

POINT	NORTHING	EASTING	STATION
"C"	N=695022.635	E=593365.814	11+37.65
"D"	N=694909.960	E=592770.504	17+43.57
"E"	N=694908.617	E=592770.783	17+44.94

○ GV-1 GAS VENT

EW-1 EXISTING EXTRACTION WELL

GCP-1-1 GRADIENT CONTROL PAIR PIEZOMETER

PASSAIC RIVER

 NAVIGATION
CHANNEL
BOUNDARY

SURVEY DISK "MAZUREK"
WEST WALL
N: 694921.30
E: 592828.48
ELEV: 14.65
AT KING PILE NO. R1 STA. 0

— START SHEET PILE AT KING PILE NO. P1 STA 0+00

TYPICAL TIEBACK SECTION

EXISTING
OU-1 FLOOD WALL

SURVEY DISK "MAZUREK"
 MID WALL
 N: 694991.65
 E: 593195.17
 ELEV: 14.63

✓ WALES (TYP)

✓ SPLICE (TYP)

STATION "D" (SEE
VERTICES SCHEDULE,
THIS SHEET)

STATION "E" (SEE
VERTICES SCHEDULE,
THIS SHEET)

EXISTING
SHERWIN-WILLIAMS—
WALL

STATION "C" (SEE VERTICES
SCHEDULE, THIS SHEET)

PLAN

SCALE: 1"=30'

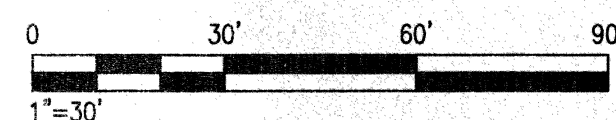
SECURED MATERIAL

NOTES:

1. THESE DRAWINGS PROVIDE A RECORD OF ADDED STRUCTURAL ELEMENTS TO THE OU-1 FLOODWALL RESULTING FROM THE PHASE I REMOVAL ACTION. SPECIFICALLY, THIS INCLUDES THE TIEBACK AND WALE SYSTEM. PHASE I ACTIVITIES WERE PERFORMED IN THE PASSAIC RIVER ADJACENT TO THE DIAMOND ALKALI SUPERFUND SITE IN 2011 THROUGH 2012. THE OU-1 SITE WAS USED ON A TEMPORARY BASIS FOR STORAGE AND ACCESS, AS WELL AS STAGING FOR THE TIEBACK DRILLING FLUIDS PRE-TREATMENT SYSTEM AND CONTAINERIZED CUTTING MANAGEMENT ACTIVITIES.
2. INFORMATION CONTAINED WITHIN THESE DRAWINGS ARE BASED ON FIELD OBSERVATIONS AND MEASUREMENTS WHERE INDICATED, BUT SHOULD BE CONSIDERED APPROXIMATE. USE OF THESE DRAWINGS ARE APPLICABLE TO IDENTIFICATION AND OVERVIEW OF ADDED FEATURES AND MUST BE INDEPENDENTLY VERIFIED FOR FUTURE USES. ALTERATIONS TO THE TIEBACK AND WALE SYSTEM MUST BE APPROVED BY A LICENSED STRUCTURAL ENGINEER FAMILIAR WITH THE ORIGINAL OU-1 FLOODWALL DESIGN AND CONSTRUCTION (BY OTHERS) AND THE TIEBACK AND WALE SYSTEM DESIGN AND CONSTRUCTION (BY ARCADIS AND SUBCONTRACTOR).

OU-1 UPLAND SITE
80 LISTER AVE.

KREFS:	IMAGE
09961X00	
09961X00-AAHPE	
baseline	
09961X02	
sheetpile	
walkwayPlan	
monopolites mattress	
09964XL1	
Nav_Channel	
Limit	
OU-1plan	
XWEEKSASBUILT	

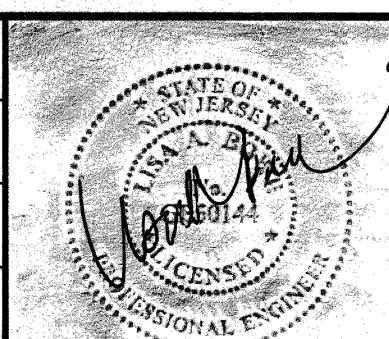


THIS BAR
REPRESENTS ONE
INCH ON THE
ORIGINAL DRAWING:

USE TO VERIFY
FIGURE
REPRODUCTION
SCALE

[illegible]

Professional Engineer's Name		
LISA A. BOWE		
Professional Engineer's No.		
24GE05014400		
State	Date Signed	Project Mgr.
NJ	2-12-13	RAR
Designed by	Drawn by	Checked by
AAH	AAH	LAB



ARCADIS U.S., INC.
NEW JERSEY ENGINEERING CERTIFICATE OF
AUTHORIZATION NUMBER 24GA27939600

TIERRA SOLUTIONS, INC. • LOWER PASSAIC RIVER, NEWARK, NJ
PHASE I CERCLA NON-TIME-CRITICAL REMOVAL ACTION

OU-1 FLOOD WALL

RECORD DRAWING

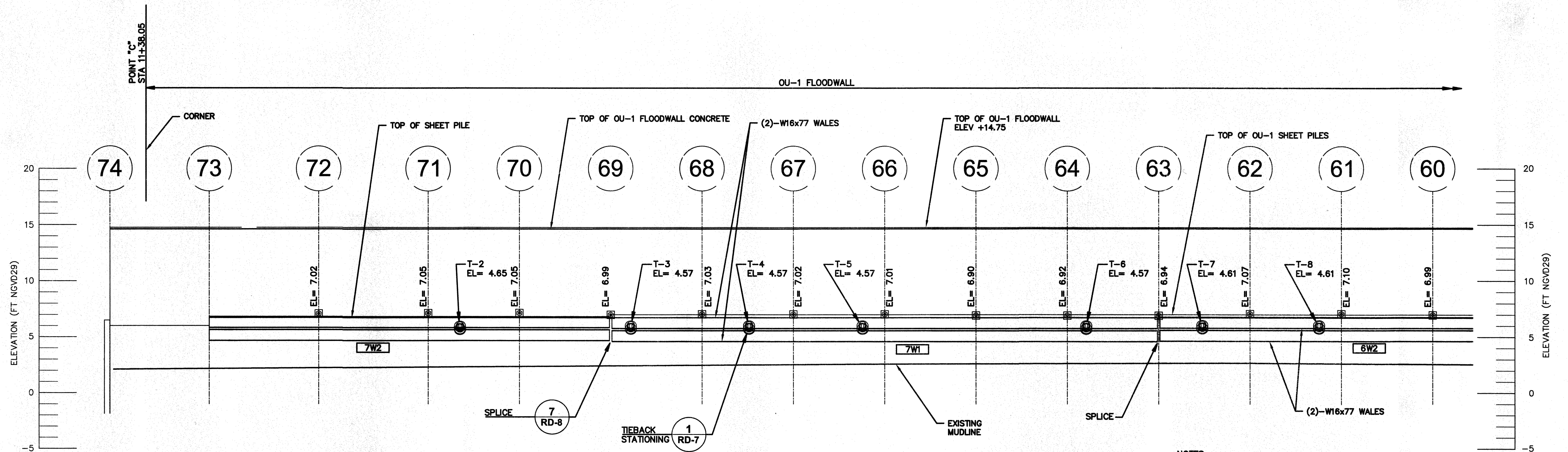
ARCADIS Project No.
B0009964.0001

Date
FEBRUARY 2013

ARCADIS
6723 TOWPATH ROAD
BOX 66
SYRACUSE, NY 13214
TEL: 315 446 9120

RD-1

CITY: TOLEDO, OH DIV: GROUP: DBA, HUNT, LD: PIC, R, ROMAGNOLI PMR, ROMAGNOLI TMR, ROMAGNOLI LVR, ON=OFF=REF
G:\Project\B0009961\0000\Drawings\RD-2\RD-2.dwg LAYOUT: RD-2, SAVER: 2/13/2013 8:30 AM, ACADVER: 18.1S (LMS, TECH), PAGES: 1, PLOT: 1, PLOTDATE: 2/13/2013 8:44 AM BY: KIRSCH, CLAIR



ELEVATIONS STA 11+40 TO 12+54

1"=5'-0"

WALE ELEVATIONS

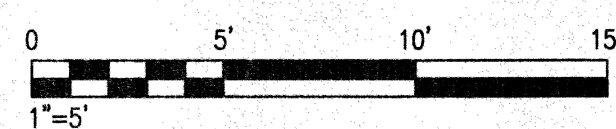
WALE ID	TIEBACK ELEVATION	WALE ID	TIEBACK ELEVATION
7W2	4.65	4W2	5.75
7W1	4.57	4W1	5.75
6W2	4.61	3W2	5.75
6W1-E	4.56	3W1	5.75
6W1-W	4.25	2W3	5.75
5W2-E	4.25	2W2	5.42
5W2-W	5.75	2W1	5.42
5W1	5.75	--	--

SYMBOL LEGEND:

- 5W2-E WALE ID NUMBER
- INSTALLED TIEBACKS
- EXISTING OU-1 TIERODS AND ELEVATION
- (50) GRIDLINE THROUGH EXISTING OU-1 TIERODS
- T-5 TIEBACK ID

NOTES:

- T-1 AND T-38 WERE NOT INSTALLED: IMPENETRABLE OBJECTS ENCOUNTERED DURING DRILLING. T-1 AND T-38 WERE GROUTED AND ABANDONED.
- T-30 WAS DAMAGED BY BARGES MOVING WITHIN THE ENCLOSURE. THE DAMAGE WAS REPAIRED DURING THE DESTRESSING PROCESS NEAR THE END OF THE REMOVAL WORK.
- T-14, T-24, T-26, T-30 AND T-37 WERE IMPACTED BY BARGES; THE TIEBACK ANCHORHEADS WERE SHIFTED OFF-CENTER ON THE BEARING PLATES. THE TENSIONING JACK COULD NOT BE USED TO DESTRESS THESE TIEBACKS SO THE PROCESS BELOW WAS USED INSTEAD:
 - THE GALVANIZED CAPS WERE REMOVED.
 - THE RETAINING WEDGE LOCKS WERE BURNED FROM THE HEADS TO RELEASE LOADS FROM EACH TIEBACK STRAND.
 - THE SHIMS AND LOAD CELLS WERE REMOVED.
 - THE TIEBACK STRANDS WERE CUT TO SIZE AND NEW HEADS INSTALLED FOR RESTRESSING.
- ALL LOAD CELLS WERE REMOVED FROM THE TIEBACKS AT THE COMPLETION OF THE WORK. LOAD CELLS WERE REMOVED FROM TIEBACKS T-2, T-8, T-10, T-14, T-18, T-20, T-26, T-30, T-34 AND T-37.
- ALL INSTALLED TIEBACKS WERE TENSIONED TO APPROXIMATELY 90 KIPS DURING INSTALLATION. TIEBACKS REQUIRING RE-STRESSING AFTER REPAIRS OR REMOVING LOAD CELLS WERE TENSIONED TO APPROXIMATELY 90 KIPS.
- TIEBACK HEADS WERE LEFT IN PLACE WITH APPROXIMATELY ONE INCH OF CABLE EXTENDING BEYOND THE HEAD. THE STRANDS AND HEAD WERE FULLY ENCASED WITH GALVANIZED CAPS WHICH WERE THEN FILLED WITH GREASE.
- A CUSTOMIZED ATTACHMENT WAS FABRICATED TO FACILITATE RESTRESSING TIEBACKS AND WILL REMAIN ON SITE. THE ATTACHMENT PROVIDES AN EXTENSION TO THE ANCHORHEAD ASSEMBLY AMENABLE TO FITTING A STANDARD SIZE STRESSING JACK. THE ATTACHMENT IS INSTALLED BY HAND-TORQUING THE UNIT ONTO THE THREADED WEDGE PLATE TO BE FLUSH WITH THE BASE PLATE. THE ATTACHMENT CONTAINS THE ENTIRE WEDGE PLATE FOR STRESSING, AND BECAUSE THE WEDGE PLATE SECURES ALL INDIVIDUAL TIEBACK STRANDS, THE ATTACHMENT PERMITS TENSIONING ALL STRANDS FOR EACH TIEBACK IN A SINGLE STRESSING EVENT.
- PRIOR TO WALE INSTALLATION, EXISTING AS500-12 SHEET PILING REQUIRED BOLTING ONTO EXISTING FLOODWALL CONCRETE DUE TO THEIR DETACHMENT FROM THE OU-1 FLOODWALL CONCRETE.

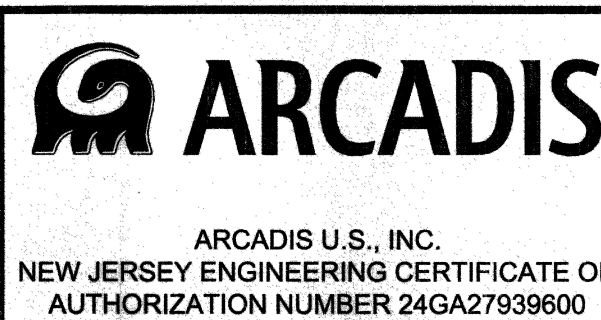
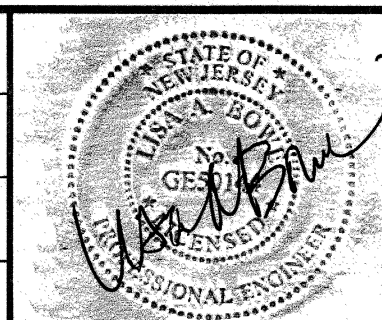


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FIGURE
REPRODUCTION
SCALE

No.	Date	Revisions	JAM	By	Ckd
-	9-28-12	RECORD DRAWING	JAM	-	-

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Professional Engineer's Name LISA A. BOWE			
Professional Engineer's No. 24GE05014400			
State NJ	Date Signed 2-12-13	Project Mgr. RAR	
Designed by AAH	Drawn by AAH	Checked by LAB	

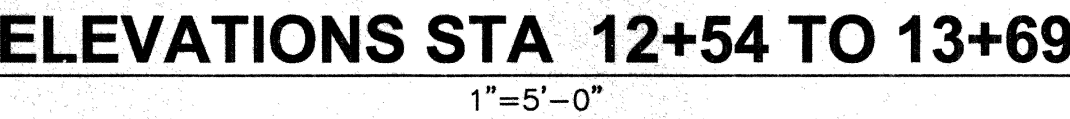


TIEBACK AND WALE SYSTEM ELEVATIONS STA 11+40 TO 12+54

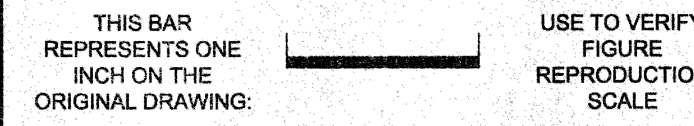
RECORD DRAWING

ARCADIS Project No. B0009964.0001
Date FEBRUARY 2013
ARCADIS 6723 TOWPATH ROAD BOX 66 SYRACUSE, NY 13214 TEL: 315.446.9120

RD-2



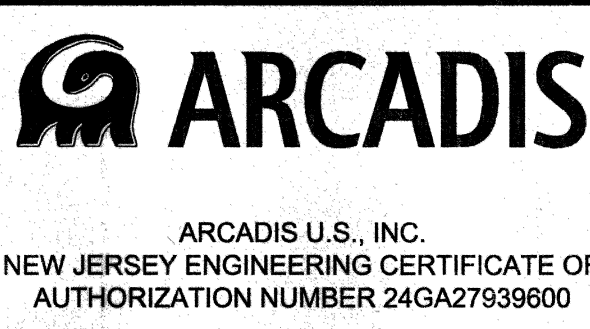
	WALE ID NUMBER
	INSTALLED TIEBACKS
	EXISTING OJ-1 TIERODS AND ELEVATION
	GRIDLINE THROUGH EXISTING OJ-1 TIERODS
	T-12 TIEBACK ID



Professional Engineer's Name
LISA A. BOWE

Professional Engineer's No.
24GE05014400

State NJ	Date Signed 2-12-13	Project Mgr. RAR
Designed by AAH	Drawn by AAH	Checked by LAB

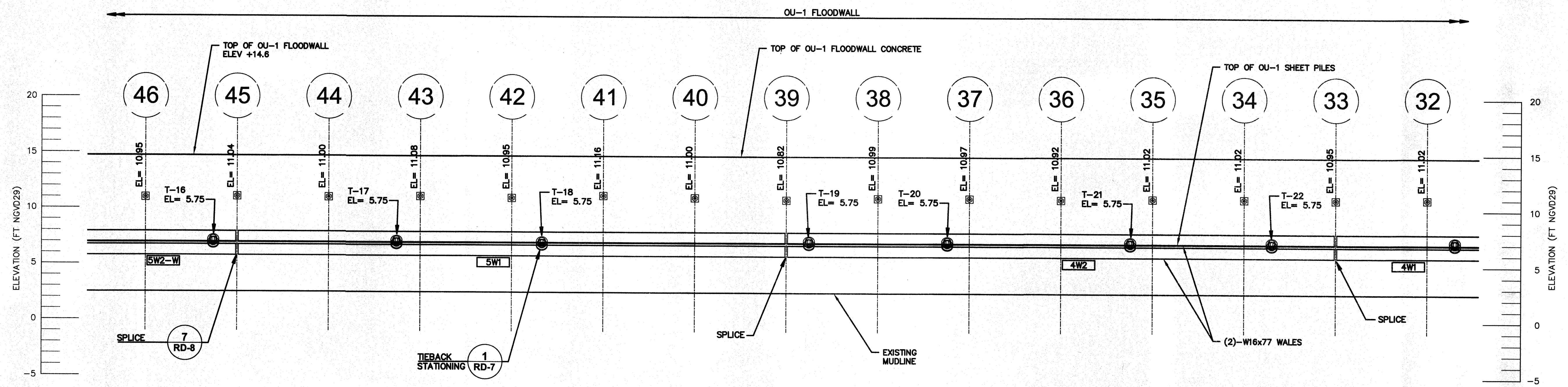


ARCADIS Project No. B0009964.0001
Date FEBRUARY 2013
ARCADIS 6723 TOWPATH ROAD BOX 66 SYRACUSE, NY 13214 TEL: 315.446.9120

RD-3

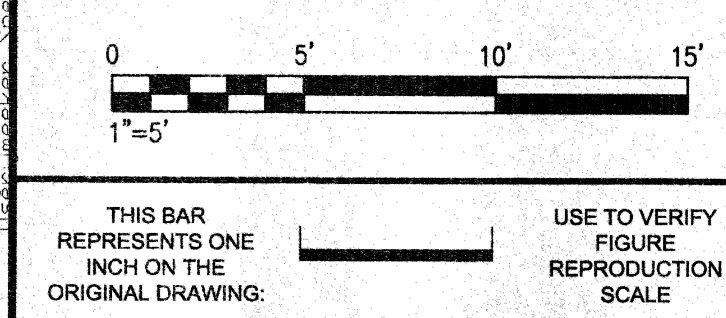
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PROJECTNAME: RD-4

0961X00
XBASERILELEV
XVEIRGATE
Xdegale
XBASSETSTBOR
XSOLUPDATE
XSOLDELINEATION
XVERTBARS
XVERTBARS
0961X00-AAHPE



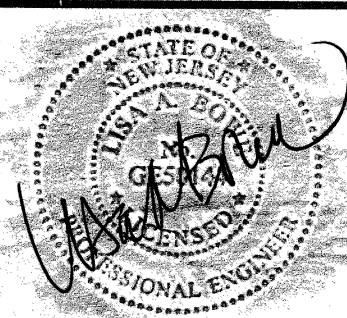
ELEVATIONS STA 13+69 TO 14+84
1"=5'-0"

