

*OPTIONAL ALLAN BLOCK VENEER IN FRONT OF PRESSURE TREATED LAGGING

3 PROFILE VIEW WALL 2 (STA 0+00 TO 2+60)
Scale 1" = 8' H & V

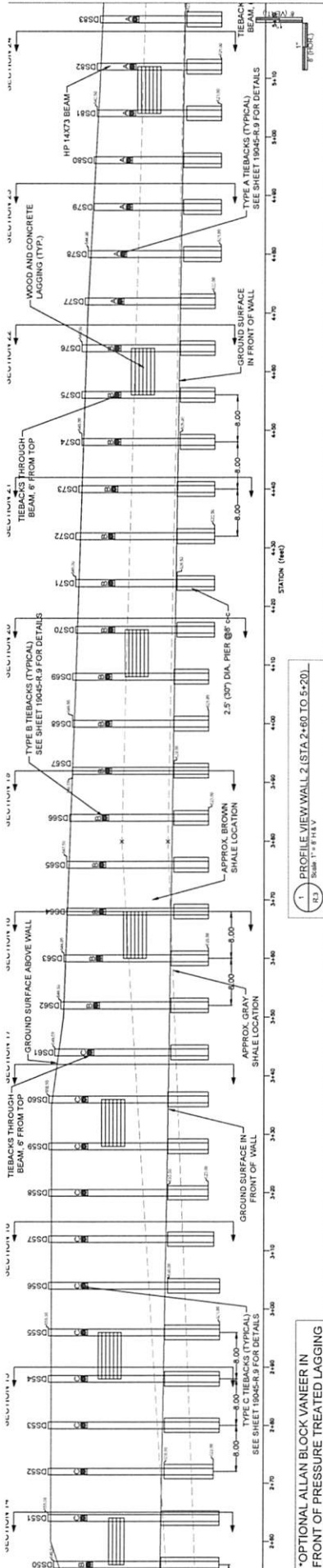


REV	DATE	DESCRIPTION
1	04/07/09	ISSUED FOR PERMITS PER CITY COMMENTS

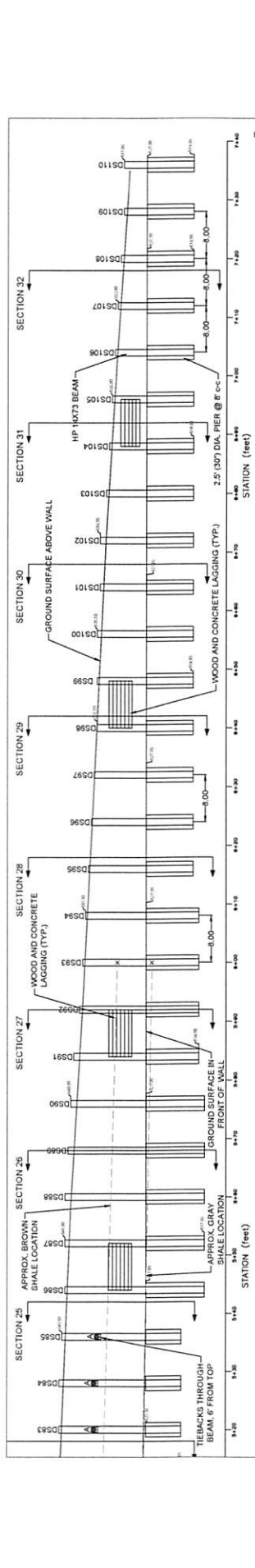


KOWALSKI ENGINEERING, INC.
3710 Section Road
Cincinnati, Ohio 45238
Phone 513.433.5637
www.RetainingWallExpert.com

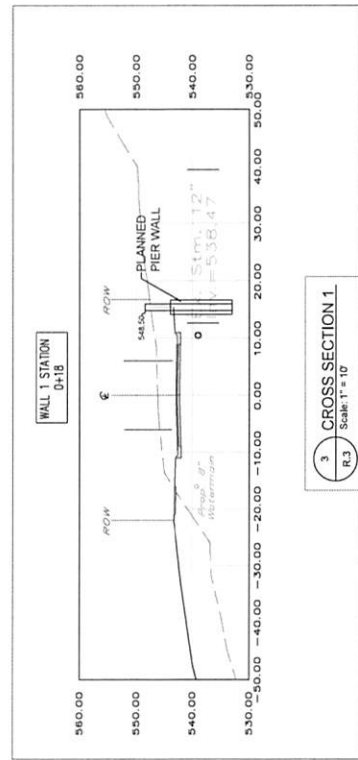
TITLE: WALL 1 & 2: PLAN VIEW, WALL 1: PROFILE VIEW
WALL 2: PROFILE VIEW (0+00 TO 2+60)
FOR: OUTDOOR ENVIRONMENTS, INC. SCALE: As Noted
PROJECT: WALWORTH JUNCTION SHEET: 2001.0



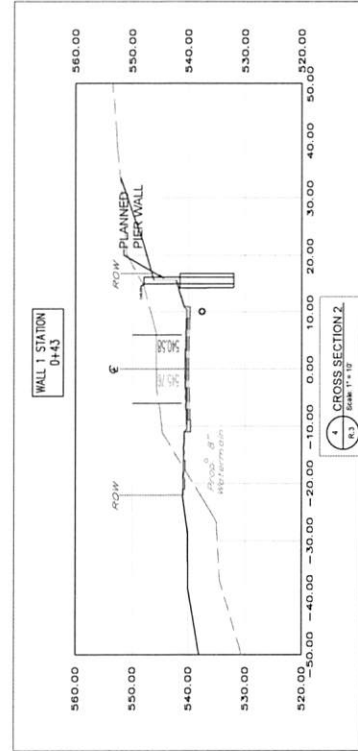
1 PROFILE VIEW WALL 2 (STA 2+60 TO 5+20)
R.3 Scale 1" = 8' H & V



