



February 10, 2014

Mr. Dwayne Lyerly
SBA Communications Corporation
5900 Broken Sound Parkway NW
Boca Raton, FL 33487
(919) 557-0555

Vertical Solutions, Inc.
PO Box 579
Holly Springs, NC 27540
(888) 321-6167
operations@verticalsolutions-inc.com

Subject:

Close-Out Letter

Carrier Designation

**Sprint/Nextel, Reconfiguration – Overlap
Site Number: CT33XC087
Site Name: West Haven-rt 15**

SBA Designation

**Site Number: CT46139-A
Site Name: West Haven-rt 15/Woodbridge**

Engineering Firm Designation

Vertical Solutions Project: 131360.01, Revision 0

Site Data

**370 Rockland Road, Guilford, New Haven County, CT 06437
Latitude: N41° 23' 48.60"±; Longitude: W072° 41' 19.70"±
Elevation: 372 ft±,
158.5-ft Self Supporting Pole Structure (Monopole)**

Dear Mr. Lyerly,

To your request, we present our close-out letter.

Based on the documents and photos provided by your office, the construction **does meet** the design intent of our Modification Design Drawings dated April 15, 2013.

We trust you find our work satisfactory. Please do not hesitate to call should you have any questions.

Sincerely,

Avery V. Fann, E.I.
Structural Engineer in Training

Reviewed by: CAA

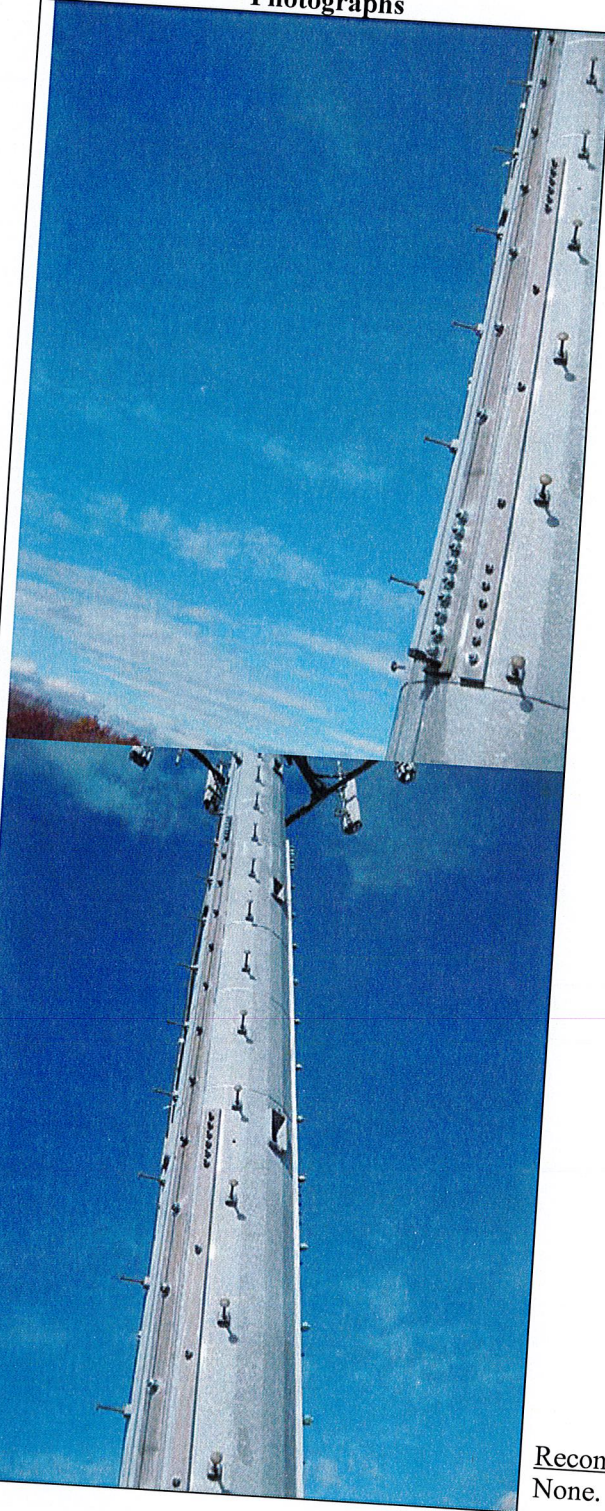


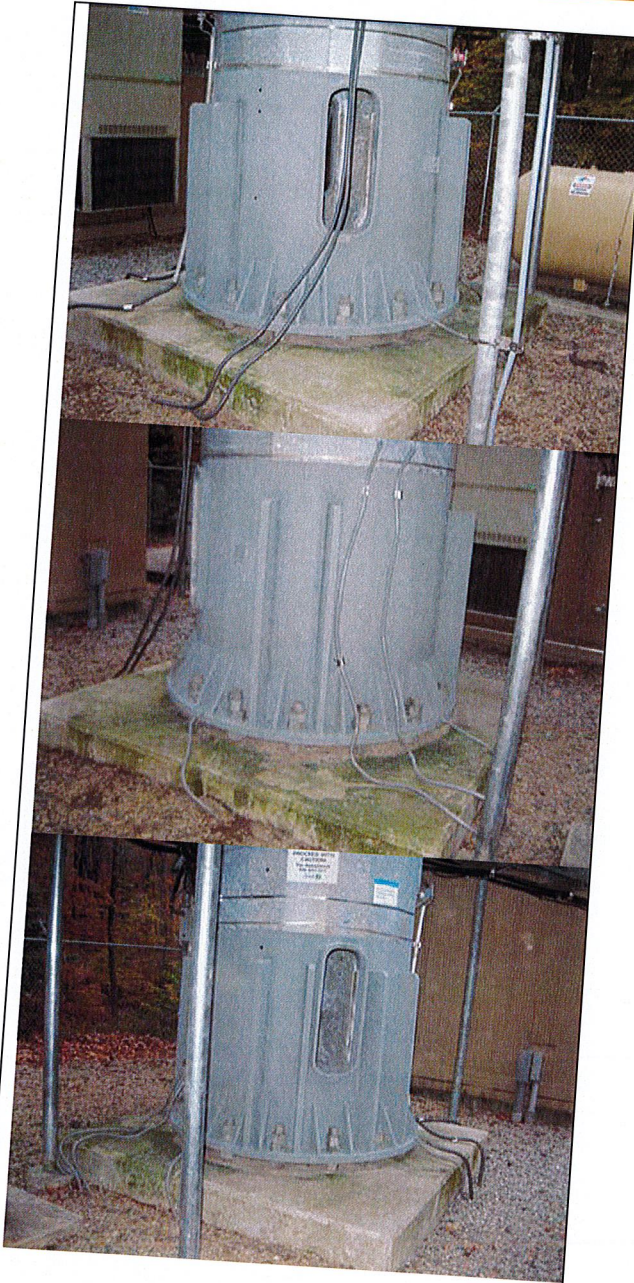
02/10/2014

Michael L. Lassiter, S.E., P.E.
Structural Engineer, Civil Engineer & President

CT License No.: 25064

PHOTOGRAPHS

Photographs	Comments
	<p data-bbox="787 325 868 367"><u>Item 1</u></p> <p data-bbox="787 388 1502 493">The existing reinforcing bars from 94.5-ft to 104.5-ft were not removed in order to installed new reinforcing bars.</p> <p data-bbox="698 1722 917 1795"><u>Recommendations:</u> None.</p>



Item 2 & 3

(32) Stiffener plates and (8) transition stiffener plates were installed.

Items 2 & 3 (Continued)



Recommendations:
None.



Item 4

Reinforcing bars were installed from 0.98-ft to 29.75-ft.

Recommendations:

None.