- SYMBOL LEGEND:
- SW2-W WALE ID NUMBER
 - INSTALLED TIEBACKS
 - EXISTING OU-1 TIERODS AND ELEVATION
 - 50 GRIDLINE THROUGH EXISTING OU-1 TIERODS
 - T-19 TIEBACK ID



9-28-12		RECORD DRAWING		JAM	-
No.	Date	Revisions	By	Ckd	
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Professional Engineer's Name
LISA A. BOWE
Professional Engineer's No.
24GE05014400
State
NJ
Date Signed
2-12-13
Project Mgr.
RAR
Designed by
AAH
Drawn by
AAH
Checked by
LAB



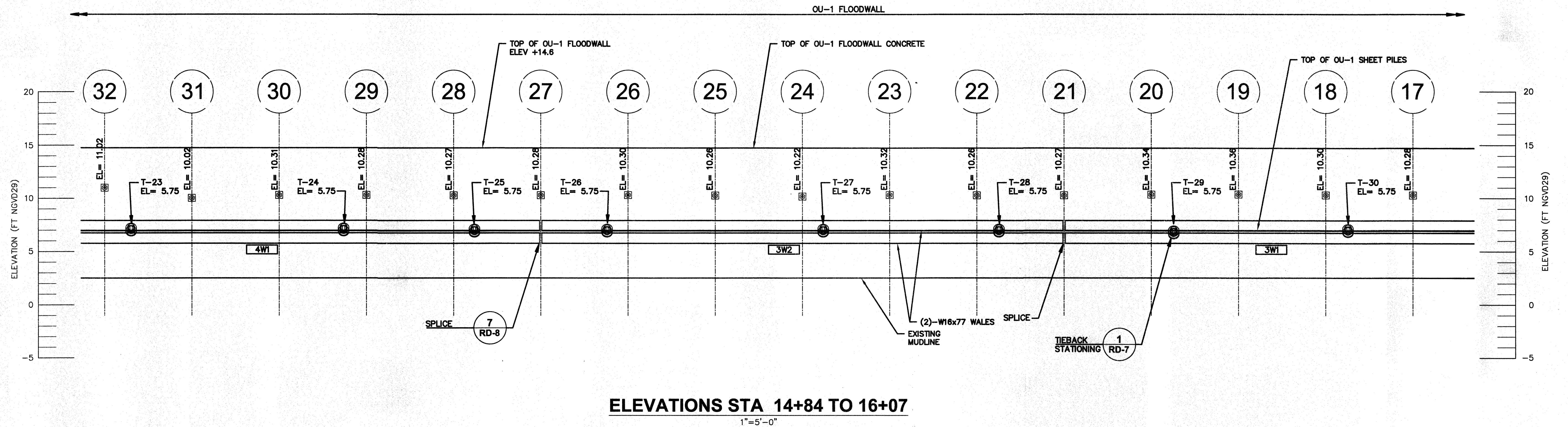
ARCADIS
ARCADIS U.S., INC.
NEW JERSEY ENGINEERING CERTIFICATE OF AUTHORIZATION NUMBER 24GA27939600

TIERRA SOLUTIONS, INC. • LOWER PASSAIC RIVER, NEWARK, NJ
PHASE I CERCLA NON-TIME-CRITICAL REMOVAL ACTION
**TIEBACK AND WALE SYSTEM ELEVATIONS
STA 13+69 TO 14+84**
RECORD DRAWING

ARCADIS Project No.
B0009964.0001
Date
FEBRUARY 2013
ARCADIS
6723 TOWPATH ROAD
BOX 66
SYRACUSE, NY 13214
TEL: 315.446.9120

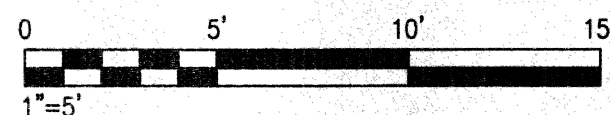
RD-4

CITY: TOLEDO OH DW: GROUP: DBA, HUNT LD: PICR, ROMAGNOLI PMR, ROMAGNOLI TMR, ROMAGNOLI LVR ON=OFF=REF
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XREFS: 09961X00 XBASEPILEELEV XWEIRGATE xldgate XBASETESTBOR XSOILUPDATE XSOILDLINEATION XVERTBARS XVERTBARS MIR 09961X00-AAHPE
IMAGES: PROJECTNAME



SYMBOL LEGEND:

- 5W2-E WALE ID NUMBER
- INSTALLED TIEBACKS
- EXISTING OU-1 TIERODS AND ELEVATION
- 50 GRIDLINE THROUGH EXISTING OU-1 TIERODS
- T-27 TIEBACK ID

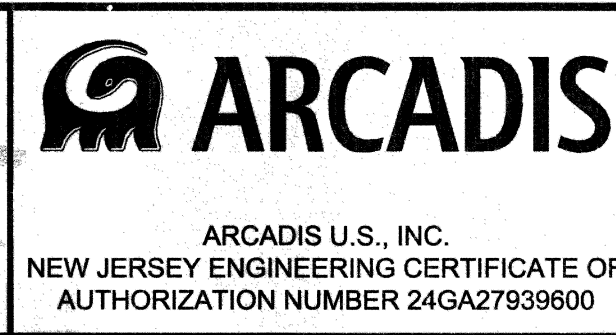
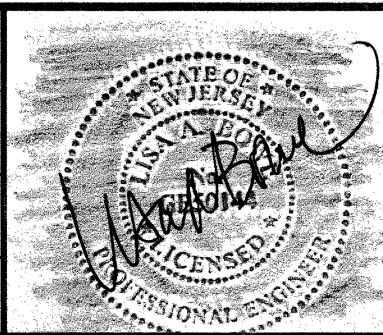


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USE TO VERIFY FIGURE REPRODUCTION SCALE

No.	Date	Revisions	JAM	By	Cld
-	9-28-12	RECORD DRAWING	JAM	-	-
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Professional Engineer's Name LISA A. BOWE		
Professional Engineer's No. 24GE05014400		
State NJ	Date Signed 2-12-13	Project Mgr. RAR
Designed by AAH	Drawn by AAH	Checked by LAB



TIERRA SOLUTIONS, INC. • LOWER PASSAIC RIVER, NEWARK, NJ
PHASE I CERCLA NON-TIME-CRITICAL REMOVAL ACTION

**TIEBACK AND WALE SYSTEM ELEVATIONS
STA 14+84 TO 16+07**

RECORD DRAWING

ARCADIS Project No. B000964.0001
Date FEBRUARY 2013
ARCADIS 6723 TOWPATH ROAD BOX 66 SYRACUSE, NY 13214 TEL: 315.446.9120

RD-5

Technical drawing showing a cross-section of a floodwall structure, labeled "OU-1 FLOODWALL". The drawing includes a plan view of the wall and a detailed elevation view of the pile structure.

Plan View (Top):

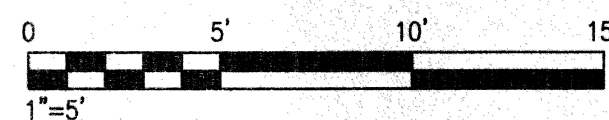
- Shows the wall extending from "POINT 'D' STA 17+41.93" to "SHERWIN-WILLIAMS WALL".
- Numbered circles 1 through 17 indicate specific pile locations along the wall.
- Labels include "TOP OF OU-1 FLOODWALL ELEV +14.6", "TOP OF OU-1 FLOODWALL CONCRETE", and "TOP OF OU-1 SHEET PILES".

Elevation View (Bottom):

- Shows the vertical profile of the wall and pile structure.
- Vertical axis labeled "ELEVATION (FT NGVD29)" with a scale from -5 to 20.
- Horizontal axis labeled "ELEVATION (FT NGVD29)" with a scale from -5 to 20.
- Key structural details and elevations are noted:
 - Pile 17: EL= 10.26
 - Pile 16: EL= 10.33
 - Pile 15: EL= 10.32
 - Pile 14: EL= 10.31
 - Pile 13: EL= 10.31
 - Pile 12: EL= 10.36
 - Pile 11: EL= 10.30
 - Pile 10: EL= 10.45
 - Pile 9: EL= 8.01
 - Pile 8: EL= 8.03
 - Pile 7: EL= 8.05
 - Pile 6: EL= 8.01
 - Pile 5: EL= 8.01
 - Pile 4: EL= 7.97
 - Pile 3: EL= 8.04
- Structural details include "T-31 EL= 5.75", "T-32 EL= 5.75", "T-33 EL= 5.75", "T-34 EL= 5.75", "T-35 EL= 5.42", "T-36 EL= 5.42", and "T-37 EL= 5.42".
- Other labels include "3W1", "2W2", "2W1", "SPLICE", "RD-8", "RD-7", "TIEBACK STATIONING", "EXISTING MUDLINE", and "(2)-W16x77 WALES".

$$1'' = 5' - 0'$$

5W2-E	WALE ID NUMBER
	INSTALLED TIEBACKS
	EXISTING OU-1 TIERODS AND ELEVATION
	GRIDLINE THROUGH EXISTING OU-1 TIERODS
T-35	TIEBACK ID

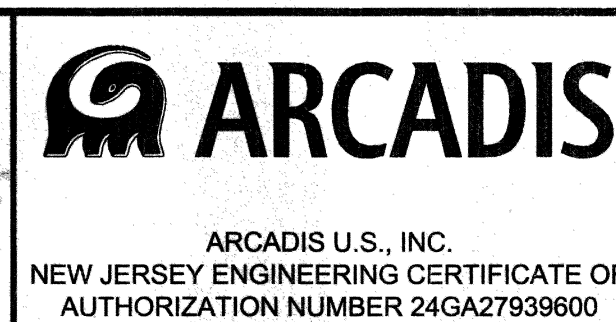
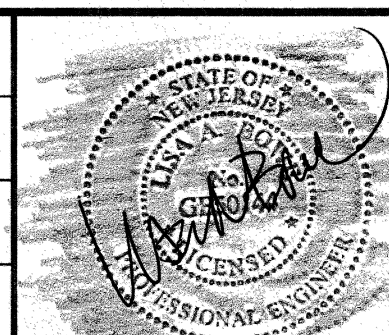


THIS BAR
REPRESENTS ONE
INCH ON THE
ORIGINAL DRAWING:

USE TO VERIFY
FIGURE
REPRODUCTION
SCALE

[illegible]

Professional Engineer's Name		
LISA A. BOWE		
Professional Engineer's No.		
24GE05014400		
State	Date Signed	Project Mgr.
NJ	2-12-13	RAR
Designed by	Drawn by	Checked by
AAH	AAH	LAB



TIERRA SOLUTIONS, INC. • LOWER PASSAIC RIVER, NEWARK, NJ
PHASE I CERCLA NON-TIME-CRITICAL REMOVAL ACTION

**TIEBACK AND WALE SYSTEM ELEVATIONS
STA 16+07 TO 17+50**

RECORD DRAWING

ARCADIS Project No. B0009964.0001
Date FEBRUARY 2013
ARCADIS 6723 TOWPATH ROAD BOX 66 SYRACUSE, NY 13214 TEL: 315.446.9120

RD-6

MATERIALS

STRUCTURAL WIDE FLANGES: ASTM A992.

STRUCTURAL TUBING: ASTM A500, GRADE B.

BOLTS, NUTS, AND WASHERS: ASTM A325 BOLTS; ASTM A563 NUTS, BLACK, UNPAINTED.

WELDING MATERIALS: AWS D1.1; TYPE REQUIRED FOR MATERIALS BEING WELDED.

FINISH

OU-1 FLOODWALL WALES, PLATES, AND ASSOCIATED STEEL: HOT-DIP GALVANIZE STEEL AFTER FABRICATION TO ASTM A-123. APPLY TWO COATS OF COLD GALVANIZING COMPOUND TO ALL FIELD WELDS AND DAMAGED AREAS.

ANCHORAGE:

ALL THREAD RODS FOR ADHESIVE ANCHORS:
ASTM F1554 GRADE 36.

ADHESIVE ANCHORS:
RAMSET/RED HEAD, EPCON SYSTEM, CERAMIC 6 EPOXY. SIMPSON STRONG TIE, EPOXY TIE SET. OR AS APPROVED.

INJECTION GEL:
TWO-COMPONENT STRUCTURAL EPOXY. COMPLY WITH ASTM C881.

SPECIFICATIONS FOR TIE-BACKS:

TIE-BACKS GROUTED WITH HIGH-STRENGTH, NON-SHRINK GROUT FOR THE FULL LENGTH OF THE ANCHOR.

NEAT CEMENT GROUT WITH TYPE I/II CEMENT, CONFORMING TO ASTM C-150. MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.

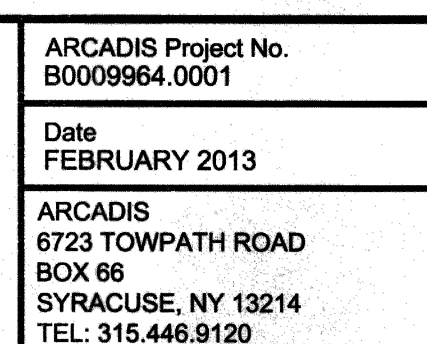
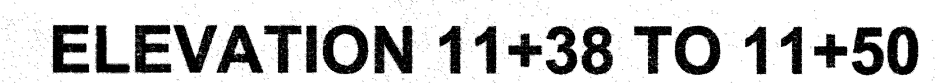
PRE STRESSING STEEL FOR TIE-BACKS IS CONSTRUCTED OF FIVE INDIVIDUAL 7-WIRE STRANDS (0.6-INCH DIAMETER CABLE STRAND)

GRADE 270k, CONFORMING TO ASTM 416, INCLUDING SUPPLEMENTARY REQUIREMENT S-1; WELDLESS, LOW-RELAXATION GRADE.

TIEBACK STATION LOCATIONS



1. THE DEPTH AND THICKNESS OF THE SUBSURFACE STRATA INDICATED ON THIS SECTION ARE GENERALIZED AND THE ACTUAL CONDITIONS MAY VARY FROM THOSE INDICATED.



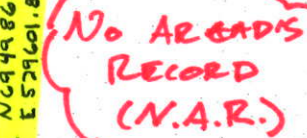
RD-7

CITY: TOLEDO-OH DW:GROUP: DBA HUNT ID: PIC: ROWAGNOLI PW: ROWAGNOLI TW: ROWAGNOLI LVR: ONE=OFF=REF
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Gen 7/25/12

(TEXT) - COMMENTS ABOUT WEEKS' AS-BUILT DOCUMENTATION

TEXT WITH BOX DENOTES TIEBACKS THAT WILL BE
SUBJECT TO AN ADDITIONAL 10 FT OF BONDED LENGTH
DEPENDENT UPON DRILLING CONDITIONS AND PERFORMANCE TESTING
AND PROOF TESTING



No ARADIS
RECORD
(N.A.R.)

NAME

NAME

NAR

NAR

695154.6073
E 593335.7815

695154.6073
E 593335.7815

CONTRACTOR TO FIELD VERIFY EXISTING EXTRACTION
WELL AND GRADIENT CONTROL PAIR PIEZOMETER

PLAN
SCALE: 1"=30'

SCALE: 1"=30'

REFS: IMAGE:
09961X00
09961X00-AAHP
baseline
09961X02
theophile
walkwayPlan
monopiles mattress
09964XL1
Navy_Channel
Unit
OU-1plan
XWEEK3ASBUILT



THIS BAR
REPRESENTS ONE
INCH ON THE
ORIGINAL DRAWING:

USE TO VERIFY
FIGURE

[illegible]

Professional Engineer's Name
AARON A HUNT
Professional Engineer's No.
24GE04804300

State	Date Signed
NJ	
Designed by	Drawn by
AAH	AAH

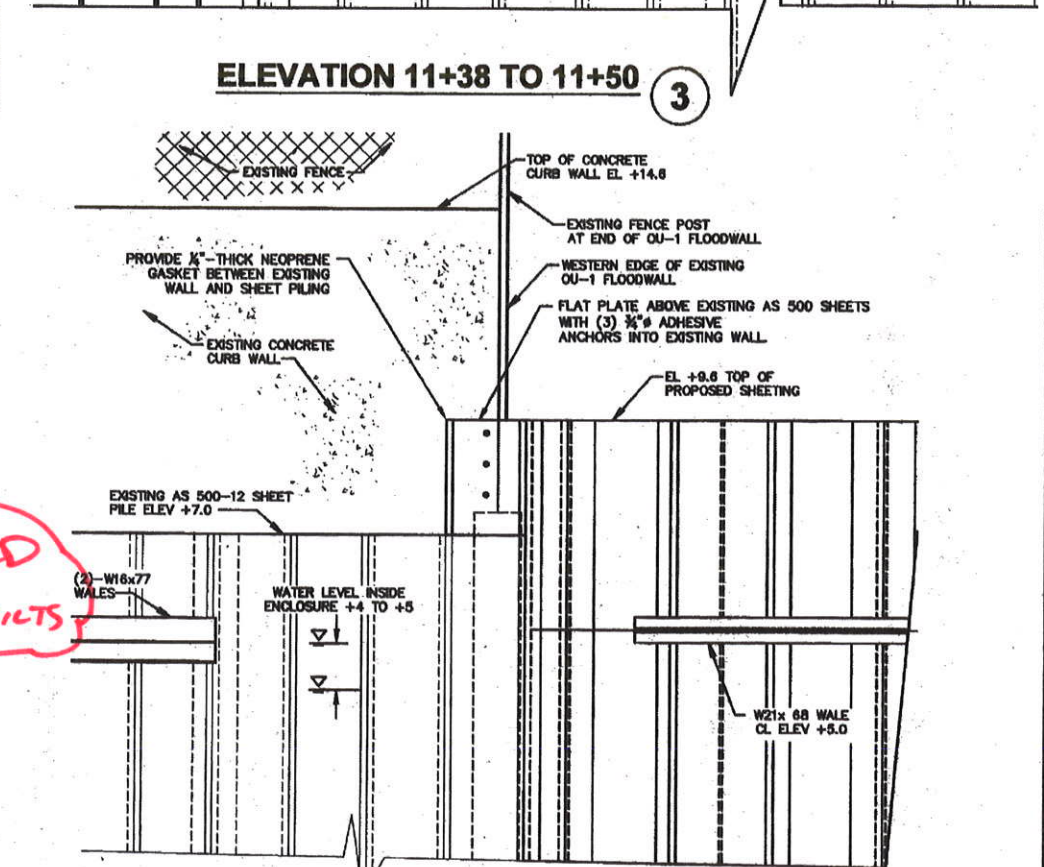
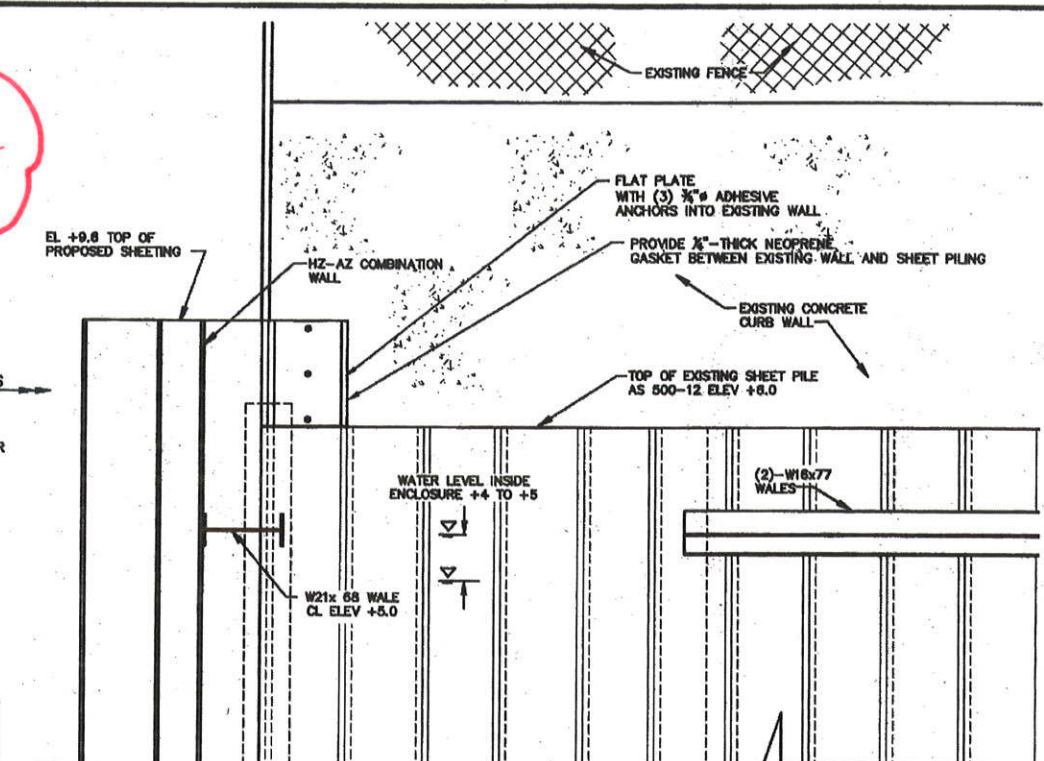
ARCADIS
ARCADIS U.S., INC.
NEW JERSEY ENGINEERING CERTIFICATE OF
AUTHORIZATION NUMBER 24GA27839600