2 PROFILE VIEW WALL 2 (STA 5+20 TO 7+35)
R.3 Scale 1" = 8' H & V



3 CROSS SECTION 1
R.3 Scale 1" = 10'



4 CROSS SECTION 2
R.3 Scale 1" = 10'

*OPTIONAL ALLAN BLOCK VANEER IN FRONT OF PRESSURE TREATED LAGGING

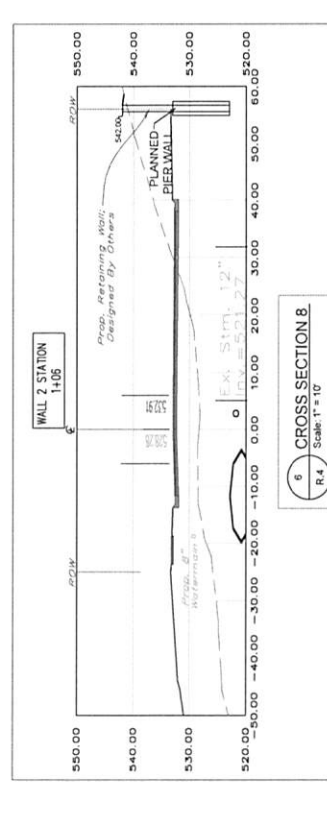
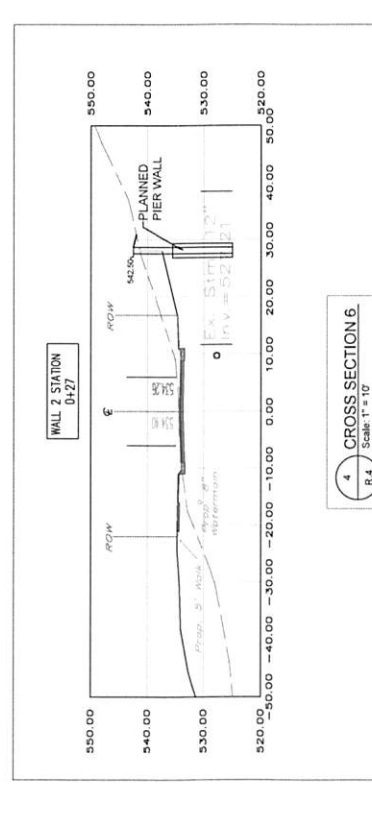
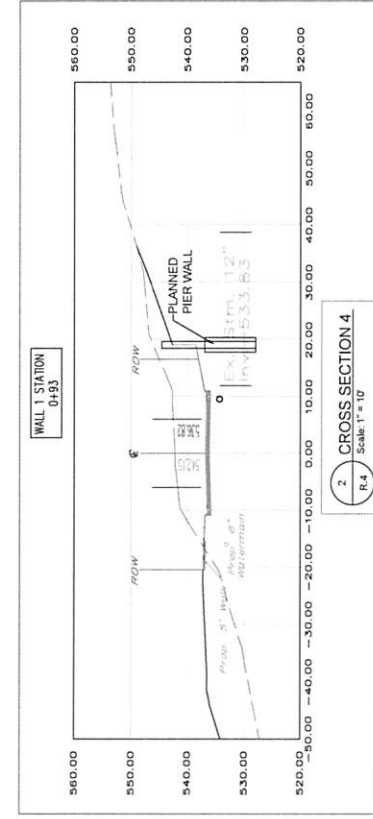
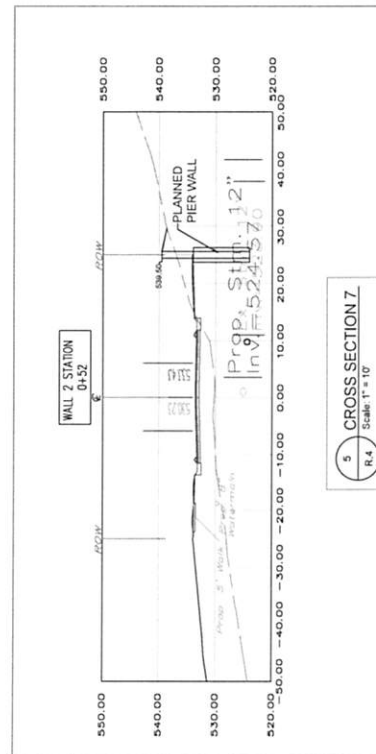
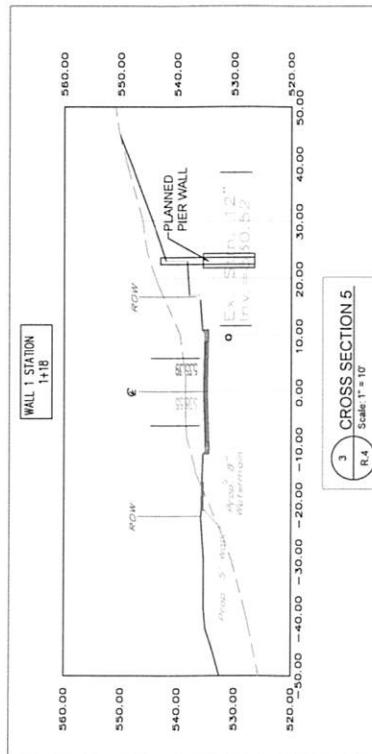
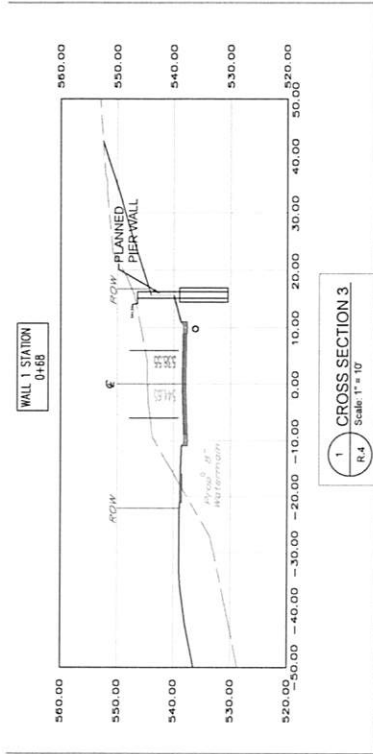
TITLE WALL 2 - PROFILE VIEW (2+60 TO 7+35) AND CROSS SECTIONS 1 AND 2
FOR OUTDOOR ENVIRONMENTS, INC.
PROJECT: WALWORTH JUNCTION
SCALE: AS NOTED
SHEET: 10 OF 10

HOWARD ENGINEERING, INC.
10000
Cincinnati, Ohio 45236
Phone 513.633.9557
www.howard-engineering.com



