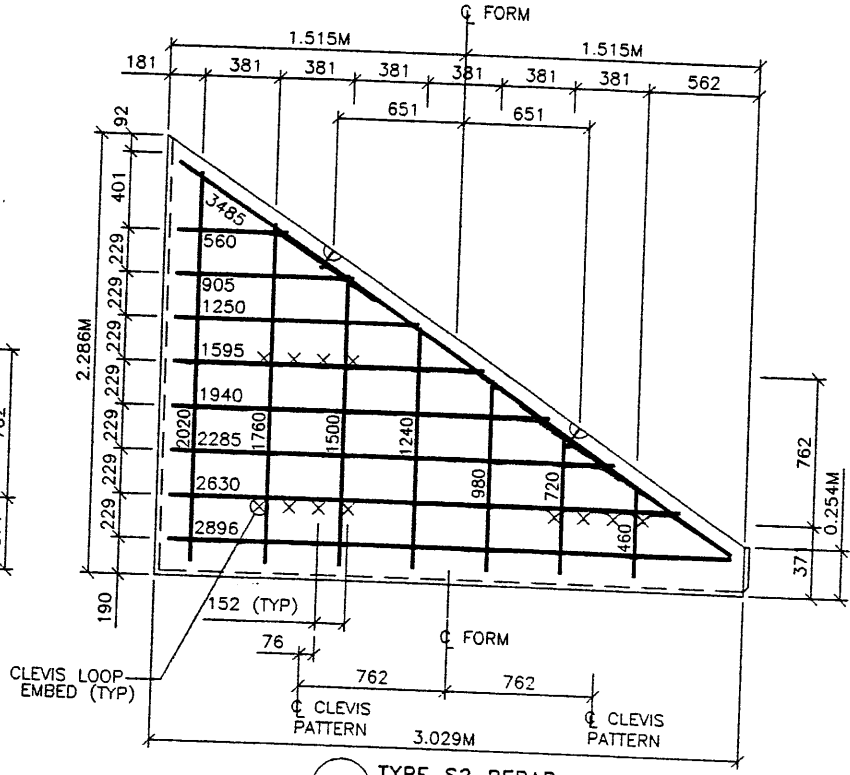
FINAL PLOT

E:\APPROVE\239-0007\72SERIES\72-10\SPF

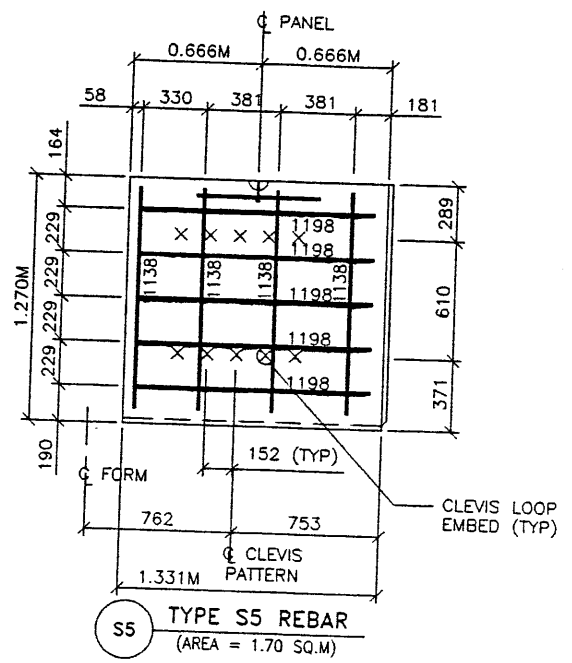
FINAL PLOT 13-97



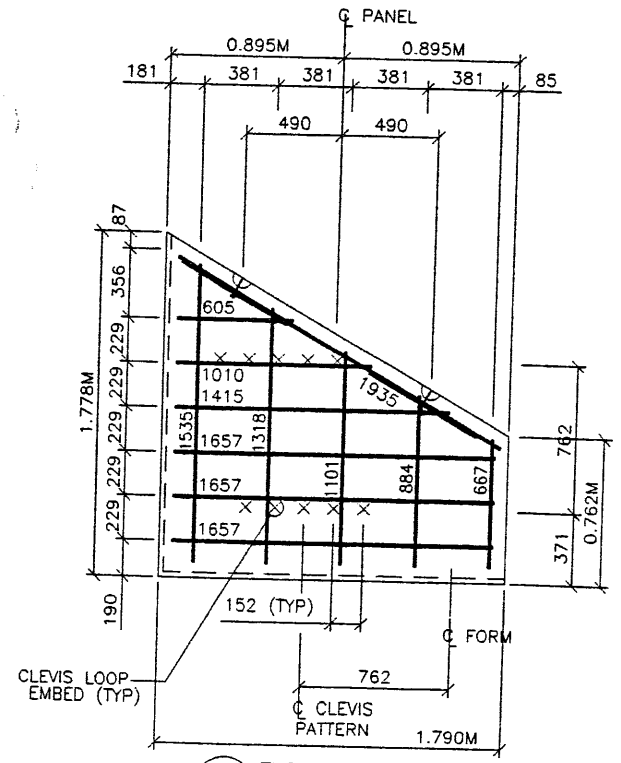
S1 TYPE S1 REBAR
(AREA = 3.10 SQ.M)



