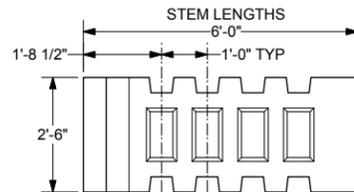
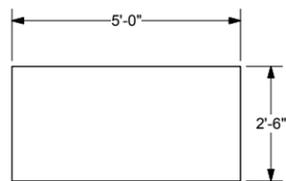


NOTES:
 • UNIT STEM LENGTHS RANGE FROM 4'-0" TO 20'-0", IN 2'-0" INCREMENTS

T-WALL® UNIT WEIGHTS	
PANEL TYPES	WEIGHTS
2.5x5.0x08 Std	2088 lbs
2.5x5.0x10 Std	2349 lbs
2.5x5.0x12 Std	2610 lbs
SLOPED-TOP (MIN)	2198 lbs
SLOPED-TOP (MAX)	3164 lbs

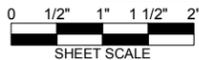


TOP VIEW

FRONT VIEW

SIDE VIEW

TYPICAL 2'-6" x 5'-0" x 6'-0" STEM T-WALL® UNIT



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PRECASTER: CONCRETE SYSTEMS, INC. CSI

PROJECT #: T21882

CONTRACTOR: A.L. ST. ONGE CONTRACTORS

PROJECT #:

DESIGNER



THE NEEL COMPANY
 8328-D TRAFORD LANE
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 FX: (703) 913-7859
 WEB: WWW.NEELCO.COM

PROJECT #: TW4301

CERTIFIED WITH RESPECT TO INTERNAL STABILITY OF T-WALL® STRUCTURES ONLY



REVISIONS

NO.	REVISION	DATE
1	REVIEWER COMMENTS	ABC 8-6-14

RIGIDIFIED TUBE FRP ARCH (RTFA) PROJECT

FAIRFIELD, VT

SHOP DRAWINGS
 COVER SHEET

T-WALL® RETAINING WALL SYSTEM

SCALE: NO SCALE

DATE: 4/21/14

DESIGNED BY: KD

DRAWN BY: ABC

CHECKED BY: CCG

SHEET: 1

RIGIDIFIED TUBE FRP ARCH (RTFA) PROJECT

FAIRFIELD, VT

T-WALL® RETAINING WALL SYSTEM

DESIGNER



THE NEEL COMPANY

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 SPRINGFIELD, VIRGINIA 22152
 PH: (703) 913-7858
 FX: (703) 913-7859
 WEB: WWW.NEELCO.COM

PRECASTER



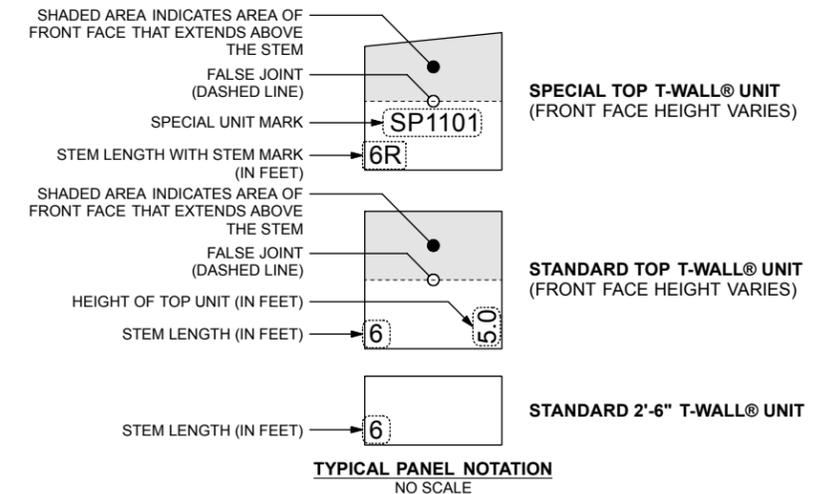
Concrete Systems Inc.

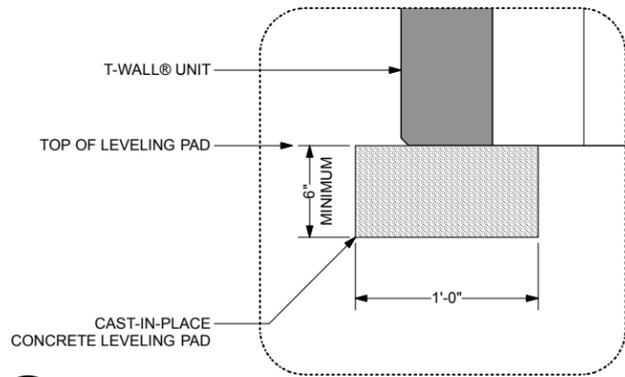
9 Commercial St., Hudson, NH, 03051
 Phone 603-889-4163
 Fax 603-889-2417
 Web www.csigroup.biz

INDEX OF DRAWINGS

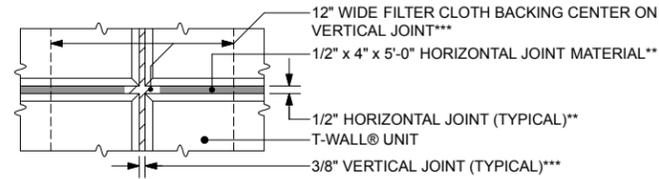
SHEET	TITLE	REV #	DATE
1	COVER SHEET	1	8/6/14
2	TYPICAL T-WALL® NOMENCLATURE	0	4/21/14
3	NOTES	0	4/21/14
4	PLAN VIEW	0	4/21/14
5	ELEVATIONS	1	8/6/14
6	SECTION, DETAILS & QUANTITIES	1	8/6/14
7	REBAR - STANDARD UNITS	0	4/21/14
8	REBAR - SLOPED TOP UNITS	1	8/6/14
9	REBAR - NARROW SLOPED TOP LEFT BEVELED UNITS	1	8/6/14
10	REBAR - NARROW SLOPED TOP RIGHT BEVELED UNITS	1	8/6/14
11	REBAR - NARROW LEFT BEVELED UNITS	1	8/6/14
12	REBAR - NARROW RIGHT BEVELED UNITS	0	4/21/14

LEGEND





4 LEVELING PAD DETAIL
Scale: 2" = 1'-0"



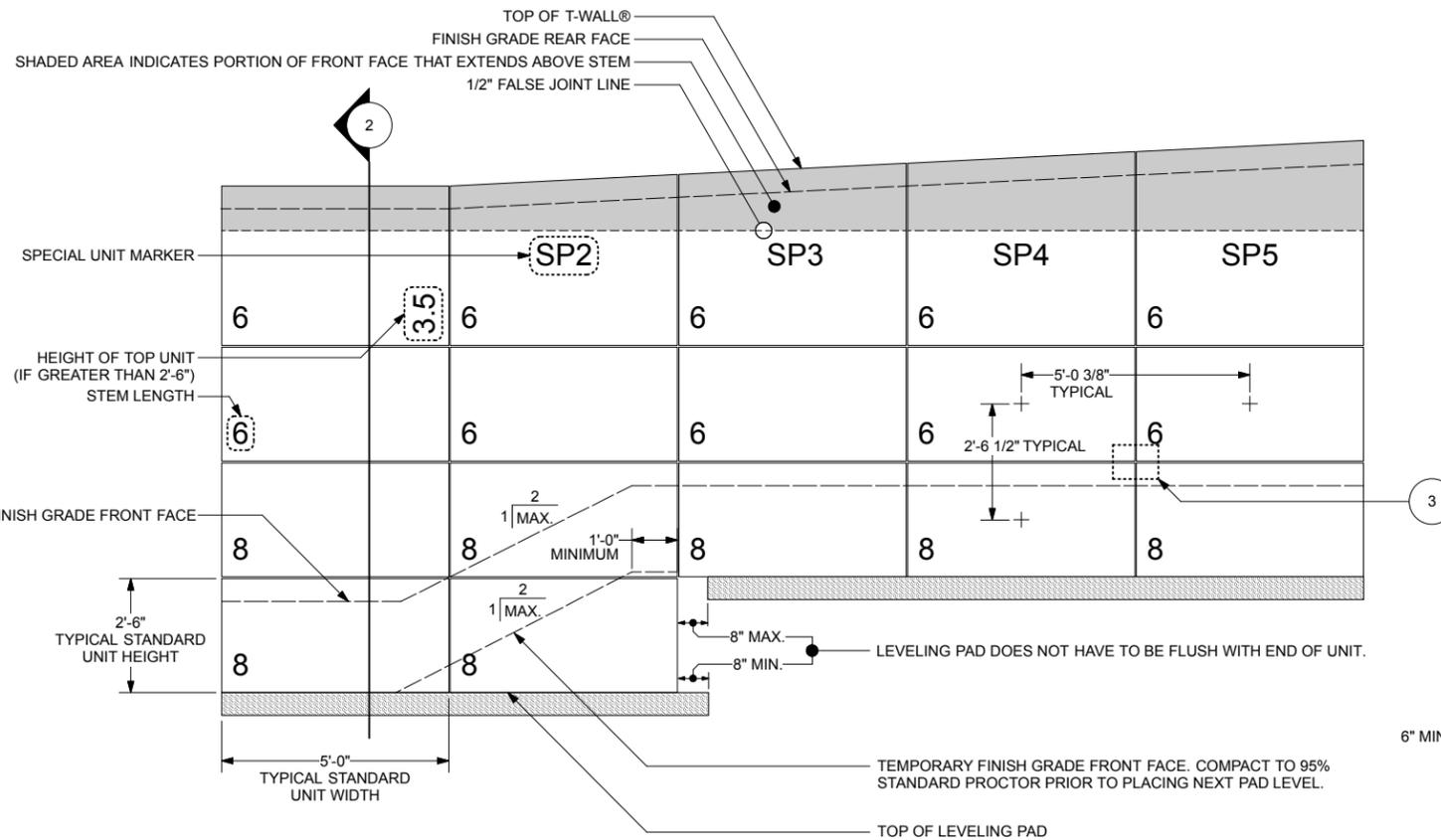
3 HORIZONTAL AND VERTICAL JOINT DETAIL
Scale: 2" = 1'-0"
** SEE GENERAL NOTE 4 ON SHEET 3 FOR ADDITIONAL DETAILS
*** SEE GENERAL NOTE 5 ON SHEET 3 FOR ADDITIONAL DETAILS

NOMENCLATURE NOTE:

THIS SHEET IS PROVIDED FOR GENERAL INFORMATION PURPOSES ONLY, REFERENCING STANDARD DETAILS APPLICABLE TO ANY T-WALL® STRUCTURE. THIS SHEET IS NOT INTENDED TO PROVIDE DETAILS SPECIFIC TO THE WALL STRUCTURES CONTAINED IN THIS DRAWING PACKAGE. FOR INFORMATION SPECIFIC TO THESE WALLS, SEE THE APPLICABLE DRAWING SHEETS.

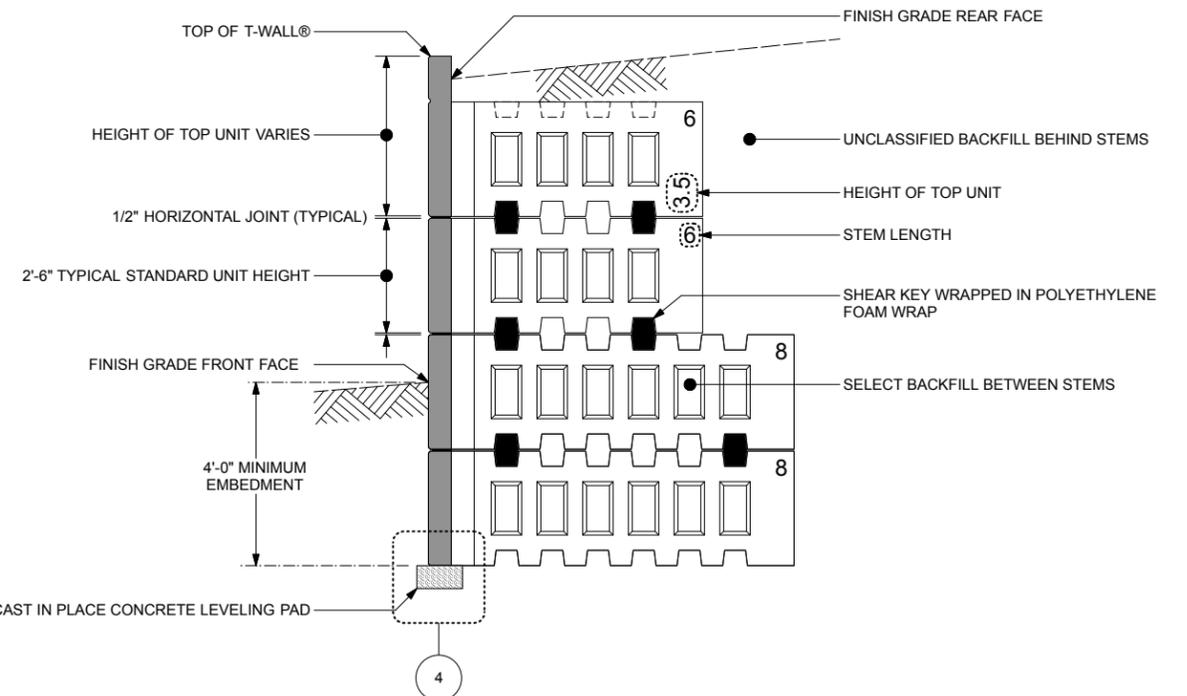
SHEAR KEY NOTES:

1. WALL IS DESIGNED FOR SPECIFIC NUMBER OF SHEAR KEYS AS SHOWN IN "TYPICAL SECTION AT MAXIMUM HEIGHT" ON SHEET 4. LOCATION OF SHEAR KEYS CAN BE ADJUSTED IF NECESSARY AT A SPECIFIC LEVEL.