REV	DATE	DESCRIPTION
1		WALWORTH JUNCTION SITE CHANGES

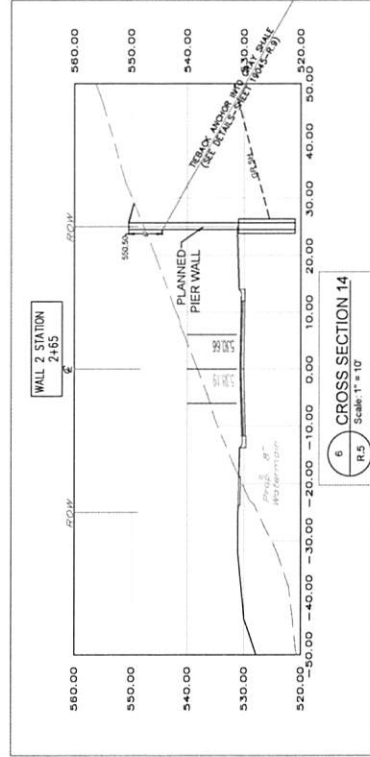
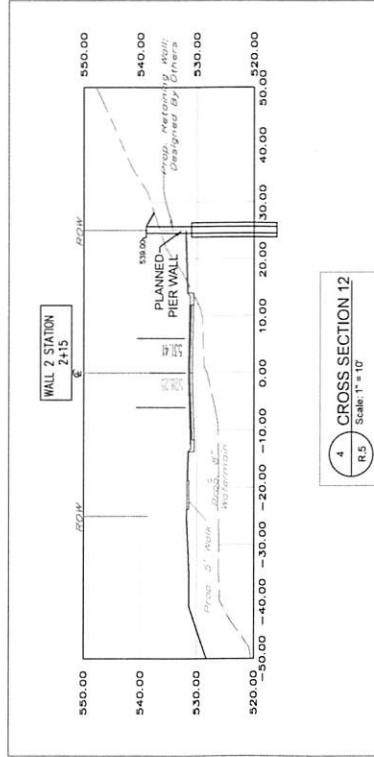
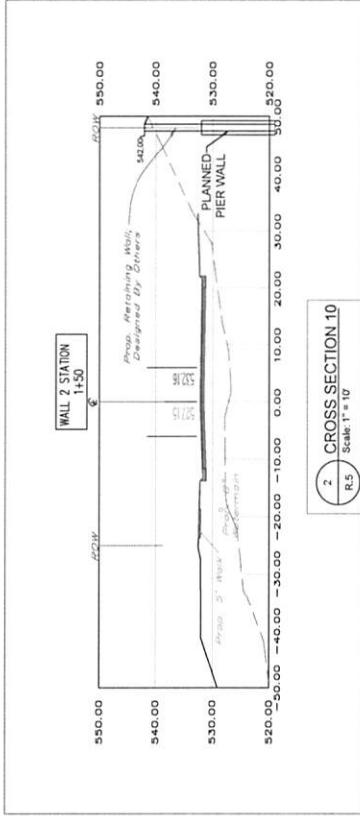
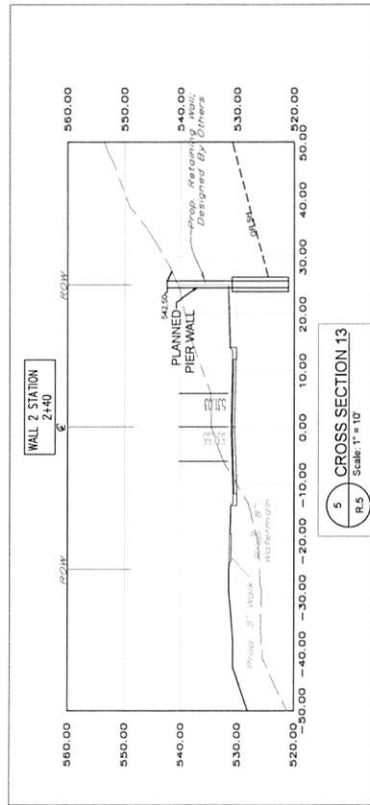
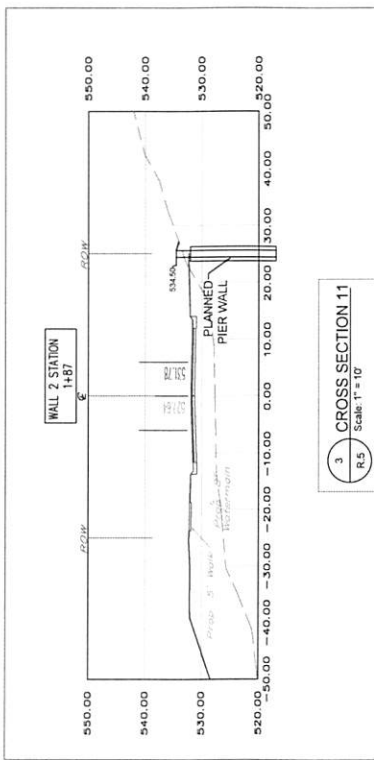
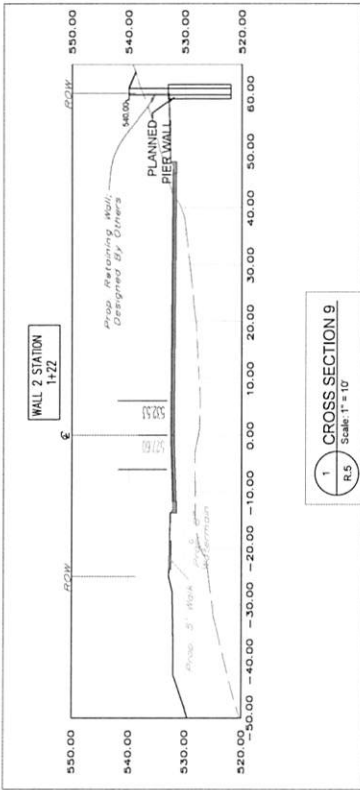




REV.	DATE	DESCRIPTION
1		ISSUE FOR PERMITS AND COMMENTS

KOWALSKI ENGINEERING, INC.
 2110 S. State St.
 Columbus, Ohio 43236
 Phone: 614.343.0837
 Fax: 614.343.0838
 www.kowalski-engineering.com

TITLE: CROSS SECTIONS 3 TO 8
FOR: OUTDOOR ENVIRONMENTS, INC.
PROJECT: WALKWORTH JUNCTION
SCALE: As Noted
SHEET: 100000000

