VERMONT

State of Vermont
Highway Division
Project Delivery Bureau
Structures Design Section
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Montpelier, VT 05633-5001
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Agency of Transportation

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Date June 8, 2016

CCS Constructors, Inc.
138 Munson Avenue
Morrisville, VT 05661

Project Name: New Haven BRF 0183(1)

Structure Identification: TH 2, Bridge 10

The Drilled Shaft Rebar Submittal associated with Item 900.640 Special Provision (Drilled Shaft in Earth)(8-FT) has been reviewed and is being returned herewith.

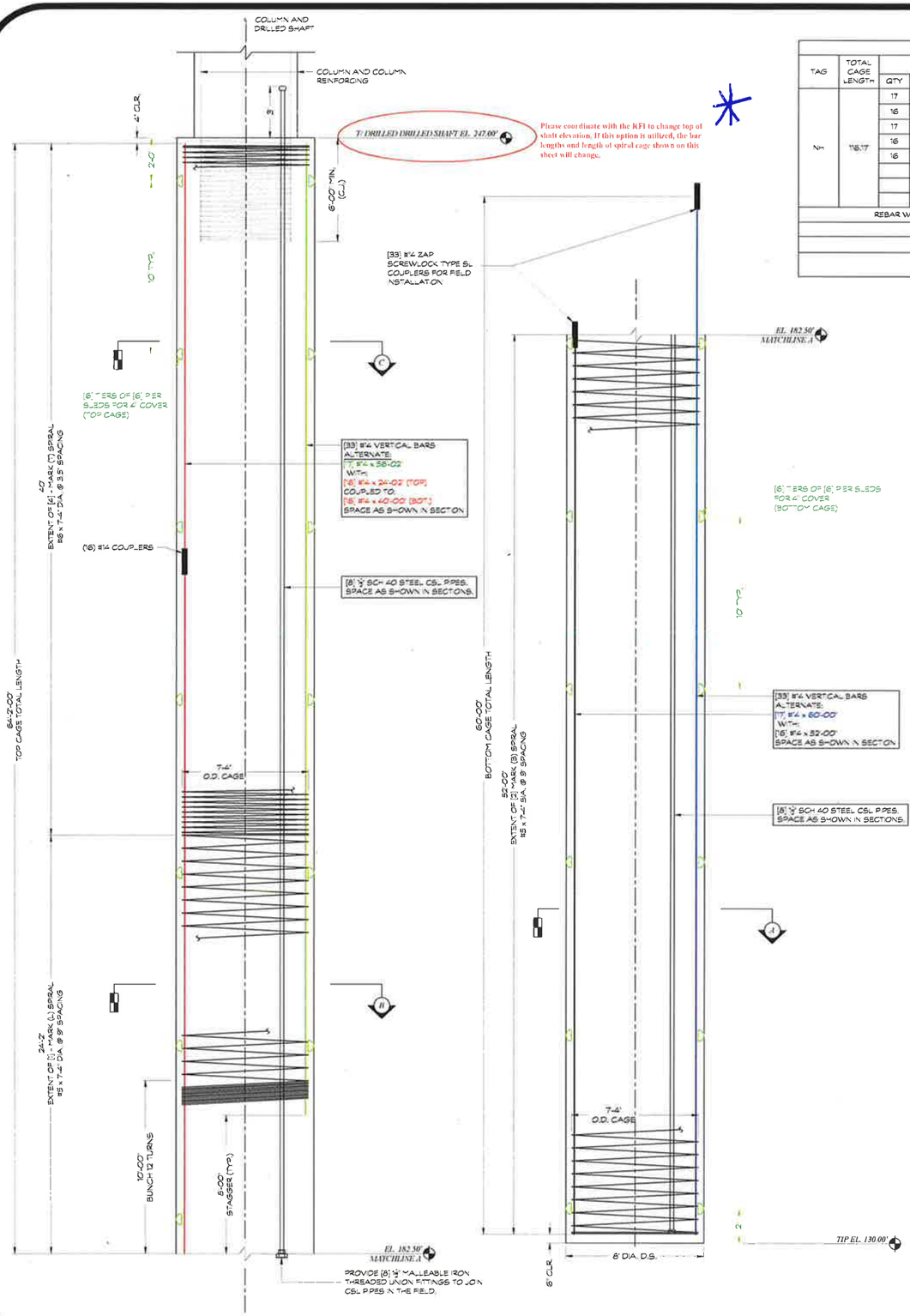
All sheets are approved as noted. Please incorporate all comments.