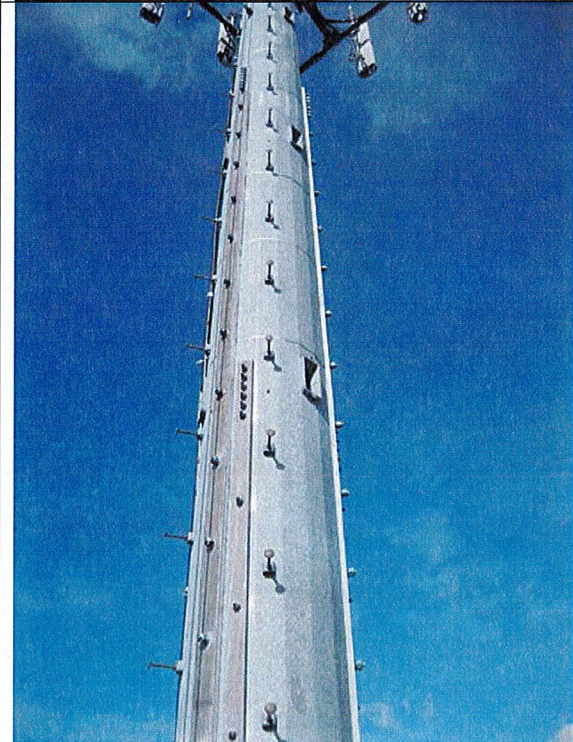
Item 5

Reinforcing bars were installed from 29.75-ft to 53.0 ft. Bars were installed using the welded splice connection per detail 3/S-5.



Item 5 (Continued)

Recommendations:
None.



Item 6

Reinforcing bars were installed from 94.5-ft to 119-ft.



Item 6 (Continued)

Recommendations:
None.

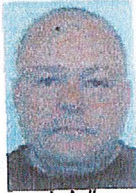
Attachments:

1. Welder Certifications for Albert Leonberger (10 pages)
2. Materials certifications (36 pages)
3. Ultrasonic Weld Testing Report by Materials Testing, Inc. (3 pages)
4. Modification design drawings by Vertical Solutions dated April 15, 2013 and stamped "As Built" by contractor on December 5, 2013

Welder Qualification Card



Albert Leonberger



Lab #
20091152

Company: n/a
Process: FCAW / Semi-Automatic
Position: 3G
Material: A-36 to A-36
Filler: E71T-1M

	Plate	Pipe	Dia.
Groove (Thickness):	1"	n/a	n/a
Fillet (Thickness):	n/a	n/a	n/a

Date: 11/19/2009 **Code: AWS D1.1:** 2008

Welder Training & Testing Institute, Inc.

Industrial Services Division

1144 N. Graham Street
Allentown, PA 18109

1-800-223-WTTI (9884)

website: www.welderinstitute.com

e-mail: services@welderinstitute.com



- Welder / Brazor / Procedure Qualification Testing • Weld Test Coupons
- Certified Welding Inspection (CWI) • Welder Training • CWI & NDT Training
- NDT Services (MT / PT / UT / VT / RI) • NDT Level III Services • Consulting

*Note: Data on this card represents the testing variables witnessed by our AWS-CWI.
Refer to the actual Welder/Brazor Qualification Test Record for limits of qualification.*

Welder Qualification Card



Albert Leonberger



Lab #
20091183

Company: n/a
Process: GMAW / Semi-Automatic
Position: 3G
Material: A-36 to A-36
Filler: ER70S-6

	Plate	Pipe	Dia.
Groove (Thickness):	1"	n/a	n/a
Fillet (Thickness):	n/a	n/a	n/a
Date: 11/19/2009	Code: AWS D1.1: 2008		

Welder Training & Testing Institute, Inc. Industrial Services Division

1144 N. Graham Street
Allentown, PA 18109
1-800-223-WTTI (9884)
website: www.welderinstitute.com
e-mail: services@welderinstitute.com



- Welder / Brazer / Procedure Qualification Testing • Weld Test Coupons
- Certified Welding Inspection (CWI) • Welder Training • CWI & NDT Training
- NDT Services (MT / PT / UT / VT / RI) • NDT Level III Services • Consulting

*Note: Data on this card represents the testing variables witnessed by our AWS-CWI.
Refer to the actual Welder/Brazer Qualification Test Record for limits of qualification.*

Welder Qualification Card

Albert Leonberger



Lab #
20091131

Company: n/a
Process: SMAW / Manual
Position: JG
Material: A-36 to A-36
Filler: E7018

	Plate	Pipe	Dia.
Groove (Thickness):	1"	n/a	n/a
Fillet (Thickness):	n/a	n/a	n/a

Date: 11/11/2009

Code: AWS D1.1: 2008

Welder Training & Testing Institute, Inc.