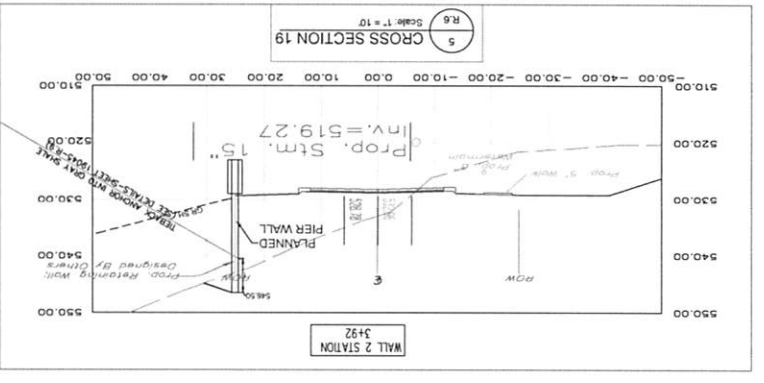
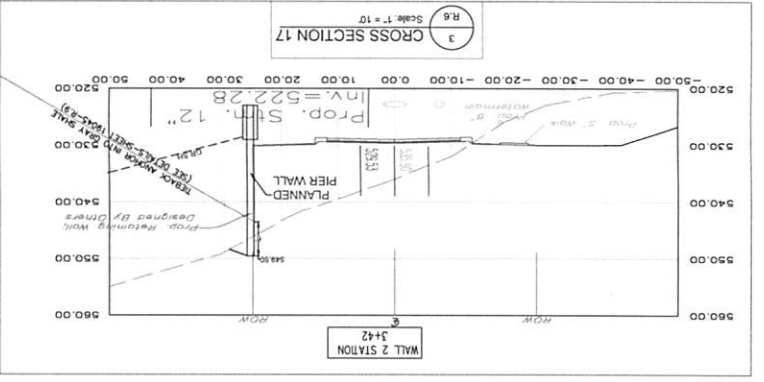
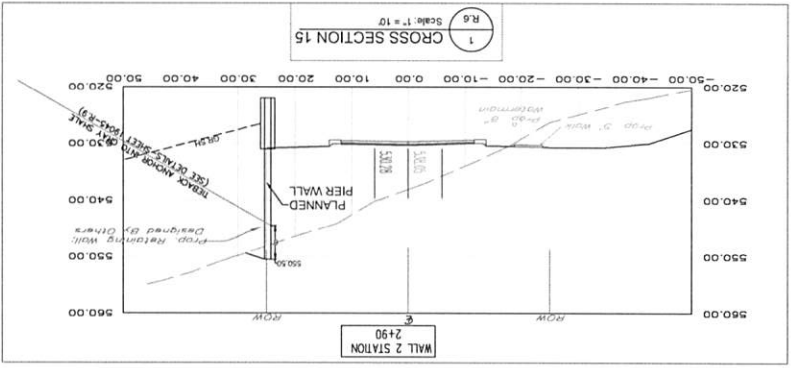
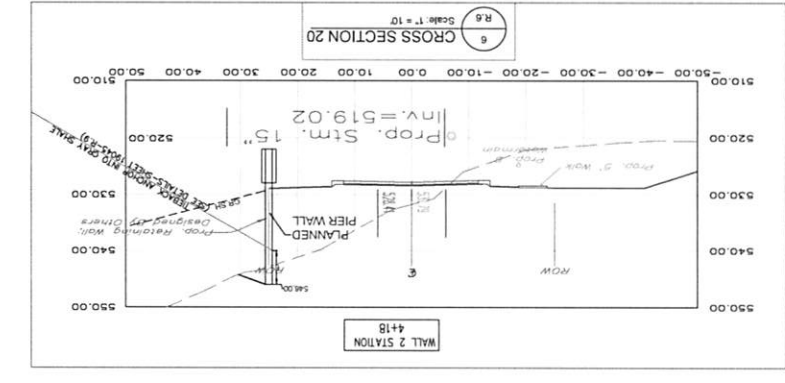
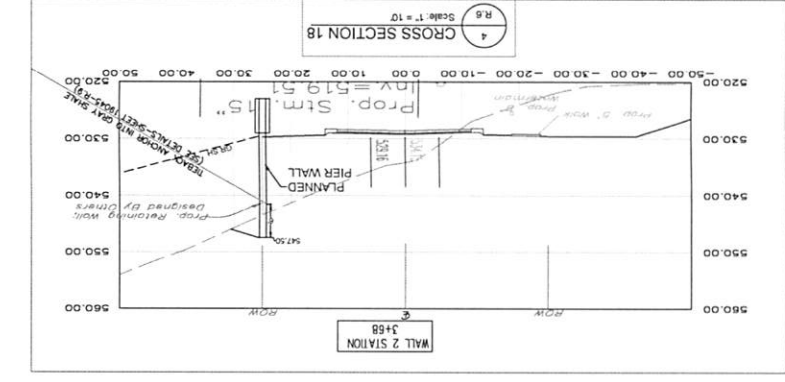
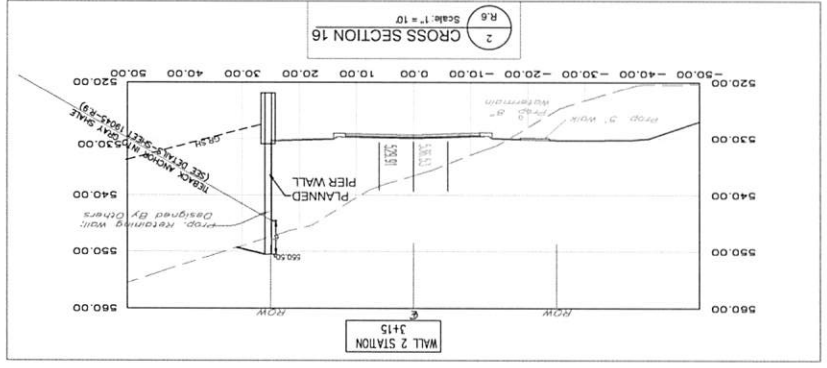