Sincerely,

Wayne B Symonds, P.E.
Structures Project Manager

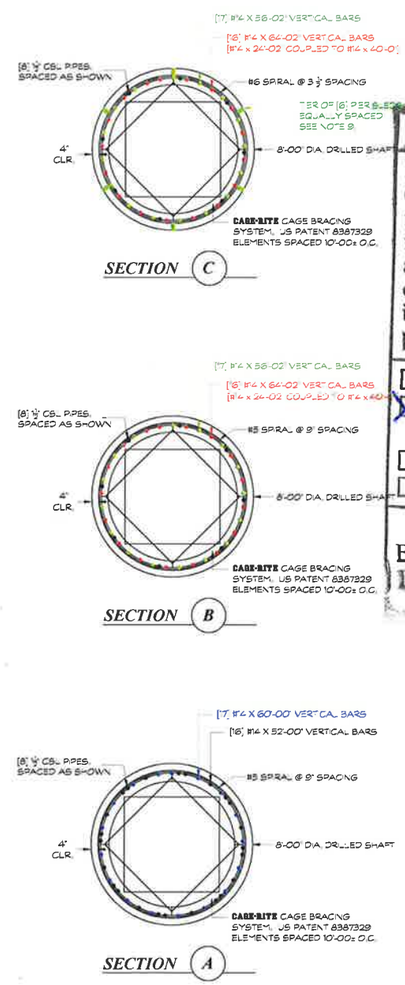
Cc. *Bob Suckert*, Resident Engineer
Chris Williams, Regional Construction Engineer
Jim Wild, VAOT Composite Materials Engineer
Callie Ewald, VTrans Geotechnical Engineer
Bob Klinefelter, Construction Structures Engineer

VTrans Working to Get You There Vermont Agency of Transportation



DRILLED SHAFT REINFORCING SCHEDULE

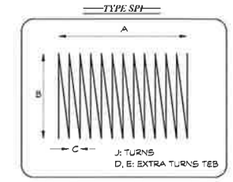
TAG	TOTAL CAGE LENGTH	VERTICAL REINFORCING					SPIRAL REINFORCING					BENDING DIMENSIONS						ACCESSORIES			
		QTY	SIZE	MARK	LENGTH	WEIGHT	QTY	MARK	SIZE	TYPE	WEIGHT	A	B	C	D	E	J	QTY	SIZE	LENGTH	WEIGHT
N/A	118.17	17	#14		60'-0"	7603	2	[B]	#5	SP.	165	26'-0"	7'-4"	0'-9"	1 1/2	1 1/2	37 1/2	8	1½" CSL	116'-2"	2526
		16	#14		52'-0"	6365	1	[L]	#5	SP	849	24'-2"	7'-4"	0'-9"	1 1/2	1 1/2	35	49	#14 CPLR	1'-1"	1274
		17	#14		58'-2"	7304	4	[T]	#6	SP	5175	10'-0"	7'-4"	3.50	1 1/2	1 1/2	37 1/2				
		16	#14		40'-0"	4896															
		16	#14		24'-2"	2958												6	CAGE-RITE	10'-0"	4800
REBAR WEIGHT						29326					2864							ACCESSORY WEIGHT			8602
PICK WEIGHT: BOTTOM REBAR CAGE												19688									
PICK WEIGHT: TOP REBAR CAGE												20903									
PICK WEIGHT: ENTIRE REBAR CAGE												40592									



