



*Letter of Transmittal*

To: Chris Williams  
VTRANS  
61 VALLEY VIEW  
MENDON, VT 05701  
Ph: (802)786-3812 Fax: (802)786-3810

Transmittal #: 3  
Date: 2/20/2015  
Job: M117 VTRANS CASTLETON BRP 015-2(10)

Subject: Submittal - Sheet Piling

- WE ARE SENDING YOU**
- Attached
  - Under separate cover via the following items:
  - Shop drawings
  - Prints
  - Plans
  - Samples
  - Copy of letter
  - Change order
  - Specifications
  - Other

Document Type	Copies	Date	No.	Description
Submittal	1		505.35-7 Rev 0	Permenant Sheet Piling

**THESE ARE TRANSMITTED as checked below:**

- For approval
- For your use
- As requested
- For review and comment
- FOR BIDS DUE
- Approved as submitted
- Approved as noted
- Returned for corrections
- Other
- PRINTS RETURNED AFTER LOAN TO US
- Resubmit \_\_\_ copies for approval
- Submit \_\_\_ copies for distribution
- Return \_\_\_ corrected prints

Remarks: Please see attached Permenant Sheet Piling submission for our sub H B Flemming

Copy To: Jennifer Fitch (VTRANS), KEVIN TURE (W.M. SCHULTZ CONSTRUCTION)

From: MIKE GARN (W.M. SCHULTZ CONSTRUCTION)

Signature: 



PO Box 2620  
Ballston Spa, NY 12020  
Ph : 518 885-0060

**Submittal**

**Job:** M117  
VTRANS CASTLETON BRF 015-2(10)

**Spec Section No:** 505.35  
**Submittal No:** 7  
**Revision No:** 0  
**Sent Date:** 2/20/2015

**Spec Section Title:**  
**Submittal Title:** Permenant Sheet Piling

**Contractor:**  
W.M. Schultz Construction, Inc

Contractor's Stamp	
<b>SCHULTZ CONSTRUCTION, INC.</b>	
CONTRACT NO.	BRF 015-2 (10)
SUBMITTAL TITLE	Sheet Piling
ITEM & SECT. NO.	505.35
LOCATION OF WORK	VT RT 30
SUB NO.	7
DATE	2/20/15
REVIEWED BY	MG

VTRANS  
Chris Williams

Architect's Stamp

Vermont Agency of Transportation

**RECEIVED**

**ON: February 20, 2015**

and Checked for

**CONFORMANCE**

**BY: Jennifer Fitch DATE: 03/07/2015**

SHOP DRAWING REVIEW	
<input type="checkbox"/> REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.	
<input type="checkbox"/> REJECTED <input checked="" type="checkbox"/> REVISE AND RESUBMIT <input type="checkbox"/> FURNISH AS CORRECTED	
<small>CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR: CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS; SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATING HIS WORK WITH THAT OF ALL OTHER TRADES; AND PERFORMING HIS WORK IN A SAFE AND SATISFACTORY MANNER.</small>	
40 IDX Drive Building 100, Suite 200 South Burlington, VT 05403 802.497.6100	Job Number: 57632.00 Reviewed By: S.G. FARNSWORTH Date: MARCH 5, 2015

**H. B. FLEMING, INC.**  
 Contracting & Engineering  
 89 Pleasant Avenue  
 South Portland, Maine 04106-5600

**LETTER OF TRANSMITTAL**

02/19/2015  
 DATE \_\_\_\_\_ JOB NO. \_\_\_\_\_

Phone (207) 799-8514

TO KEVIN TURE

ATTENTION \_\_\_\_\_

RE: CASTLETON, VT  
 BRIDGE No. 93

WE ARE SENDING YOU  Attached  Under separate cover via \_\_\_\_\_ the following items:

- Shop drawings  Prints  Plans  Samples  Specifications  
 Copy of letter  Change order  \_\_\_\_\_