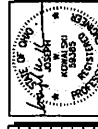
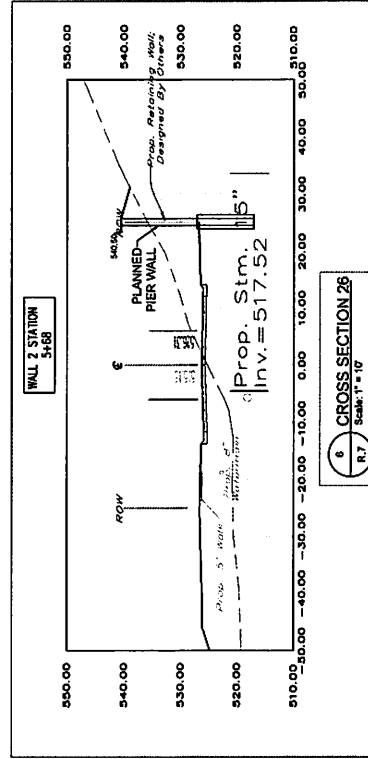
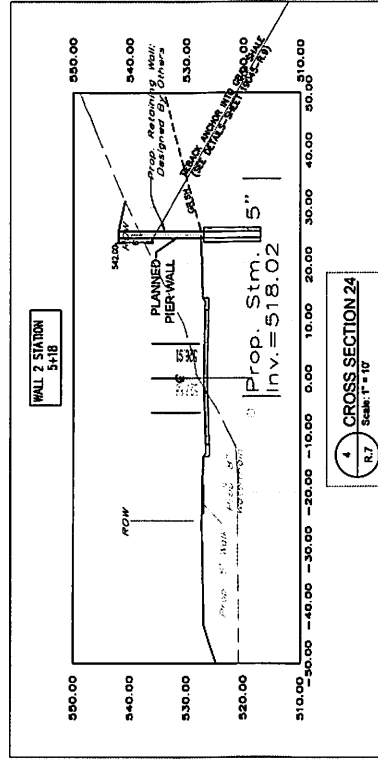
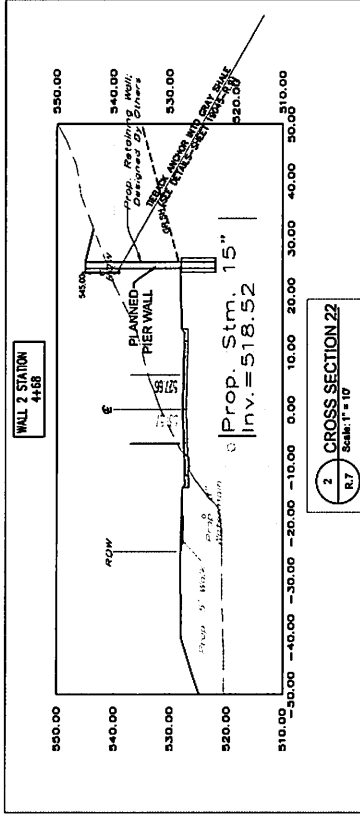
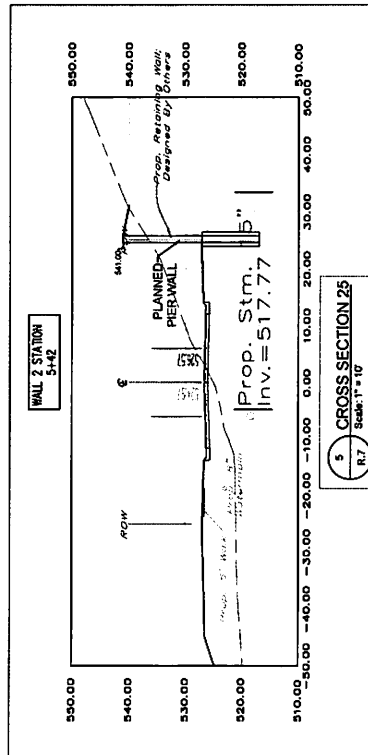
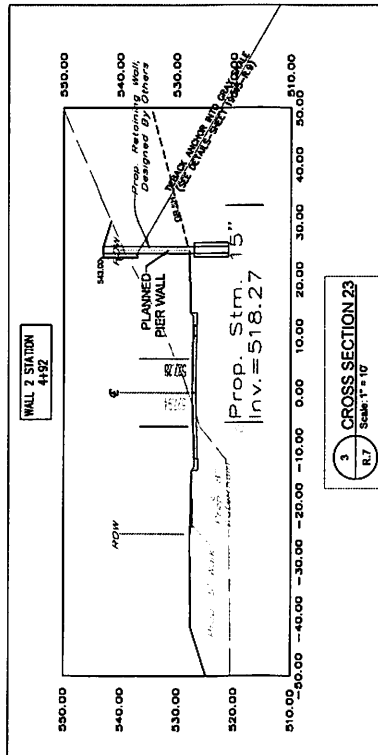
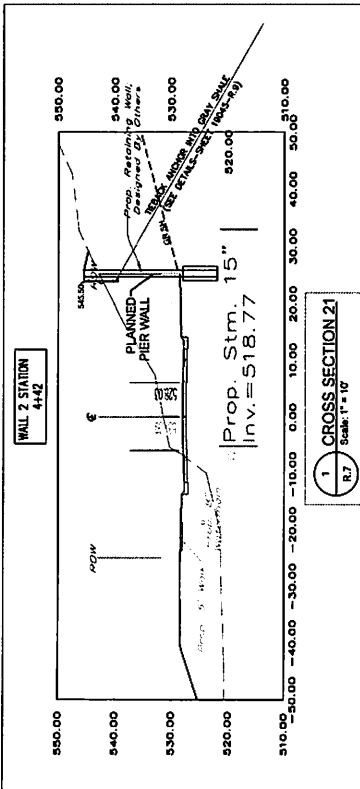
REV	DATE	DESCRIPTION
1		ISSUED FOR PERMIT

KOWALSKI ENGINEERING, INC.
 10000 W. 12th St., Suite 100
 Cleveland, Ohio 44130
 Phone: 513.403.5037
 www.kowalskiengineering.com

FILE: CROSS SECTIONS 9 TO 14
 FOR: OUTDOOR ENVIRONMENTS, INC.
 PROJECT: WALWORTH JUNCTION
 SCALE: As Noted
 SHEET: 10 OF 10