Industrial Services Division

1144 N. Graham Street
Allentown, PA 18109
1-800-223-WTTI (9884)
website: www.welderinstitute.com
e-mail: services@welderinstitute.com



- Welder / Brazor / Procedure Qualification Testing • Weld Test Coupons
- Certified Welding Inspection (CWI) • Welder Training • CWI & NDT Training
- NDT Services (MT / PT / UT / VT / RI) • NDT Level III Services • Consulting

*Note: Data on this card represents the testing variables witnessed by our AWS-CWI.
Refer to the actual Welder/Brazor Qualification Test Record for limits of qualification.*



WELDER QUALIFICATION TEST RECORD

A.W.S. D1.1



Type of Qualification: Welder: Welding Operator: Tack Welder:
 Name: Albert Leonberger ID Number:
 Welding Procedure Specification No.: I-FCAW Rev.: 1 Date: 2/13/2008

<u>Variable</u>	<u>Actual Variable Used in Qualification</u>	<u>Qualification Range</u>
Process / Type:	FCAW / Semi-Automatic	
Electrode (Single / Multiple):	Single	Single
Current / Polarity:	DC / Positive	
Position:	3G	1G,2G,3G,1F,2F,3F
Weld Progression:	Uphill	Uphill
Backing (Yes / No):	Yes	With or Both Sides
Material / Spec.:	A-36 to A-36	
Base Metal		
Thickness (Plate)		
Groove:	1"	1/8" - Unlimited
Fillet:	n/a	1/8" - Unlimited
Thickness (Pipe / Tube)		
Groove:	n/a	1/8" - Unlimited
Fillet:	n/a	1/8" - Unlimited
Diameter (Pipe)		
Groove:	n/a	>24" OD
Fillet:	n/a	All except TK & Y Joints
Filler Metal Spec. No.:	A5.20	
Class:	E71T-1M	
F-No.:	n/a	n/a
Gas / Flux Type:	75% Argon / 25% CO2	
Other:	n/a	n/a

Visual Inspection (4.8.1)

Acceptable Yes: No:

Guided Bend Test Results (4.30.5)

#1: Radiograph - PASSED #3: n/a
 #2: n/a #4: n/a

Fillet Weld Test Results (4.30.2.3, 4.30.4.1)

Appearance: n/a Size: n/a
 Penetration: n/a Macroetch: n/a

Inspector: Jeffrey T. Wiswesser CWI / WTTI LabNumber(s): 20091152
 Organization: Welder Training & Testing Institute Date: 11/19/2009

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of section 4 of AWS D1.1 (2008) Structural Welding Code - Steel.

Contractor: n/a Authorized by: Date:



Radiographic Inspection Report

Customer: n/a

Date: 11/19/2009

Welder's Name: Albert Leonberger

Procedure No.: 1-FCAW

Material Type: A-36 With 1/4" Backing

Material Thickness: 1.00"

Weld Thickness: 1.00"

Reinforcement Thickness: 0"

Diameter / Length: n/a

Source to Film Distance: 56"

X-Ray KV: 280

MA: 8

Spot Size: 3.0

Exposure Time: 90 Seconds

Penetrameter: Source Side

Size: .020 / 2.0

Type: Wire / Hole IQI

Shim Material: None Used

Shim Thickness: n/a

Screens Front: 0.005"

Back: 0.005"

Geometric Unsharpness (UG) Less Than: .020"

Weld Identification	Accept	Reject	Porosity	Slag	Crack	Inc. Pen	Inc. Fusion	Concavity	Convexity	Undercut	Surface	Tungston	Oxidation	Burn Through	Artifact	Other	Remarks
20091152	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3G, FCAW

Acceptance Standard: AWS D1.1-2008

Inspector: Leonard J. Macikonycz Level II

Authorized By: Leonard J. Macikonycz

Date: 11/19/09

WTTI

WWW.WTTI.COM

**WELDER TRAINING AND TESTING INSTITUTE**

1144 N. GRAHAM ST. • ALLENTOWN, PA 18109 • TEL 610-820-9551 • FAX 610-820-0271

**WELDER QUALIFICATION TEST RECORD****A.W.S. D1.1**

Type of Qualification: Welder: Welding Operator: Tack Welder:
 Name: Albert Leonberger ID Number:
 Welding Procedure Specification No.: 1-GMAW Rev.: 1 Date: 2/13/2008