1 PARTIAL ELEVATION SHOWN - TYPICAL DETAILS
Scale: 1/2" = 1'-0"

NOT ALL DETAILS APPLY. SEE SPECIFIC WALL ELEVATIONS



2 PARTIAL ELEVATION SHOWN - TYPICAL DETAILS
Scale: 1/2" = 1'-0"

NOT ALL DETAILS APPLY. SEE SPECIFIC WALL ELEVATIONS



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PRECASTER: CONCRETE SYSTEMS, INC. CSI
PROJECT #: T21882

CONTRACTOR: A.L. ST. ONGE CONTRACTORS
PROJECT #:

DESIGNER

THE NEEL COMPANY
8328-D TRAFORD LANE
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PROJECT #: TW4301



REVISIONS	

RIGIDIFIED TUBE FRP ARCH (RTFA) PROJECT

FAIRFIELD, VT

SHOP DRAWINGS
TYPICAL T-WALL® NOMENCLATURE

T-WALL® RETAINING WALL SYSTEM

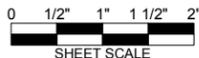
SCALE:	AS NOTED
DATE:	4/21/14
DESIGNED BY:	KD
DRAWN BY:	ABC
CHECKED BY:	CCG
SHEET:	2

SPECIAL NOTES:

- THESE DRAWINGS WERE PREPARED BASED ON INFORMATION GIVEN IN THE FOLLOWING:
 - CONTRACT DRAWINGS:**
 - STATE OF VERMONT AGENCY OF TRANSPORTATION CONTRACT PLANS DATED 10/30/2013. PREPARED BY MCFARLAND JOHNSON.
- REPORT DISCREPANCIES BETWEEN CONTRACT INFORMATION AND ACTUAL CONDITIONS AS SITE WORK PROGRESSES TO THE NEEL COMPANY FOR REDESIGN. NO LIABILITY IS ACCEPTED FOR INACCURATE INFORMATION SUPPLIED BY OTHERS.
- THE FOLLOWING ASSUMPTIONS WERE MADE:
 - FOUNDATION IS ABLE TO SUPPORT BEARING PRESSURE SHOWN IN SPECIAL NOTES 4 WITH AN ACCEPTABLE FACTOR OF SAFETY.
- APPLIED BEARING PRESSURE AT MAXIMUM HEIGHT:
 - WINGWALL MAXIMUM PRESSURE: 4,475 psf STR I MAX
 - DESIGN IS BASED ON AASHTO LRFD METHOD.
- THE DESIGN CONTAINED ON THESE DRAWINGS IS BASED UPON INFORMATION PROVIDED BY THE OWNER. ON THE BASIS OF THIS INFORMATION, THE NEEL COMPANY HAS DESIGNED, AND IS RESPONSIBLE FOR, THE INTERNAL STABILITY OF THE STRUCTURE ONLY. EXTERNAL STABILITY, INCLUDING FOUNDATION AND SLOPE STABILITY, IS THE RESPONSIBILITY OF THE OWNER.**
- THE NEEL COMPANY HAS NOT PERFORMED GLOBAL STABILITY SETTLEMENT AND BEARING CAPACITY ANALYSIS FOR THE WALL FOUNDATION. THESE ANALYSES WILL BE THE RESPONSIBILITY OF OTHERS.**
- DRAINAGE:**
 - THE NEEL COMPANY HAS NOT PERFORMED A DRAINAGE ANALYSIS FOR THIS WALL SITE. IT IS THE OWNER'S RESPONSIBILITY TO ASSURE THAT SURFACE RUN-OFF IS DIVERTED AWAY FROM THE WALL.**
- SELECT BACKFILL GRADATION AND COMPACTION:**
 - BACKFILL GRADATION AND COMPACTION BETWEEN STEMS AND AROUND PIPES ARE IMPORTANT TO THE WALL STABILITY. THE OWNER'S GEOTECHNICAL ENGINEER SHOULD PROVIDE SUFFICIENT TESTING TO INSURE COMPLIANCE WITH THE SELECT BACKFILL GRADATION AND COMPACTION SPECIFICATIONS NOTED ON THIS SHEET. PLACEMENT OF LOOSE LIFT OF BACKFILL SHALL NOT EXCEED 12 INCHES.**
- T-WALL® FACE FORM FINISH:
 - PLAIN STEEL FORM FINISH

GENERAL NOTES:

- PRIMARY REFERENCE:
 - AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 5TH EDITION 2010 AND INTERIMS.
- SELECT BACKFILL BETWEEN STEMS:
 - ANGLE OF INTERNAL FRICTION - 34°
 - DENSITY - 120 pcf
 - 10% MAXIMUM PASSING #200 SIEVE
 - 100% PASSING 3" SIEVE
 - 95% STANDARD COMPACTION (ASTM D-698)
- UNCLASSIFIED BACKFILL BEHIND STEMS:
 - ANGLE OF INTERNAL FRICTION - 30°
 - DENSITY - 120 pcf
 - 95% STANDARD COMPACTION (ASTM D-698)
- HORIZONTAL JOINT:
 - 1/2 INCH ASPHALT JOINT MATERIAL PER ASTM D-994 AS SHOWN ON DEVELOPED ELEVATIONS.
- VERTICAL JOINT:
 - 3/8 INCH SPACE
 - 12 INCHES WIDE FILTER CLOTH BACKING CENTERED AT JOINT, UNLESS OTHERWISE NOTED.
 - FILTER CLOTH BACKING: MIRAFI 160N OR EQUAL
- OVERALL DIMENSIONAL TOLERANCES FOR FINISHED WALL:
 - VERTICAL ALIGNMENT (PLUMPNESS) - 3/4 INCH IN 10 FEET
 - HORIZONTAL ALIGNMENT (LINE) - 3/4 INCH IN 10 FEET
- FOUNDATION:
 - PROOF-ROLL THE FOUNDATION SUBGRADE ALONG THE ENTIRE WALL LENGTH PRIOR TO CONSTRUCTION OF THE T-WALL®. A GEOTECHNICAL ENGINEER MUST INSPECT THE EXCAVATED FOUNDATION SUBGRADE AND PROOF-ROLLING ACTIVITIES. ANY SOFT OR UNSUITABLE MATERIALS IDENTIFIED BY INSPECTION SHALL BE REMOVED AND REPLACED WITH COMPACTED STRUCTURAL BACKFILL AS DIRECTED BY THE ENGINEER. CONTRACTOR TO PROVIDE SUFFICIENT DEWATERING SO THAT THE EXCAVATIONS ARE DRY ENOUGH FOR INSPECTION, TESTING AND CONSTRUCTION.
- CAST-IN-PLACE CONCRETE LEVELING PAD:
 - 6 INCHES MINIMUM x 12 INCHES
 - CONCRETE STRENGTH: 2500 psi (MINIMUM) @ 28 DAYS
 - NO REBAR
 - GRADE TOLERANCE - 1/4 INCH IN 10 FEET
- T-WALL® UNIT REBAR:
 - ASTM A615/ASTM A185
 - Fy = 60 ksi (GRADE 60)
 - BLACK
 - WELDING IS NOT PERMITTED**
- T-WALL® UNIT CONCRETE :
 - 5000 psi (MINIMUM) @ 28 DAYS
- SHEAR KEYS:
 - NO REBAR
 - CONCRETE STRENGTH: 4000 psi (MINIMUM) @ 28 DAYS
 - WALL IS DESIGNED FOR SPECIFIC NUMBER OF SHEAR KEYS AS SHOWN IN TYPICAL SECTION ON SHEET 4. LOCATION OF SHEAR KEYS CAN BE ADJUSTED IF NECESSARY AT A SPECIFIC LEVEL.
 - SHEAR KEY WRAP:
 - 1/4 INCH POLYETHYLENE FOAM WRAP TWO TIMES AROUND THE SHEAR KEY.
 - SHEAR KEY WRAP: AF250 POLYETHYLENE FOAM
- CONSTRUCTION:
 - TO BE IN ACCORDANCE WITH T-WALL® CONSTRUCTION MANUAL (v07.04) AND TYPICAL T-WALL® NOMENCLATURE ON SHEET 2.
 - T-WALL® CONSTRUCTION MANUAL (v07.04) CAN BE DOWNLOADED FROM OUR WEB SITE AT www.neelco.com, UNDER "Downloads".
 - CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF ALL EXCAVATED SLOPES. DESIGN AND CONSTRUCTION OF ANY REQUIRED TEMPORARY SUPPORT OF EXCAVATION SHALL ALSO BE THE RESPONSIBILITY OF THE CONTRACTOR.
 - ALL SURFACE RUNOFF IS TO BE DIVERTED AWAY FROM EXCAVATIONS TO AVOID THE DETERIORATION OF THE SUBGRADE SOILS DUE TO EXPOSURE TO MOISTURE.



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PRECASTER: CONCRETE SYSTEMS, INC. CSI
PROJECT #: T21882

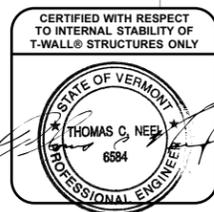
CONTRACTOR: A.L. ST. ONGE CONTRACTORS
PROJECT #:

DESIGNER



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 PH: (703) 913-7858
 FX: (703) 913-7859
 WEB: WWW.NEELCO.COM

PROJECT #: TW4301



REVISIONS	

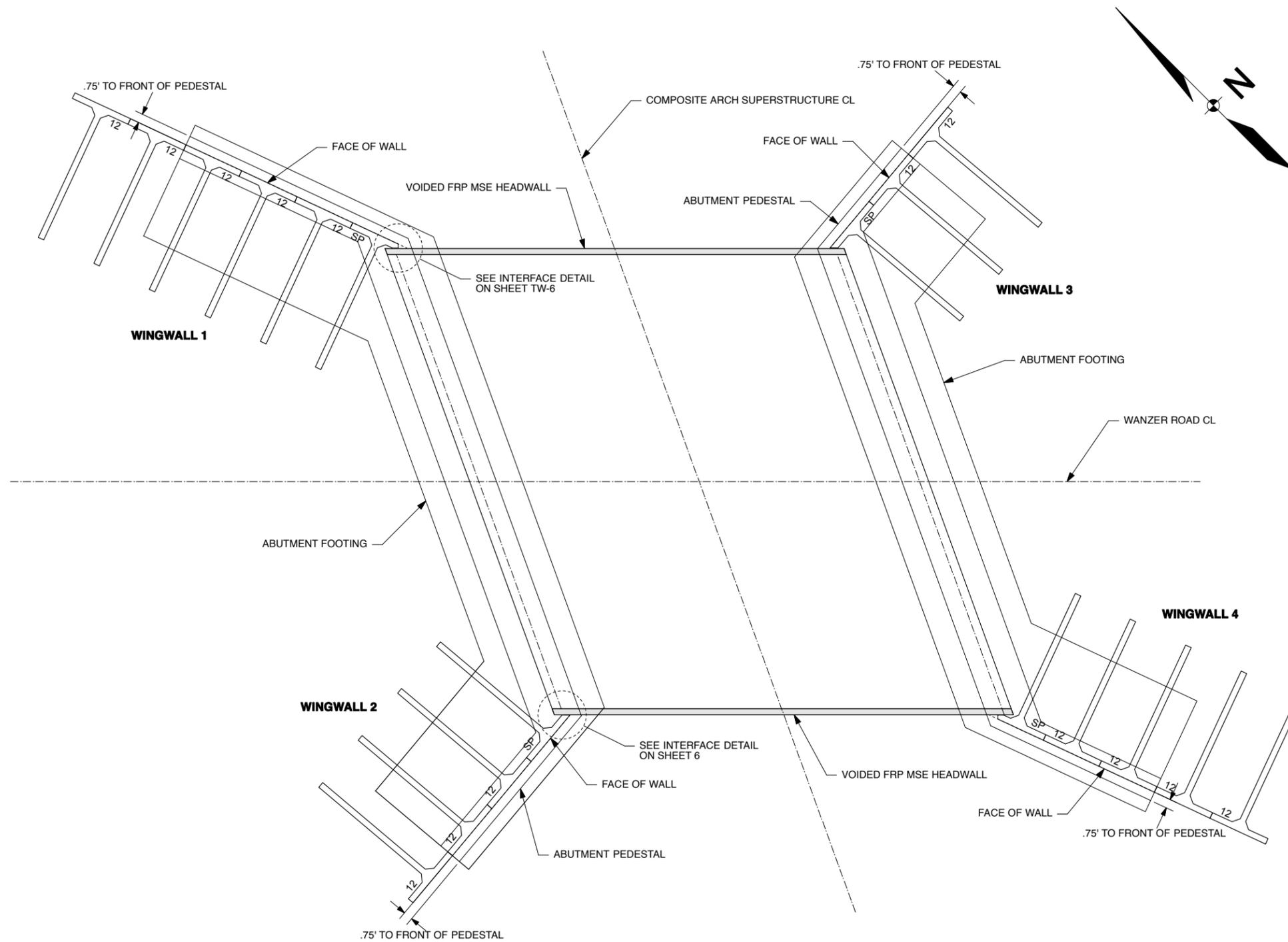
RIGIDIFIED TUBE FRP ARCH (RTFA) PROJECT

FAIRFIELD, VT

SHOP DRAWINGS
NOTES

T-WALL® RETAINING WALL SYSTEM

SCALE:	NO SCALE
DATE:	4/21/14
DESIGNED BY:	KD
DRAWN BY:	ABC
CHECKED BY:	CCG
SHEET:	3



1 PLAN
1" = 5 ft



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PRECASTER: CONCRETE SYSTEMS, INC. CSI
PROJECT #: T21882
CONTRACTOR: A.L. ST. ONGE CONTRACTORS
PROJECT #:

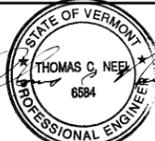
DESIGNER



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8328-D TRAFORD LANE
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PH: (703) 913-7858
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PROJECT #: TW4301