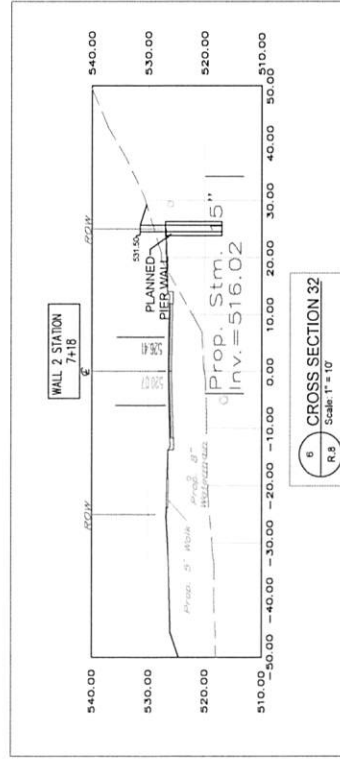
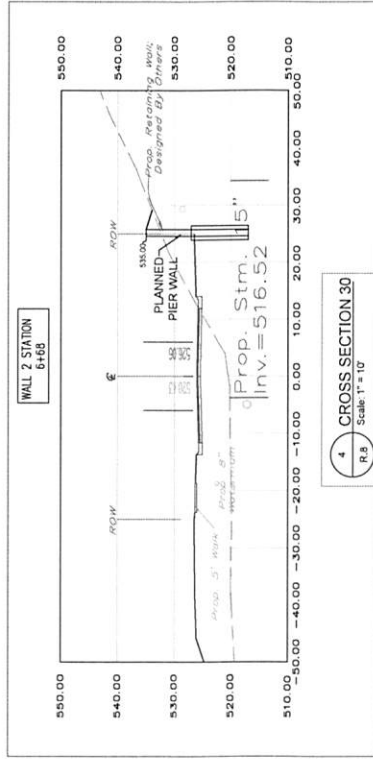
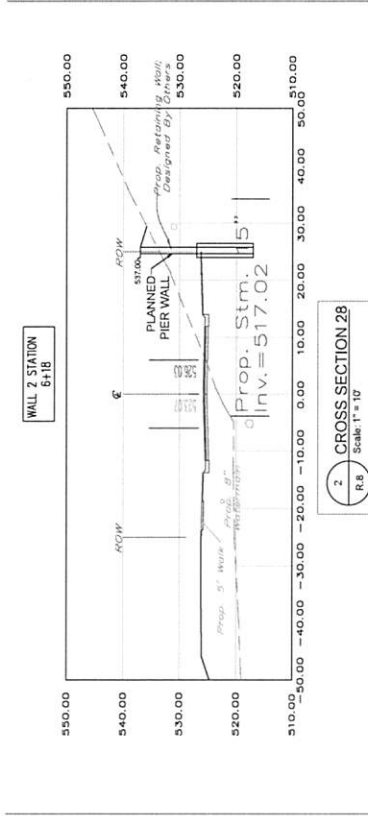
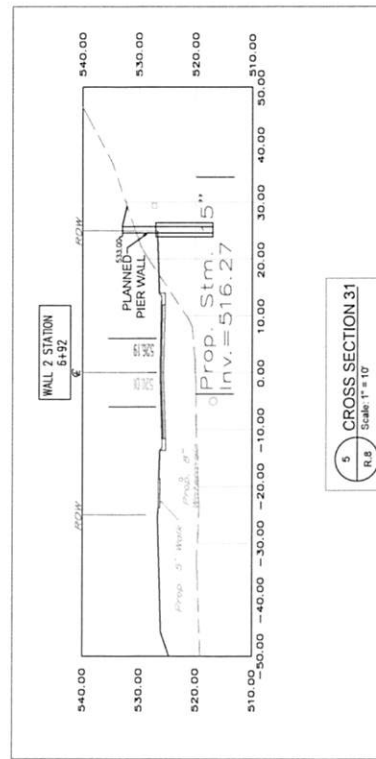
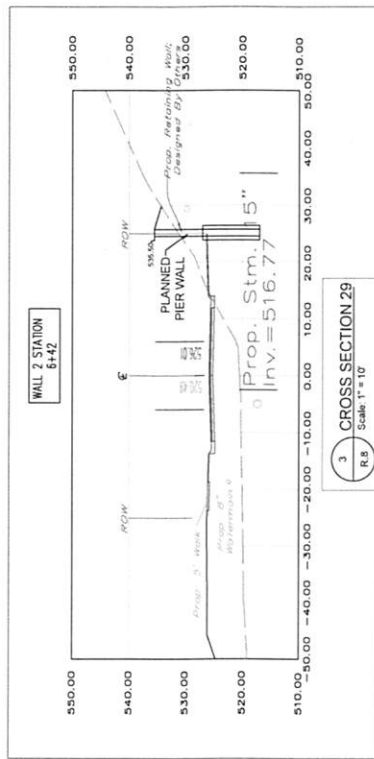
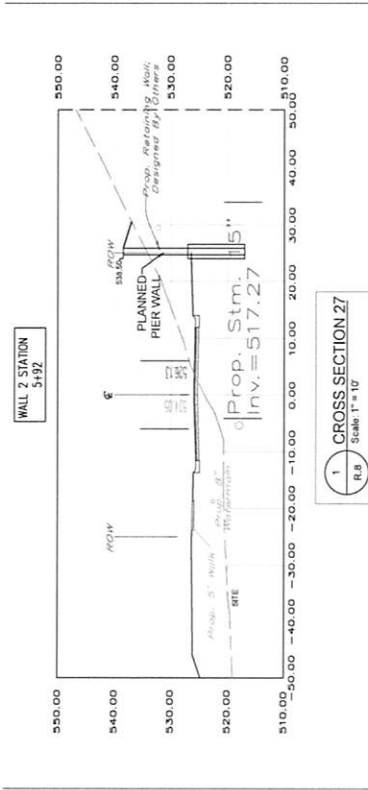
PROJECT: OUTDOOR ENVIRONMENTS, INC.	DATE: 1/27/2016	SCALE: As Noted	PROJECT: WALTHAM JUNCTION
TITLE: CROSS SECTIONS 15 TO 20	DESIGNED BY: [Redacted]	CHECKED BY: [Redacted]	DATE: 1/27/2016
COMPANY: KOWALSKI ENGINEERING, INC.	PROJECT: WALTHAM JUNCTION	SCALE: As Noted	PROJECT: WALTHAM JUNCTION
3170 Shelton Road Cincinnati, Ohio 45226 www.kowalskieng.com	PHONE: 513.433.5657	FAX: 513.433.5657	WWW: www.kowalskieng.com





KOMARSKI ENGINEERING, INC.
 17700 W. 13th St.
 Parma, OH 44130
 Phone: 313.403.2437
 Fax: 313.403.2438
 www.komarski-engineering.com

FILE: CROSS SECTIONS 21 TO 26
 FOR: OUTDOOR ENVIRONMENTS, INC.
 PROJECT: WALNORTH JUNCTION
 SCALE: As Noted
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 DATE: [Date]



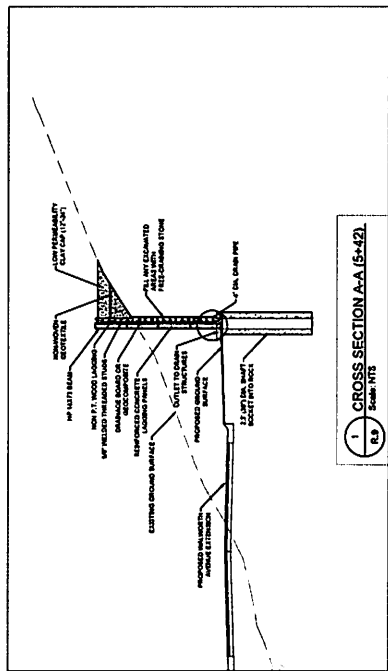
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1	10/17/10	ISSUED FOR PERMIT COMMENTS



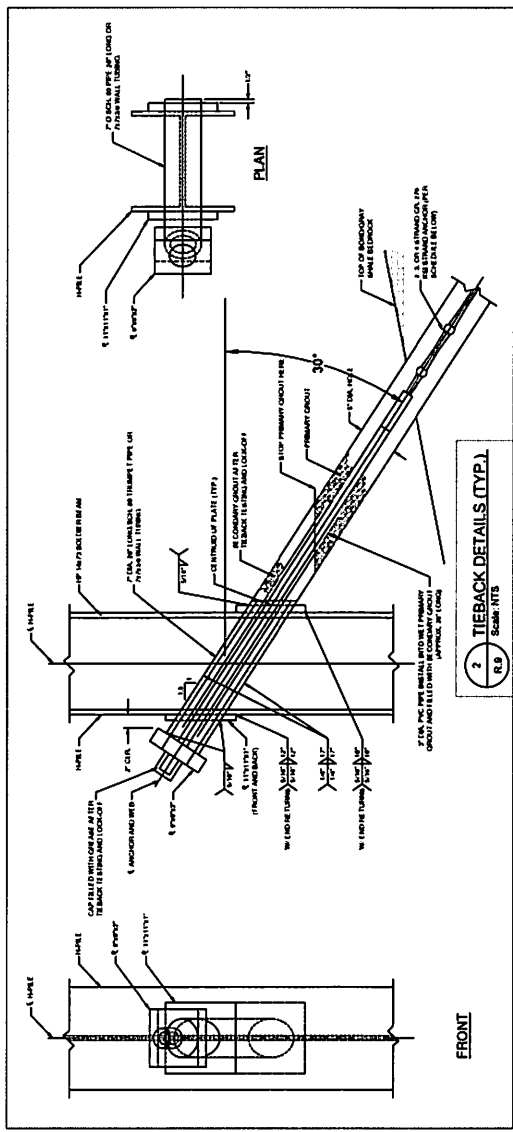
KOWALSKI ENGINEERING, INC.
3110 Seaton Road
Cincinnati, Ohio 45236
www.kowalski-engineering.com