COPIES	DATE	NO.	DESCRIPTION
1	2/19/15		PLAN VIEW PERMANENT SHEET PILING LAYOUT
1	2/19/15		SKZ 20 CUT SHEET

THESE ARE TRANSMITTED as checked below:

- For approval  Approved as submitted  Resubmit \_\_\_\_\_ copies for approval  
 For your use  Approved as noted  Submit \_\_\_\_\_ copies for distribution  
 As requested  Returned for corrections  Return \_\_\_\_\_ corrected prints  
 For review and comment  \_\_\_\_\_  
 FOR BIDS DUE \_\_\_\_\_  PRINTS RETURNED AFTER LOAN TO US

REMARKS

Kevin,

I have attached a Permanent Sheet Sheet Piling Layout Plan View for the Castleton Bridge # 93 project. I have also attached a cut sheet for an alternate sheet section. The project notes call out PZ-27 or PZ-35 sections, but also state sheet piling to have a minimum section modulus of 31.0 in<sup>3</sup>. The sheet section we are proposing is a SKZ-20 and has a section modulus of 31.69 in<sup>3</sup> which exceeds the minimum 31.0 in<sup>3</sup>.

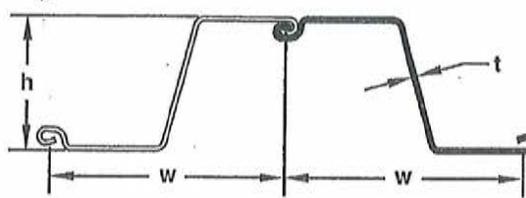
Thank You

COPY TO \_\_\_\_\_

SIGNED: 