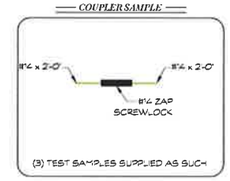
General Notes

1. VERTICAL REBAR SHALL BE ASTM A615 Gr 60. SPIRAL REBAR SHALL BE ASTM A615 Gr 60.
2. ONE HUNDRED PERCENT OF INTERSECTIONS OF SPIRAL BARS AND VERTICAL BARS SHALL BE SECURED BY DOUBLE STRAND 16 GA WIRE TIES.
3. SPIRAL REINFORCING SHALL BE SPLICED & OR TERMINATED AS REQUIRED ACCORDING TO THE SPIRAL LAP & TERMINATION DETAIL ON THIS SHEET.
4. ELEVATIONS SHOWN ARE FOR INFORMATION ONLY AND SHALL NOT BE USED FOR CONSTRUCTION.
5. CSL PIPES SHALL BE OF ASTM A53 GRADE A OR B SCH. 40 1½" DIA. BLACK STEEL PIPE. PIPES SHALL BE FITTED WITH A WATERTIGHT THREADED CAP/PLUG AT BOTTOM AND A REMOVABLE BLK CAP AT TOP. CSL PIPE SHALL RUN FROM 6" ABOVE THE BOTTOM OF THE EXCAVATION TO MIN. 3' ABOVE THE TOP OF THE D.S.
6. FOLLOWING INSTALLATION OF THE VERTICAL BAR MECH. COUPLERS, THE BUNCHED SPIRAL SHALL BE SPACED OVER THE SPLICING ZONE AT THE PITCH DESCRIBED ON THE DRAWING.
7. ALL SPIRAL TO BE SPLICED AND TERMINATED WITH 1½ TURN OVERLAP.
8. ALL WEIGHTS IN POUNDS
9. SIDE COVER DEVICE SPACING SHALL CONFORM TO THE FOLLOWING: THERE SHALL BE A TIER OF [6] SPACER DEVICES NOT MORE THAN 2' BELOW TOP OF CASING, 2' ABOVE MATCHLINE A, 2' BELOW MATCHLINE A, AND 2' ABOVE THE BOTTOM OF THE CAGE. THERE SHALL BE INTERMEDIATE TIERS OF SPACERS NOT MORE THAN 10' ON CENTER IN BETWEEN THESE POINTS. REFERENCE PIERESEARCH CENTRALIZER @ PER SLED.

TYPE SP1



COUPLER SAMPLE



SUBMITTAL REVIEW

Review is only for general conformity to the contract drawings and specifications and shall not relieve the contractor of his entire responsibility under the contract, including among other things, dimensions to be confirmed and correlated at the job site, and information that pertains to the fabrication processes or to techniques of construction.

- ☐ NO EXCEPTIONS TAKEN
- ☒ MAKE CORRECTIONS NOTED RESUBMITTAL NOT REQUIRED (*)
- ☐ AMEND AND RESUBMIT
- ☐ REJECTED - SEE REMARKS

PB AMERICAS, INC.
BY: Adam M. Stoel
DATE: 6/6/16

DIMENSION
DIMENSION FABRICATORS, INC.
1-800-BIG-REBAR
WWW.DIMENSIONFAB.COM
CAGE-RITE
US PATENT 8,387,329

1	PER VTAOT COMMENTS	2.5.16
	Revision/Issue	Date

DIMENSION

DIMENSION FABRICATORS, INC.
2000 SEVENTH STREET
SCOTIA, NY 12302
www.dimensionfab.com