TIERRA SOLUTIONS, INC. • LOWER PASSAIC RIVER, NEWARK, NJ
PHASE I CERCLA NON-TIME-CRITICAL REMOVAL ACTION
**SEDIMENT EXCAVATION
ENCLOSURE OVERVIEW PLAN**

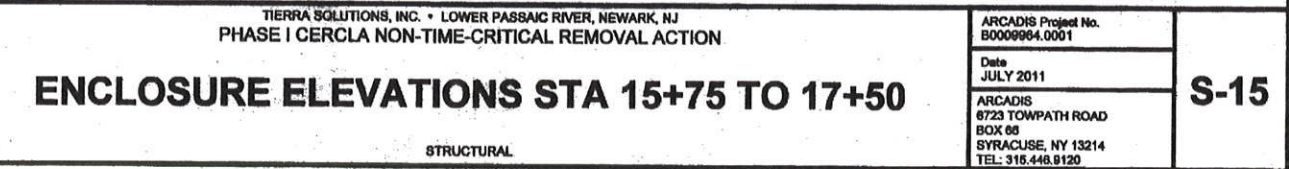
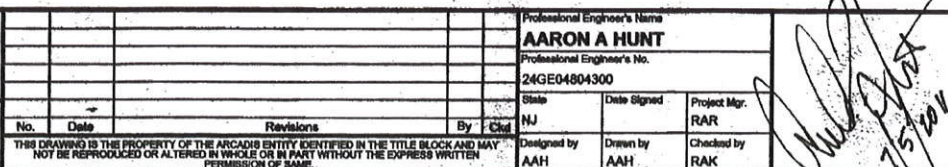
STRUCTURAL

ARCADIS Project No. B0009964.0001
Date JULY 2011
ARCADIS 6723 TOWPATH ROAD BOX 66 SYRACUSE, NY 13214 TEL: 315.446.9120

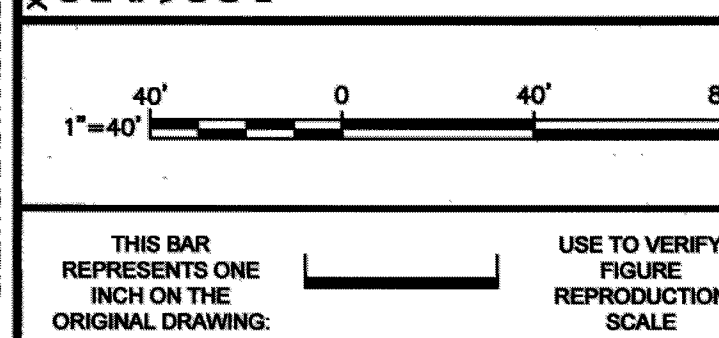
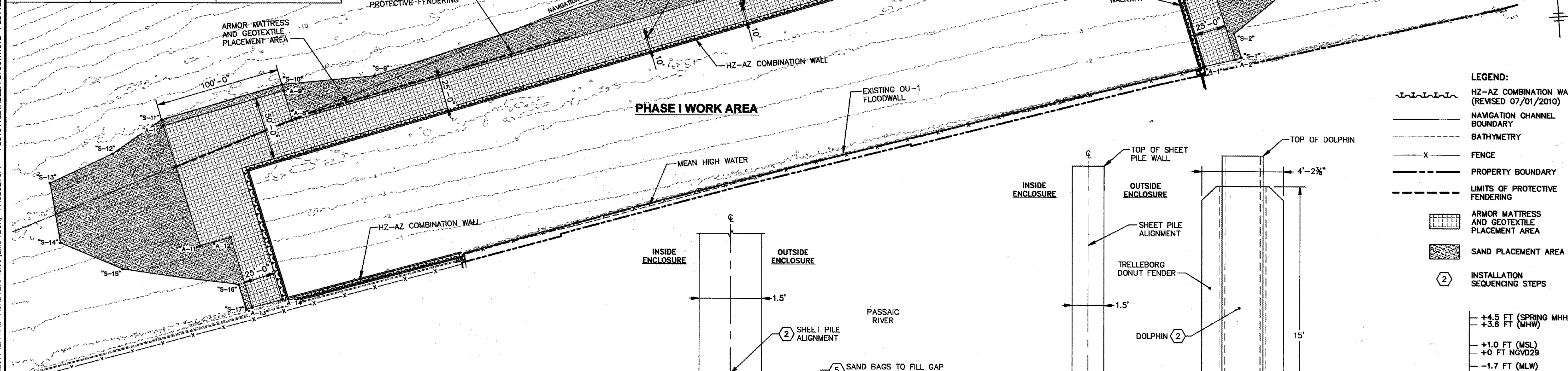
S-2

[illegible]

ELEVATION 17+25 TO 0+00 (2)



SAND VERTICES			ARMOR MATTRESS VERTICES		
POINT	NORTHING	EASTING	POINT	NORTHING	EASTING
"S-1"	695029.033	593399.021	"A-1"	695023.929	593369.395
"S-2"	695048.598	593394.344	"A-2"	695027.871	593394.158
"S-3"	695138.078	593517.297	"A-3"	695114.133	593373.540
"S-4"	695172.667	593594.380	"A-4"	695119.944	593397.855
"S-5"	695258.361	593574.263	"A-5"	695217.205	593374.608
"S-6"	695262.410	593456.422	"A-6"	695194.887	593277.130
"S-7"	695243.294	593347.191	"A-7"	695170.518	593282.710
"S-8"	695164.545	593078.311	"A-8"	695023.369	592639.991
"S-9"	695055.179	592707.647	"A-9"	695047.736	592634.412
"S-10"	695052.610	592633.296	"A-10"	695025.418	592536.935
"S-11"	695030.292	592535.819	"A-11"	694928.279	592560.765
"S-12"	695005.461	592495.035	"A-12"	694933.627	592585.194
"S-13"	694985.225	592444.041	"A-13"	694876.822	592599.129
"S-14"	694937.292	592449.365	"A-14"	694881.773	592623.656
"S-15"	694913.733	592497.672			
"S-16"	694895.629	592589.368			
"S-17"	694875.631	592594.273			



Professional Engineer's Name		
ROBERT ROMAGNOLI		
Professional Engineer's No.		
24GE04659400		
State	Date Signed	Project Mgr.
NJ	7/5/11	RAR
Designed by	Drawn by	Checked by
APC	RKD	JRR

ARCADIS

ARCADIS U.S., INC.
NEW JERSEY ENGINEERING CERTIFICATE OF
AUTHORIZATION NUMBER 24GA27939600

TERRA SOLUTIONS, INC. • LOWER PASSAIC RIVER, NEWARK, NJ
 SE I CERCLA NON-TIME-CRITICAL REMOVAL ACTION

COASTAL SCOUR PROTECTION PLAN AND SECTIONS

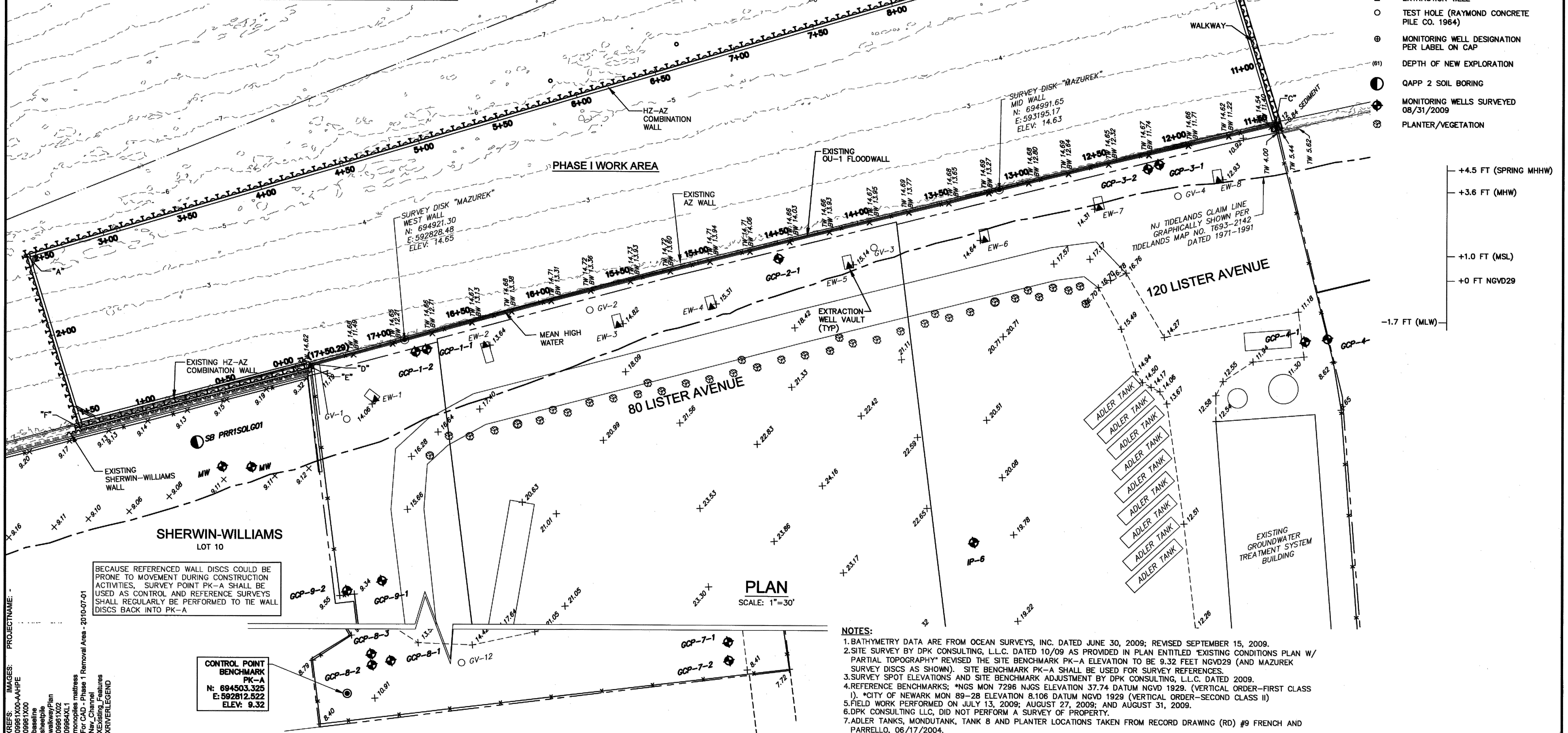
DREDGING AND BACKFILL

D-14

CITY: TOLEDO OH DIV: GROUP: DBA: HUNT LD: PIC: R. ROMAGNOLI PM: R. ROMAGNOLI TMR: ROMAGNOLI LTR: ON: OFF: REF: 110H03FP0101Data\Project\B0009961\0000\Drawing\SURVCONTRL.dwg LAYOUT: SURVEY CONTROL PLAN DATE: 6/30/2011 12:26 PM ACADVER: 18.05 (LMS TECH) PAGES: 18 OF 18 PLOT: 6/30/2011 1:04 PM BY: HUNT, AARON

ENCLOSURE VERTICES			
POINT	NORTHING	EASTING	STATION
"A"	N = 694986.257	E = 592601.821	2+51.44
"B"	N = 695153.987	E = 593334.420	10+03.00
"C"	N = 695022.635	E = 593365.814	11+38.05
"D"	N = 694909.960	E = 592770.504	17+43.97
"E"	N = 694907.886	E = 592770.935	17+46.08
"F"	N = 694879.493	E = 592628.012	1+41.52

GATE VERTEX			
POINT	NORTHING	EASTING	STATION
"G"	N = 695134.721	E = 593339.025	10+22.81

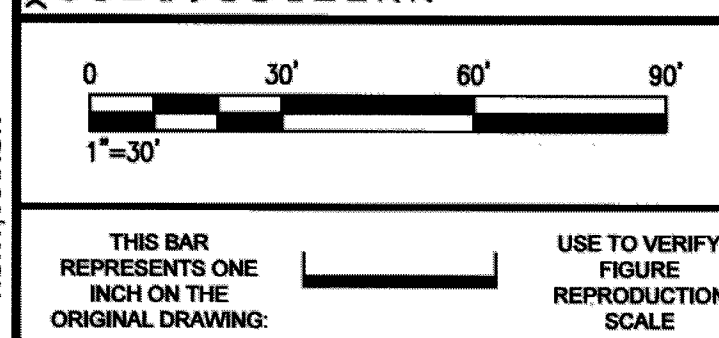


- LEGEND:**
- HZ-AZ COMBINATION WALL
 - NAVIGATION CHANNEL BOUNDARY
 - BATHYMETRY
 - FENCE
 - PROPERTY BOUNDARY
 - DRAINAGE SWALE
 - PIERHEAD AND BULKHEAD LINE
 - TIDELANDS CLAIM LINE
 - ▲ EXTRACTION WELL
 - TEST HOLE (RAYMOND CONCRETE PILE CO. 1964)
 - ⊕ MONITORING WELL DESIGNATION PER LABEL ON CAP
 - (61) DEPTH OF NEW EXPLORATION
 - QAPP 2 SOIL BORING
 - ⊕ MONITORING WELLS SURVEYED 08/31/2009
 - ⊕ PLANTER/VEGETATION

- +4.5 FT (SPRING MHHW)
- +3.6 FT (MHW)
- +1.0 FT (MSL)
- +0 FT NGVD29
- 1.7 FT (MLW)

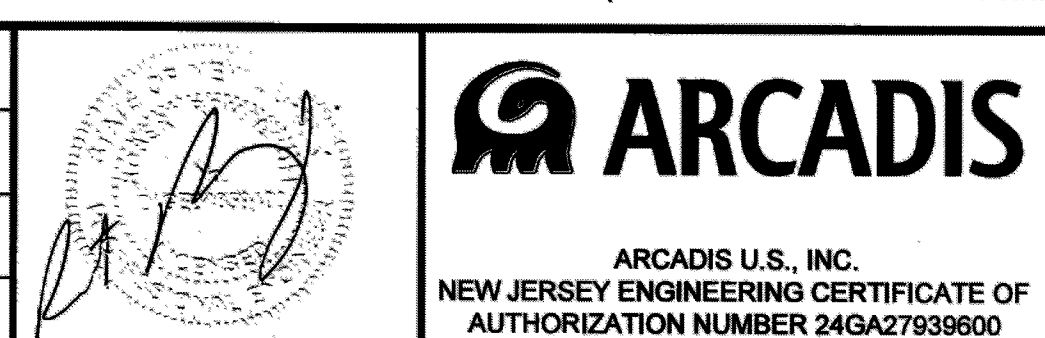
BECAUSE REFERENCED WALL DISCS COULD BE PRONE TO MOVEMENT DURING CONSTRUCTION ACTIVITIES, SURVEY POINT PK-A SHALL BE USED AS CONTROL AND REFERENCE SURVEYS SHALL REGULARLY BE PERFORMED TO TIE WALL DISCS BACK INTO PK-A

CONTROL POINT BENCHMARK PK-A
N: 694503.325
E: 592812.522
ELEV: 9.32



No.	Date	Revisions	By	Ckd

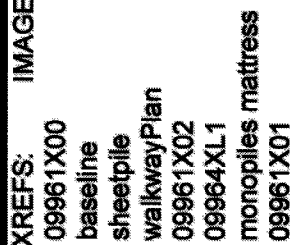
Professional Engineer's Name
ROBERT ROMAGNOLI
Professional Engineer's No.
24GE04659400
State
NJ
Date Signed
7/5/11
Project Mgr.
RAR
Designed by
APC
Drawn by
AAH
Checked by
JRB



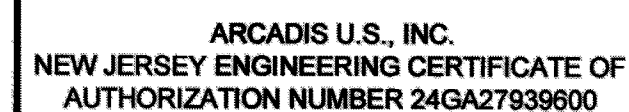
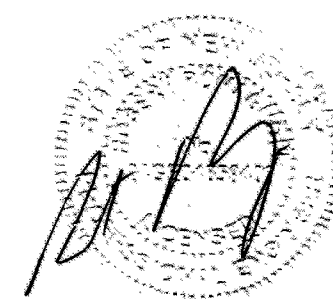
- NOTES:**
- BATHYMETRY DATA ARE FROM OCEAN SURVEYS, INC. DATED JUNE 30, 2009; REVISED SEPTEMBER 15, 2009.
 - SITE SURVEY BY DPK CONSULTING, L.L.C. DATED 10/09 AS PROVIDED IN PLAN ENTITLED 'EXISTING CONDITIONS PLAN W/ PARTIAL TOPOGRAPHY' REVISED THE SITE BENCHMARK PK-A ELEVATION TO BE 9.32 FEET NGVD29 (AND MAZUREK SURVEY DISCS AS SHOWN). SITE BENCHMARK PK-A SHALL BE USED FOR SURVEY REFERENCES.
 - SURVEY SPOT ELEVATIONS AND SITE BENCHMARK ADJUSTMENT BY DPK CONSULTING, L.L.C. DATED 2009.
 - REFERENCE BENCHMARKS: *NGS MON 7296 NGS ELEVATION 37.74 DATUM NGVD 1929. (VERTICAL ORDER-FIRST CLASS I). *CITY OF NEWARK MON 89-28 ELEVATION 8.106 DATUM NGVD 1929 (VERTICAL ORDER-SECOND CLASS II).
 - FIELD WORK PERFORMED ON JULY 13, 2009; AUGUST 27, 2009; AND AUGUST 31, 2009.
 - DPK CONSULTING LLC, DID NOT PERFORM A SURVEY OF PROPERTY.
 - ADLER TANKS, MONDUTANK, TANK 8 AND PLANTER LOCATIONS TAKEN FROM RECORD DRAWING (RD) #9 FRENCH AND PARRELLO, 06/17/2004.