# SCZ/SKZ

## SCZ/SKZ Cold Formed Steel Sheet Pile

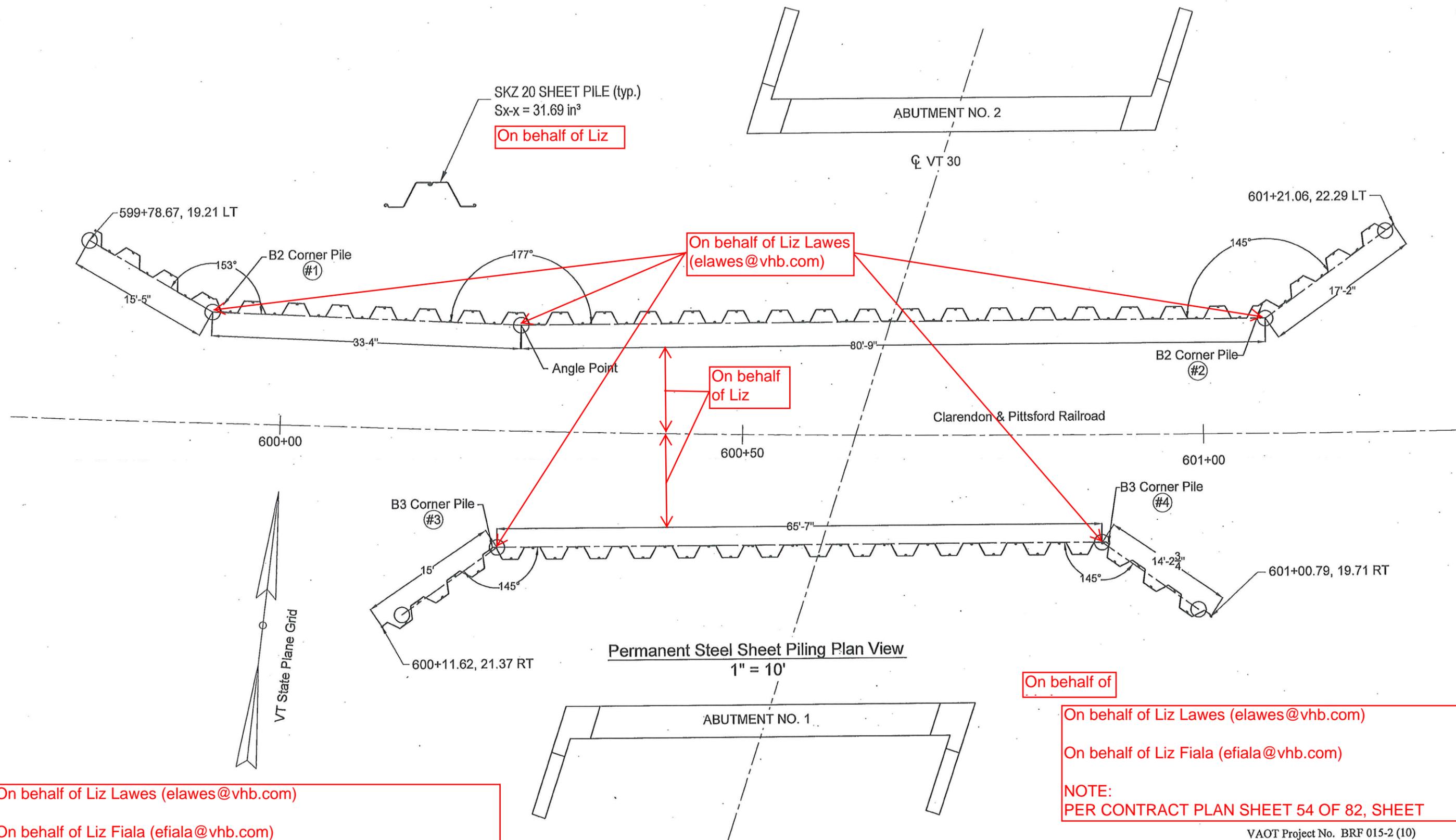


SECTION	Width (w) in (mm)	Height (h) in (mm)	Thickness (t) in (mm)	Gross Sectional Area in <sup>2</sup> /ft <sup>2</sup> (cm <sup>2</sup> /m <sup>2</sup> )	WEIGHT		SECTION MODULUS			COATING AREA	
					Pile lb/ft (kg/m)	Wall lb/ft <sup>2</sup> (kg/m <sup>2</sup> )	Elastic in <sup>4</sup> /ft (cm <sup>4</sup> /m)	Plastic in <sup>3</sup> /ft (cm <sup>3</sup> /m)	Moment of Inertia in <sup>4</sup> /ft (cm <sup>4</sup> /m)	Both Sides ft <sup>2</sup> /ft (m <sup>2</sup> /m)	Coating Area ft <sup>2</sup> /ft (m <sup>2</sup> /m)
SCZ 14	28.50 723.9	10.00 254.0	0.250 6.4	4.18 88.48	33.81 50.31	14.23 69.50	14.36 772	16.32 877.4	71.82 9808	6.10 1.85	1.28 1.28
SCZ 16	28.50 723.9	10.00 254.0	0.276 7.0	4.62 97.79	37.37 55.61	15.73 76.82	15.75 847	17.97 965.9	78.73 10751	6.10 1.86	1.28 1.28
SCZ 17N	28.50 723.9	10.00 254.0	0.295 7.5	4.95 104.78	40.03 59.58	16.86 85.79	16.87 907	19.21 1033	84.35 11519	6.10 1.86	1.28 1.28
SCZ 18N	28.50 723.9	10.00 254.0	0.317 8.1	5.31 112.39	42.94 63.91	18.08 85.79	18.10 973	20.61 1108	90.48 12356	6.10 1.86	1.28 1.28
SCZ 21N	28.50 723.9	10.00 254.0	0.375 9.5	6.29 133.06	50.84 75.66	21.41 85.79	21.43 1152	24.40 1312	107.13 14629	6.10 1.86	1.28 1.28
SKZ 20	28.50 723.9	16.00 406.4	0.315 8.0	6.00 136.20	48.24 71.79	20.31 99.17	31.69 1704	36.66 1970.97	253.51 34618	7.60 2.32	1.60 1.60
SKZ 22	28.50 723.9	16.00 406.4	0.335 8.5	6.30 145.40	51.30 76.34	21.60 105.46	33.43 1797	38.94 2093.55	267.40 36515	7.60 2.32	1.60 1.60
SKZ 23	28.50 723.9	16.00 406.4	0.354 9.0	6.70 162.50	54.20 80.66	22.82 111.42	35.61 1915	41.12 2210.75	284.90 38905	7.60 2.32	1.60 1.60
SKZ 24	28.50 723.9	16.00 406.4	0.375 9.5	7.10 179.50	57.43 85.47	24.18 118.06	37.73 2028	43.52 2339.78	301.80 41213	7.60 2.32	1.60 1.60
SKZ 25	28.50 723.9	16.00 406.4	0.399 10.1	7.60 188.00	61.10 90.93	25.73 125.61	40.14 2158	46.24 2486.02	321.12 43851	7.60 2.32	1.60 1.60
SKZ 31	28.50 723.9	18.00 457.2	0.450 11.4	9.07 192.04	73.82 109.85	31.08 151.75	51.56 2772	60.51 3253.29	464.05 63369	8.06 2.46	1.70 1.70
SKZ 33	28.50 723.9	18.00 457.2	0.475 12.1	9.40 198.97	77.64 115.54	32.69 159.61	54.89 2951	63.57 3417.68	494.03 67462	8.06 2.46	1.70 1.70
SKZ 34	28.50 723.9	18.00 457.2	0.500 12.7	9.89 209.25	81.42 121.17	34.28 167.38	57.62 3098	66.86 3594.60	518.62 70821	8.06 2.46	1.70 1.70
SKZ 36	28.50 723.9	18.00 457.2	0.535 13.6	10.78 228.10	86.81 129.19	36.55 178.46	60.71 3264	71.58 3948.17	546.43 74619	8.06 2.46	1.70 1.70
SKZ 38	28.50 723.9	18.00 457.2	0.550 14.0	11.07 234.42	88.95 132.37	37.45 182.85	62.32 3350	73.52 3952.44	560.85 76588	8.06 2.46	1.70 1.70