CERTIFIED WITH RESPECT TO INTERNAL STABILITY OF T-WALL® STRUCTURES ONLY



THOMAS C. NEEL
6684
PROFESSIONAL ENGINEER

REVISIONS	

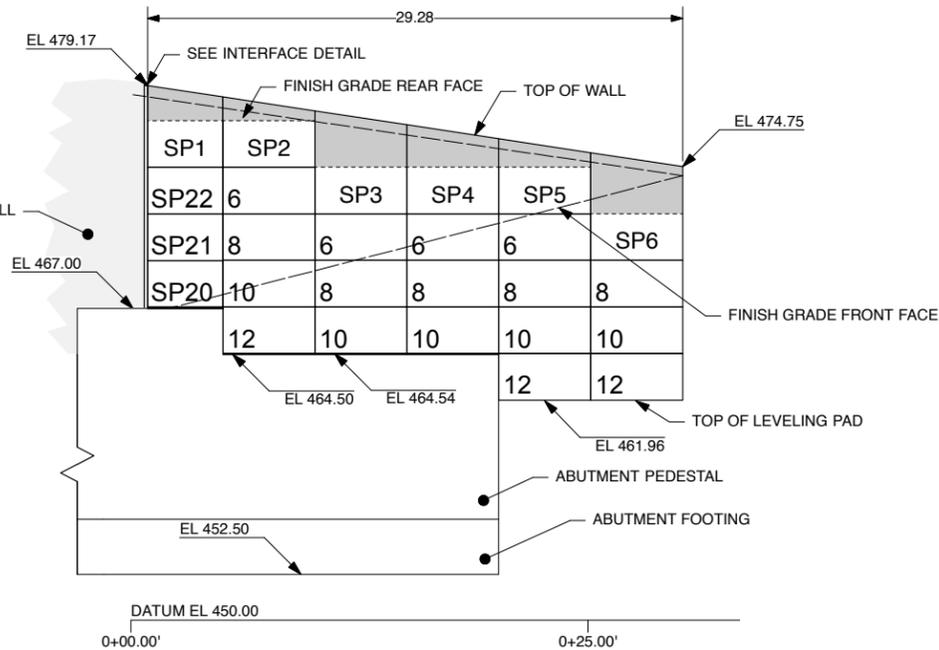
RIGIDIFIED TUBE FRP ARCH (RTFA) PROJECT

FAIRFIELD, VT

SHOP DRAWINGS
WALL DRAWINGS
PLAN VIEW

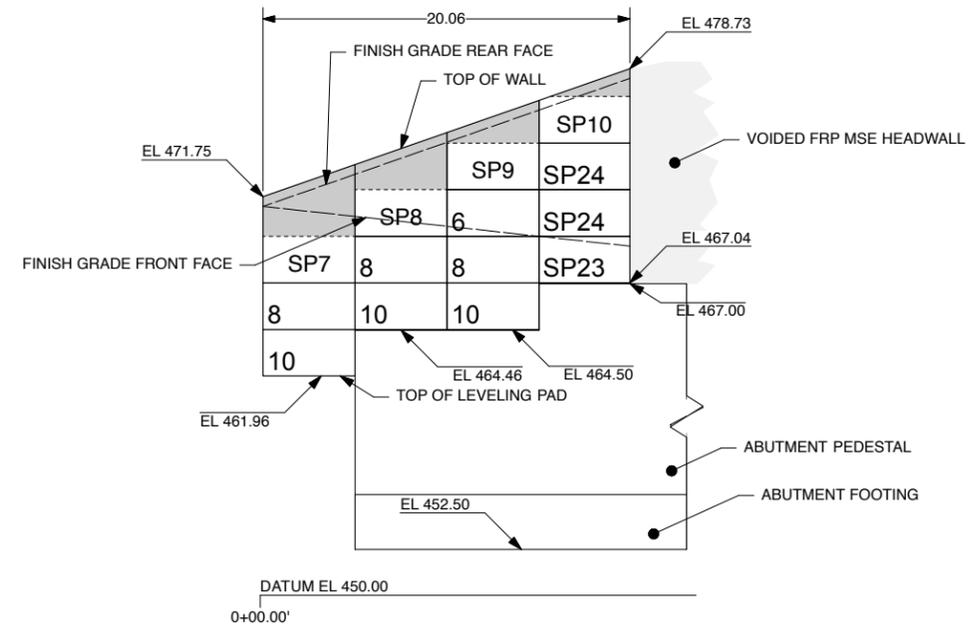
T-WALL® RETAINING WALL SYSTEM

SCALE:	AS NOTED
DATE:	4/21/14
DESIGNED BY:	KD
DRAWN BY:	ABC
CHECKED BY:	CCG
SHEET:	4



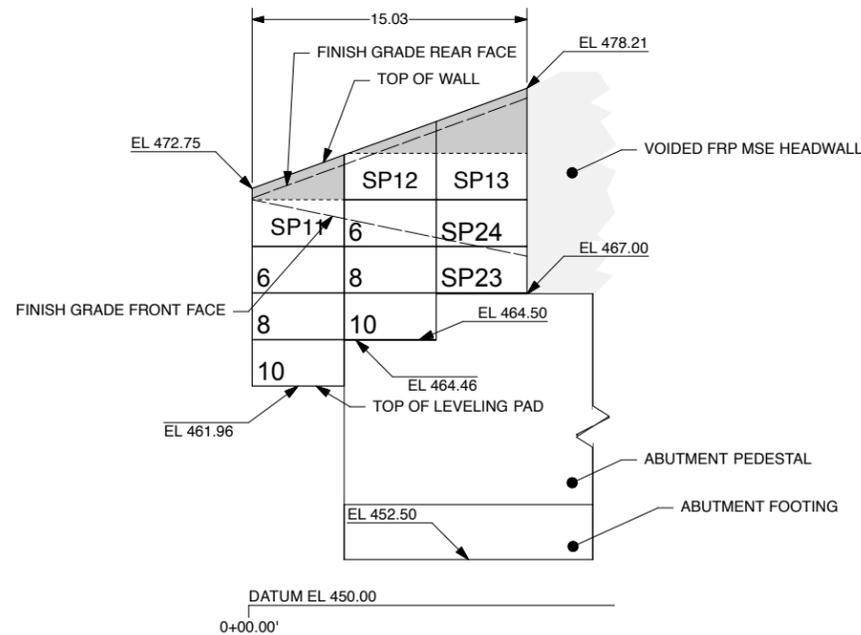
1 WINGWALL 1 DEVELOPED ELEVATION (FRONT FACE)
1" = 5 ft

NOTE: SEE ELEVATION DETAIL ON NEXT SHEET



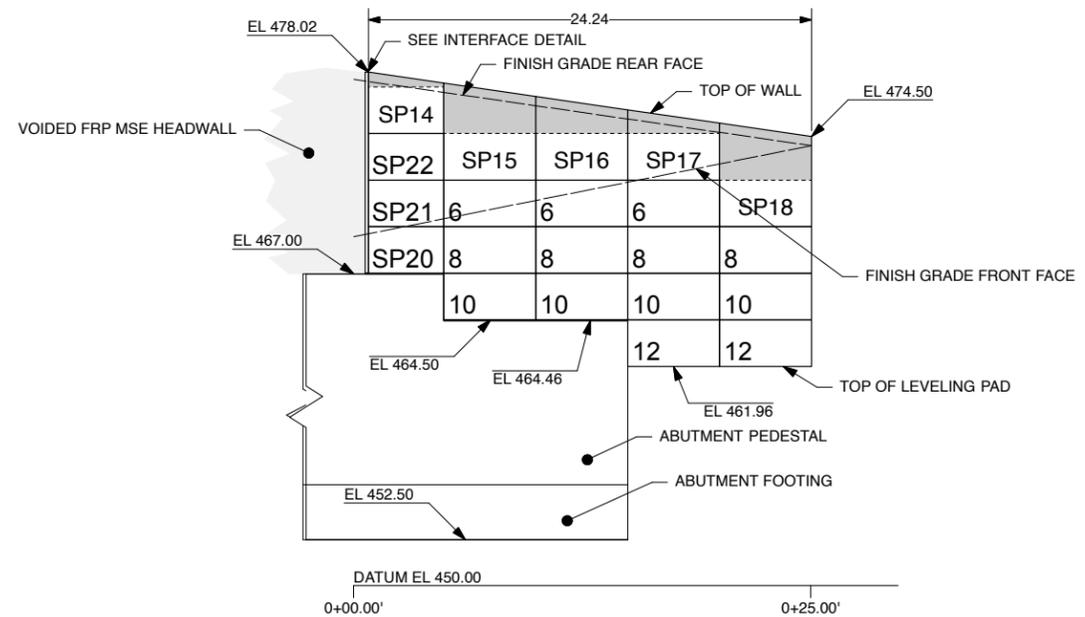
2 WINGWALL 2 DEVELOPED ELEVATION (FRONT FACE)
1" = 5 ft

NOTE: SEE ELEVATION DETAIL ON NEXT SHEET



3 WINGWALL 3 DEVELOPED ELEVATION (FRONT FACE)
1" = 5 ft

NOTE: SEE ELEVATION DETAIL ON NEXT SHEET



4 WINGWALL 4 DEVELOPED ELEVATION (FRONT FACE)
1" = 5 ft

NOTE: SEE ELEVATION DETAIL ON NEXT SHEET



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PRECASTER: CONCRETE SYSTEMS, INC. CSI

PROJECT #: T21882

CONTRACTOR: A.L. ST. ONGE CONTRACTORS

PROJECT #:

DESIGNER



THE NEEL COMPANY
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PROJECT #: TW4301

CERTIFIED WITH RESPECT TO INTERNAL STABILITY OF T-WALL® STRUCTURES ONLY



REVISIONS

NO.	REVISIONS	BY	DATE
1	REVIEWER COMMENTS	ABC	8-6-14

RIGIDIFIED TUBE FRP ARCH (RTFA) PROJECT

FAIRFIELD, VT

SHOP DRAWINGS
WALL DRAWINGS
DEVELOPED ELEVATIONS

T-WALL® RETAINING WALL SYSTEM

SCALE: AS NOTED

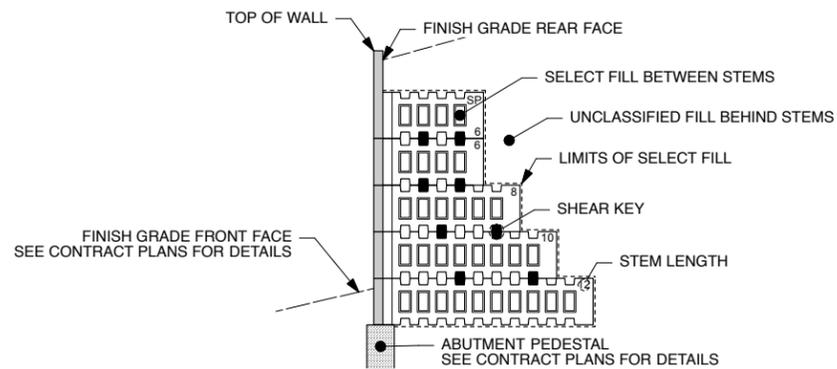
DATE: 4/21/14

DESIGNED BY: KD

DRAWN BY: ABC

CHECKED BY: CCG

SHEET: 5



1 TYPICAL SECTION AT MAXIMUM HEIGHT
1" = 5 ft

T-WALL Unit Count for Wingwall 1 8/6/14 10:55:48 AM

PANEL TYPE	QNTY (ea)	AREA (sf)	SELECT FILL (cy)
2.5 x 5.0 x 06 Std	4	50.00	9
2.5 x 5.0 x 08 Std	5	62.50	16
2.5 x 5.0 x 10 Std	5	62.50	20
2.5 x 5.0 x 12 Std	3	37.50	15
Special Units	9	160.70	21
TOTALS:	26 ea	373.20 sf	82 cy

NOTE: Select backfill quantities are between stems only.

T-WALL Unit Count for Wingwall 2 8/6/14 10:56:14 AM

PANEL TYPE	QNTY (ea)	AREA (sf)	SELECT FILL (cy)
2.5 x 5.0 x 06 Std	1	12.50	2
2.5 x 5.0 x 08 Std	3	37.50	10
2.5 x 5.0 x 10 Std	3	37.50	12
Special Units	7	124.78	17
TOTALS:	14 ea	212.28 sf	41 cy

NOTE: Select backfill quantities are between stems only.

T-WALL Unit Count for Wingwall 3 8/6/14 10:56:26 AM

PANEL TYPE	QNTY (ea)	AREA (sf)	SELECT FILL (cy)
2.5 x 5.0 x 06 Std	2	25.00	5
2.5 x 5.0 x 08 Std	2	25.00	6
2.5 x 5.0 x 10 Std	2	25.00	8
Special Units	5	87.49	12
TOTALS:	11 ea	162.49 sf	31 cy

NOTE: Select backfill quantities are between stems only.

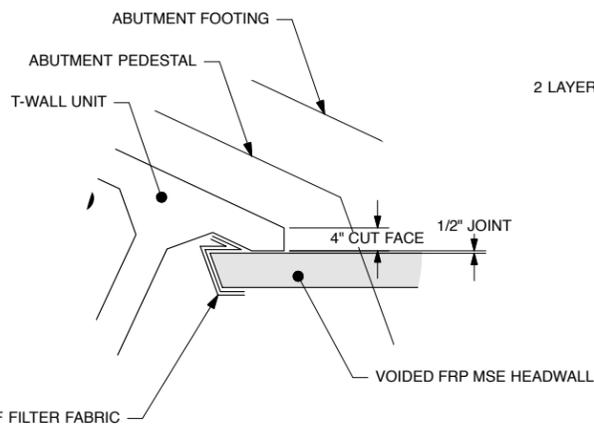
T-WALL Unit Count for Wingwall 4 8/6/14 11:17:17 AM

PANEL TYPE	QNTY (ea)	AREA (sf)	SELECT FILL (cy)
2.5 x 5.0 x 06 Std	3	37.50	7
2.5 x 5.0 x 08 Std	4	50.00	13
2.5 x 5.0 x 10 Std	4	50.00	16
2.5 x 5.0 x 12 Std	2	25.00	10
Special Units	8	133.45	19
TOTALS:	21 ea	295.95 sf	65 cy

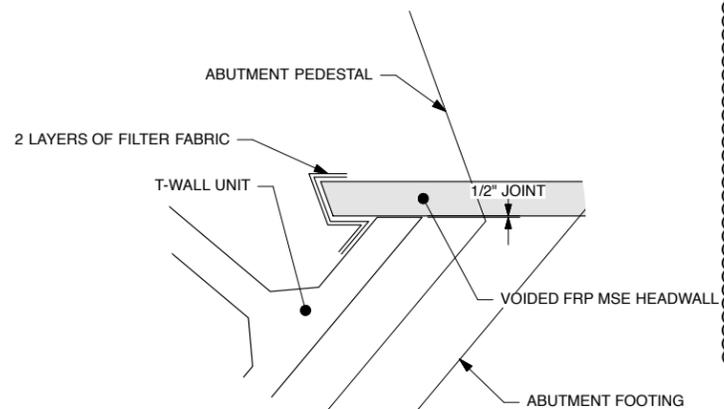
NOTE: Select backfill quantities are between stems only.

SHIP LOOSE LIST FOR WINGWALLS

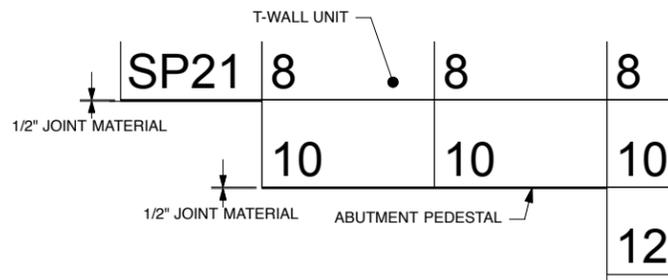
ITEM	QNTY
T-Wall Lifting Device	1 ea
Shear Keys	108 ea
Mirafi 160N Filter Fabric (12" wide)	287 lf
1/2" x 4" x 5' Horizontal Joint Material	295 lf



2 WINGWALLS 1 & 4 INTERFACE DETAIL
Scale: 3/4" = 1'-0"

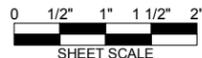


3 WINGWALLS 2 & 3 INTERFACE DETAIL
Scale: 3/4" = 1'-0"



4 ELEVATION DETAIL
Scale: 3/8" = 1'-0"

NOTE: CONTRACTOR TO CONFIRM REVISED PEDESTAL ELEVATIONS FOR 2'6" 1/2" SPACING.



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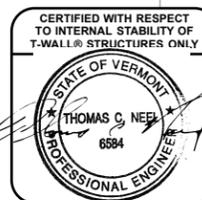
PRECASTER: CONCRETE SYSTEMS, INC. CSI
PROJECT #: T21882

CONTRACTOR: A.L. ST. ONGE CONTRACTORS
PROJECT #:

DESIGNER

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PROJECT #: TW4301



REVISIONS

NO.	REVIEWER COMMENTS	DATE
1	ABC	8-6-14

RIGIDIFIED TUBE FRP ARCH (RTFA) PROJECT

FAIRFIELD, VT

SHOP DRAWINGS
WALL DRAWINGS
SECTION, DETAILS & QUANTITIES
T-WALL® RETAINING WALL SYSTEM

SCALE:	AS NOTED
DATE:	4/21/14
DESIGNED BY:	KD
DRAWN BY:	ABC
CHECKED BY:	CCG
SHEET:	6

T-WALL UNIT PROPERTIES

UNIT TYPE	H	W	S	Tf*	Ts	SH	VOLUME*	WEIGHT*
2.5x5.0x06 Std	2'6"	5'0"	6'4 1/2"	6"	6"	2'6"	0.45 cy	1,827 lbs
2.5x5.0x08 Std	2'6"	5'0"	8'4 1/2"	6"	6"	2'6"	0.52 cy	2,088 lbs
2.5x5.0x10 Std	2'6"	5'0"	10'4 1/2"	6"	6"	2'6"	0.58 cy	2,349 lbs
2.5x5.0x12 Std	2'6"	5'0"	12'4 1/2"	6"	6"	2'6"	0.64 cy	2,610 lbs

* VOLUMES AND WEIGHTS ON THIS TABLE ARE BASED ON 6" FACE THICKNESS (Tf)

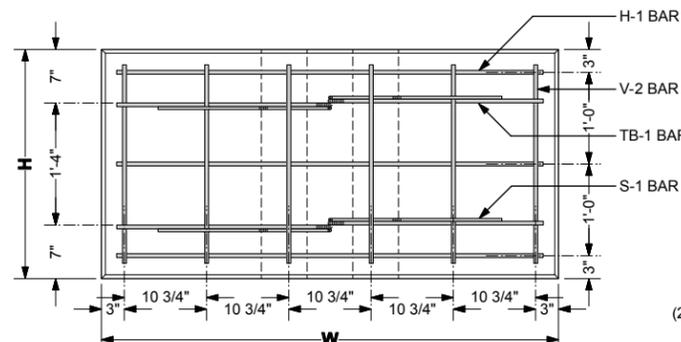
REBAR SCHEDULES

Unit Dims	Bar Mark	Qty	Size	Length	Dim "A"	Bar Weight	Bend Dia	Remarks	
H=2'6"	H-1	3 ea	#4	4'8"		9.35 lbs			
W=5'0"	V-1	12 ea	#4	2'2"		17.37 lbs			
S=6'4 1/2"	V-2	6 ea	#4	2'2"		8.68 lbs			
SH=2'6"	S-1	4 ea	#4	3'4 1/2"		9.02 lbs	D= 3"		
	TB-1	4 ea	#4	8'2"	5'11"	21.81 lbs	D= 3"		
						66.23 lbs			