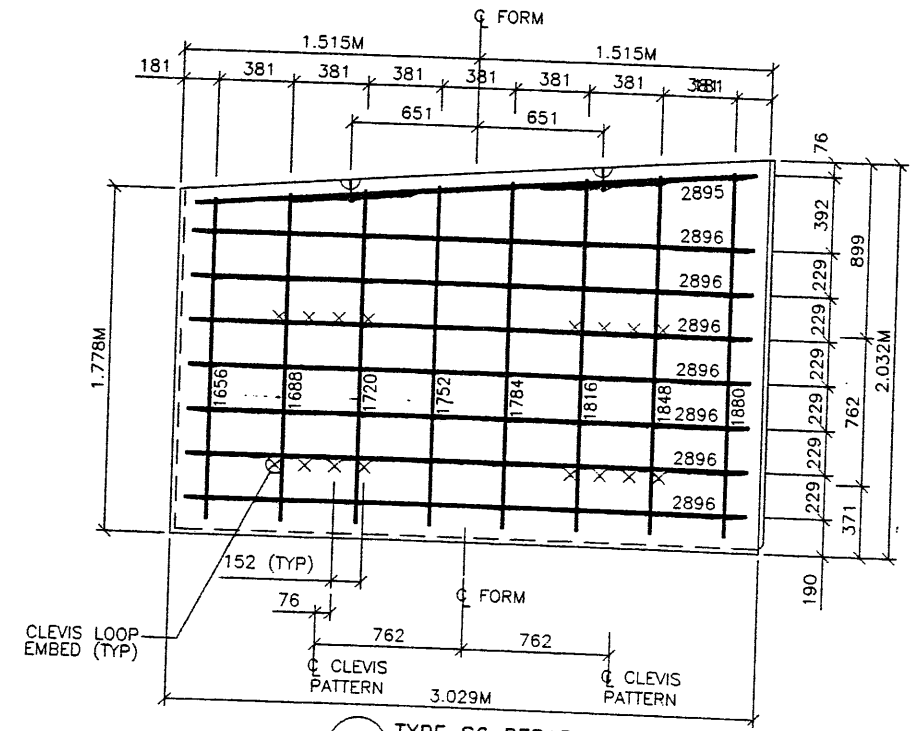
S2 TYPE S2 REBAR
(AREA = 3.87 SQ.M)



S5 TYPE S5 REBAR
(AREA = 1.70 SQ.M)



S4 TYPE S4 REBAR
(AREA = 2.29 SQ.M)



S6 TYPE S6 REBAR
(AREA = 5.81 SQ.M)

APPROVED FOR CONSTRUCTION		
NO.	DATE	DESCRIPTION
1	11-4-97	RELEASE 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 I. CONCRETE PANELS TO HAVE 28 DAY COMPRESSIVE STRENGTH OF 27,500 KPa.
 7. EQUIVALENT WELDED WIRE FABRIC MAY BE USED.
 8. ALL PANELS TO USE 9.5mmØ CLEVIS LOOPS. VSL RETAINED EARTH™ IS PROTECTED UNDER PATENT 4,725,170.

NO.	DATE	REVISION	CHK

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

VSL

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WASATCH CONSTRUCTORS
DEC 05 1997
RELEASED FOR CONSTRUCTION

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RETAINED EARTH™ WALLS
PRECAST WALL "R-343-10"
SPECIAL PANEL REINFORCEMENT
UTAH I-15 INTERCHANGE
SALT LAKE COUNTY, UTAH
UTAH DEPARTMENT OF TRANSP.

METRIC

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SCALE: 1.2R-343-10.7

JOB NO: 239-0007 / B

RE-6