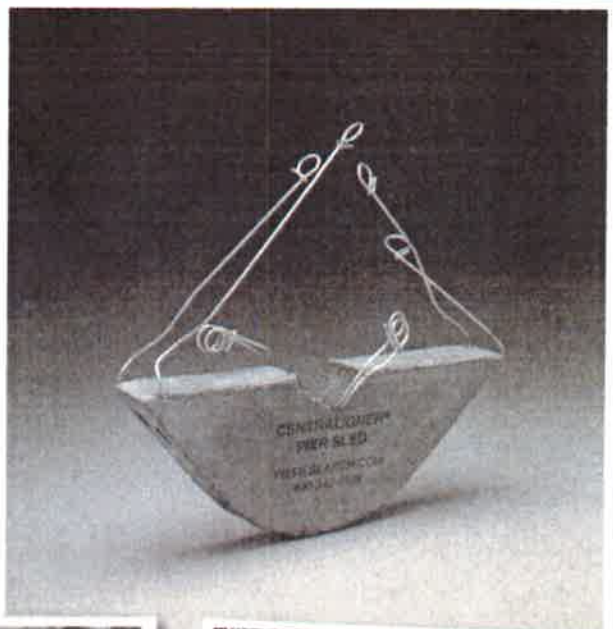
CUSTOMER	HUB FOUNDATIONS CO.
STRUCTURE	DRILLED SHAFT CAGE
	VTAOT NEW HAVEN BRF 0183 (1)
LOCATION	TH 2 (RIVER RD.) /NEW HAVEN RIVER
	NEW HAVEN, VT
ENGINEER	PARSONS BRINKERHOFF
REFERENCE	BRF 0183 (1) - SHEET 42

Project 9550		Sheet DS-R01
Date 12.22.15		
Scale NA	By DES	

DESIGNER CERTIFICATION

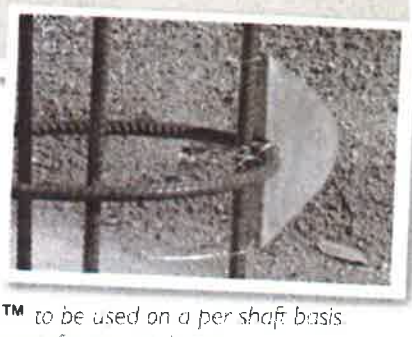
Vermont Agency of Transportation
RECEIVED
ON: February 9, 2016
and Checked for
CONFORMANCE
BY: Todd A. Sumner DATE: 06/08/16

Centraligner™ Pier Sleds



Centraligner™ Pier Sled contains a notch for the spiral or circle tie and has four sets of integral, embedded 16 gauge galvanized wires for ease of installation. The sled's shape prevents the cage from hanging on the casing and it doesn't protrude into the interior of the cage so interference with the tremie is not a concern.

This product has been well received by the structural engineering and construction communities. It achieves a result that has long been sought by structural engineers.



The table below illustrates the recommended number of ***Centraligner Pier Sleds™*** *to be used on a per shaft basis. The actual number can vary subject to the number of vertical bars of the reinforcing steel cage. The structural engineer is the governing authority. When in doubt, please check with the structural engineer.*

RECOMMENDED CENTRALIGNER™ PIER SLEDS PER REINFORCING CAGE

Pier Shaft Depth In Feet	Pier Shaft Diameter In Inches				
	Under 30"	31" to 48"	49" to 72"	73" to 96"	97" to 120"
0' to 12'	6	8	12	16	20
13' to 24'	9	12	18	24	30
25' to 36'	12	16	24	32	40
37' to 48'	15	20	30	40	50
49' to 60'	18	24	36	48	60
61' to 72'	21	28	42	56	70
73' to 84'	24	32	48	64	80
85' to 96'	27	36	54	72	90
97' to 108'	30	40	60	80	100
109' to 120'	36	48	72	96	120
121' to 132'	39	52	78	104	130
133' to 144'	42	56	84	112	140

Part No.	Description
CPS-2	2" Centraligner™ Pier Sled 25 each per bag
CPS-3	3" Centraligner™ Pier Sled 25 each per bag
CPS-4	4" Centraligner™ Pier Sled 25 each per bag
CPS-5	5" Centraligner™ Pier Sled 15 each per bag
CPS-6	6" Centraligner™ Pier Sled 10 each per bag
CPS-7	7" Centraligner™ Pier Sled 10 each per bag
CPS-8	8" Centraligner™ Pier Sled 10 each per bag
CPS-9	9" Centraligner™ Pier Sled 10 each per bag

Stainless steel or PVC coated tie wires are available on special order.

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PB AMERICAS, INC.
BY: Adam M. Arnold
DATE: 6/6/16

Vermont Agency of Transportation
2016-06-08 New Haven BRF 0183(1) Drilled Shaft Rebar_app
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BY: Todd A. Sumner DATE: 06/08/16