TIERRA SOLUTIONS, INC. • LOWER PASSAIC RIVER, NEWARK, NJ
PHASE I CERCLA NON-TIME-CRITICAL REMOVAL ACTION
PHASE I WORK AREA/OU-1 SITE STATIONING AND SURVEY CONTROL PLAN
GENERAL

ARCADIS Project No. B0009964.0001	G-4
Date JULY 2011 ARCADIS 6723 TOWPATH ROAD BOX 66 SYRACUSE, NY 13214 TEL: 315.446.9120	

[illegible]

Professional Engineer's Name		
ROBERT ROMAGNOLI		
Professional Engineer's No.		
24GE04659400		
State	Date Signed	Project Mgr.
NJ	7/5/11	RAR
Designed by	Drawn by	Checked by
APC	BKD	JRB



AIDS TO NAVIGATION

GENERAL

 PIPELINE ALIGNMENT
 PHASE I WORK AREA
 (REVISED 07/01/2010)
 NAVIGATION CHANNEL BOUNDARY
 BATHYMETRY
 FENCE
 PROPERTY BOUNDARY
 DRAINAGE SWALE
 PIERHEAD AND BULKHEAD LINE
 TIDELANDS CLAIM LINE
 EXISTING STRUCTURE
 LIMITS OF PROTECTIVE FENDERING

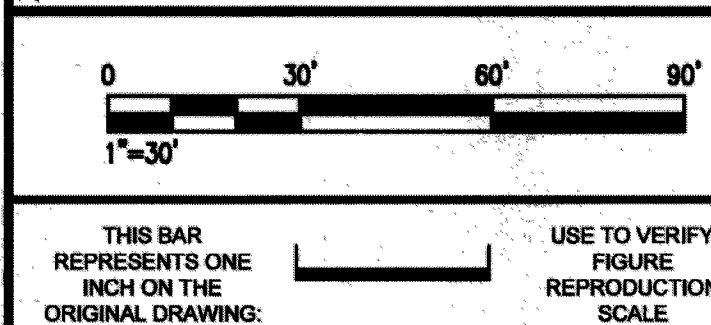
— +4.5 FT (SPRING MHHW)
 — +3.6 FT (MHW)
 — +1.0 FT (MSL)
 — +0 FT NGVD29
 — -1.7 FT (MLW)

1. BATHYMETRY DATA ARE FROM OCEAN SURVEYS, INC. DATED 06/30/2009; REVISED 09/15/2009.
2. UPLAND TOPOGRAPHY AND EXISTING FEATURES WERE TAKEN FROM SHEET NO. 9 OF THE FINAL SITE CONDITIONS PLAN SUBMITTED BY FRENCH AND PARRELLO ASSOCIATES ON 06/17/2004.
3. SURVEY SPOT ELEVATIONS WERE PROVIDED BY DPK CONSULTING, L.L.C. DATED 2009.
4. ALL LIGHTS, SIGNAGE, AND OTHER NAVIGATIONAL AIDS WILL BE APPROVED BY THE USCG PRIOR TO INSTALLATION.

G-11

CITY: TOLEDO-OH DIVGROUP: DBA, HUNT, LD: PIC, ROMAGNOLI, PMR, ROMAGNOLI, TMR, ROMAGNOLI, LYN: ONL-OFF-REF
\\0303FP01\Drawings\00009861\0000\Drawings\S-2 SED OVERVIEW PLAN.dwg LAYOUT: SEDIMENT EXCAVATION ENCLOSURE OVERVIEW PLAN
PLOT: 7/1/2011 3:47 PM BY: HUNT, AARON

PROJECTNAME: ---
IMAGES: 09861X00
09861X00-AAHPE
baseline
09861X02
sheetpile
walkwayPlan
monopiles mattress
09864XL1
Nav Channel
Limit
OU-1plan
XWEEKSASBUILT



No.	Date	Revisions	By	Ckd

Professional Engineer's Name AARON A HUNT		
Professional Engineer's No. 24GE04804300		
State NJ	Date Signed	Project Mgr. RAR
Designed by AAH	Drawn by AAH	Checked by RAK

[Signature]
7/5/11

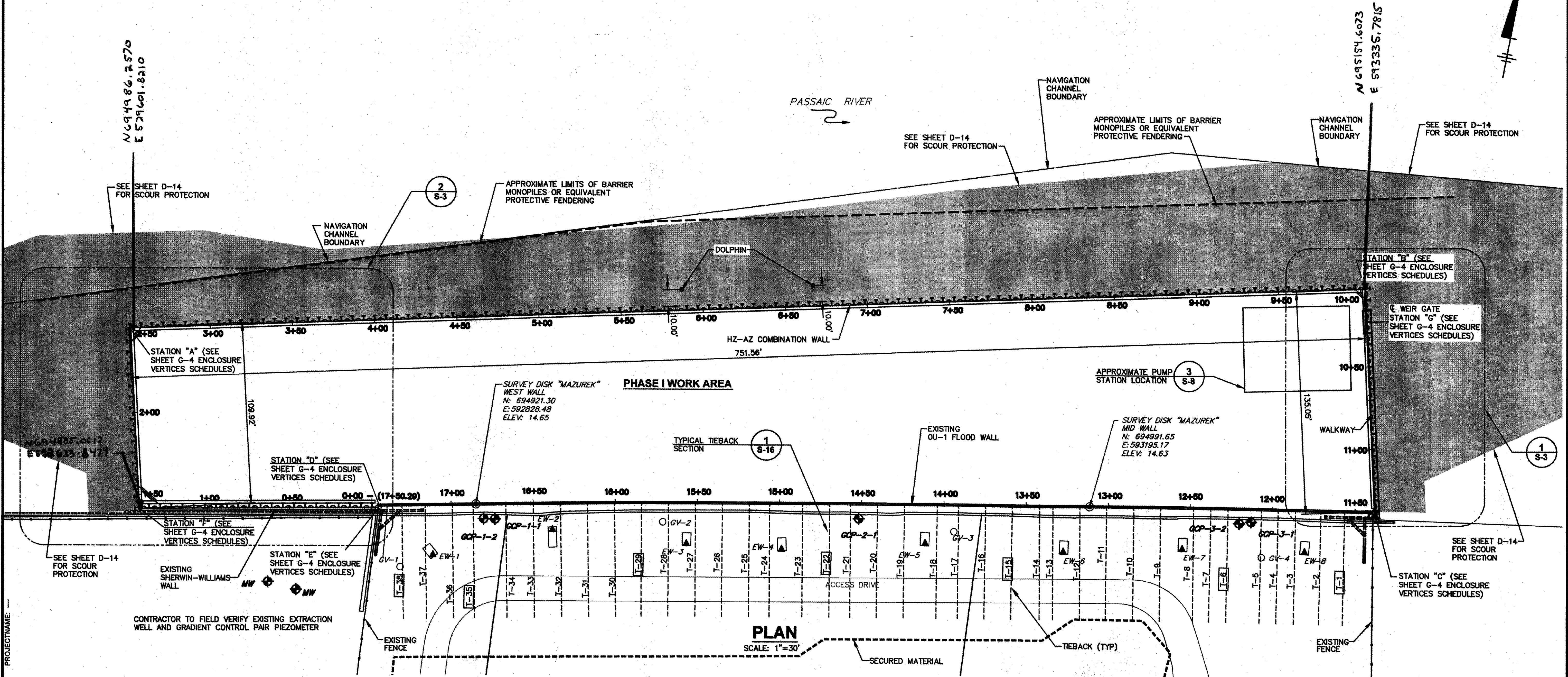
ARCADIS
ARCADIS U.S., INC.
NEW JERSEY ENGINEERING CERTIFICATE OF
AUTHORIZATION NUMBER 24GA27939600

TIERRA SOLUTIONS, INC. • LOWER PASSAIC RIVER, NEWARK, NJ
PHASE I CERCLA NON-TIME-CRITICAL REMOVAL ACTION
**SEDIMENT EXCAVATION
ENCLOSURE OVERVIEW PLAN**
STRUCTURAL

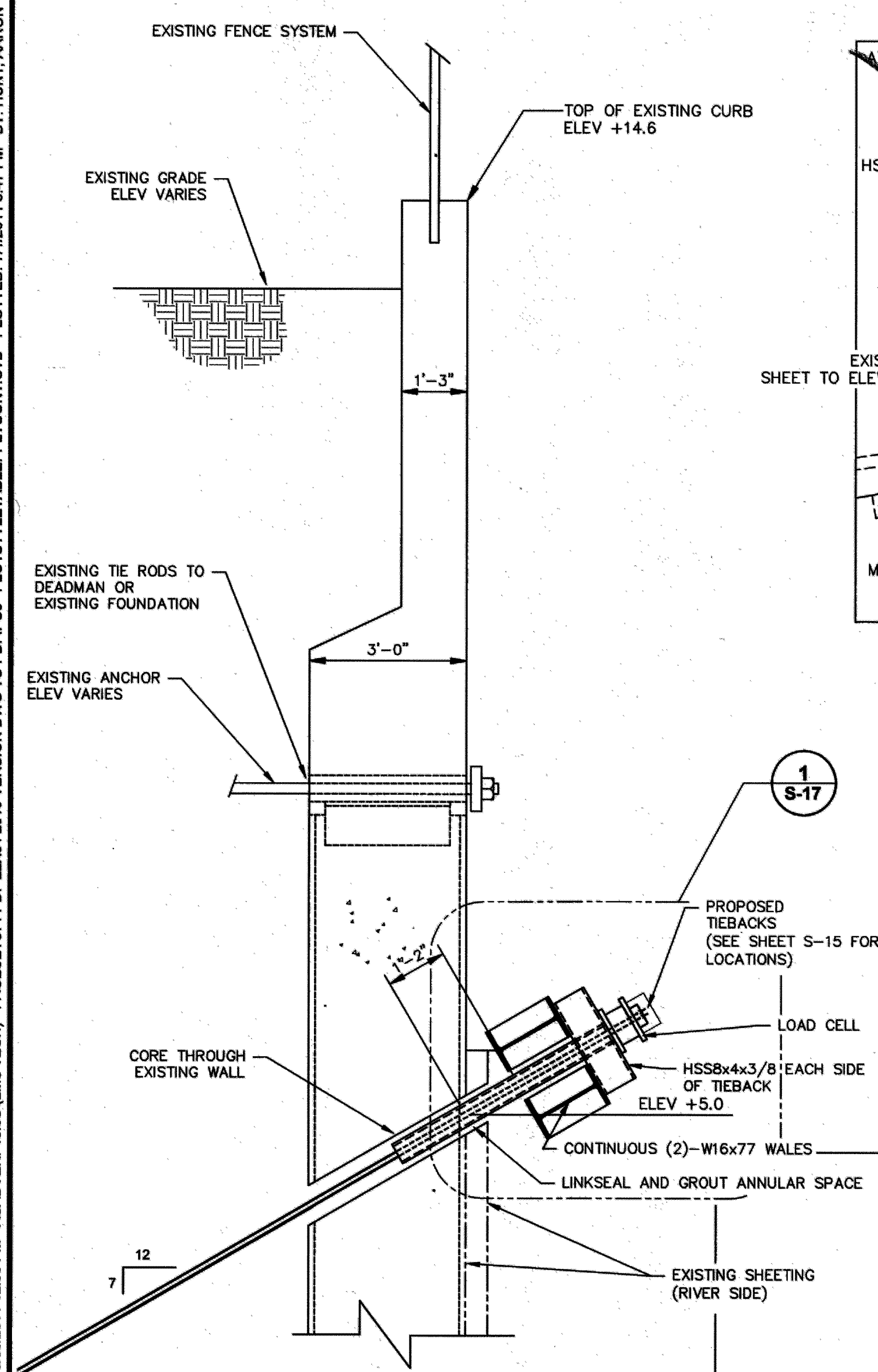
ARCADIS Project No.
B0009964.0001
Date
JULY 2011
ARCADIS
6723 TOWPATH ROAD
BOX 66
SYRACUSE, NY 13214
TEL: 315.446.9120

S-2

- LEGEND:**
- GV-1 GAS VENT
 - ▲ EW-1 EXISTING EXTRACTION WELL
 - ◆ GCP-1-1 GRADIENT CONTROL PAIR PIEZOMETER
 - TEXT WITH BOX DENOTES TIEBACKS THAT WILL BE SUBJECT TO AN ADDITIONAL 10 FT OF BONDED LENGTH DEPENDENT UPON DRILLING CONDITIONS AND PERFORMANCE TESTING AND PROOF TESTING



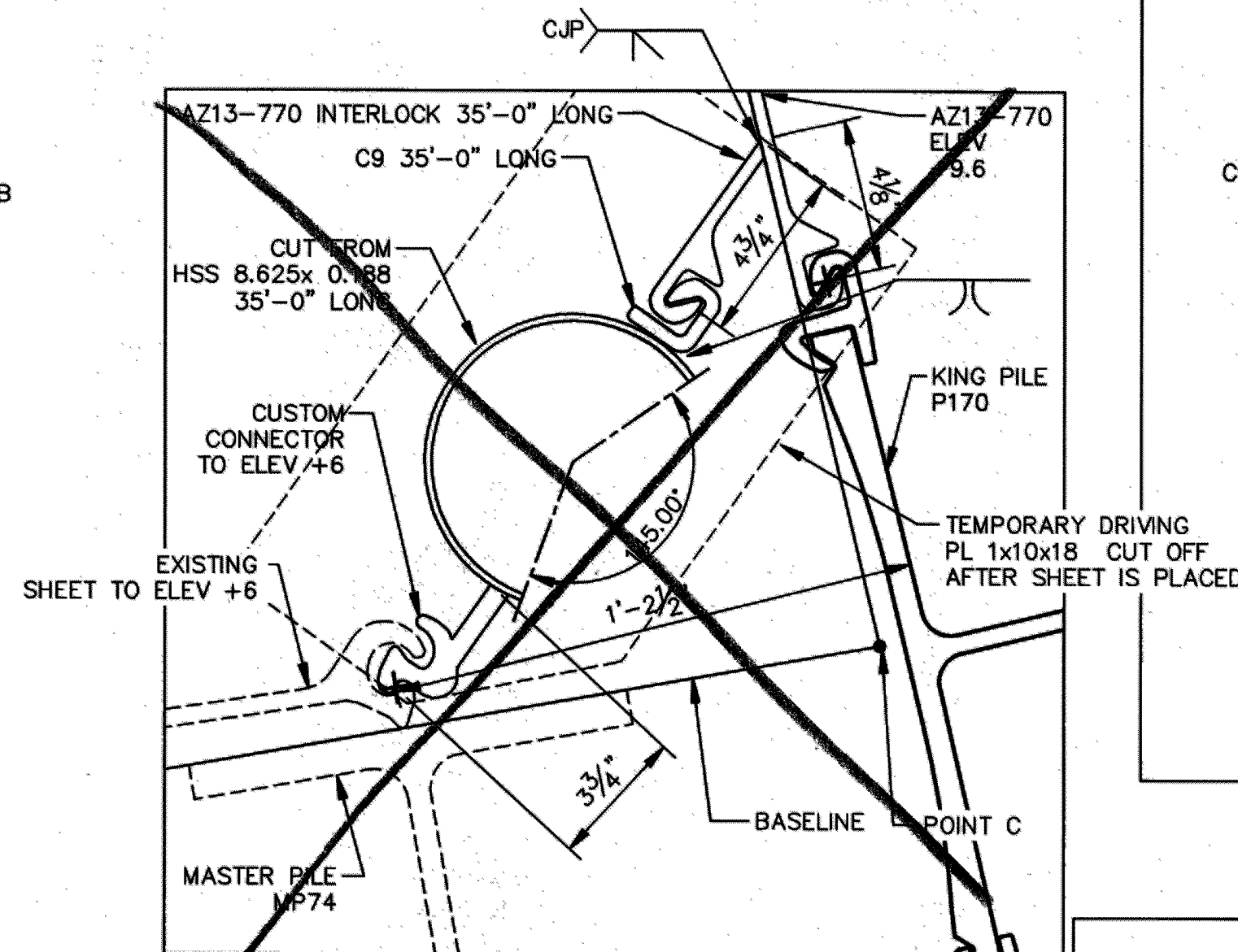
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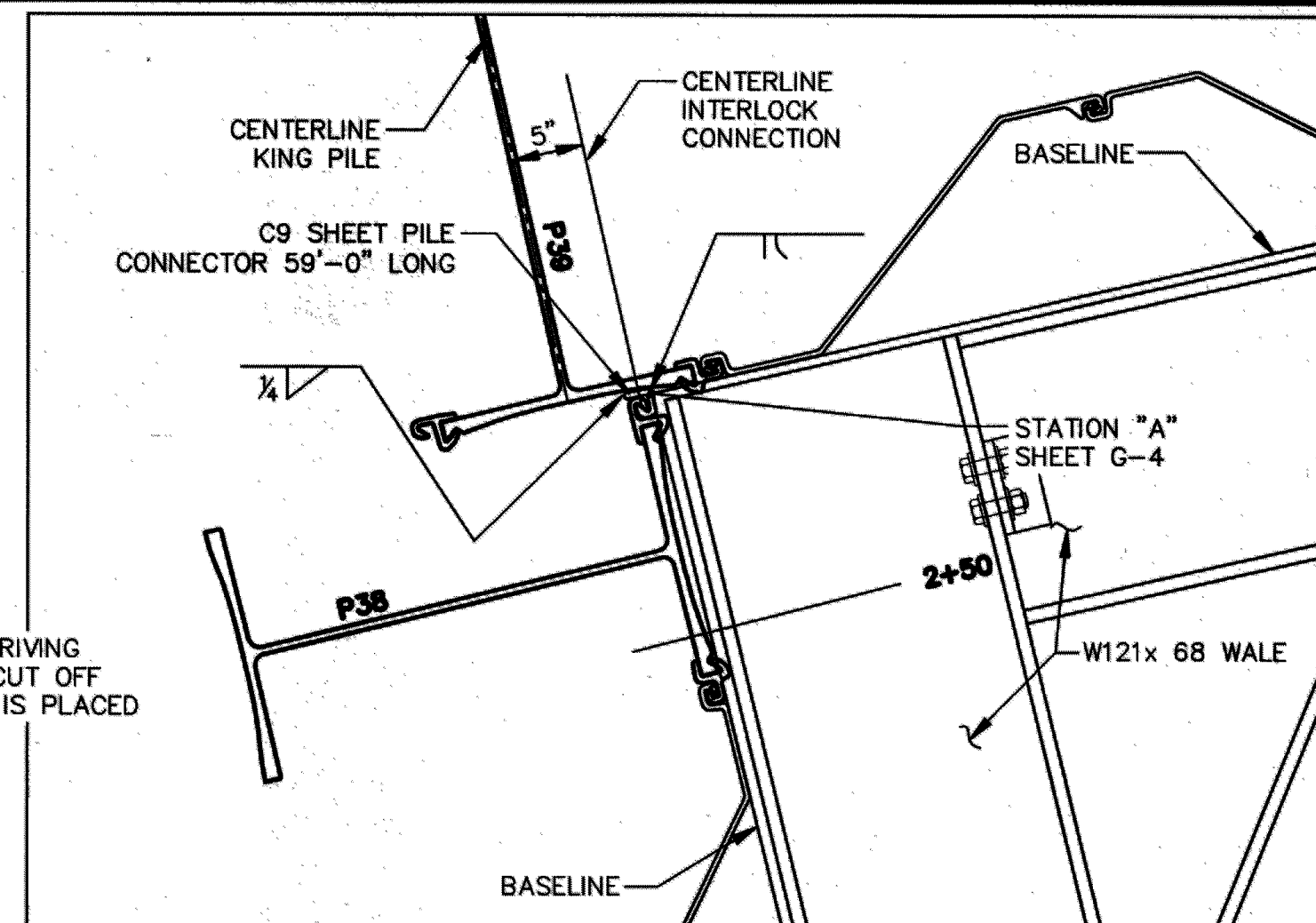
OU-1 FLOODWALL SECTION

SCALE: 1/2"=1'-0"