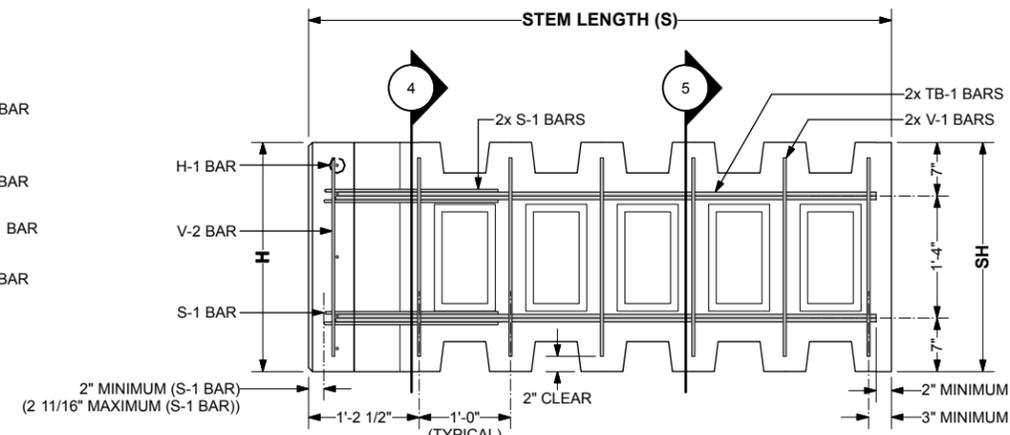
Unit Dims	Bar Mark	Qty	Size	Length	Dim "A"	Bar Weight	Bend Dia	Remarks	
H=2'6"	H-1	3 ea	#4	4'8"		9.35 lbs			
W=5'0"	V-1	16 ea	#4	2'2"		23.16 lbs			
S=8'4 1/2"	V-2	6 ea	#4	2'2"		8.68 lbs			
SH=2'6"	S-1	4 ea	#4	3'4 1/2"		9.02 lbs	D= 3"		
	TB-1	4 ea	#4	10'2"	7'11"	27.16 lbs	D= 3"		
						77.37 lbs			

Unit Dims	Bar Mark	Qty	Size	Length	Dim "A"	Bar Weight	Bend Dia	Remarks	
H=2'6"	H-1	3 ea	#4	4'8"		9.35 lbs			
W=5'0"	V-1	20 ea	#4	2'2"		16.29 lbs			
S=10'4 1/2"	V-2	6 ea	#4	2'2"		4.89 lbs			
SH=2'6"	S-1	4 ea	#4	3'4 1/2"		5.08 lbs	D= 2 1/4"		
	TB-1	4 ea	#4	12'2"	9'11"	32.50 lbs	D= 3"		
						68.11 lbs			

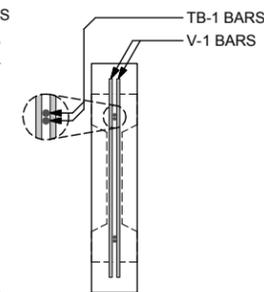
Unit Dims	Bar Mark	Qty	Size	Length	Dim "A"	Bar Weight	Bend Dia	Remarks	
H=2'6"	H-1	3 ea	#4	4'8"		9.35 lbs			
W=5'0"	V-1	20 ea	#4	2'2"		16.29 lbs			
S=12'4 1/2"	V-2	6 ea	#4	2'2"		4.89 lbs			
SH=2'6"	S-1	4 ea	#4	3'4 1/2"		5.08 lbs	D= 2 1/4"		
	TB-1	4 ea	#4	12'2"	9'11"	32.50 lbs	D= 3"		
						68.11 lbs			



3 FRONT VIEW - 2.5 x 5.0 x 06 Std SHOWN
Scale: 1" = 1'-0" (V-1 BARS IN STEM OMITTED FOR CLARITY)



2 SIDE VIEW - 2.5 x 5.0 x 06 Std SHOWN
Scale: 1" = 1'-0"



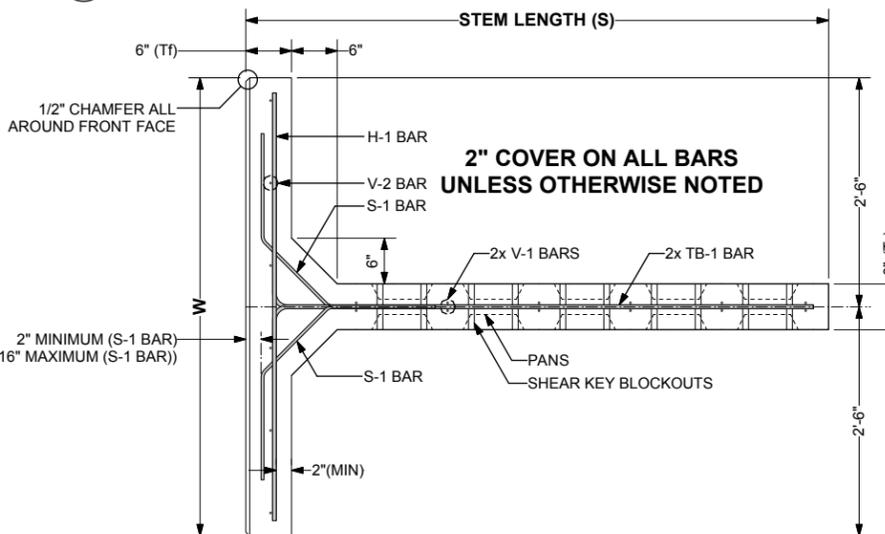
5 SECTION THROUGH STEM
Scale: 1" = 1'-0"

SPECIAL NOTES:

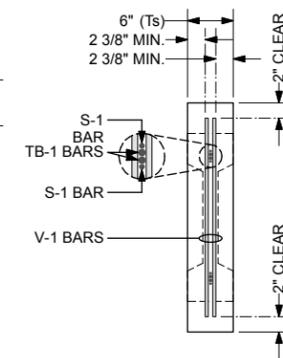
- FRONT FACE OF T-WALL® UNITS FINISH TREATMENT:
 - PLAIN STEEL FORM FINISH

GENERAL NOTES:

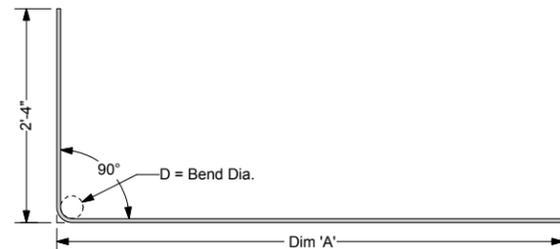
- PRIMARY REFERENCE:
 - AASHTO, LRFD BRIDGE DESIGN SPECIFICATION, 5TH EDITION 2010 (WITH INTERIMS)
- T-WALL® CONCRETE:
 - F_c = 5000 psi (MINIMUM) @ 28 DAYS
 - MINIMUM STRIPPING STRENGTH: 2500 psi
- T-WALL® REINFORCING STEEL:
 - BLACK
 - F_y = 60 ksi (GRADE 60)
 - WELDING IS NOT PERMITTED
- MARKING OF PRECAST UNITS:
 - CLEARLY MARK EACH PRECAST UNIT ON THE BUTT END OF THE STEM WITH THE UNIT TYPE (i.e. 2.5x5.0x06 STD), THE DATE OF MANUFACTURE, THE LOT NUMBER (IF APPLICABLE), AND THE TRADEMARK "T-WALL®".
- REINFORCING FABRICATION AND PLACEMENT TOLERANCES:
 - THE STRUCTURAL DESIGN OF PRECAST UNITS ASSUMES 2 INCHES OF CONCRETE COVER OVER ALL REINFORCING BARS.
 - UNLESS OTHERWISE NOTED IN CONTRACT DOCUMENTS OR REFERENCED SPECIFICATIONS, TOLERANCES ON CONCRETE COVER SHALL BE ± 3/8 INCHES.
 - UNLESS OTHERWISE NOTED IN CONTRACT DOCUMENTS OR REFERENCED SPECIFICATIONS, TOLERANCES ON BAR PLACEMENT SHALL BE:
 - VERTICAL LOCATION OF TB-1 BARS: ± 3/8 INCHES
 - LOCATION / SPACING OF H-1, V-1 & V-2 BARS: ± 1 INCH
 - REGARDLESS OF THE SPECIFIED PLACEMENT TOLERANCES, CONCRETE COVER SHALL BE MAINTAINED WITHIN ± 3/8 INCHES AS PREVIOUSLY NOTED.
 - ALL REINFORCING BARS SHALL BE CUT AND BENT FOLLOWING REQUIREMENTS OF THE CRSI MANUAL OF STANDARD PRACTICE.
 - UNLESS NOTED OTHERWISE, TOLERANCES FOR BAR FABRICATION SHALL MEET REQUIREMENTS OF STANDARD ACI 318 AND THE CRSI MANUAL OF STANDARD PRACTICE.



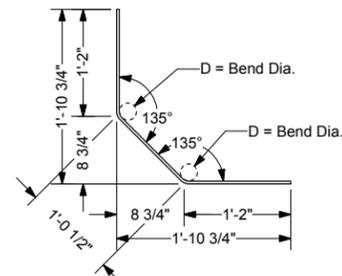
1 PLAN VIEW - 2.5 x 5.0 x 06 Std SHOWN
Scale: 1" = 1'-0"



4 SECTION THROUGH STEM
Scale: 1" = 1'-0"



6 TB-1 REBAR
Scale: 1" = 1'-0"



7 S-1 REBAR
Scale: 1" = 1'-0"



The design contained on these drawings is based upon information provided by the owner. On the basis of this information, The Neel Company has designed, and is responsible for, the internal stability of the structure only. External stability, including foundation and slope stability, is the responsibility of the owner.

This drawing contains information proprietary to The Neel Company. T-WALL® is a registered trademark owned by The Neel Company. ©2014 The Neel Company

PRECASTER: CONCRETE SYSTEMS, INC. CSI

PROJECT #: T21882

CONTRACTOR: A.L. ST. ONGE CONTRACTORS

PROJECT #:

DESIGNER

THE NEEL COMPANY
8328-D TRAFORD LANE
SPRINGFIELD, VIRGINIA 22152
PH: (703) 913-7858
FX: (703) 913-7859
WEB: WWW.NEELCO.COM

PROJECT #: TW4301

CERTIFIED WITH RESPECT TO INTERNAL STABILITY OF T-WALL® STRUCTURES ONLY



REVISIONS

NO.	DESCRIPTION

RIGIDIFIED TUBE FRP ARCH (RTFA) PROJECT

FAIRFIELD, VT

SHOP DRAWINGS
STANDARD UNITS
REBAR AND DIMENSIONS

T-WALL® RETAINING WALL SYSTEM

SCALE: AS NOTED

DATE: 4/21/14

DESIGNED BY: KD

DRAWN BY: ABC

CHECKED BY: CCG

SHEET: 7

GENERAL NOTES:

- PRIMARY REFERENCE:
 - AASHTO, LRFD BRIDGE DESIGN SPECIFICATION, 5TH EDITION 2010 (WITH INTERIMS)
- T-WALL® CONCRETE:
 - F_c = 5000 psi (MINIMUM) @ 28 DAYS
 - MINIMUM STRIPPING STRENGTH: 2500 psi
- T-WALL® REINFORCING STEEL:
 - BLACK
 - F_y = 60 ksi (GRADE 60)
 - WELDING IS NOT PERMITTED
- MARKING OF PRECAST UNITS:
 - CLEARLY MARK EACH PRECAST UNIT ON THE BUTT END OF THE STEM WITH THE UNIT TYPE (i.e. 2.5x5.0x06 STD), THE DATE OF MANUFACTURE, THE LOT NUMBER (IF APPLICABLE), AND THE TRADEMARK "T-WALL®".
- REINFORCING FABRICATION AND PLACEMENT TOLERANCES:
 - THE STRUCTURAL DESIGN OF PRECAST UNITS ASSUMES 2 INCHES OF CONCRETE COVER OVER ALL REINFORCING BARS.
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 - UNLESS OTHERWISE NOTED IN CONTRACT DOCUMENTS OR REFERENCED SPECIFICATIONS, TOLERANCES ON BAR PLACEMENT SHALL BE:
 - VERTICAL LOCATION OF TB-1 BARS: ± 3/8 INCHES
 - LOCATION / SPACING OF H-1, V-1 & V-2 BARS: ± 1 INCH
 - REGARDLESS OF THE SPECIFIED TOLERANCES, CONCRETE COVER SHALL BE MAINTAINED WITHIN ± 3/8 INCHES AS PREVIOUSLY NOTED.
 - ALL REINFORCING BARS SHALL BE CUT AND BENT FOLLOWING REQUIREMENTS OF THE CRSI MANUAL OF STANDARD PRACTICE.
 - UNLESS NOTED OTHERWISE, TOLERANCES FOR BAR FABRICATION SHALL MEET REQUIREMENTS OF STANDARD ACI 318 AND THE CRSI MANUAL OF STANDARD PRACTICE.

SPECIAL NOTES:

- FRONT FACE OF T-WALL® UNITS FINISH TREATMENT:
 - PLAIN STEEL FORM FINISH
- LIFTING INSERTS CAPACITY:
 - TWO QUICKLIFT 'QL050G' LIFTING INSERTS OR EQUAL, SPACED AT LEAST 30" APART.
 - 2000 LBS (1 TON) MINIMUM RATED WORKING LOAD CAPACITY.
 - MINIMUM CONCRETE STRENGTH SHALL BE 3,500 psi PRIOR TO STRIPPING AND LIFTING OPERATIONS.
- 1/2" FALSE JOINT LOCATION:
 - IF H-1 IS GREATER THEN 2'-6", THEN FIRST FALSE JOINT WILL BE 2'-6" FROM THE BOTTOM OF THE UNIT.
 - IF H-1 IS GREATER THEN 5'-0", THEN SECOND FALSE JOINT WILL BE 2'-6" ABOVE THE FIRST FALSE JOINT.
 - THE FALSE JOINT WILL 1/2" HIGH AND 1/2" DEEP.

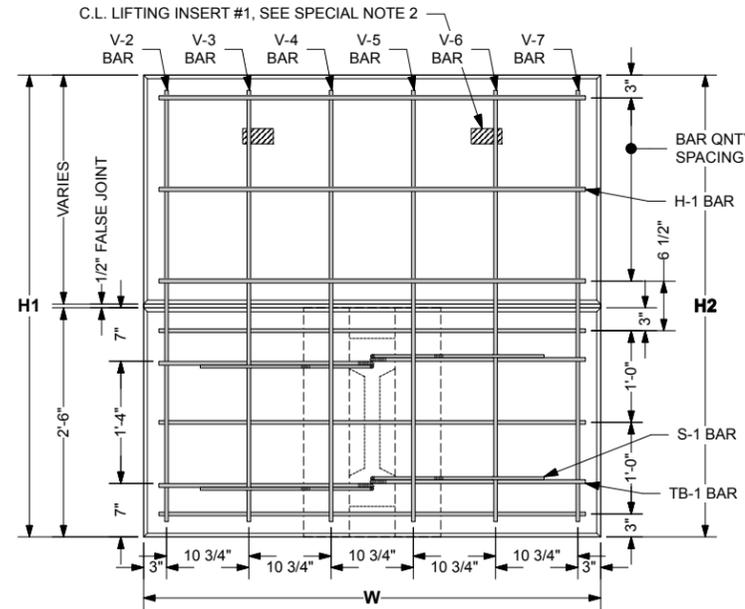
REBAR SCHEDULES

6' STEM SPECIAL UNITS

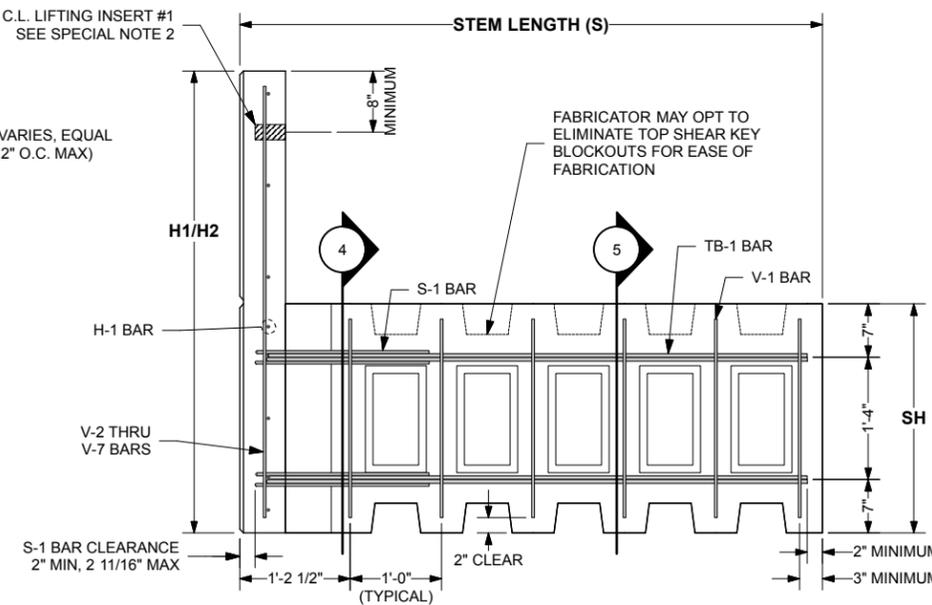
Unit Dims	Bar Mark	Qty	Size	Length	Dim "A"	Bar Weight	Bend Dia	Remarks
H=VARIES	H-1	VARIES	#4	4'8"				SEE SLOPED TOP UNIT SCHEDULE
W=5'0"	V-1	12 ea	#4	2'2"		17.37 lbs		
S=6'4 1/2"	V-2 THRU V-7	1 ea	#5	VARIES				SEE SLOPED TOP UNIT SCHEDULE
SH=2'6"	S-1	4 ea	#4	3'4 1/2"		9.02 lbs	D=3"	
	TB-1	4 ea	#4	8'3"	5'11"	22.04 lbs	D=3"	