TITLE: CROSS SECTIONS 27 TO 32
FOR: OUTDOOR ENVIRONMENTS, INC.
PROJECT: WALWORTH JUNCTION
SCALE: As Noted
SHEET: 1004-1-10

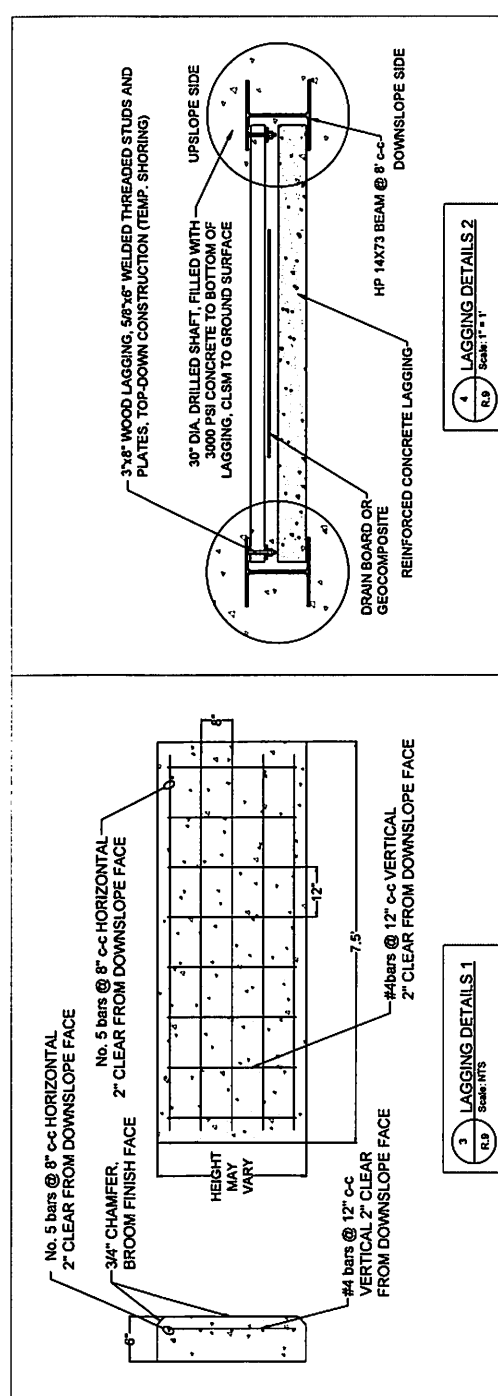




1 CROSS SECTION A-A (S+42)
R.B. SCALE: 1" = 12"



2 TIEBACK DETAILS (TYP.)
R.B. SCALE: 1" = 12"



3 LAGGING DETAILS 1
R.B. SCALE: 1" = 1'

4 LAGGING DETAILS 2
R.B. SCALE: 1" = 1'

PIER	TOP	BOT	LENGTH
D527	434.5	533.0	198.5
D528	434.5	533.0	198.5
D529	434.5	533.0	198.5
D530	434.5	533.0	198.5
D531	434.5	533.0	198.5
D532	434.5	533.0	198.5
D533	434.5	533.0	198.5
D534	434.5	533.0	198.5
D535	434.5	533.0	198.5
D536	434.5	533.0	198.5
D537	434.5	533.0	198.5
D538	434.5	533.0	198.5
D539	434.5	533.0	198.5
D540	434.5	533.0	198.5
D541	434.5	533.0	198.5
D542	434.5	533.0	198.5
D543	434.5	533.0	198.5
D544	434.5	533.0	198.5
D545	434.5	533.0	198.5
D546	434.5	533.0	198.5
D547	434.5	533.0	198.5
D548	434.5	533.0	198.5
D549	434.5	533.0	198.5
D550	434.5	533.0	198.5
D551	434.5	533.0	198.5
D552	434.5	533.0	198.5
D553	434.5	533.0	198.5
D554	434.5	533.0	198.5
D555	434.5	533.0	198.5

PIER	TOP	BOT	LENGTH
D527	434.5	533.0	198.5
D528	434.5	533.0	198.5
D529	434.5	533.0	198.5
D530	434.5	533.0	198.5
D531	434.5	533.0	198.5
D532	434.5	533.0	198.5
D533	434.5	533.0	198.5
D534	434.5	533.0	198.5
D535	434.5	533.0	198.5
D536	434.5	533.0	198.5
D537	434.5	533.0	198.5
D538	434.5	533.0	198.5
D539	434.5	533.0	198.5
D540	434.5	533.0	198.5
D541	434.5	533.0	198.5
D542	434.5	533.0	198.5
D543	434.5	533.0	198.5
D544	434.5	533.0	198.5
D545	434.5	533.0	198.5
D546	434.5	533.0	198.5
D547	434.5	533.0	198.5
D548	434.5	533.0	198.5
D549	434.5	533.0	198.5
D550	434.5	533.0	198.5
D551	434.5	533.0	198.5
D552	434.5	533.0	198.5
D553	434.5	533.0	198.5
D554	434.5	533.0	198.5
D555	434.5	533.0	198.5

PIER	TOP	BOT	LENGTH
D527	434.5	533.0	198.5
D528	434.5	533.0	198.5
D529	434.5	533.0	198.5
D530	434.5	533.0	198.5
D531	434.5	533.0	198.5
D532	434.5	533.0	198.5
D533	434.5	533.0	198.5
D534	434.5	533.0	198.5
D535	434.5	533.0	198.5
D536	434.5	533.0	198.5
D537	434.5	533.0	198.5
D538	434.5	533.0	198.5
D539	434.5	533.0	198.5
D540	434.5	533.0	198.5
D541	434.5	533.0	198.5
D542	434.5	533.0	198.5
D543	434.5	533.0	198.5
D544	434.5	533.0	198.5
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D552	434.5	533.0	198.5
D553	434.5	533.0	198.5
D554	434.5	533.0	198.5
D555	434.5	533.0	198.5

TIEBACK SCHEDULE					
Anchor Type	Unbonded Length (feet)	Bond Length (feet)	Number of Strands	Design Load (DL) (kips)	Beam Type
A	15	30	2	70	HP 14X73
B	20	35	3	75	HP 14X73
C	25	40	4	80	HP 14X73