6



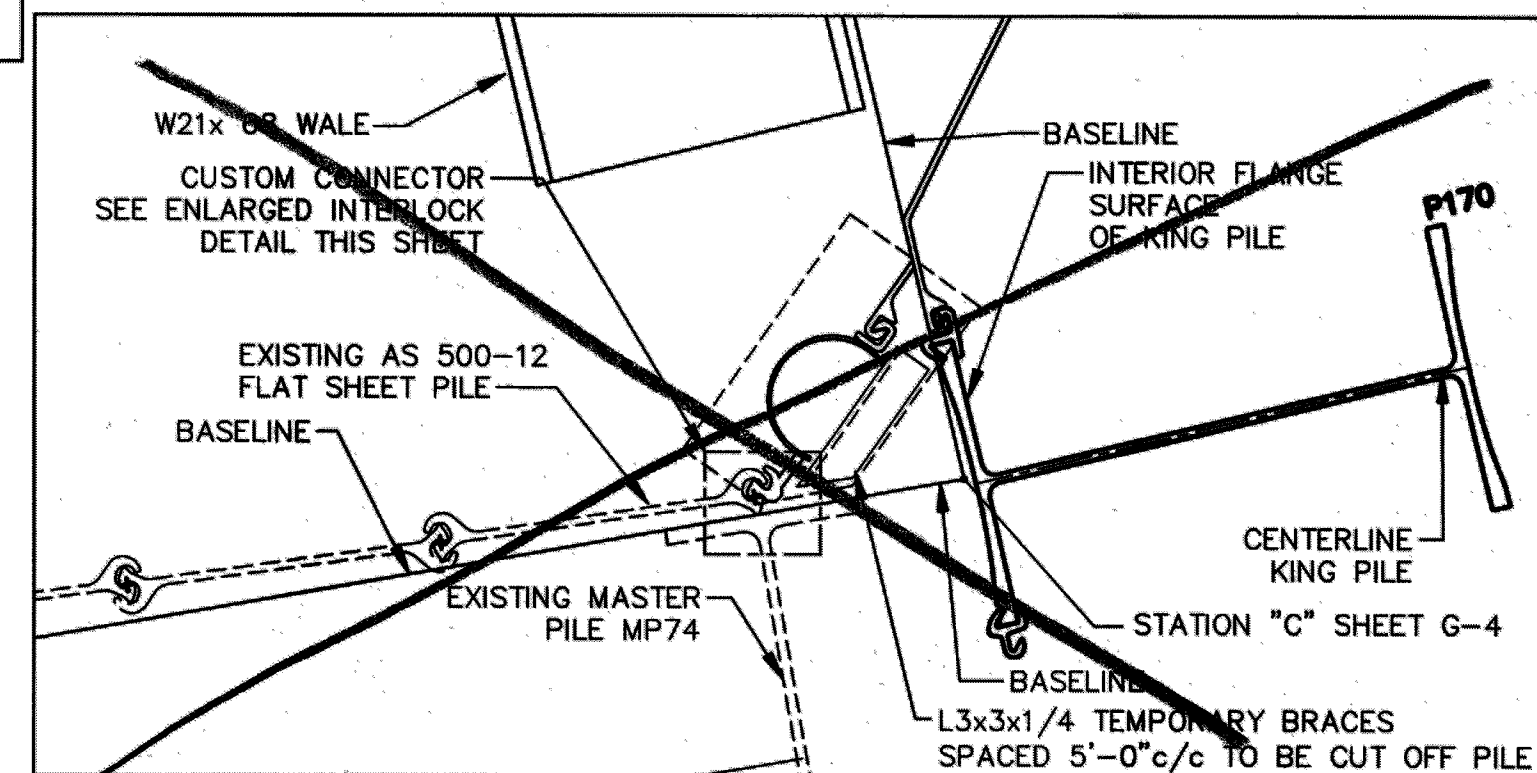
ENLARGED INTERLOCK DETAIL



CLOSURE CONNECTOR DETAIL

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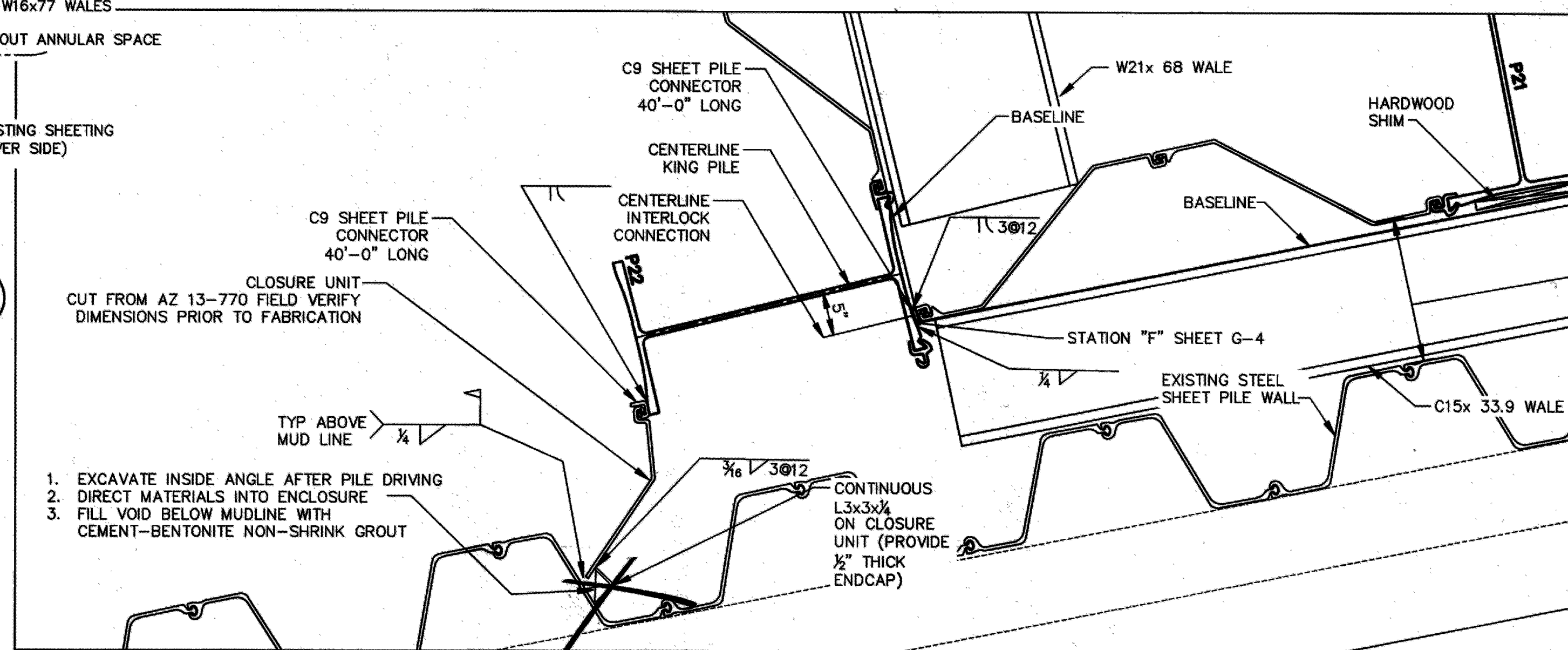
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CLOSURE CONNECTOR DETAIL

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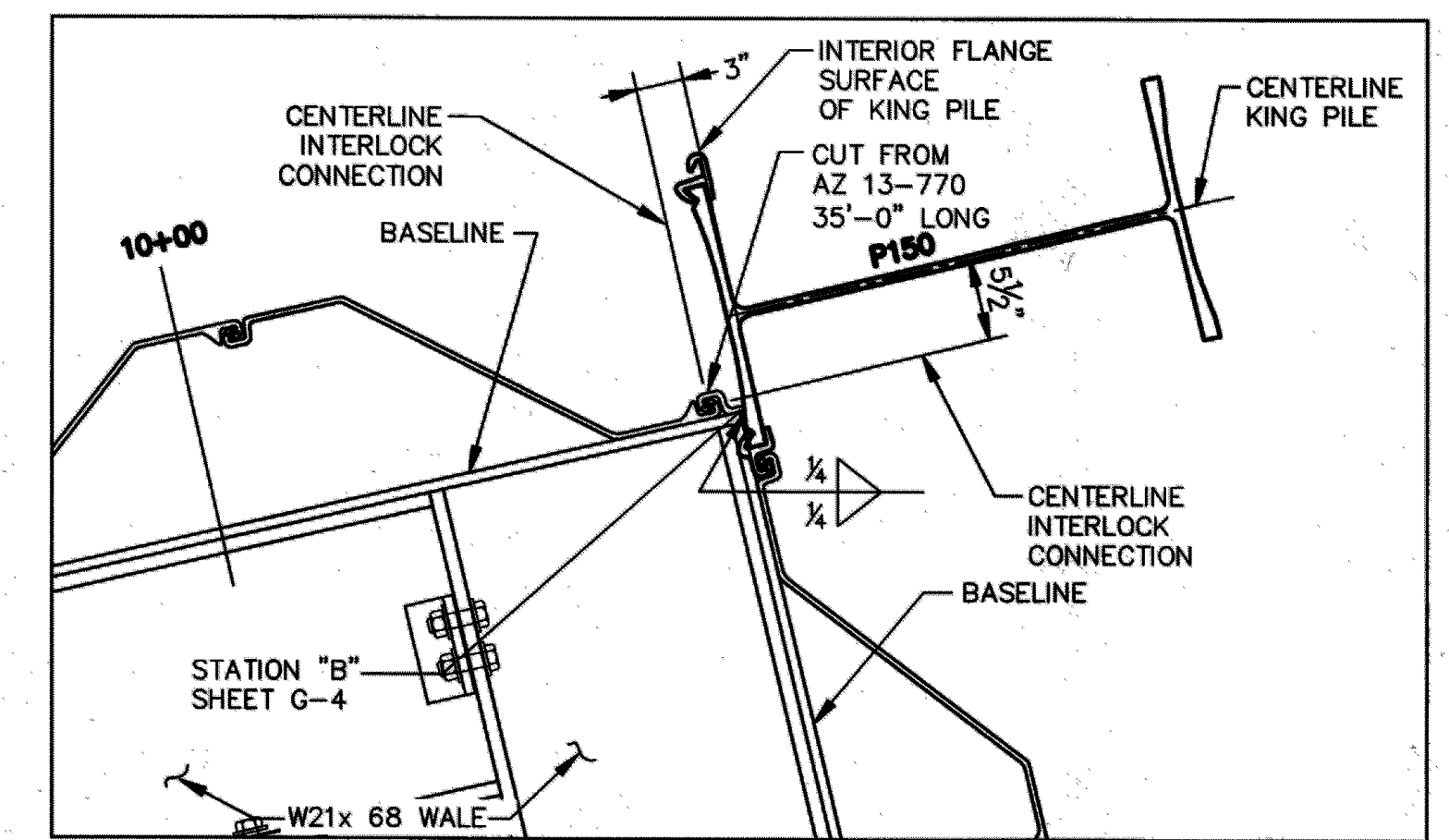
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CLOSURE CONNECTOR DETAIL

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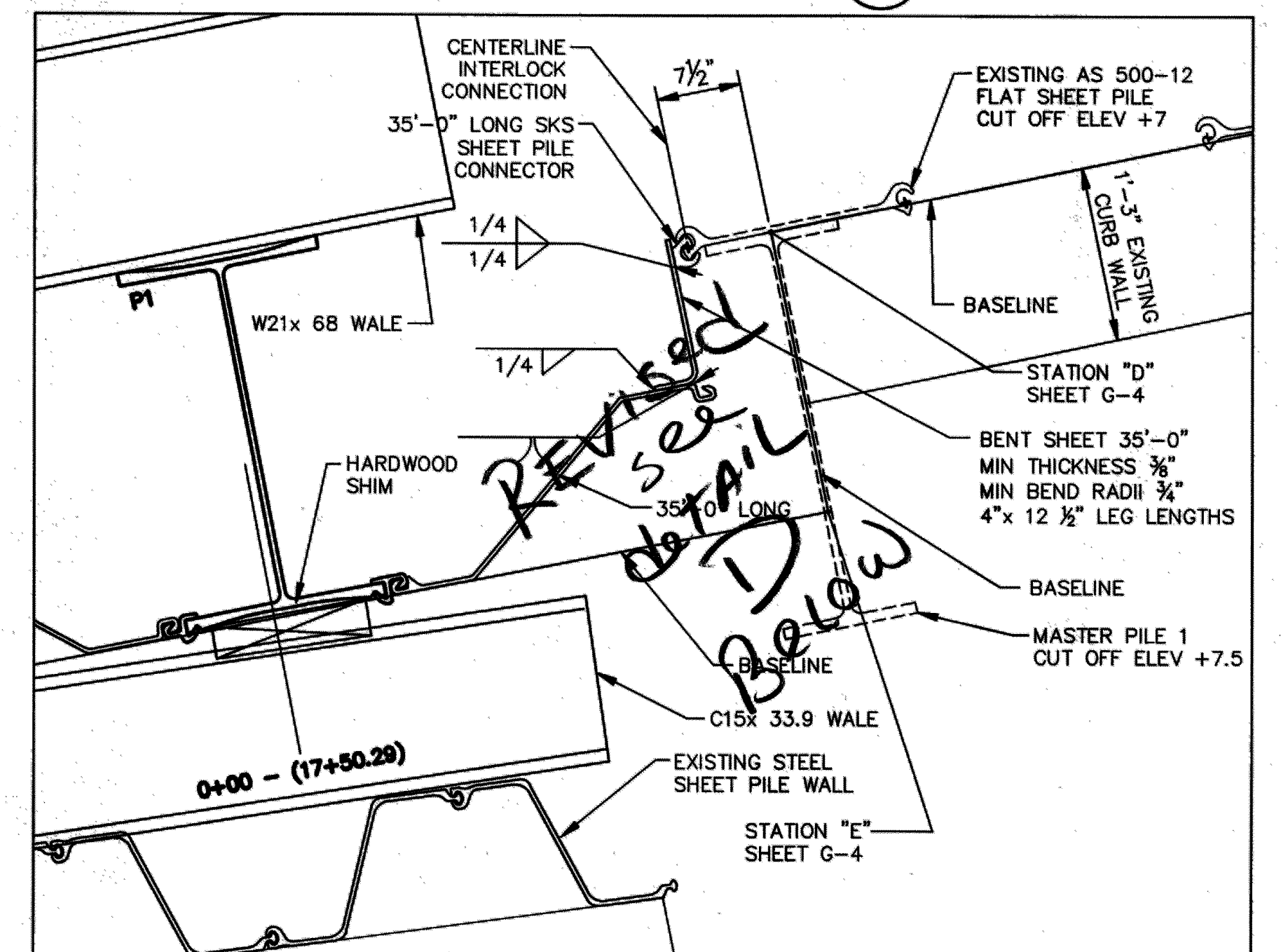
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CLOSURE CONNECTOR DETAIL

SCALE: 1"=1'-0"

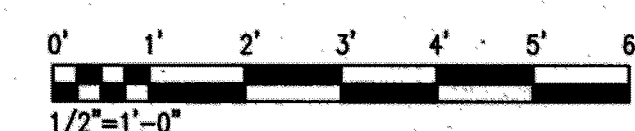
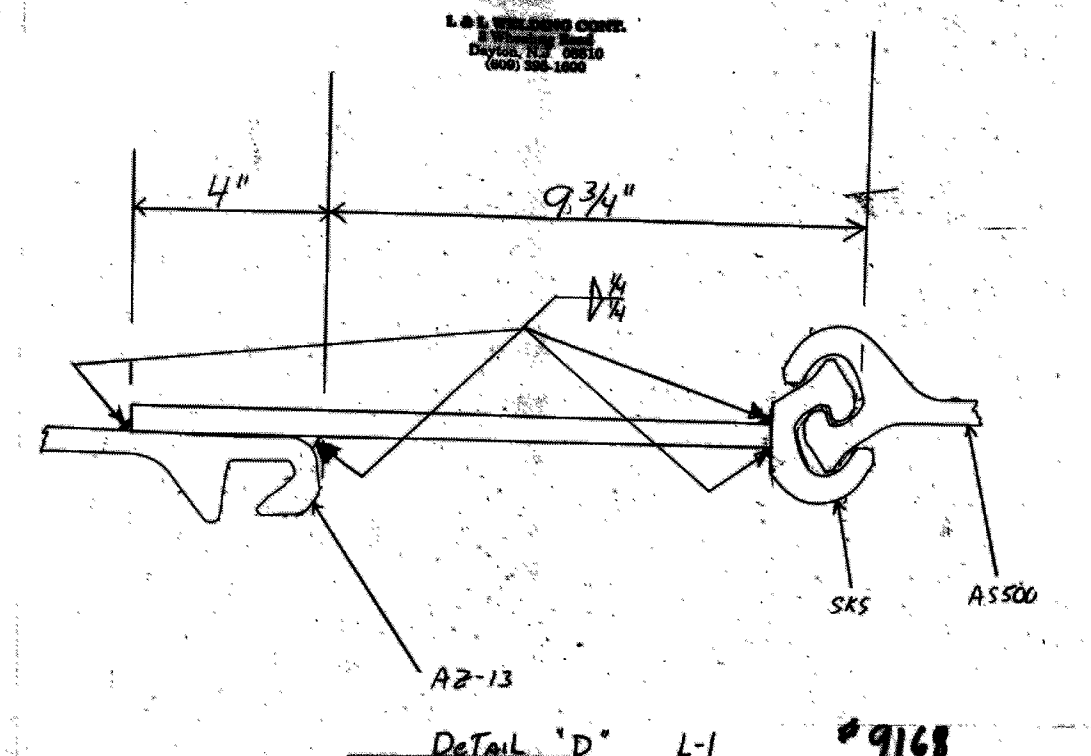
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CLOSURE CONNECTOR DETAIL

SCALE: 1"=1'-0"

4



THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING.