SLOPED TOP UNIT SCHEDULE:

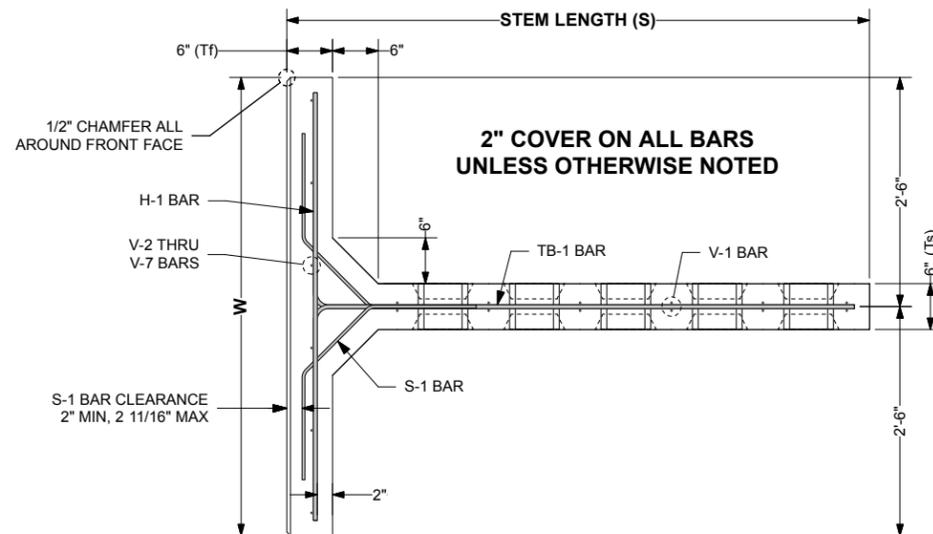
MARK No.	QNTY	STEM	WIDTH	H1	H2	H-1 BAR	V-2 BAR	V-3 BAR	V-4 BAR	V-5 BAR	V-6 BAR	V-7 BAR	VOL	WEIGHT	AREA
SP2	1 ea	6'4 1/2"	5'0"	3'10 1/8"	3'1"	5 ea	3'5 5/8"	3'3 3/4"	3'2"	3'1 1/8"	2'11 1/4"	2'9 1/2"	0.56 cy	2,266 lbs	17.30 sf
SP3	1 ea	6'4 1/2"	5'0"	5'7 1/2"	4'10 3/8"	7 ea	5'3"	5'1 1/8"	4'11 3/8"	4'10 3/8"	4'8 5/8"	4'6 7/8"	0.72 cy	2,934 lbs	26.20 sf
SP4	1 ea	6'4 1/2"	5'0"	4'10 3/8"	4'1 1/4"	6 ea	4'5 7/8"	4'4"	4'2 1/4"	3'11 1/2"	3'9 3/4"	3'7 1/2"	0.65 cy	2,649 lbs	22.40 sf
SP5	1 ea	6'4 1/2"	5'0"	4'1 1/4"	3'4 1/8"	5 ea	3'8 3/4"	3'6 7/8"	3'5 1/8"	3'4 1/8"	3'2 3/8"	3'0 5/8"	0.58 cy	2,364 lbs	18.60 sf
SP6	1 ea	6'4 1/2"	5'0"	5'10 5/8"	5'1 1/2"	7 ea	5'6 1/8"	5'4 1/4"	5'2 1/2"	5'1 1/2"	4'11 3/4"	4'10"	0.75 cy	3,032 lbs	27.50 sf
SP7	1 ea	6'4 1/2"	5'0"	4'8 1/2"	6'5 1/2"	7 ea	4'5 5/8"	4'9 7/8"	5'2"	5'4 1/8"	5'8 1/4"	6'0 3/8"	0.76 cy	3,063 lbs	27.93 sf
SP8	1 ea	6'4 1/2"	5'0"	3'11"	5'8"	7 ea	3'8 1/8"	4'0 3/8"	4'4 1/2"	4'6 5/8"	4'10 3/4"	5'2 7/8"	0.68 cy	2,767 lbs	23.98 sf
SP9	1 ea	6'4 1/2"	5'0"	3'1 1/2"	4'10 1/2"	6 ea	2'10 3/4"	3'2 7/8"	3'7"	3'9 1/8"	4'1 1/4"	4'5 3/8"	0.61 cy	2,471 lbs	20.02 sf
SP11	1 ea	6'4 1/2"	5'0"	3'1 7/8"	4'11 7/8"	6 ea	2'11 1/8"	3'3 1/2"	3'7 3/4"	3'10"	4'2 3/8"	4'6 3/4"	0.62 cy	2,497 lbs	20.38 sf
SP12	1 ea	6'4 1/2"	5'0"	2'5 3/8"	4'3 3/8"	5 ea	2'2 5/8"	2'7"	2'11 1/4"	3'1 1/2"	3'5 7/8"	3'10 1/8"	0.55 cy	2,231 lbs	16.82 sf
SP15	1 ea	6'4 1/2"	5'0"	5'3 1/2"	4'6 3/4"	6 ea	4'11"	4'9 1/4"	4'7 1/2"	4'6 5/8"	4'4 7/8"	4'3 1/4"	0.70 cy	2,816 lbs	24.62 sf
SP16	1 ea	6'4 1/2"	5'0"	4'6 3/4"	3'10"	6 ea	4'2 1/4"	4'0 1/2"	3'10 3/4"	3'8 1/8"	3'6 1/2"	3'6 1/2"	0.63 cy	2,542 lbs	20.97 sf
SP17	1 ea	6'4 1/2"	5'0"	3'10"	3'1 1/4"	5 ea	3'5 1/2"	3'3 3/4"	3'2"	3'1 1/8"	2'11 3/8"	2'9 5/8"	0.56 cy	2,268 lbs	17.32 sf
SP18	1 ea	6'4 1/2"	5'0"	5'7 3/4"	4'11"	7 ea	5'3 3/8"	5'1 5/8"	4'11 7/8"	4'11"	4'9 1/4"	4'7 1/2"	0.73 cy	2,951 lbs	26.43 sf



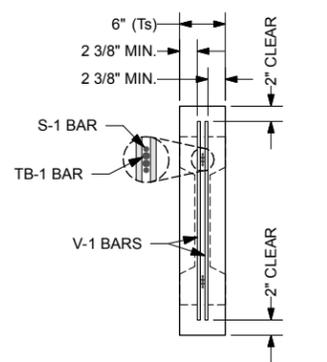
3 FRONT VIEW - 6' STEM UNIT SHOWN
Scale: 1" = 1'-0" (V-1 BARS IN STEM OMITTED FOR CLARITY)



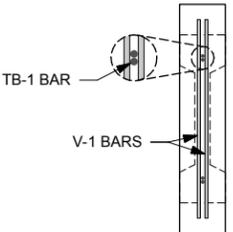
2 SIDE VIEW - 6' STEM UNIT SHOWN
Scale: 1" = 1'-0"



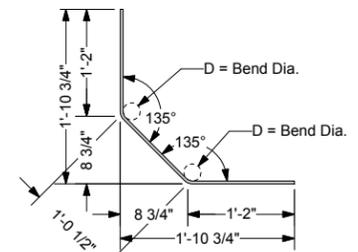
1 PLAN VIEW - 6' STEM UNIT SHOWN
Scale: 1" = 1'-0"



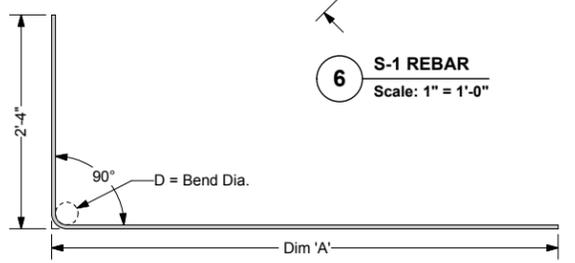
4 SECTION AT STEM
Scale: 1" = 1'-0"



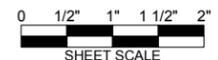
5 SECTION AT STEM
Scale: 1" = 1'-0"



6 S-1 REBAR
Scale: 1" = 1'-0"



7 TB-1 REBAR
Scale: 1" = 1'-0"



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This drawing contains information proprietary to The Neel Company. T-WALL® is a registered trademark owned by The Neel Company. ©2014 The Neel Company

PRECASTER: CONCRETE SYSTEMS, INC. CSI
PROJECT #: T21882
CONTRACTOR: A.L. ST. ONGE CONTRACTORS
PROJECT #:

DESIGNER
THE NEEL COMPANY
8328-D TRAFORD LANE
SPRINGFIELD, VIRGINIA 22152
PH: (703) 913-7858
FX: (703) 913-7859
WEB: WWW.NEELCO.COM
PROJECT #: TW4301



REVISIONS		
1	REVIEWER COMMENTS	ABC 8-6-14

RIGIDIFIED TUBE FRP ARCH (RTFA) PROJECT
FAIRFIELD, VT
SHOP DRAWINGS
SLOPED TOP UNITS
REBAR AND DIMENSIONS
T-WALL® RETAINING WALL SYSTEM

SCALE:	AS NOTED
DATE:	4/21/14
DESIGNED BY:	KD
DRAWN BY:	ABC
CHECKED BY:	CCG
SHEET:	8

GENERAL NOTES:

- PRIMARY REFERENCE:
 - AASHTO, LRFD BRIDGE DESIGN SPECIFICATION, 5TH EDITION 2010 (WITH INTERIMS)
- T-WALL@ CONCRETE:
 - F'c = 5000 psi (MINIMUM) @ 28 DAYS
 - MINIMUM STRIPPING STRENGTH: 2500 psi
- T-WALL@ REINFORCING STEEL:
 - BLACK
 - Fy = 60 ksi (GRADE 60)
 - WELDING IS NOT PERMITTED**
- MARKING OF PRECAST UNITS:
 - CLEARLY MARK EACH PRECAST UNIT ON THE BUTT END OF THE STEM WITH THE UNIT TYPE (i.e. 2.5x5.0x06 STD), THE DATE OF MANUFACTURE, THE LOT NUMBER (IF APPLICABLE), AND THE TRADEMARK "T-WALL@".
- REINFORCING FABRICATION AND PLACEMENT TOLERANCES:
 - THE STRUCTURAL DESIGN OF PRECAST UNITS ASSUMES 2 INCHES OF CONCRETE COVER OVER ALL REINFORCING BARS.
 - UNLESS OTHERWISE NOTED IN CONTRACT DOCUMENTS OR REFERENCED SPECIFICATIONS, TOLERANCES ON CONCRETE COVER SHALL BE ± 3/8 INCHES.
 - UNLESS OTHERWISE NOTED IN CONTRACT DOCUMENTS OR REFERENCED SPECIFICATIONS, TOLERANCES ON BAR PLACEMENT SHALL BE:
 - VERTICAL LOCATION OF TB-1 BARS: ± 3/8 INCHES
 - LOCATION / SPACING OF H-1, V-1 & V-2 BARS: ± 1 INCH
 - REGARDLESS OF THE SPECIFIED PLACEMENT TOLERANCES, CONCRETE COVER SHALL BE MAINTAINED WITHIN ± 3/8 INCHES AS PREVIOUSLY NOTED.
 - ALL REINFORCING BARS SHALL BE CUT AND BENT FOLLOWING REQUIREMENTS OF THE CRSI MANUAL OF STANDARD PRACTICE.
 - UNLESS NOTED OTHERWISE, TOLERANCES FOR BAR FABRICATION SHALL MEET REQUIREMENTS OF STANDARD ACI 318 AND THE CRSI MANUAL OF STANDARD PRACTICE.

SPECIAL NOTES:

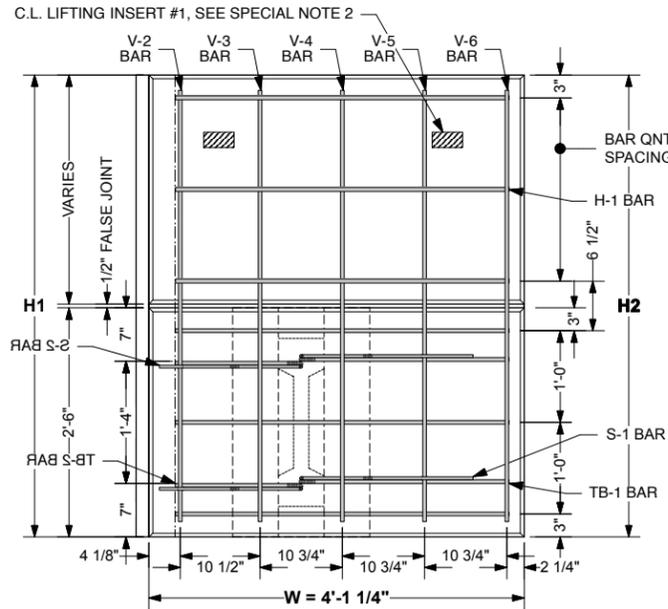
- FRONT FACE OF T-WALL@ UNITS FINISH TREATMENT:
 - PLAIN STEEL FORM FINISH
- LIFTING INSERTS CAPACITY:
 - TWO QUICKLIFT "QL050G" LIFTING INSERTS OR EQUAL, SPACED AT LEAST 30" APART.
 - 2000 LBS (1 TON) MINIMUM RATED WORKING LOAD CAPACITY.
 - MINIMUM CONCRETE STRENGTH SHALL BE 3,500 psi PRIOR TO STRIPPING AND LIFTING OPERATIONS.
- 1/2" FALSE JOINT LOCATION:
 - IF H-1 IS GREATER THEN 2'-6", THEN FIRST FALSE JOINT WILL BE 2'-6" FROM THE BOTTOM OF THE UNIT.
 - IF H-1 IS GREATER THEN 5'-0", THEN SECOND FALSE JOINT WILL BE 2'-6" ABOVE THE FIRST FALSE JOINT.
 - THE FALSE JOINT WILL 1/2" HIGH AND 1/2" DEEP.