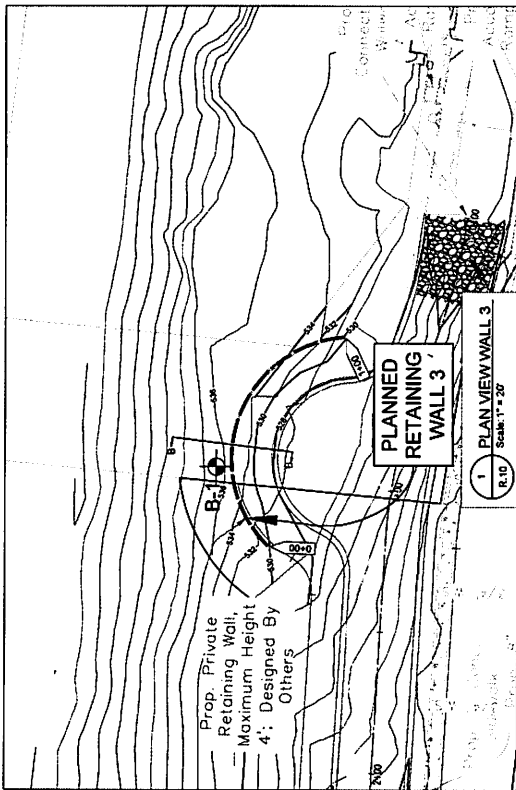
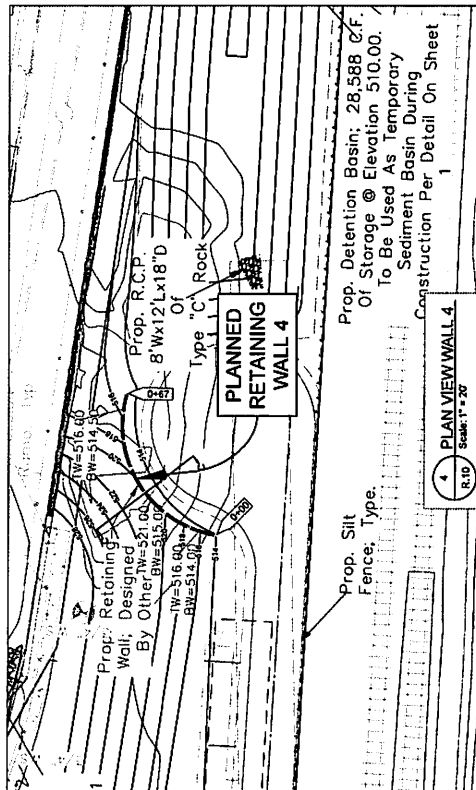
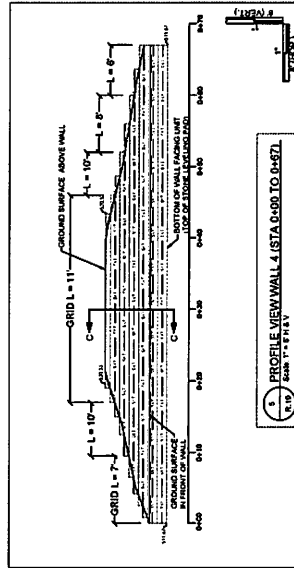
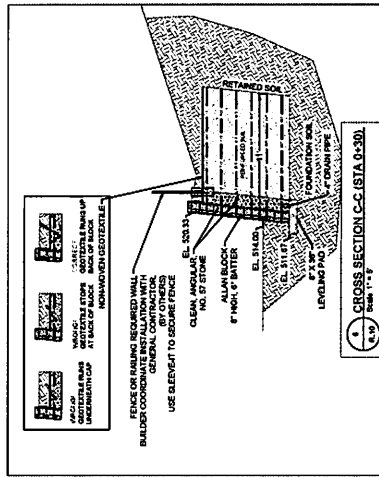
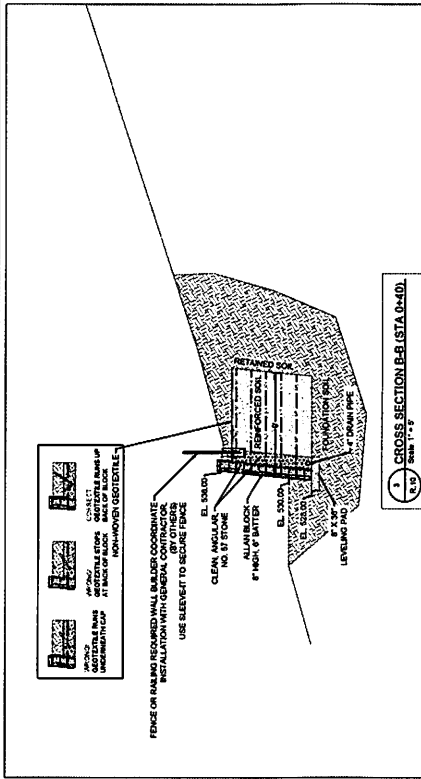
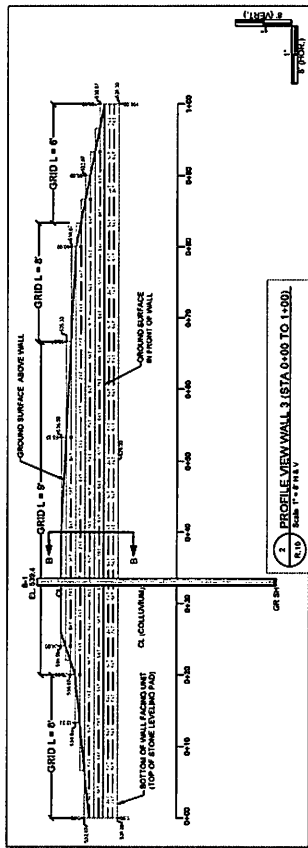
KOWALSKI ENGINEERING, INC.
 10000 W. 10th Street, Suite 100
 Overland Park, KS 66211
 Phone: 913.633.8337
 Fax: 913.633.8338
 www.kowalski-engineering.com

TIEBACK DETAILS, CROSS SECTION A-A, SHAFT AND WOOD LAGGING DETAILS, PIER AND TIEBACK SCHEDULE FOR: OUTDOOR ENVIRONMENTS, INC.
 SCALE: As Noted
 PROJECT: WALWORTH JUNCTION
 SHEET: 10/10



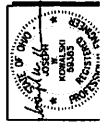
REV	DATE	DESCRIPTION
1	08/11/10	ISSUED FOR PERMIT
2	08/11/10	ISSUED FOR PERMIT
3	08/11/10	ISSUED FOR PERMIT
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5	08/11/10	ISSUED FOR PERMIT
6	08/11/10	ISSUED FOR PERMIT
7	08/11/10	ISSUED FOR PERMIT
8	08/11/10	ISSUED FOR PERMIT
9	08/11/10	ISSUED FOR PERMIT
10	08/11/10	ISSUED FOR PERMIT





LINE	DESCRIPTION

KOWALSKI ENGINEERING, INC.
110 S. Maple Road, Suite 300
Wauwatosa, WI 53190
Phone: 314.353.3537
www.KowalskiEng.com



311
Professional Engineer Seal
Title: WALL 2 AND 3: PLAN VIEW, PROFILE VIEW AND CROSS SECTIONS B-B & C-C
FOR: OUTDOOR ENVIRONMENTS, INC.
SCALE: As Noted
PROJECT: WALWORTH JUNCTION
SHEET: 3 OF 4