USE TO VERIFY FIGURE REPRODUCTION SCALE

No.	Date	Revisions	By	Ckd

Professional Engineer's Name AARON A HUNT	Date Signed 7/5/2011	Project Mgr. RAR
Professional Engineer's No. 24GE04804300	State NJ	Checked by RAK
Designed by AAH	Drawn by AAH	

7/5/2011

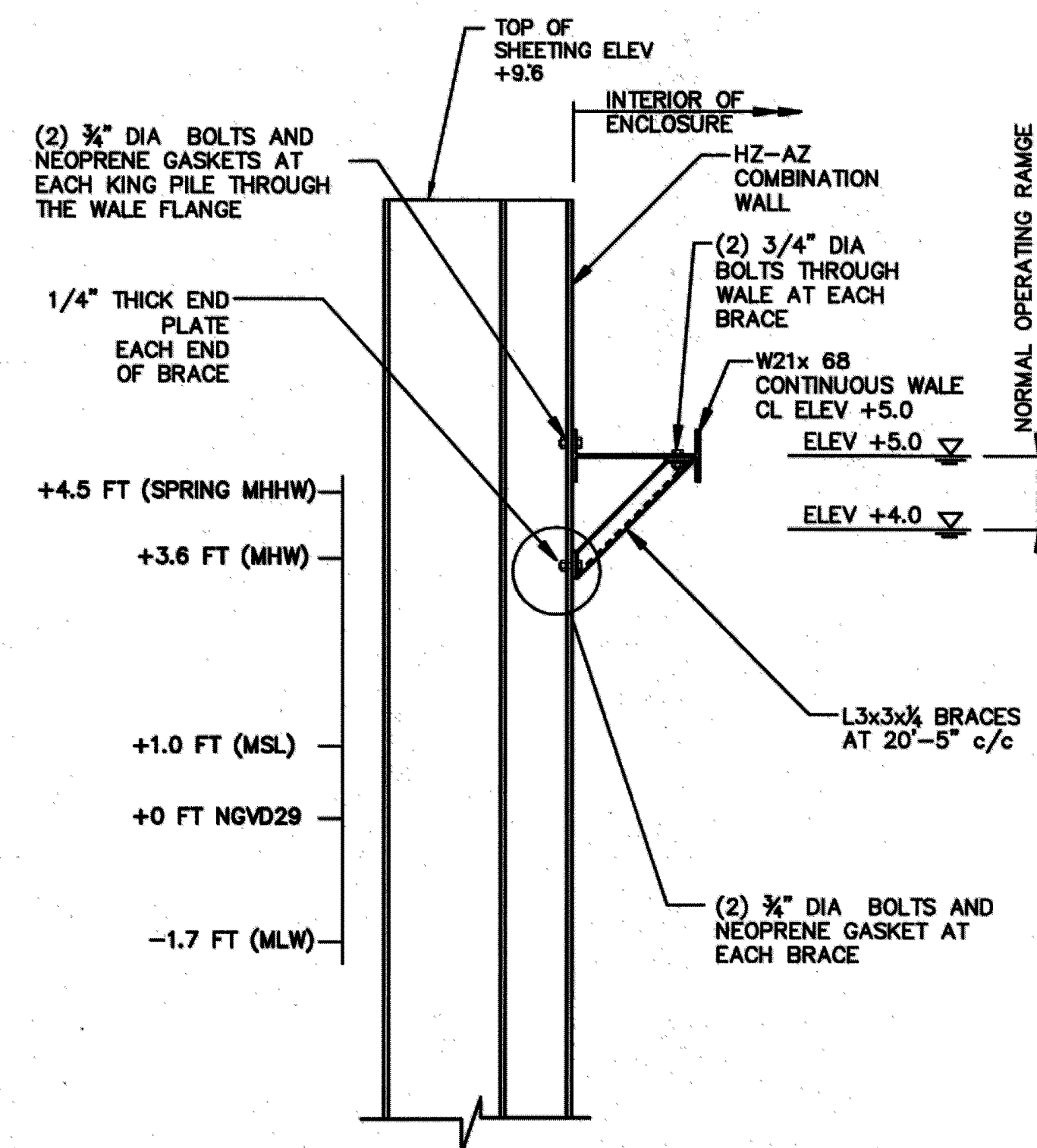
ARCADIS
ARCADIS U.S., INC.
NEW JERSEY ENGINEERING CERTIFICATE OF AUTHORIZATION NUMBER 24GA27939600

TIERRA SOLUTIONS, INC. • LOWER PASSAIC RIVER, NEWARK, NJ
PHASE I CERCLA NON-TIME-CRITICAL REMOVAL ACTION

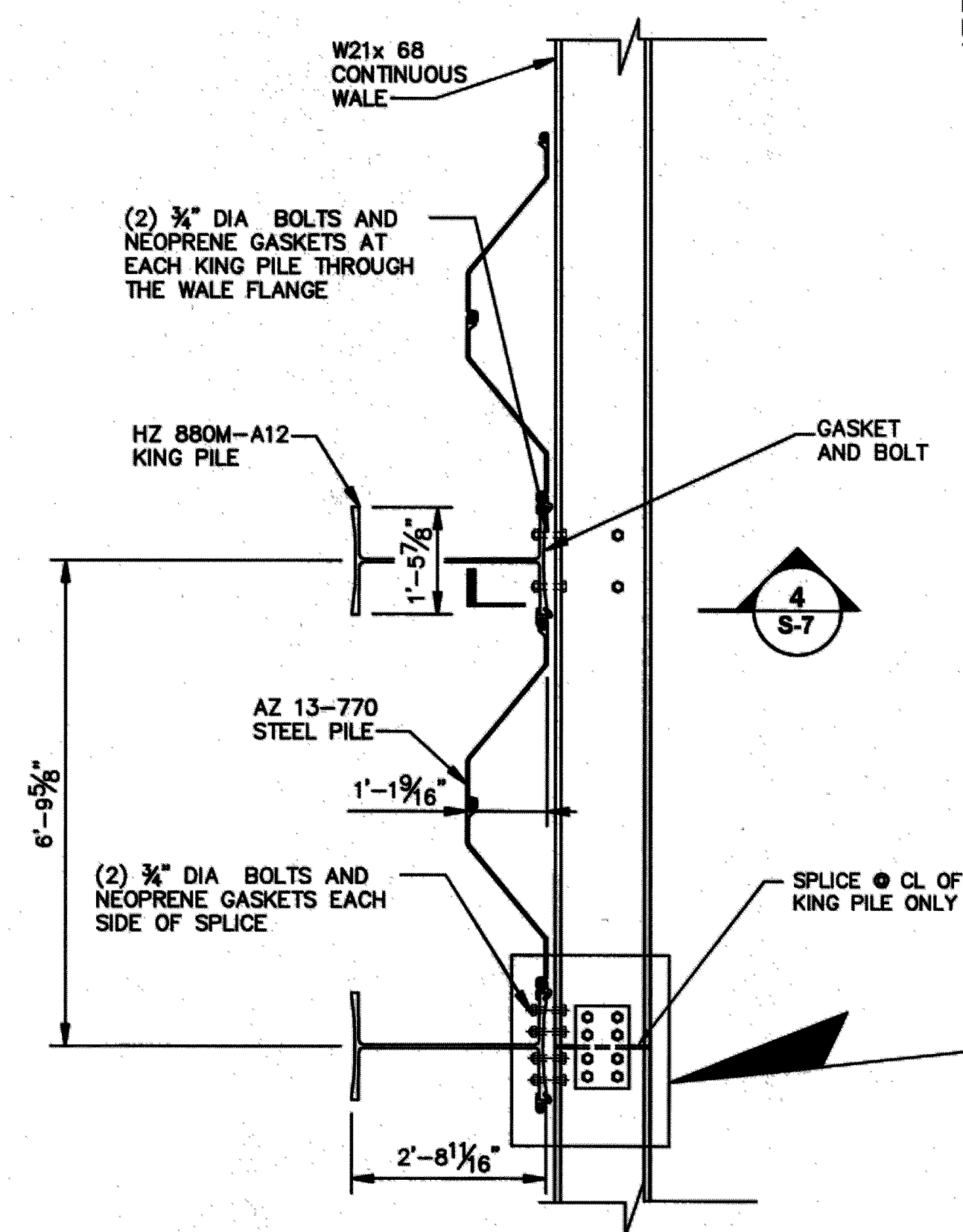
SECTIONS
SHEET 1 OF 3
STRUCTURAL

ARCADIS Project No.
B0009864.0001
Date
JULY 2011
ARCADIS
6723 TOWPATH ROAD
BOX 66
SYRACUSE, NY 13214
TEL: 315.446.9120

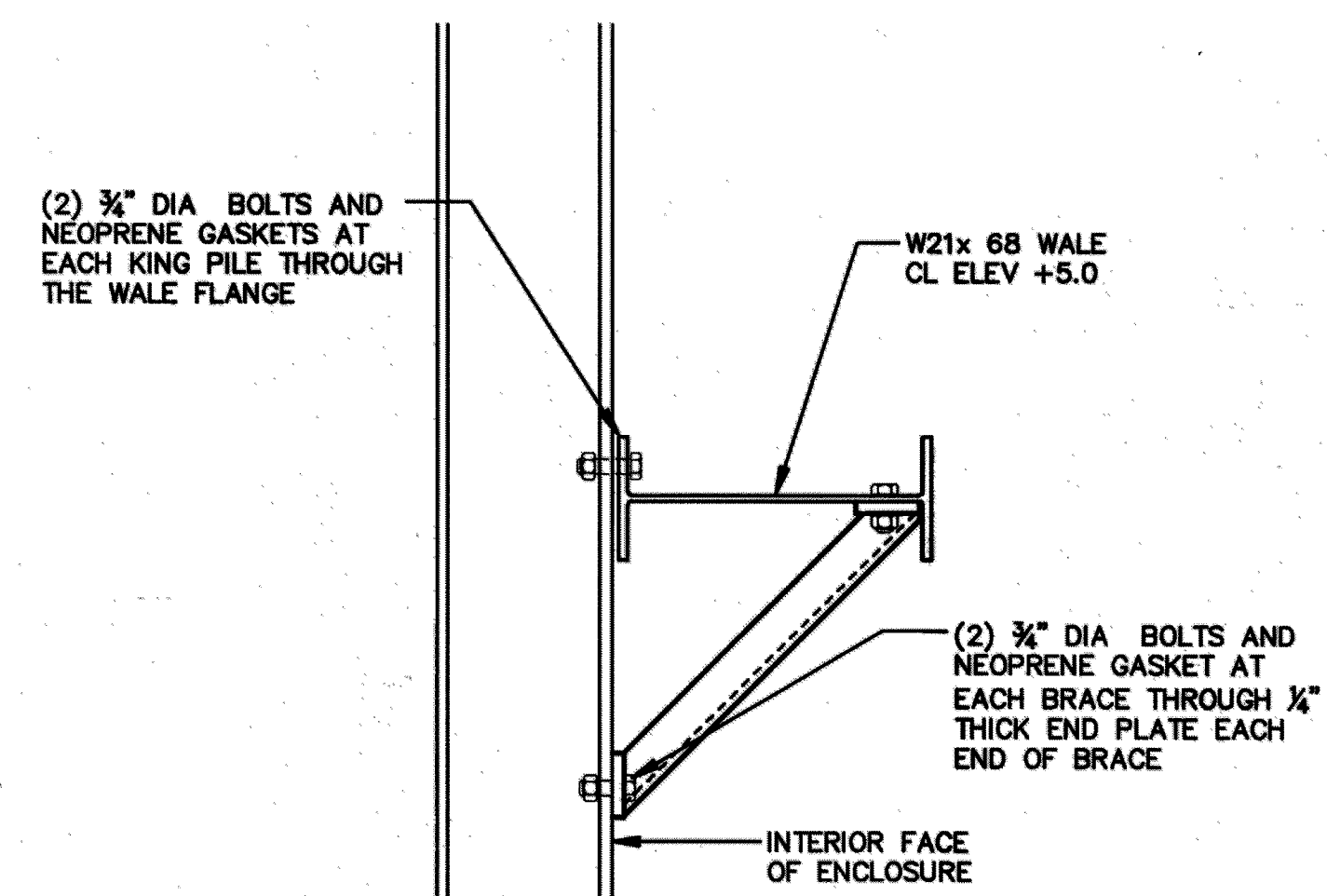
S-6



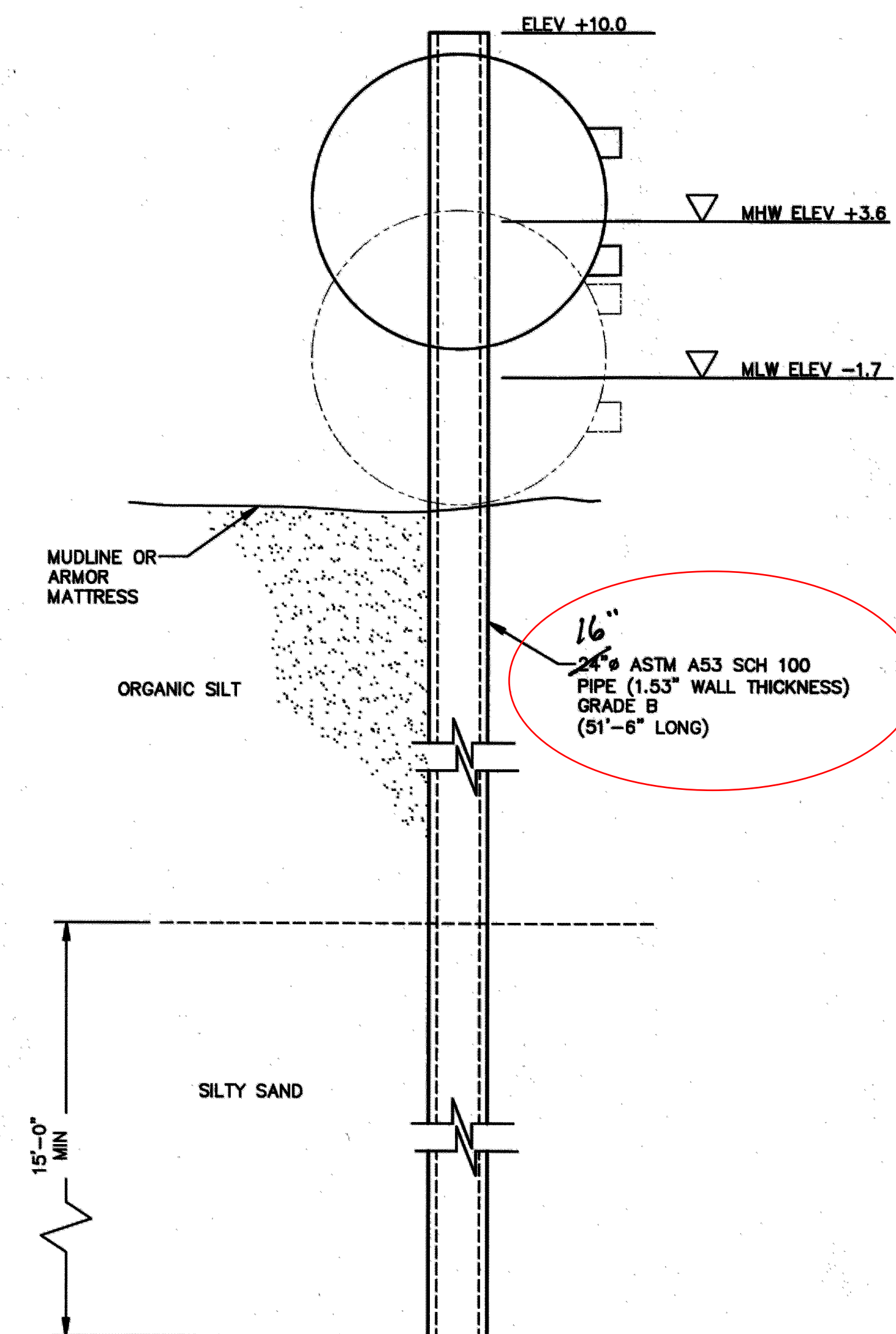
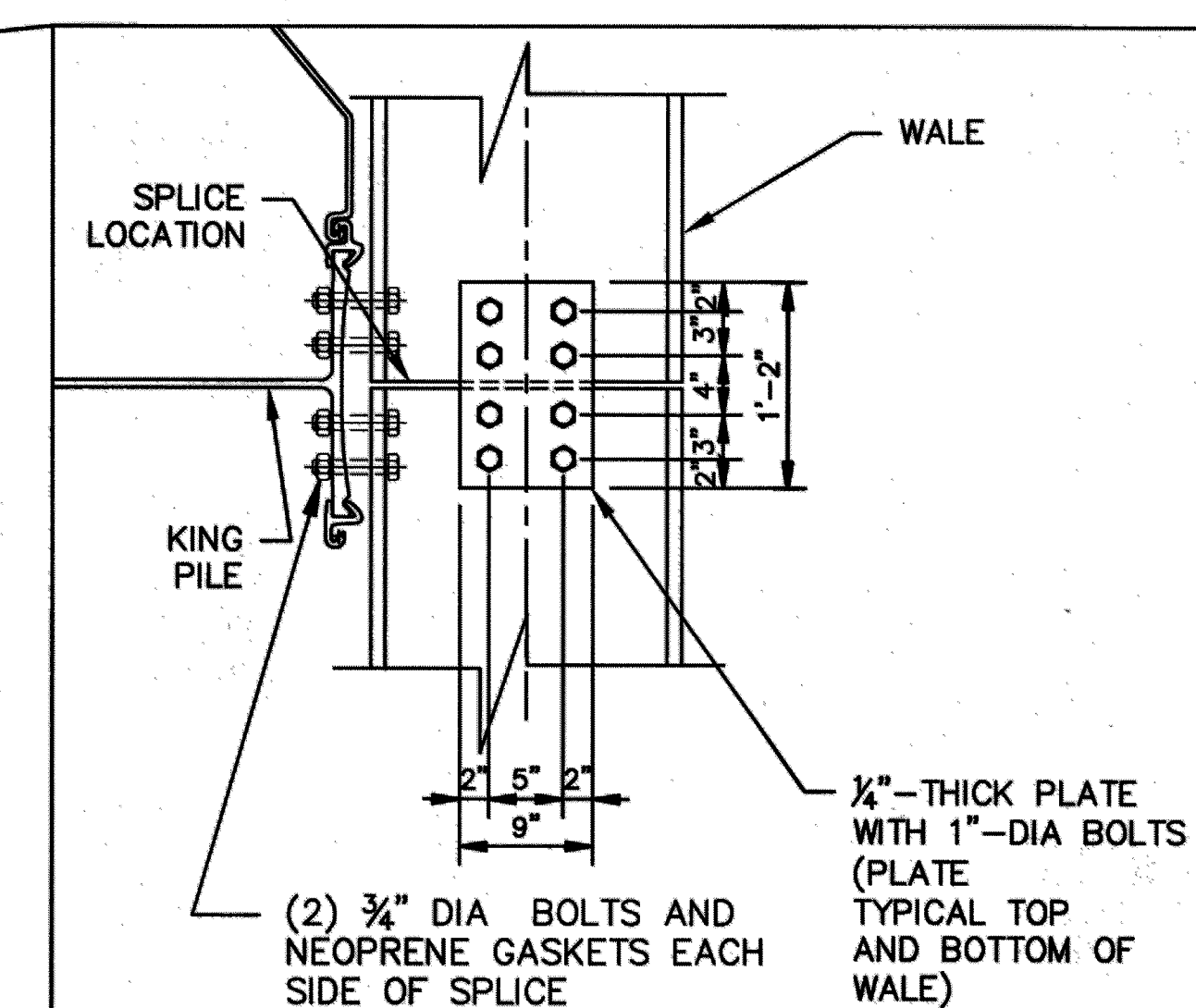
SECTION
TYPICAL RIVERSIDE SECTION **1**
 $1/2"=1'-0"$



PLAN
TYPICAL WALL CONSTRUCTION 2



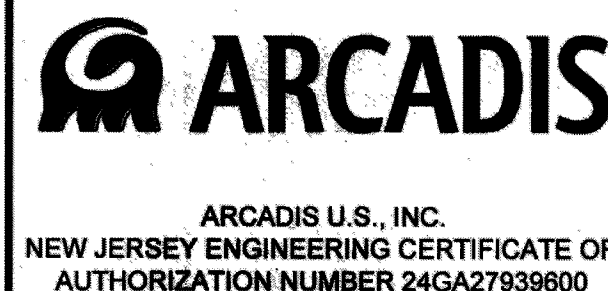
TYPICAL WALE CONNECTION



NOTE OVER BARRIER MONOPILES:
SUBMITTAL OF ALTERNATE ENCLOSURE PROTECTION DESIGN
MAY BE CONSIDERED BY ENGINEER AND MUST INCLUDE
PLANS AND DETAILS FOR APPROVAL BY ENGINEER TO
MODIFY BARRIER MONOPILE PLAN.