REBAR SCHEDULES

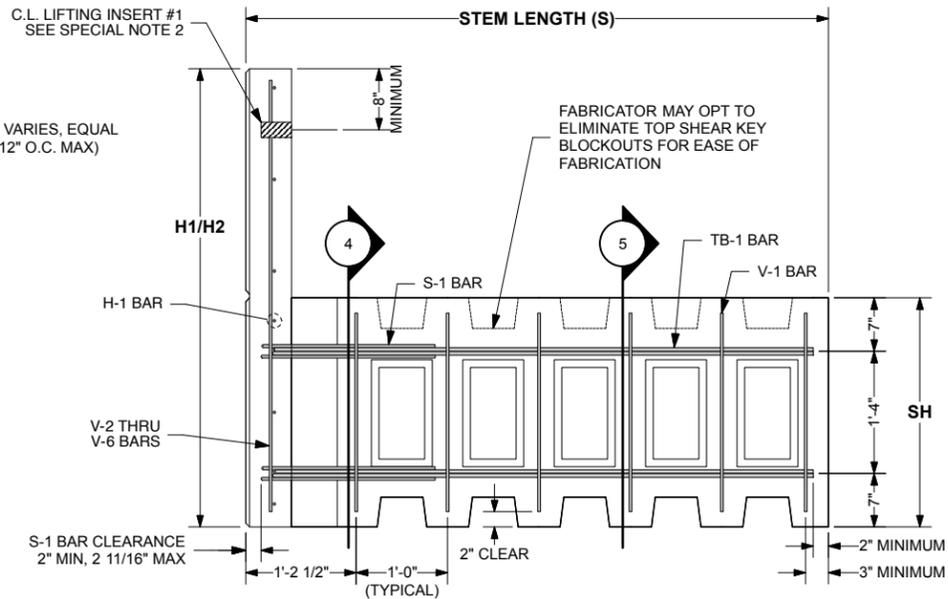
6' STEM SPECIAL UNITS								HIGHWAY REBAR		Remarks
Unit Dims	Bar Mark	Qty	Size	Length	Dim "A"	Bar Weight	Bend Dia			
H=VARIES	H-1	VARIES	#4	4'1 1/4"						SEE SLOPED TOP UNIT SCHEDULE
W=4'1 1/4"	V-1	12 ea	#4	2'2"		17.37 lbs				
S=6'4 1/2"	V-2 THRU V-6	1 ea	#4	VARIES						SEE SLOPED TOP UNIT SCHEDULE
SH=2'6"	S-1	2 ea	#4	3'4 1/2"		4.51 lbs	D= 3"			
	S-2	2 ea	#4	3'0 1/2"		4.06 lbs	D= 3"			
	TB-1	2 ea	#4	4'4"	2'0 1/2"	5.79 lbs	D= 3"			
	TB-2	2 ea	#4	3'5 1/4"	2'0 1/2"	4.59 lbs	D= 3"			

SLOPED TOP UNIT SCHEDULE:

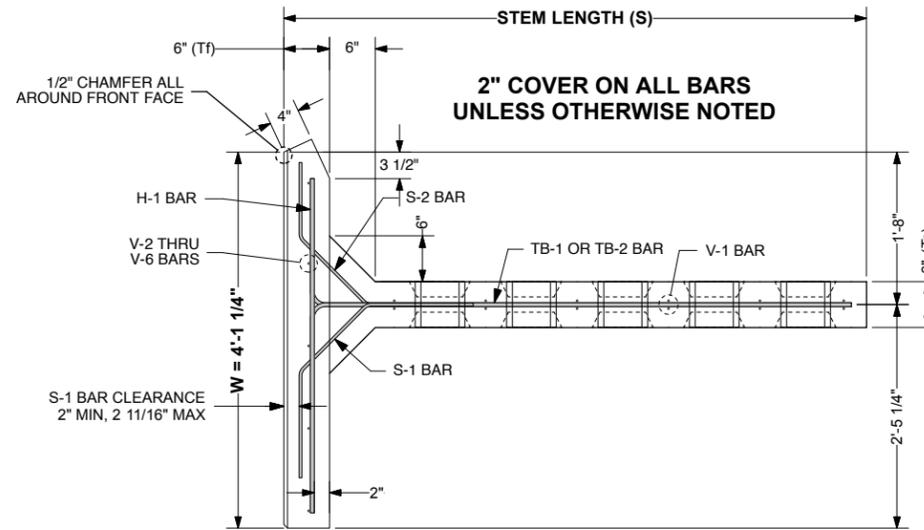
MARK No.	QNTY	STEM	WIDTH	H1	H2	H-1 BAR	V-2 BAR	V-3 BAR	V-4 BAR	V-5 BAR	V-6 BAR	VOL	WEIGHT	AREA
SP1	1 ea	6'4 1/2"	4'1 1/4"	4'5 1/2"	3'10 1/8"	5 ea	4'0 7/8"	4'0"	3'9 3/4"	3'8 1/8"	3'6 3/8"	0.55 cy	2,247 lbs	17.04 sf
SP14	1 ea	6'4 1/2"	4'1 1/4"	3'4 1/4"	2'9"	4 ea	2'11 5/8"	2'10 5/8"	2'8 1/2"	2'6 7/8"	2'5 3/8"	0.47 cy	1,908 lbs	12.52 sf



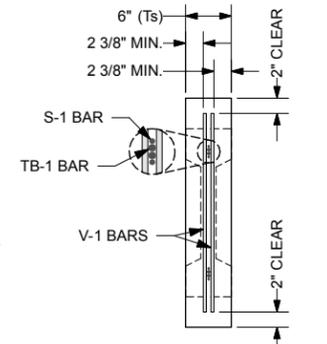
3 FRONT VIEW - 6' STEM UNIT SHOWN
Scale: 1" = 1'-0" (V-1 BARS IN STEM OMITTED FOR CLARITY)



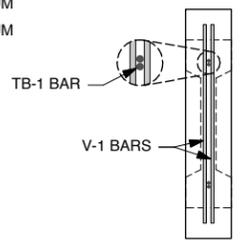
2 SIDE VIEW - 6' STEM UNIT SHOWN
Scale: 1" = 1'-0"



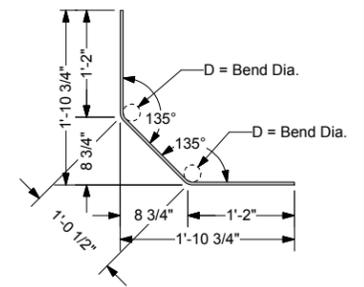
1 PLAN VIEW - 6' STEM UNIT SHOWN
Scale: 1" = 1'-0"



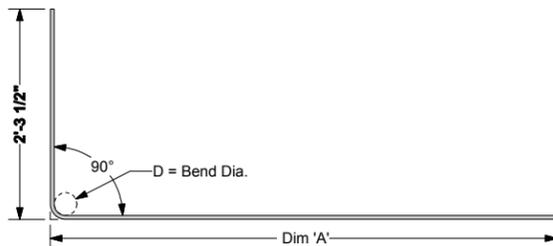
4 SECTION AT STEM
Scale: 1" = 1'-0"



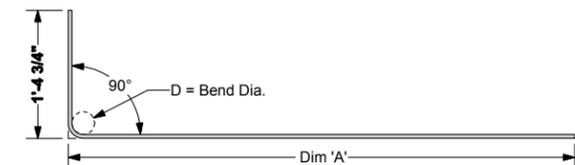
5 SECTION AT STEM
Scale: 1" = 1'-0"



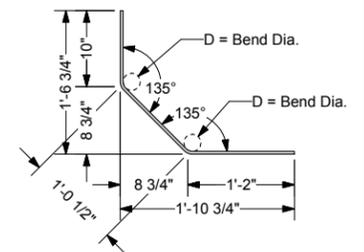
6 S-1 REBAR
Scale: 1" = 1'-0"



7 TB-1 REBAR
Scale: 1" = 1'-0"



8 TB-2 REBAR
Scale: 1" = 1'-0"



9 S-2 REBAR
Scale: 1" = 1'-0"



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PRECASTER: CONCRETE SYSTEMS, INC. CSI

PROJECT #: T21882

CONTRACTOR: A.L. ST. ONGE CONTRACTORS

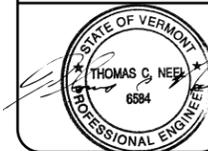
PROJECT #:

DESIGNER

THE NEEL COMPANY
8328-D TRAFORD LANE
SPRINGFIELD, VIRGINIA 22152
PH: (703) 913-7858
FX: (703) 913-7859
WEB: WWW.NEELCO.COM

PROJECT #: TW4301

CERTIFIED WITH RESPECT TO INTERNAL STABILITY OF T-WALL@ STRUCTURES ONLY



REVISIONS

NO.	REVIEWER COMMENTS	DATE
1	ABC	8-6-14

RIGIDIFIED TUBE FRP ARCH (RTFA) PROJECT

FAIRFIELD, VT

SHOP DRAWINGS
NARROW SLOPED TOP LEFT BEVELED UNITS
REBAR AND DIMENSIONS
T-WALL@ RETAINING WALL SYSTEM

SCALE: AS NOTED

DATE: 4/21/14

DESIGNED BY: KD

DRAWN BY: ABC

CHECKED BY: CCG

SHEET: 9

GENERAL NOTES:

- PRIMARY REFERENCE:
 - AASHTO, LRFD BRIDGE DESIGN SPECIFICATION, 5TH EDITION 2010 (WITH INTERIMS)
- T-WALL® CONCRETE:
 - F_c = 5000 psi (MINIMUM) @ 28 DAYS
 - MINIMUM STRIPPING STRENGTH: 2500 psi
- T-WALL® REINFORCING STEEL:
 - BLACK
 - F_y = 60 ksi (GRADE 60)
 - WELDING IS NOT PERMITTED
- MARKING OF PRECAST UNITS:
 - CLEARLY MARK EACH PRECAST UNIT ON THE BUTT END OF THE STEM WITH THE UNIT TYPE (i.e. 2.5x5.0x06 STD), THE DATE OF MANUFACTURE, THE LOT NUMBER (IF APPLICABLE), AND THE TRADEMARK "T-WALL®".
- REINFORCING FABRICATION AND PLACEMENT TOLERANCES:
 - THE STRUCTURAL DESIGN OF PRECAST UNITS ASSUMES 2 INCHES OF CONCRETE COVER OVER ALL REINFORCING BARS.
 - UNLESS OTHERWISE NOTED IN CONTRACT DOCUMENTS OR REFERENCED SPECIFICATIONS, TOLERANCES ON CONCRETE COVER SHALL BE ± 3/8 INCHES.
 - UNLESS OTHERWISE NOTED IN CONTRACT DOCUMENTS OR REFERENCED SPECIFICATIONS, TOLERANCES ON BAR PLACEMENT SHALL BE:
 - VERTICAL LOCATION OF TB-1 BARS: ± 3/8 INCHES
 - LOCATION / SPACING OF H-1, V-1 & V-2 BARS: ± 1 INCH
 - REGARDLESS OF THE SPECIFIED PLACEMENT TOLERANCES, CONCRETE COVER SHALL BE MAINTAINED WITHIN ± 3/8 INCHES AS PREVIOUSLY NOTED.
 - ALL REINFORCING BARS SHALL BE CUT AND BENT FOLLOWING REQUIREMENTS OF THE CRSI MANUAL OF STANDARD PRACTICE.
 - UNLESS NOTED OTHERWISE, TOLERANCES FOR BAR FABRICATION SHALL MEET REQUIREMENTS OF STANDARD ACI 318 AND THE CRSI MANUAL OF STANDARD PRACTICE.

SPECIAL NOTES:

- FRONT FACE OF T-WALL® UNITS FINISH TREATMENT:
 - PLAIN STEEL FORM FINISH
- LIFTING INSERTS CAPACITY:
 - TWO QUICKLIFT® QL050G LIFTING INSERTS OR EQUAL, SPACED AT LEAST 30" APART.
 - 2000 LBS (1 TON) MINIMUM RATED WORKING LOAD CAPACITY.
 - MINIMUM CONCRETE STRENGTH SHALL BE 3,500 psi PRIOR TO STRIPPING AND LIFTING OPERATIONS.
- 1/2" FALSE JOINT LOCATION:
 - IF H-1 IS GREATER THEN 2'-6", THEN FIRST FALSE JOINT WILL BE 2'-6" FROM THE BOTTOM OF THE UNIT.
 - IF H-1 IS GREATER THEN 5'-0", THEN SECOND FALSE JOINT WILL BE 2'-6" ABOVE THE FIRST FALSE JOINT.
 - THE FALSE JOINT WILL 1/2" HIGH AND 1/2" DEEP.

REBAR SCHEDULES

6' STEM SPECIAL UNITS

Unit Dims	Bar Mark	Qty	Size	Length	Dim "A"	Bar Weight	Bend Dia	Remarks
H=VARIES	H-1	VARIES	#4	4'3 3/8"				SEE SLOPED TOP UNIT SCHEDULE
W=4'11 1/4"	V-1	12 ea	#4	2'2"		17.37 lbs		
S=6'4 1/2"	V-2 THRU V-7	1 ea	#5	VARIES				SEE SLOPED TOP UNIT SCHEDULE
SH=2'6"	S-1	4 ea	#4	3'4 1/2"		9.02 lbs	D=3"	
	TB-1	2 ea	#4	8'2 7/8"	5'11"	11.01 lbs	D=3"	
	TB-2	2 ea	#4	7'11"	5'11"	10.58 lbs	D=3"	

HIGHWAY REBAR

SLOPED TOP UNIT SCHEDULE:

MARK No.	QNTY	STEM	WIDTH	H1	H2	H-1 BAR	V-2 BAR	V-3 BAR	V-4 BAR	V-5 BAR	V-6 BAR	V-7 BAR	VOL	WEIGHT	AREA
SP10	1 ea	6'4 1/2"	4'11 1/4"	24"	40 3/4"	5 ea	2'1 1/4"	2'5 3/8"	2'9 1/2"	2'11 5/8"	3'3 3/4"	3'6 3/8"	0.53 cy	2,155 lbs	15.81 sf
SP13	1 ea	6'4 1/2"	4'11 1/4"	4'3 3/8"	6'1"	7 ea	4'0 1/2"	4'4 7/8"	4'9 1/4"	4'11 3/8"	5'3 3/4"	5'6 3/8"	0.71 cy	2,887 lbs	25.58 sf



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PRECASTER: CONCRETE SYSTEMS, INC. CSI

PROJECT #: T21882

CONTRACTOR: A.L. ST. ONGE CONTRACTORS

PROJECT #:

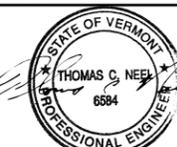
DESIGNER



THE NEEL COMPANY
8328-D TRAFORD LANE
SPRINGFIELD, VIRGINIA 22152
PH: (703) 913-7858
FX: (703) 913-7859
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PROJECT #: TW4301