### Interlock Compatibility

	SCZ 14	SCZ 16	SCZ 17N	SCZ 18N	SCZ 21N	SKZ 20	SKZ 22	SKZ 23	SKZ 24	SKZ 25	SKZ 31	SKZ 33	SKZ 34	SKZ 36	SKZ 38
SCZ 14	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SCZ 16	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SCZ 17N	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SCZ 18N	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SCZ 21N	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SKZ 20	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SKZ 22	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SKZ 23	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SKZ 24	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SKZ 25	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SKZ 31	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
SKZ 33	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
SKZ 34	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
SKZ 36	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
SKZ 38	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

● Interlock compatible ○ Interlock not compatible



SKZ 20 SHEET PILE (typ.)  
 $S_{x-x} = 31.69 \text{ in}^3$   
 On behalf of Liz

On behalf of Liz Lawes  
 (elawes@vhb.com)

On behalf of Liz

On behalf of

On behalf of Liz Lawes (elawes@vhb.com)

On behalf of Liz Fiala (efiala@vhb.com)

NOTE:  
 PER CONTRACT PLAN SHEET 54 OF 82, SHEET

On behalf of Liz Lawes (elawes@vhb.com)

On behalf of Liz Fiala (efiala@vhb.com)

INFORMATION THAT HAS NOT BEEN SUBMITTED FOR REVIEW:  
 PER CONTRACT PLAN SHEET 8 OF 82, SHEET PILING NOTE  
 NO. 60, "THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER

Permanent Steel Sheet Piling Plan View  
 1" = 10'

VAOT Project No. BRP 015-2 (10)

**H.B. FLEMING**  
 89 PLEASANT AVENUE  
 SO. PORTLAND, ME 04106  
 P: 207-799-8514 F: 207-799-8538  
 www.hbfleming.com

TITLE: Permanent Sheet Piling Layout
PROJECT: VAOT Bridge #93 Replacement
LOCATION: Castleton, VT
DATE: 02/19/14
SCALE: As Noted