USE TO VERIFY
FIGURE
REPRODUCTION
SCALE

[illegible]

TIERRA SOLUTIONS, INC. • LOWER PASSAIC RIVER, NEWARK, NJ
PHASE I CERCLA NON-TIME-CRITICAL REMOVAL ACTION

SECTIONS
SHEET 2 OF 3
STRUCTURAL

ARCADIS Project No. B0009964.0001
Date JULY 2011
ARCADIS 6723 TOWPATH ROAD BOX 66 SYRACUSE, NY 13214 TEL: 315.446.9120

S-7



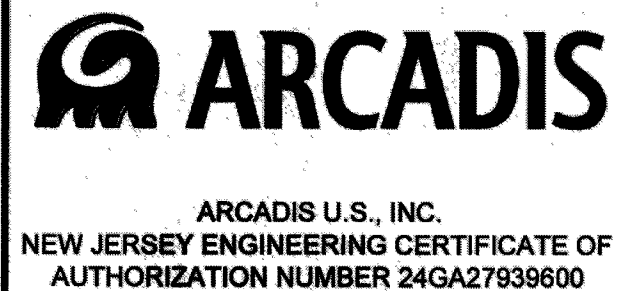
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REPRESENTS ONE
INCH ON THE
ORIGINAL DRAWING:



USE TO VERIFY
FIGURE
REPRODUCTION
SCALE

Professional Engineer's Name AARON A HUNT		
Professional Engineer's No. 24GE04804300		
State NJ	Date Signed	Project Mgr. RAR
Designed by AAH	Drawn by AAH	Checked by RAK

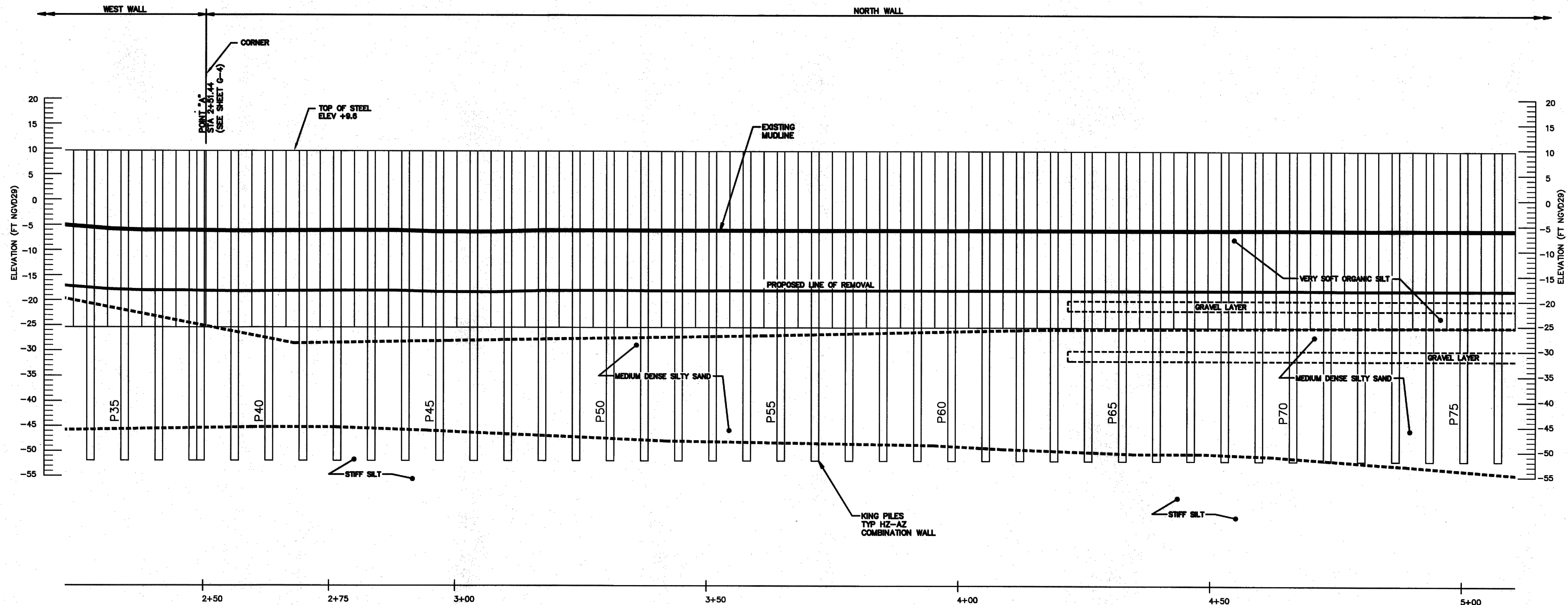
15/10/11



STRUCTURAL

S-9

CITY: TOLEDO-OH DIVGROUP: DBA, HUNT LD: PICR, ROMAGNOLI PMR, ROMAGNOLI TMR, ROMAGNOLI LTR: ON=OFF=REF
\\OH03FP01Data\Project\B000961\0000\Drawings\5-10 ELEV 275 510.dwg LAYOUT: ELE SAVD: 6/30/2011 12:41 PM ACADVER: 18.05 (LMS TECH) PAGES: 18 OF 18 PLOT: 7/1/2011 3:48 PM BY: HUNT, AARON



ELEVATIONS STA 2+75 TO 5+10
1"=10'-0"

NOTE: ALL SOIL DELINEATIONS
ARE ESTIMATED FROM AVAILABLE
BORING INFORMATION AND SHOULD
BE CONSIDERED APPROXIMATE.

09861X00
XBASEPILELEV
XVERTBARS
XVERTBARSMIR
XWIRGATE
XBASETESTBOR
XSOILUPDATE
XSOILDELINEATION

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING.	USE TO VERIFY FIGURE REPRODUCTION SCALE	<table border="1"><thead><tr><th>No.</th><th>Date</th><th>Revisions</th><th>By</th><th>Ckd</th></tr></thead><tbody><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr></tbody></table>	No.	Date	Revisions	By	Ckd						Professional Engineer's Name AARON A HUNT Professional Engineer's No. 24GE04804300			ARCADIS U.S., INC. NEW JERSEY ENGINEERING CERTIFICATE OF AUTHORIZATION NUMBER 24GA27939800	TIERRA SOLUTIONS, INC. • LOWER PASSAIC RIVER, NEWARK, NJ PHASE I CERCLA NON-TIME-CRITICAL REMOVAL ACTION ENCLOSURE ELEVATIONS STA 2+75 TO 5+10 STRUCTURAL	ARCADIS Project No. B0009964.0001 Date JULY 2011 ARCADIS 6723 TOWPATH ROAD BOX 66 SYRACUSE, NY 13214 TEL: 315.446.9120	S-10
			No.	Date	Revisions	By	Ckd												
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State	Date Signed	Project Mgr.																	
NJ		RAR																	
Designed by	Drawn by	Checked by																	
AAH	AAH	RAK																	



0 10' 20' 30'

1"=10'

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING:

USE TO VERIFY FIGURE REPRODUCTION SCALE

[illegible]

Professional Engineer's Name AARON A HUNT		
Professional Engineer's No. 24GE04804300		
State NJ	Date Signed	Project Mgr. RAR
Designed by AAH	Drawn by AAH	Checked by RAK

ARCADIS

ARCADIS U.S., INC.
NEW JERSEY ENGINEERING CERTIFICATE OF
AUTHORIZATION NUMBER 24GA27939600

TIERRA SOLUTIONS, INC. • LOWER PASSAIC RIVER, NEWARK, NJ
PHASE I CERCLA NON-TIME-CRITICAL REMOVAL ACTION

ENCLOSURE ELEVATIONS STA 5+10 TO 7+70

STRUCTURAL

ARCADIS Project No. B0009964.0001
Date JULY 2011
ARCADIS 6723 TOWPATH ROAD BOX 66 SYRACUSE, NY 13214 TEL: 315.446.9120

S-11

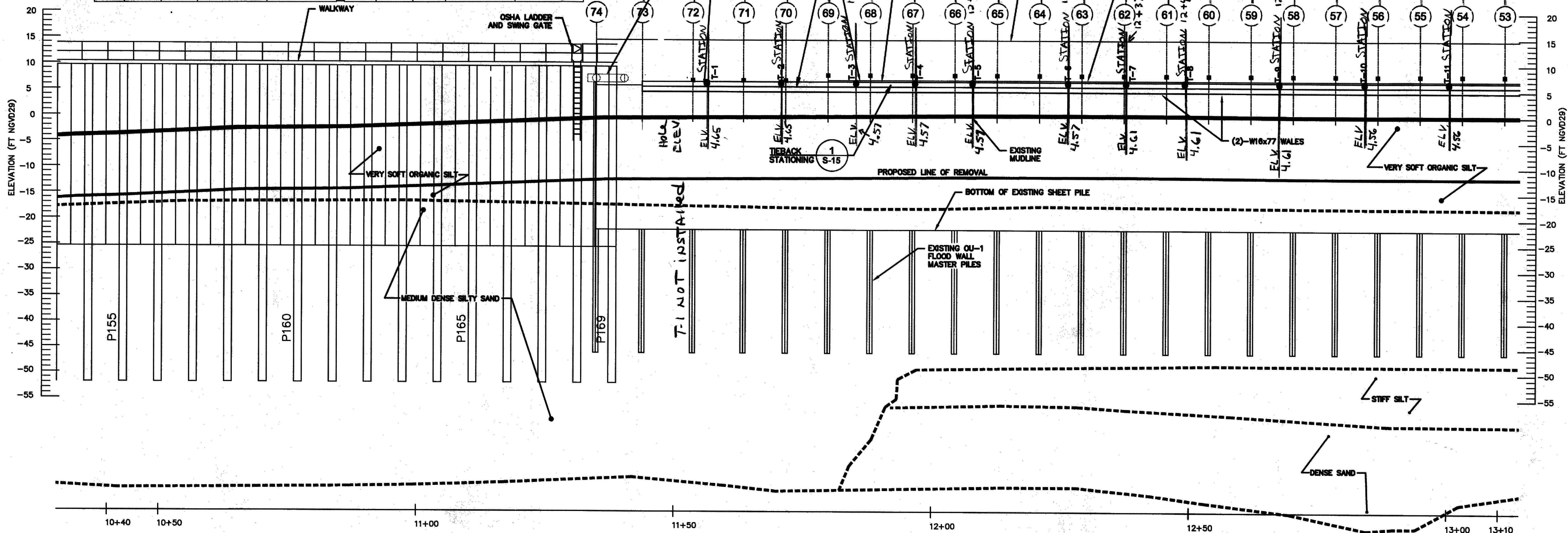
09881200
XBASEPILELEV
XVERTBAR
XVERTBARSMIR
XWIRGATE
XSLIDE
XBASETESTBOR
XSOILUPDATE
XSOILDELINEATION



THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING.
USE TO VERIFY FIGURE REPRODUCTION SCALE

NOTE: ALL SOIL DELINEATIONS ARE ESTIMATED FROM AVAILABLE BORING INFORMATION AND SHOULD BE CONSIDERED APPROXIMATE.

DESCRIPTION OF WORK		WIDTH	AMOUNT REMOVED	AMOUNT REMOVED	DESCRIPTION OF WORK		WIDTH	AMOUNT REMOVED	AMOUNT REMOVED
Wale Tieback #		(INCHES)	LENGTH (FRONT) (INCHES)	LENGTH (BACK) (INCHES)	Wale Tieback #		(INCHES)	LENGTH (FRONT) (INCHES)	LENGTH (BACK) (INCHES)
7W2	1	7	Not Used	Not Used	4W2	20	7	1	1.5
7W2	2	7	1	2	4W2	21	7	1	1.5
7W1	3	7	-	-	4W2	22	7	3	2
7W1	4	7	-	3	4W1	23	7	1.5	3
7W1	5	7	-	-	4W1	24	7	2	2
7W1	6	7	-	5	4W1	25	7	2	2
6W2	7	7	-	4	3W2	26	7	3.5	5
6W2	8	7	-	4.5	3W2	27	7	2	2
6W2	9	7	1	3	3W2	28	7	3	2
6W1	10	7	3	3	3W1	29	7	2.5	3
6W1	11	7	1	2	3W1	30	7	1.5	2
6W1	12	7	1	2	3W1	31	7	1.5	1.5
5W2.2	13	7	1	3	2W3	32	7	2	2
5W2.2	14	7	1	3	2W3	33	7	3	5
5W2.1	15	7	3	1.5	2W3	34	7	3	5
5W2.1	16	7	1	1	2W2	35	7	1	4
5W1	17	7	1	2	2W2	36	7	2.5	3.5
5W1	18	7	0.5	-	2W1	37	7	2	3
5W1	19	7	2	0.5	2W1	38	7	-	-



ELEVATIONS STA 10+40 TO 13+10
1"=10'-0"

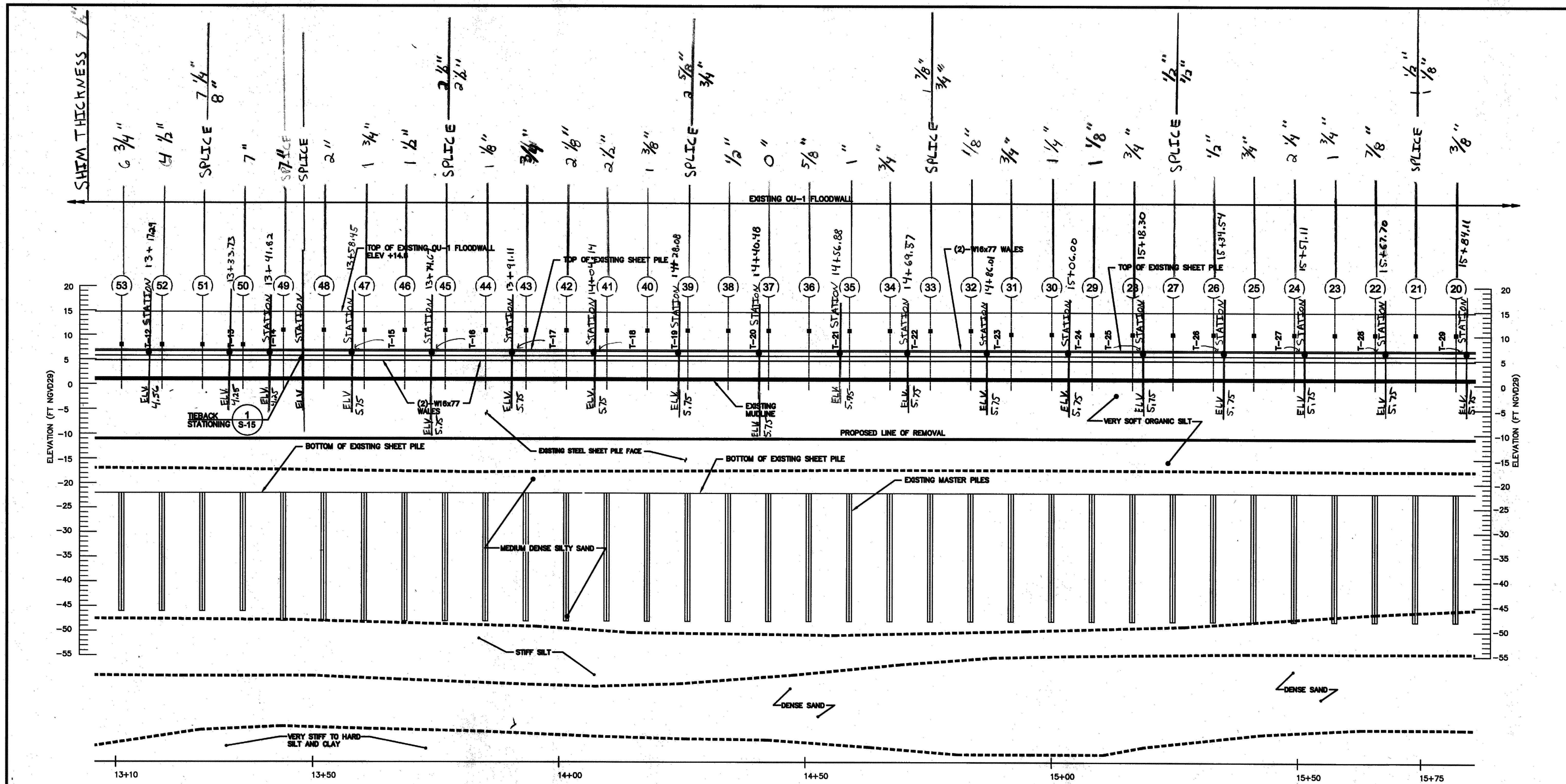
Professional Engineer's Name
AARON A HUNT
Professional Engineer's No.
24GE04804300
State
NJ
Date Signed
7/5/2011
Project Mgr.
RAR
Designed by
AAH
Drawn by
AAH
Checked by
RAK

ARCADIS
ARCADIS U.S., INC.
NEW JERSEY ENGINEERING CERTIFICATE OF AUTHORIZATION NUMBER 24GA27939800

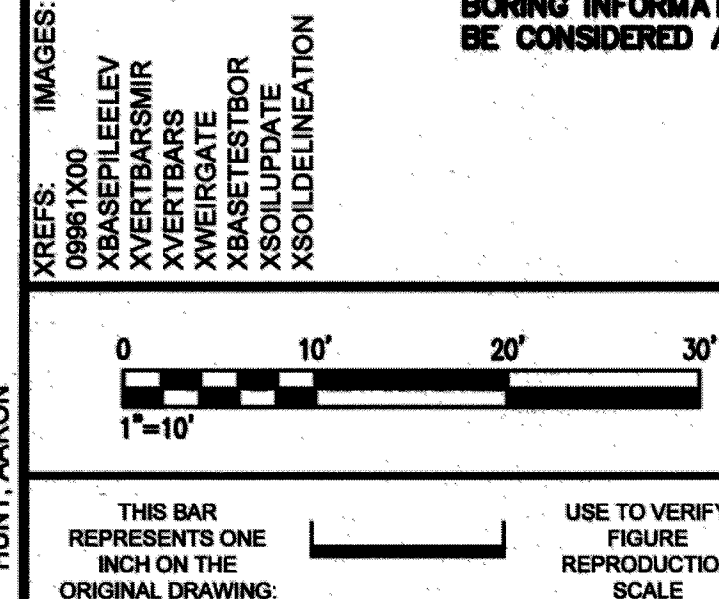
TIERRA SOLUTIONS, INC. • LOWER PASSAIC RIVER, NEWARK, NJ
PHASE I CERCLA NON-TIME-CRITICAL REMOVAL ACTION
ENCLOSURE ELEVATIONS STA 10+40 TO 13+10
STRUCTURAL

ARCADIS Project No.
B0009964.0001
Date
JULY 2011
ARCADIS
6723 TOWPATH ROAD
BOX 66
SYRACUSE, NY 13214
TEL: 315.446.9120

S-13

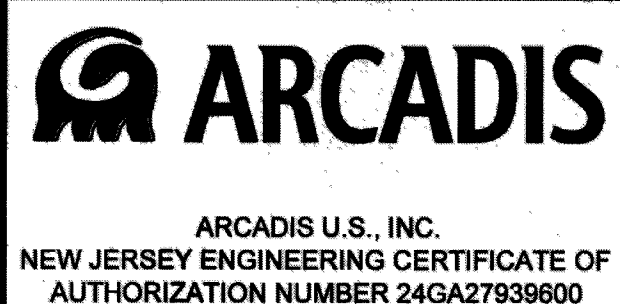
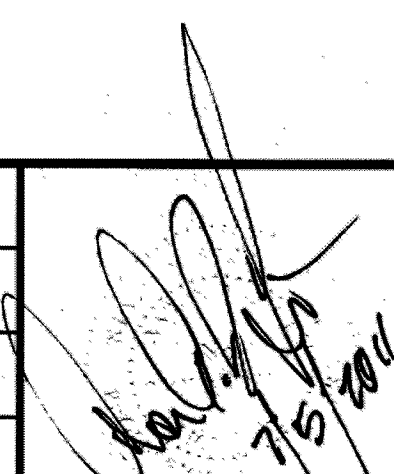


ELEVATIONS STA 13+10 TO 15+75
1"=10'-0"



No.	Date					Revisions		By	Ck
THIS DRAWING IS THE PROPERTY OF THE ARCADIS ENTITY IDENTIFIED IN THE TITLE BLOCK AND MAY NOT BE REPRODUCED OR ALTERED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN									

Professional Engineer's Name		
AARON A HUNT		
Professional Engineer's No.		
24GE04804300		
State	Date Signed	Project Mgr.
NJ		RAR
Designed by	Drawn by	Checked by
A.A.H.	A.A.H.	RAK