CERTIFIED WITH RESPECT TO INTERNAL STABILITY OF T-WALL® STRUCTURES ONLY



REVISIONS

NO.	REVIEWER COMMENTS	DATE
1	REVIEWER COMMENTS	ABC 8-6-14

RIGIDIFIED TUBE FRP ARCH (RTFA) PROJECT

FAIRFIELD, VT

SHOP DRAWINGS
NARROW SLOPED TOP RIGHT BEVELED UNITS
REBAR AND DIMENSIONS
T-WALL® RETAINING WALL SYSTEM

SCALE: AS NOTED

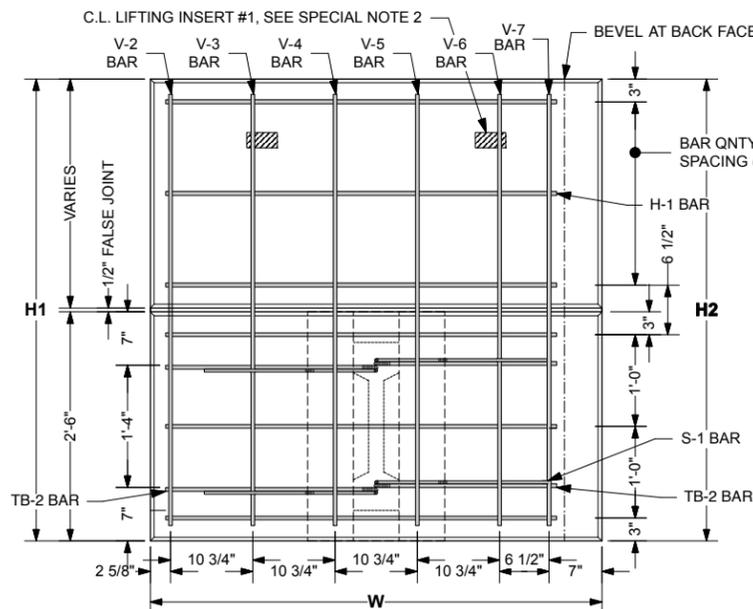
DATE: 4/21/14

DESIGNED BY: KD

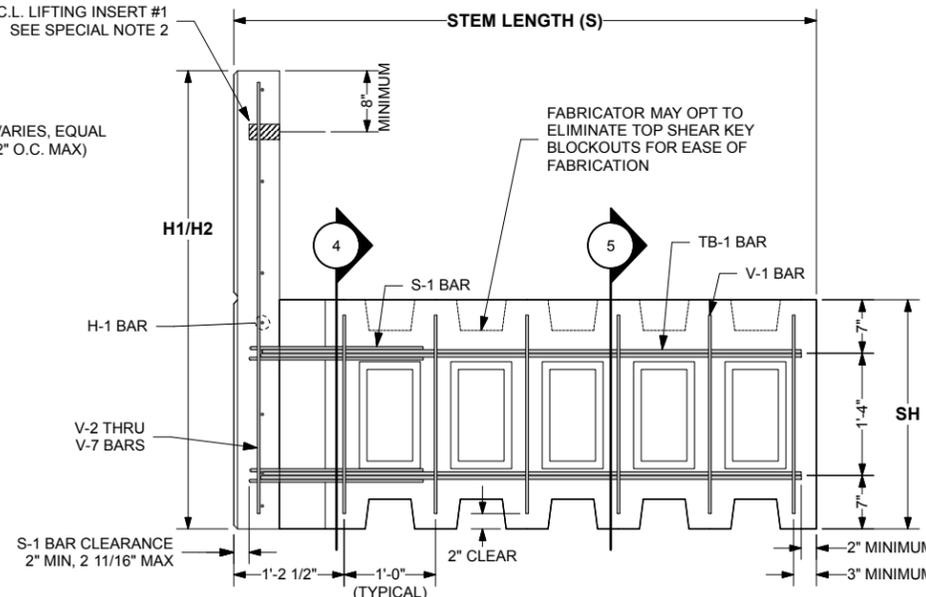
DRAWN BY: ABC

CHECKED BY: CCG

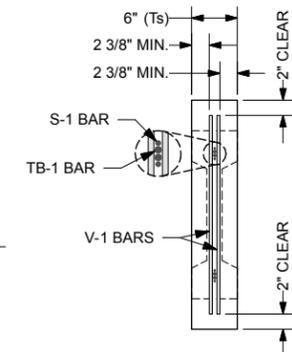
SHEET: 10



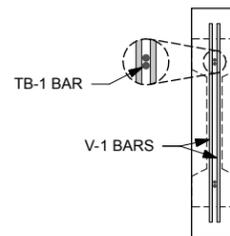
3 FRONT VIEW - 6' STEM UNIT SHOWN
Scale: 1" = 1'-0" (V-1 BARS IN STEM OMITTED FOR CLARITY)



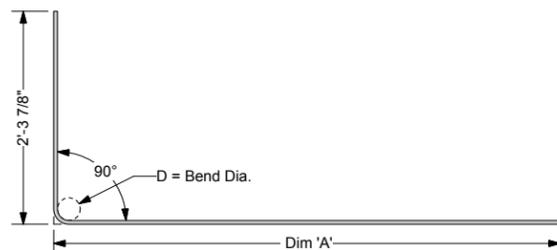
2 SIDE VIEW - 6' STEM UNIT SHOWN
Scale: 1" = 1'-0"



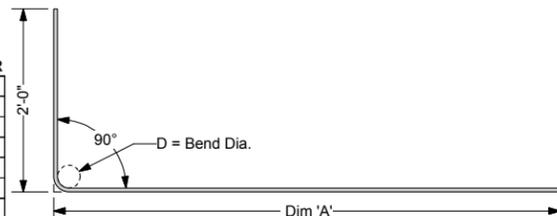
4 SECTION AT STEM
Scale: 1" = 1'-0"



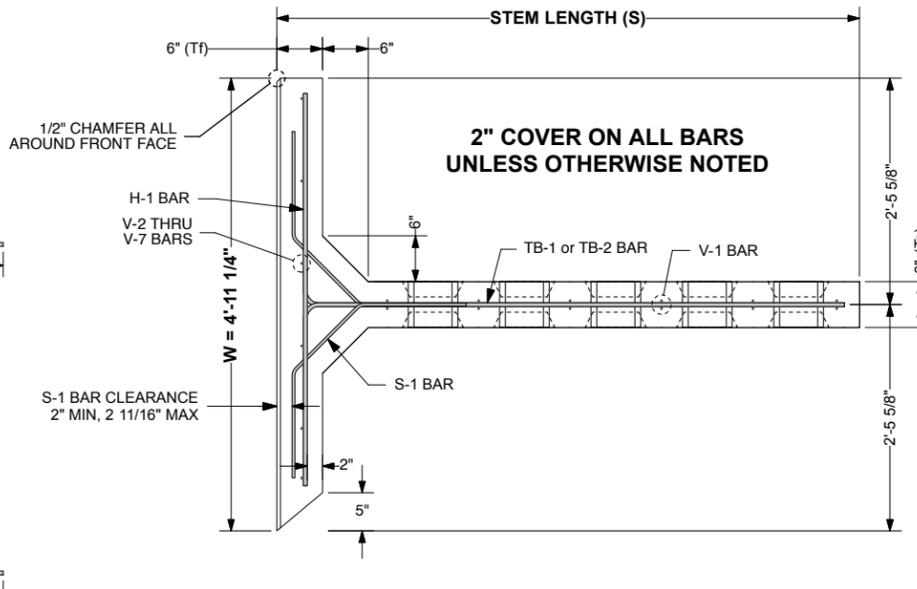
5 SECTION AT STEM
Scale: 1" = 1'-0"



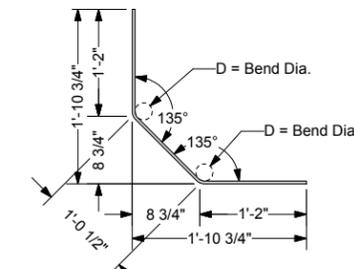
7 TB-1 REBAR
Scale: 1" = 1'-0"



7 TB-1 REBAR
Scale: 1" = 1'-0"



1 PLAN VIEW - 6' STEM UNIT SHOWN
Scale: 1" = 1'-0"



6 S-1 REBAR
Scale: 1" = 1'-0"

REBAR SCHEDULES

SP22								HIGHWAY REBAR	
Unit Dims	Bar Mark	Qty	Size	Length	Dim "A"	Bar Weight	Bend Dia	Remarks	
H=2'6"	H-1	3 ea	#4	3'7 3/4"		7.31 lbs			
W=4'1 1/4"	V-1	12 ea	#4	2'2"		17.37 lbs			
S=6'4 1/2"	V-2	4 ea	#4	2'2"		5.79 lbs			
SH=2'6"	S-1	2 ea	#4	3'4 1/2"		4.51 lbs	D=3"		
	TB-1	2 ea	#4	8'2 1/2"	5'11"	10.97 lbs	D=3"		
	S-2	2 ea	#4	3'4 1/2"		4.51 lbs	D=3"		
	TB-2	2 ea	#4	7'3 3/4"	5'11"	9.77 lbs	D=3"		
						35.54 lbs			

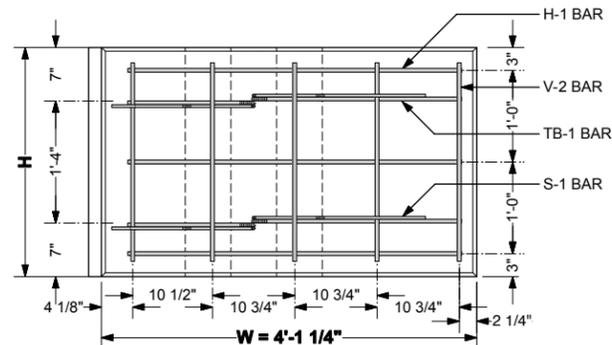
SP21								HIGHWAY REBAR	
Unit Dims	Bar Mark	Qty	Size	Length	Dim "A"	Bar Weight	Bend Dia	Remarks	
H=2'6"	H-1	3 ea	#4	3'7 3/4"		7.31 lbs			
W=4'1 1/4"	V-1	16 ea	#4	2'2"		23.16 lbs			
S=8'4 1/2"	V-2	4 ea	#4	2'2"		5.79 lbs			
SH=2'6"	S-1	2 ea	#4	3'4 1/2"		4.51 lbs	D=3"		
	TB-1	2 ea	#4	10'2 1/2"	7'11"	13.64 lbs	D=3"		
	S-2	2 ea	#4	3'4 1/2"		4.51 lbs	D=3"		
	TB-2	2 ea	#4	9'3 3/4"	7'11"	12.44 lbs	D=3"		
						40.89 lbs			

SP20								HIGHWAY REBAR	
Unit Dims	Bar Mark	Qty	Size	Length	Dim "A"	Bar Weight	Bend Dia	Remarks	
H=2'6"	H-1	3 ea	#4	3'7 3/4"		9.35 lbs			
W=4'1 1/4"	V-1	20 ea	#4	2'2"		16.29 lbs			
S=10'4 1/2"	V-2	4 ea	#4	2'2"		4.89 lbs			
SH=2'6"	S-1	2 ea	#4	3'4 1/2"		5.08 lbs	D=2 1/4"		
	TB-1	2 ea	#4	12'2 1/2"	9'11"	32.50 lbs	D=3"		
	S-2	2 ea	#4	3'4 1/2"		5.08 lbs	D=2 1/4"		
	TB-2	2 ea	#4	11'3 3/4"	9'11"	32.50 lbs	D=3"		
						68.11 lbs			

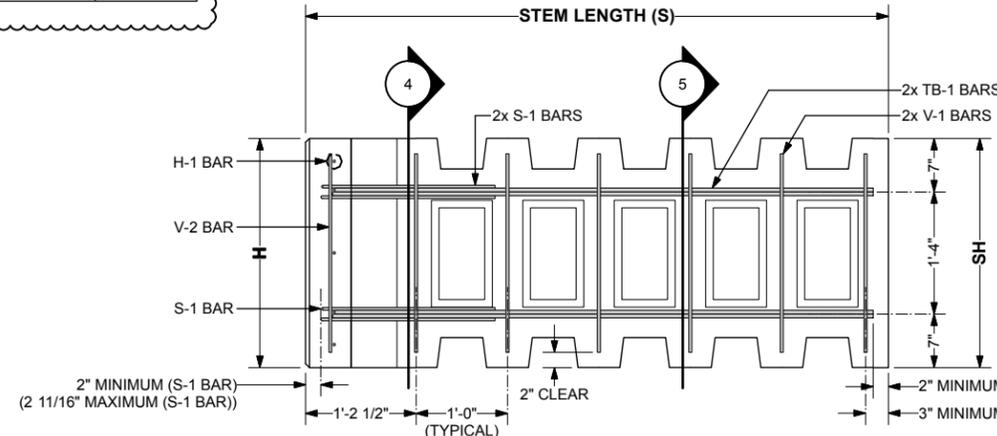
T-WALL UNIT PROPERTIES

UNIT TYPE	H	W	S	Tf*	Ts	SH	VOLUME*	WEIGHT*
SP22	2'6"	4'1 1/4"	6'4 1/2"	6"	6"	2'6"	0.41 cy	1,659 lbs
SP21	2'6"	4'1 1/4"	8'4 1/2"	6"	6"	2'6"	0.47 cy	1,920 lbs
SP20	2'6"	4'1 1/4"	10'4 1/2"	6"	6"	2'6"	0.54 cy	2,181 lbs

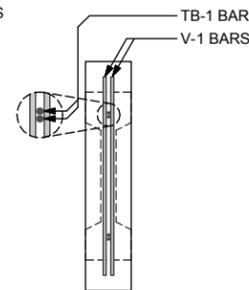
* VOLUMES AND WEIGHTS ON THIS TABLE ARE BASED ON 6" FACE THICKNESS (Tf)



3 FRONT VIEW - 2.5 x 5.0 x 06 Std SHOWN
Scale: 1" = 1'-0"



2 SIDE VIEW - 2.5 x 5.0 x 06 Std SHOWN
Scale: 1" = 1'-0"



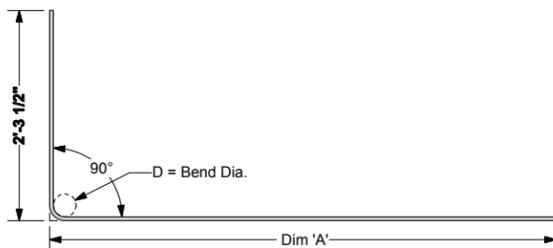
5 SECTION THROUGH STEM
Scale: 1" = 1'-0"

SPECIAL NOTES:

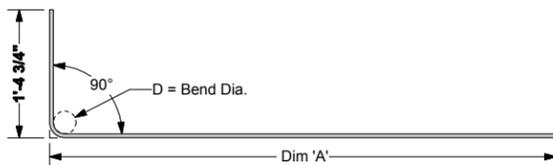
- FRONT FACE OF T-WALL® UNITS FINISH TREATMENT:
 - PLAIN STEEL FORM FINISH

GENERAL NOTES:

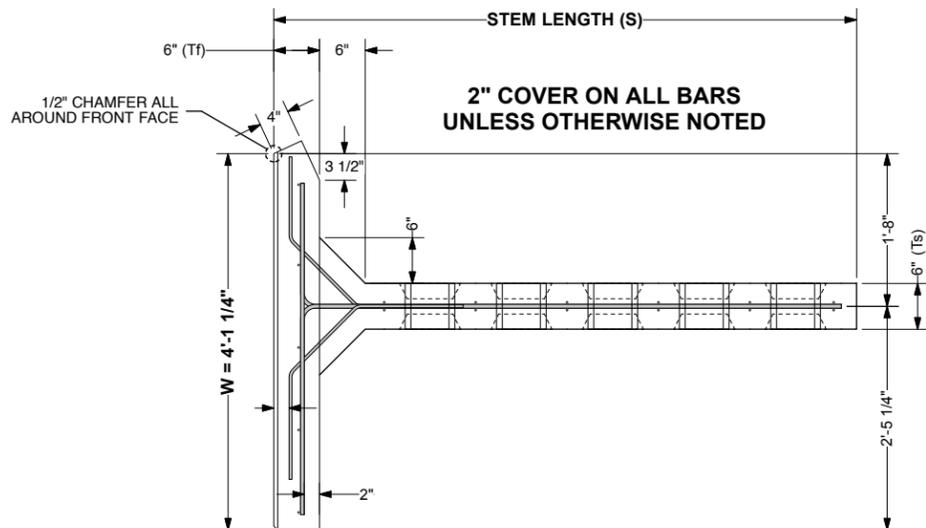
- PRIMARY REFERENCE:
 - AASHTO, LRFD BRIDGE DESIGN SPECIFICATION, 5TH EDITION 2010 (WITH INTERIMS)
- T-WALL® CONCRETE:
 - F'c = 5000 psi (MINIMUM) @ 28 DAYS
 - MINIMUM STRIPPING STRENGTH: 2500 psi
- T-WALL® REINFORCING STEEL:
 - BLACK
 - Fy = 60 ksi (GRADE 60)
 - WELDING IS NOT PERMITTED
- MARKING OF PRECAST UNITS:
 - CLEARLY MARK EACH PRECAST UNIT ON THE BUTT END OF THE STEM WITH THE UNIT TYPE (i.e. 2.5x5.0x06 STD), THE DATE OF MANUFACTURE, THE LOT NUMBER (IF APPLICABLE), AND THE TRADEMARK "T-WALL®".
- REINFORCING FABRICATION AND PLACEMENT TOLERANCES:
 - THE STRUCTURAL DESIGN OF PRECAST UNITS ASSUMES 2 INCHES OF CONCRETE COVER OVER ALL REINFORCING BARS.
 - UNLESS OTHERWISE NOTED IN CONTRACT DOCUMENTS OR REFERENCED SPECIFICATIONS, TOLERANCES ON CONCRETE COVER SHALL BE ± 3/8 INCHES.
 - UNLESS OTHERWISE NOTED IN CONTRACT DOCUMENTS OR REFERENCED SPECIFICATIONS, TOLERANCES ON BAR PLACEMENT SHALL BE:
 - VERTICAL LOCATION OF TB-1 BARS: ± 3/8 INCHES
 - LOCATION / SPACING OF H-1, V-1 & V-2 BARS: ± 1 INCH
 - REGARDLESS OF THE SPECIFIED PLACEMENT TOLERANCES, CONCRETE COVER SHALL BE MAINTAINED WITHIN ± 3/8 INCHES AS PREVIOUSLY NOTED.
 - ALL REINFORCING BARS SHALL BE CUT AND BENT FOLLOWING REQUIREMENTS OF THE CRSI MANUAL OF STANDARD PRACTICE.
 - UNLESS NOTED OTHERWISE, TOLERANCES FOR BAR FABRICATION SHALL MEET REQUIREMENTS OF STANDARD ACI 318 AND THE CRSI MANUAL OF STANDARD PRACTICE.