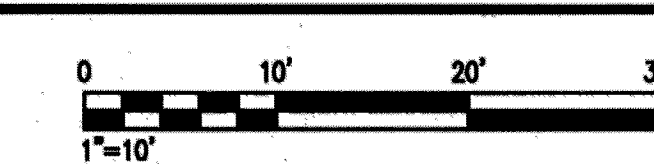
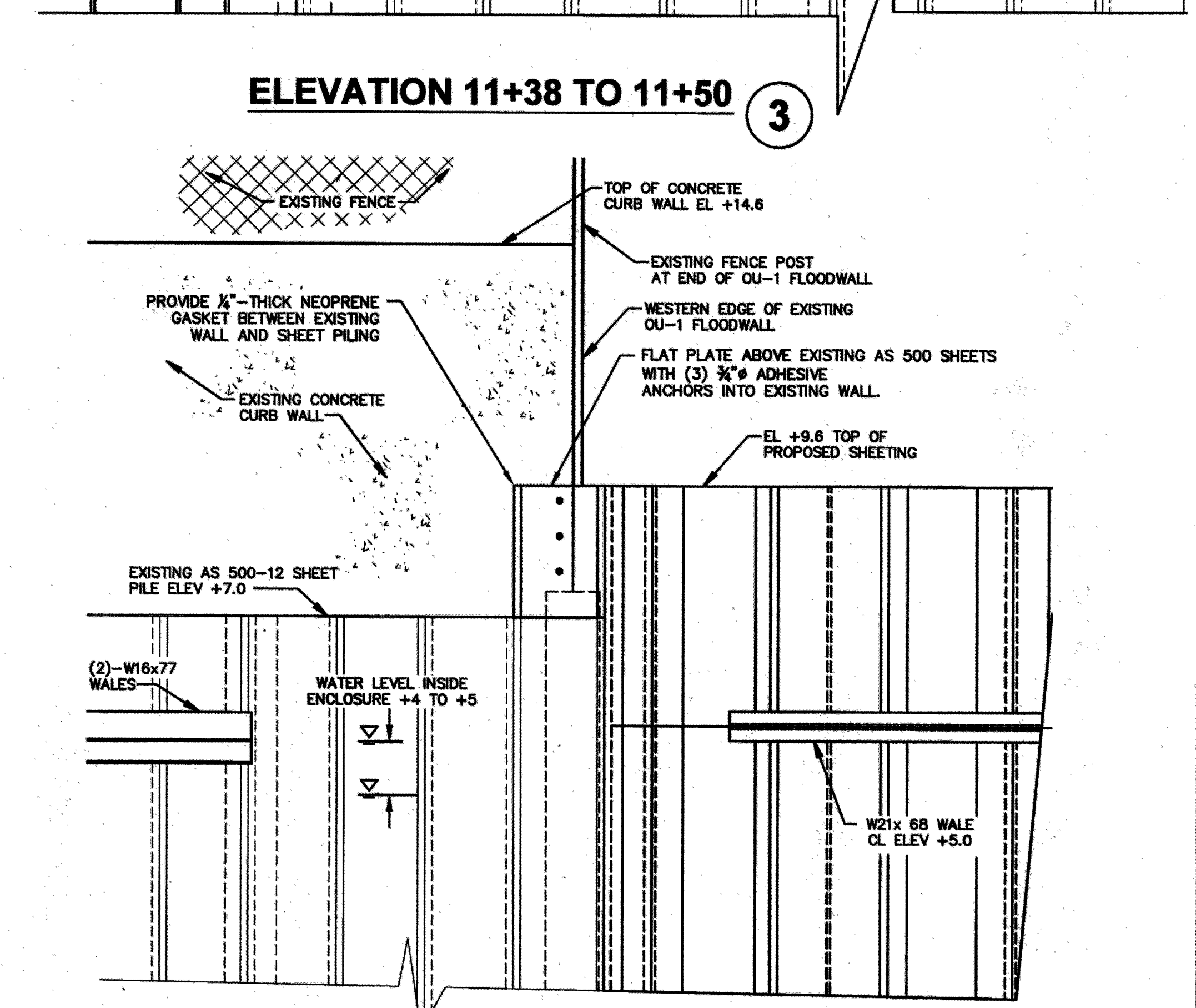
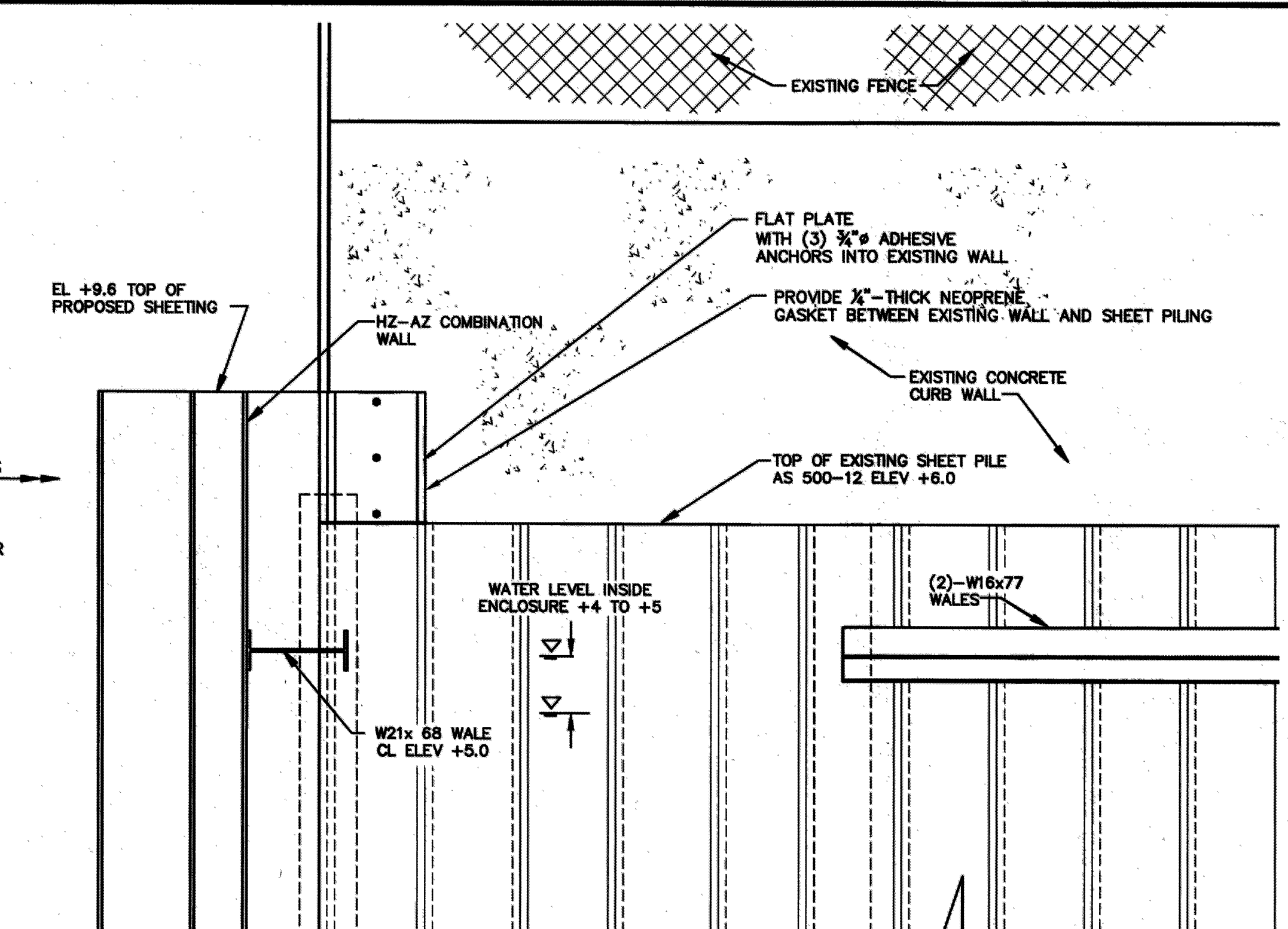
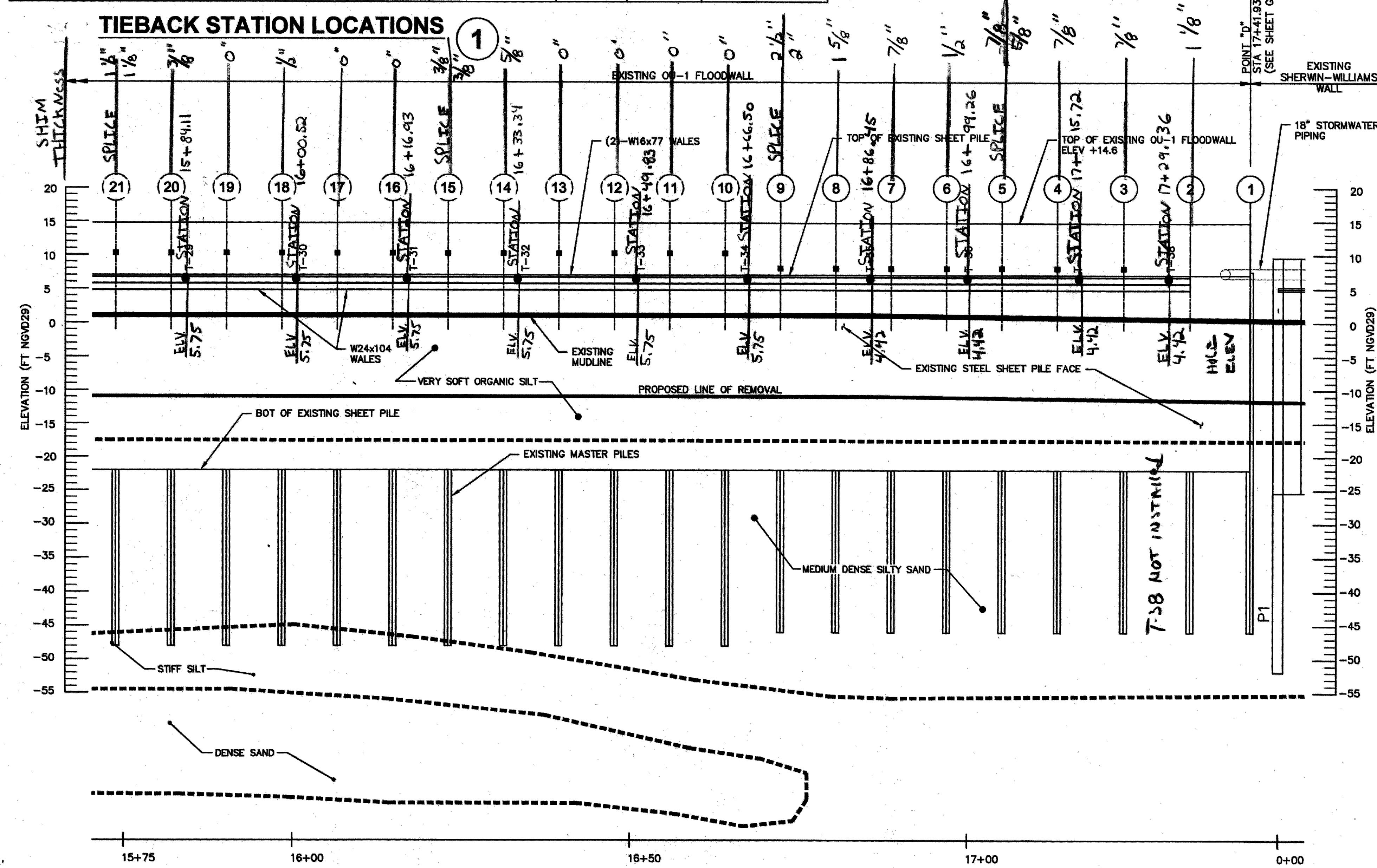
TIERRA SOLUTIONS, INC. • LOWER PASSAIC RIVER, NEWARK, NJ
PHASE I CERCLA NON-TIME-CRITICAL REMOVAL ACTION

ENCLOSURE ELEVATIONS STA 13+10 TO 15+75

STRUCTURAL

ARCADIS Project No. B0009964.0001
Date JULY 2011
ARCADIS 6723 TOWPATH ROAD BOX 66 SYRACUSE, NY 13214

TIEBACK ID	STATION	INCREMENT TO NEXT TIEBACK	TIEBACK ID	STATION	INCREMENT TO NEXT TIEBACK	TIEBACK ID	STATION	INCREMENT TO NEXT TIEBACK
T-1	11+56.27	14.42 FT	T-14	13+41.82	16.63 FT	T-27	15+51.28	16.42 FT
T-2	11+70.89	15.36 FT	T-15	13+58.45	16.22 FT	T-28	15+67.70	16.41 FT
T-3	11+86.05	10.63 FT	T-16	13+74.67	16.44 FT	T-29	15+84.11	16.41 FT
T-4	11+96.68	10.20 FT	T-17	13+91.11	13.03 FT	T-30	16+00.52	16.41 FT
T-5	12+06.88	20.13 FT	T-18	14+04.14	19.94 FT	T-31	16+16.93	16.41 FT
T-6	12+27.19	10.42 FT	T-19	14+24.08	16.40 FT	T-32	16+33.34	16.66 FT
T-7	12+37.61	10.50 FT	T-20	14+40.48	16.40 FT	T-33	16+50.00	16.67 FT
T-8	12+48.11	20.13 FT	T-21	14+56.88	12.69 FT	T-34	16+66.67	19.78 FT
T-9	12+68.24	16.26 FT	T-22	14+69.57	16.44 FT	T-35	16+86.45	12.81 FT
T-10	12+84.50	16.58 FT	T-23	14+86.01	19.99 FT	T-36	16+99.26	16.49 FT
T-11	13+01.08	16.21 FT	T-24	15+06.00	12.47 FT	T-37	17+15.72	14.14 FT
T-12	13+17.29	16.44 FT	T-25	15+18.47	16.40 FT	T-38	17+29.86	
T-13	13+33.73	8.09 FT	T-26	15+34.87	16.41 FT			



**NOTE: ALL SOIL DELINEATIONS
ARE ESTIMATED FROM AVAILABLE
BORING INFORMATION AND SHOULD
BE CONSIDERED APPROXIMATE.**

							Professional Engineer's Name					
							AARON A HUNT					
							Professional Engineer's No.					
							24GE04804300					
							Date Signed				Project Mgr.	
No.	Date	Revisions				By	Ckd	NJ			RAR	
THIS DRAWING IS THE PROPERTY OF THE ARCADIS ENTITY IDENTIFIED IN THE TITLE BLOCK AND MAY NOT BE REPRODUCED OR ALTERED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF SAME.							Designed by AAH		Drawn by AAH		Checked by RAK	



ARCADIS
ARCADIS U.S., INC.
NEW JERSEY ENGINEERING CERTIFICATE OF
AUTHORIZATION NUMBER 24GA27839860

TIERRA SOLUTIONS, INC. • LOWER PASSAIC RIVER, NEWARK, NJ
PHASE I CERCLA NON-TIME-CRITICAL REMOVAL ACTION

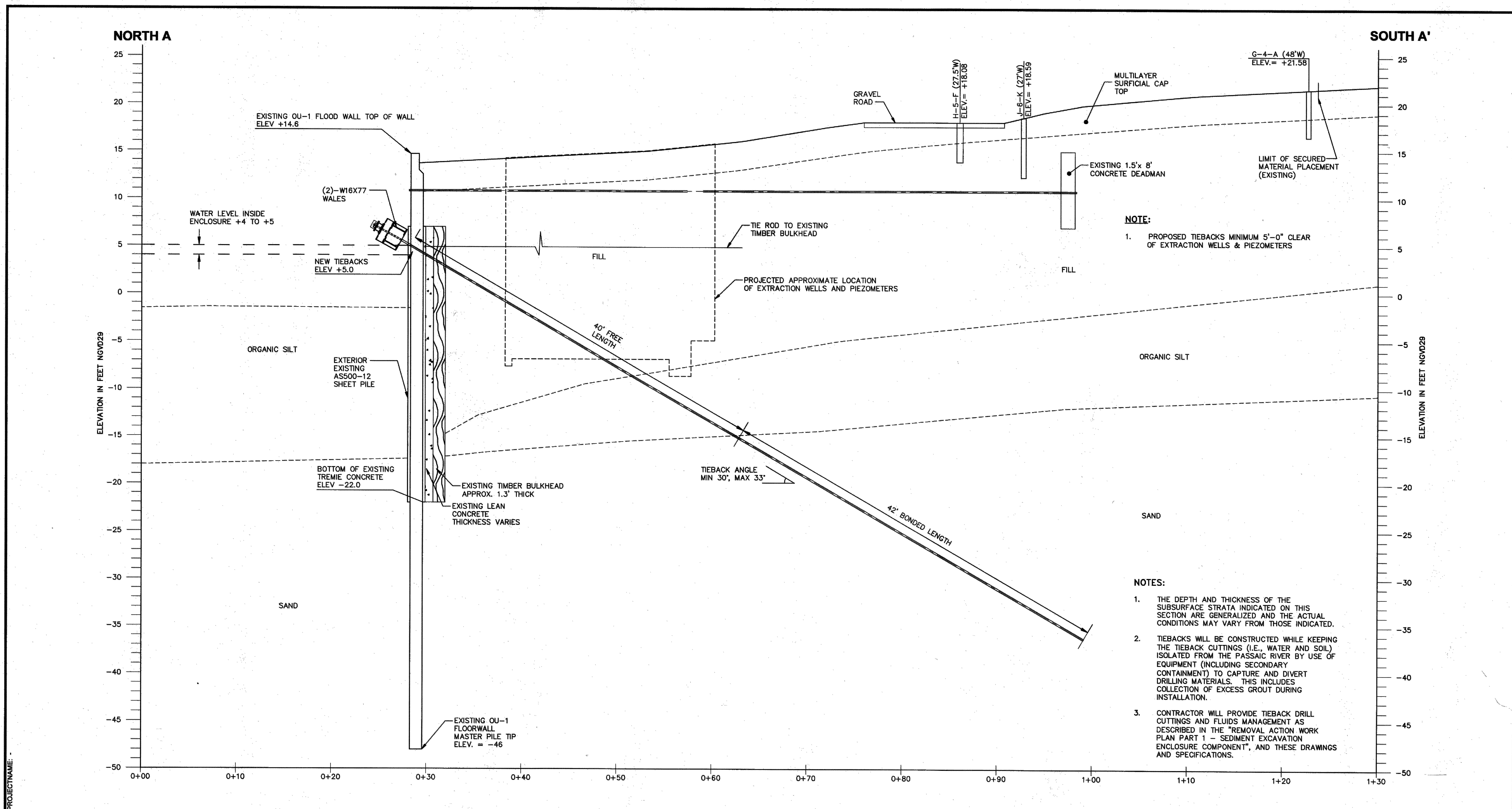
ENCLOSURE ELEVATIONS STA 15+75 TO 17+50

ARCADIS Project No.
B0009964.0001

Date
JULY 2011

ARCADIS
6723 TOWPATH ROAD
BOX 66
SYRACUSE, NY 13214
TEL: 315.445.8100

CITY: TOLEDO-OH DIVISION: DBA, HUNT LD. PIC: ROMAGNOLI PMR, ROMAGNOLI TMR, ROMAGNOLI LVR: ON=OFF=REF
\\0400FF01\Drawings\1.0000\Drawings\16 SECTION TIEBACK.dwg LAYOUT: SECTION TIEBACK.dwg SAVED: 8/30/2011 12:44 PM ACADVER: 18.08 (LMS TECH) PAGES: 18.08 (LMS TECH) PLOT: 7/1/2011 3:48 PM BY: HUNT, AARON



TYPICAL TIEBACK SECTION
1" = 5'-0"

1

0 5' 10' GRAPHIC SCALE		THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING.		USE TO VERIFY FIGURE REPRODUCTION SCALE		No. Date Revisions By Ckd		Professional Engineer's Name AARON A HUNT Professional Engineer's No. 24GE04804300 State NJ Date Signed Project Mgr. Designed by Drawn by Checked by AAH AAH RAK		ARCADIS ARCADIS U.S., INC. NEW JERSEY ENGINEERING CERTIFICATE OF AUTHORIZATION NUMBER 24GA27939600		TIERRA SOLUTIONS, INC. • LOWER PASSAIC RIVER, NEWARK, NJ PHASE I CERCLA NON-TIME-CRITICAL REMOVAL ACTION OU-1 FLOODWALL SECTION AT TIEBACK STRUCTURAL		ARCADIS Project No. B0009964.0001 Date JULY 2011 ARCADIS 6723 TOWPATH ROAD BOX 66 SYRACUSE, NY 13214 TEL: 315.446.9120		S-16	
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