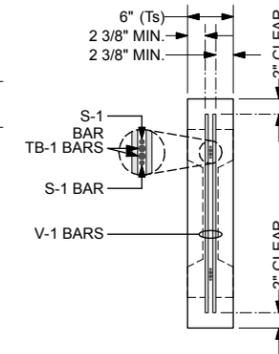
7 TB-1 REBAR
Scale: 1" = 1'-0"



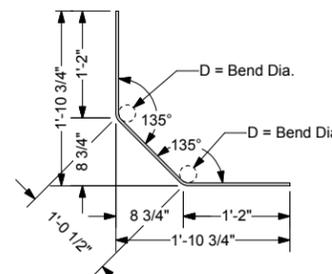
8 TB-2 REBAR
Scale: 1" = 1'-0"



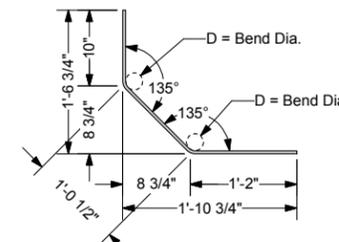
1 PLAN VIEW - 2.5 x 5.0 x 06 Std SHOWN
Scale: 1" = 1'-0"



4 SECTION THROUGH STEM
Scale: 1" = 1'-0"



6 S-1 REBAR
Scale: 1" = 1'-0"



9 S-2 REBAR
Scale: 1" = 1'-0"



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PRECASTER: CONCRETE SYSTEMS, INC. CSI

PROJECT #: T21882

CONTRACTOR: A.L. ST. ONGE CONTRACTORS

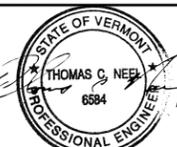
PROJECT #:

DESIGNER

THE NEEL COMPANY
8328-D TRAFORD LANE
SPRINGFIELD, VIRGINIA 22152
PH: (703) 913-7858
FX: (703) 913-7859
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PROJECT #: TW4301

CERTIFIED WITH RESPECT TO INTERNAL STABILITY OF T-WALL® STRUCTURES ONLY



REVISIONS

NO.	REVIEWER COMMENTS	DATE
1	ABC	8-6-14

RIGIDIFIED TUBE FRP ARCH (RTFA) PROJECT

FAIRFIELD, VT

SHOP DRAWINGS
NARROW LEFT BEVELED UNITS
REBAR AND DIMENSIONS
T-WALL® RETAINING WALL SYSTEM

SCALE: AS NOTED

DATE: 4/21/14

DESIGNED BY: KD

DRAWN BY: ABC

CHECKED BY: CCG

SHEET: 11

T-WALL UNIT PROPERTIES

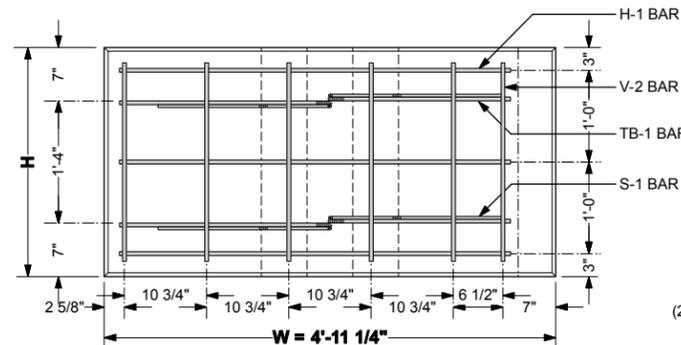
UNIT TYPE	H	W	S	Tf*	Ts	SH	VOLUME*	WEIGHT*
SP24	2'6"	4'11 1/4"	6'4 1/2"	6"	6"	2'6"	0.45 cy	1,815 lbs
SP23	2'6"	4'11 1/4"	8'4 1/2"	6"	6"	2'6"	0.51 cy	2,076 lbs

* VOLUMES AND WEIGHTS ON THIS TABLE ARE BASED ON 6" FACE THICKNESS (Tf)

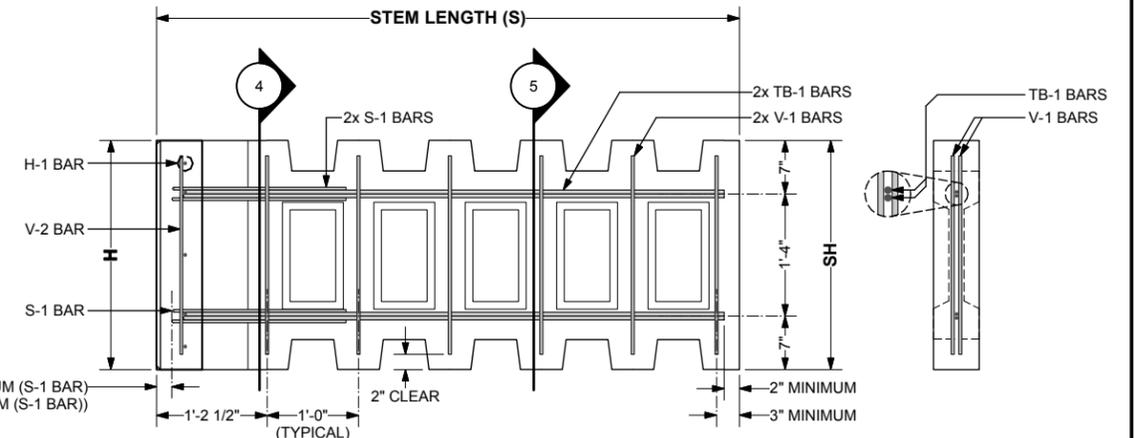
REBAR SCHEDULES

SP24								HIGHWAY REBAR	
Unit Dims	Bar Mark	Qty	Size	Length	Dim "A"	Bar Weight	Bend Dia	Remarks	
H=2'6"	H-1	3 ea	#4	4'3 3/8"		8.57 lbs			
W=4'11 1/4"	V-1	12 ea	#4	2'2"		17.37 lbs			
S=6'4 1/2"	V-2	3 ea	#4	2'2"		4.34 lbs			
SH=2'6"	S-1	4 ea	#4	3'4 1/2"		9.02 lbs	D= 3"		
	TB-1	2 ea	#4	8'2 7/8"	5'11"	11.01 lbs	D= 3"		
	TB-2	2 ea	#4	7'11"	5'11"	10.58 lbs	D= 3"		
						52.31 lbs			

SP23								HIGHWAY REBAR	
Unit Dims	Bar Mark	Qty	Size	Length	Dim "A"	Bar Weight	Bend Dia	Remarks	
H=2'6"	H-1	3 ea	#4	4'3 3/8"		8.57 lbs			
W=4'11 1/4"	V-1	16 ea	#4	2'2"		23.16 lbs			
S=8'4 1/2"	V-2	3 ea	#4	2'2"		4.34 lbs			
SH=2'6"	S-1	4 ea	#4	3'4 1/2"		9.02 lbs	D= 3"		
	TB-1	2 ea	#4	10'2 7/8"	7'11"	13.68 lbs	D= 3"		
	TB-2	2 ea	#4	9'11"	7'11"	13.25 lbs	D= 3"		
						63.45 lbs			



3 FRONT VIEW - 2.5 x 5.0 x 06 Std SHOWN
Scale: 1" = 1'-0"
(V-1 BARS IN STEM OMITTED FOR CLARITY)



2 SIDE VIEW - 2.5 x 5.0 x 06 Std SHOWN
Scale: 1" = 1'-0"

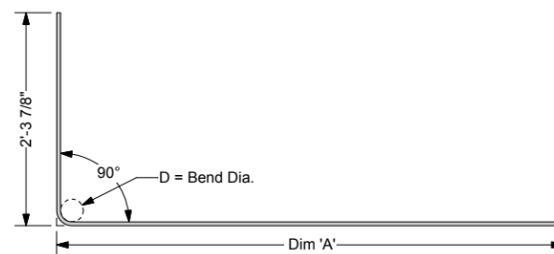
5 SECTION THROUGH STEM
Scale: 1" = 1'-0"

SPECIAL NOTES:

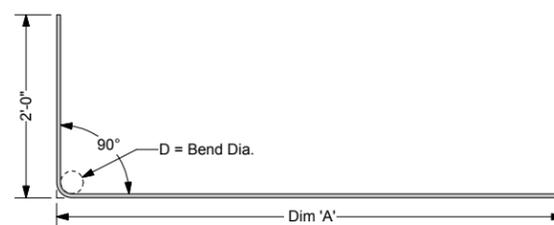
- FRONT FACE OF T-WALL® UNITS FINISH TREATMENT:
 - PLAIN STEEL FORM FINISH

GENERAL NOTES:

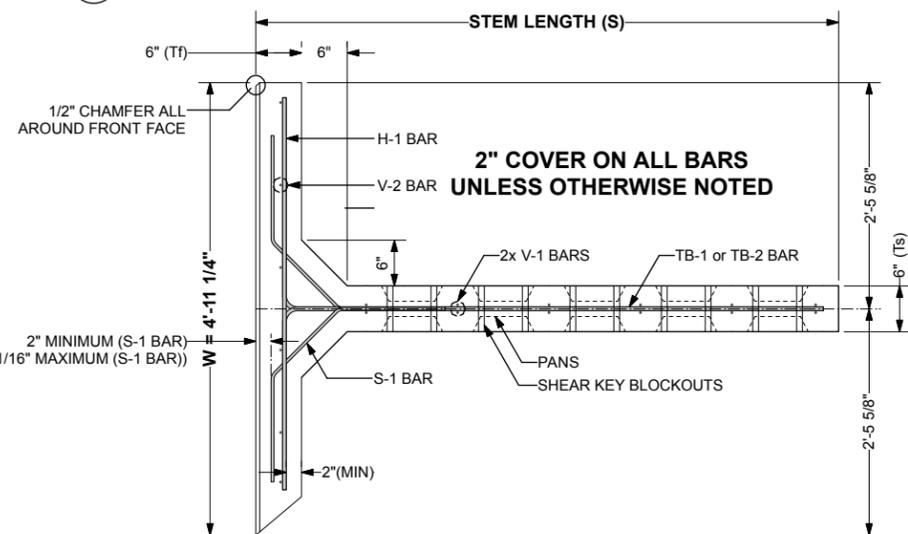
- PRIMARY REFERENCE:
 - AASHTO, LRFD BRIDGE DESIGN SPECIFICATION, 5TH EDITION 2010 (WITH INTERIMS)
- T-WALL® CONCRETE:
 - F_c = 5000 psi (MINIMUM) @ 28 DAYS
 - MINIMUM STRIPPING STRENGTH: 2500 psi
- T-WALL® REINFORCING STEEL:
 - BLACK
 - F_y = 60 ksi (GRADE 60)
 - WELDING IS NOT PERMITTED
- MARKING OF PRECAST UNITS:
 - CLEARLY MARK EACH PRECAST UNIT ON THE BUTT END OF THE STEM WITH THE UNIT TYPE (i.e. 2.5x5.0x06 STD), THE DATE OF MANUFACTURE, THE LOT NUMBER (IF APPLICABLE), AND THE TRADEMARK "T-WALL®".
- REINFORCING FABRICATION AND PLACEMENT TOLERANCES:
 - THE STRUCTURAL DESIGN OF PRECAST UNITS ASSUMES 2 INCHES OF CONCRETE COVER OVER ALL REINFORCING BARS.
 - UNLESS OTHERWISE NOTED IN CONTRACT DOCUMENTS OR REFERENCED SPECIFICATIONS, TOLERANCES ON CONCRETE COVER SHALL BE ± 3/8 INCHES.
 - UNLESS OTHERWISE NOTED IN CONTRACT DOCUMENTS OR REFERENCED SPECIFICATIONS, TOLERANCES ON BAR PLACEMENT SHALL BE:
 - VERTICAL LOCATION OF TB-1 BARS: ± 3/8 INCHES
 - LOCATION / SPACING OF H-1, V-1 & V-2 BARS: ± 1 INCH
 - REGARDLESS OF THE SPECIFIED PLACEMENT TOLERANCES, CONCRETE COVER SHALL BE MAINTAINED WITHIN ± 3/8 INCHES AS PREVIOUSLY NOTED.
 - ALL REINFORCING BARS SHALL BE CUT AND BENT FOLLOWING REQUIREMENTS OF THE CRSI MANUAL OF STANDARD PRACTICE.
 - UNLESS NOTED OTHERWISE, TOLERANCES FOR BAR FABRICATION SHALL MEET REQUIREMENTS OF STANDARD ACI 318 AND THE CRSI MANUAL OF STANDARD PRACTICE.



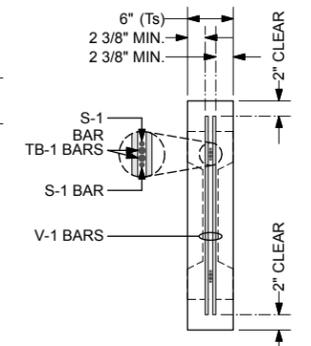
7 TB-1 REBAR
Scale: 1" = 1'-0"



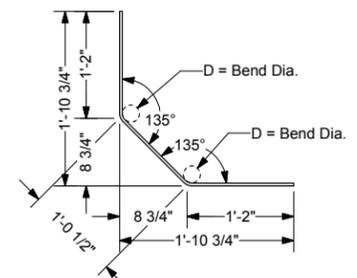
8 TB-2 REBAR
Scale: 1" = 1'-0"



1 PLAN VIEW - 2.5 x 5.0 x 06 Std SHOWN
Scale: 1" = 1'-0"



4 SECTION THROUGH STEM
Scale: 1" = 1'-0"



6 S-1 REBAR
Scale: 1" = 1'-0"



The design contained on these drawings is based upon information provided by the owner. On the basis of this information, The Neel Company has designed, and is responsible for, the internal stability of the structure only. External stability, including foundation and slope stability, is the responsibility of the owner.

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PRECASTER: CONCRETE SYSTEMS, INC. CSI

PROJECT #: T21882

CONTRACTOR: A.L. ST. ONGE CONTRACTORS

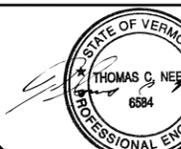
PROJECT #:

DESIGNER

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PROJECT #: TW4301

CERTIFIED WITH RESPECT TO INTERNAL STABILITY OF T-WALL® STRUCTURES ONLY



REVISIONS

RIGIDIFIED TUBE FRP ARCH (RTFA) PROJECT

FAIRFIELD, VT

SHOP DRAWINGS
NARROW RIGHT BEVELED UNITS
REBAR AND DIMENSIONS
T-WALL® RETAINING WALL SYSTEM

SCALE: AS NOTED

DATE: 4/21/14

DESIGNED BY: KD

DRAWN BY: ABC

CHECKED BY: CCG

SHEET: 12