<u>Variable</u>	<u>Actual Variable Used in Qualification</u>	<u>Qualification Range</u>
Process / Type:	GMAW / Semi-Automatic	
Electrode (Single / Multiple):	Single	Single
Current / Polarity:	DC / Positive	
Position:	3G	1G,2G,3G,1F,2F,3F
Weld Progression:	Uphill	Uphill
Backing (Yes / No):	Yes	With or Both Sides
Material / Spec.:	A-36 to A-36	
Base Metal		
Thickness (Plate)		
Groove:	1"	1/8" - Unlimited
Fillet:	n/a	1/8" - Unlimited
Thickness (Pipe / Tube)		
Groove:	n/a	1/8" - Unlimited
Fillet:	n/a	1/8" - Unlimited
Diameter (Pipe)		
Groove:	n/a	>24" OD
Fillet:	n/a	All except TK & Y Joints
Filler Metal Spec. No.:	A5.18	
Class:	ER70S-6	
F-No.:	n/a	n/a
Gas / Flux Type:	75% Argon / 25% CO2	
Other:	n/a	n/a

Visual Inspection (4.8.1)
 Acceptable Yes: No:
 Guided Bend Test Results (4.30.5)

#1: Radiograph - PASSED

#3: n/a

#2: n/a

#4: n/a

Fillet Weld Test Results (4.30.2.3, 4.30.4.1)

Appearance: n/a

Size: n/a

Penetration: n/a

Macroetch: n/a

Inspector: Jeffrey T. Wiswesser CWI / WTTI

Lab Number(s): 20091183

Organization: Welder Training & Testing Institute

Date: 11/19/2009

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of section 4 of AWS D1.1 (2008) Structural Welding Code - Steel.

Contractor: n/a

Authorized by:

Date:



Radiographic Inspection Report

Customer: n/a

Date: 11/19/2009

Welder's Name: Albert Leonberger

Procedure No.: 1-GMAW

Material Type: A-36 With 1/4" Backing

Material Thickness: 1.00"

Weld Thickness: 1.00"

Reinforcement Thickness: 0"

Diameter / Length: n/a

Source to Film Distance: 56"

X-Ray KV: 250

MA: 7

Spot Size: 3.0

Exposure Time: 80 Seconds

Penetrator: Source Side

Size: .025 / 2.0

Type: Wire / Hole IQI

Shim Material: None Used

Shim Thickness: n/a

Screens Front: 0.005"

Back: 0.010"

Geometric Unsharpness (UG) Less Than: .020"

Weld Identification	Accept	Reject	Porosity	Slag	Crack	Inc. Pen	Inc. Fusion	Concavity	Convexity	Undercut	Surface	Tungston	Oxidation	Burn Through	Artifact	Other	Remarks
20091183	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3G, GMAW

Acceptance Standard: AWS D1.1-2008

Inspector: Leonard J. Macikonycz Level II

Authorized By: Leonard J. Macikonycz

Date: 11/19/09



WELDER QUALIFICATION TEST RECORD
A.W.S. D1.1



Type of Qualification: Welder: Welding Operator: Tack Welder:
 Name: Albert Leonberger ID Number:
 Welding Procedure Specification No.: 1-SMAW Rev.: 1 Date: 2/13/2008

<u>Variable</u>	<u>Actual Variable Used in Qualification</u>	<u>Qualification Range</u>
Process / Type:	SMAW / Manual	
Electrode (Single / Multiple):	Single	Single
Current / Polarity:	DC / Positive	
Position:	3G	1G,2G,3G,1F,2F,3F
Weld Progression:	n/a	n/a
Backing (Yes / No):	Yes	With or Both Sides
Material / Spec.:	A-36 to A-36	
Base Metal		
Thickness (Plate)		
Groove:	1"	1/8" - Unlimited
Fillet:	n/a	1/8" - Unlimited
Thickness (Pipe / Tube)		
Groove:	n/a	1/8" - Unlimited
Fillet:	n/a	1/8" - Unlimited
Diameter (Pipe)		
Groove:	n/a	>24" OD
Fillet:	n/a	All except TK & Y Joints
Filler Metal Spec. No.:	A5.1	
Class:	E7018	
F-No.:	4	1,2,3,4
Gas / Flux Type:	None	
Other:	n/a	n/a

Visual Inspection (4.8.1)
 Acceptable Yes: No:
 Guided Bend Test Results (4.30.5)

#1: Radiograph - PASSED #3: n/a
 #2: n/a #4: n/a

Fillet Weld Test Results (4.30.2.3, 4.30.4.1)

Appearance: n/a Size: n/a
 Penetration: n/a Macroetch: n/a

Inspector: Jeffrey T. Wiswesser CWI / WTTI Lab Number(s): 20091131
 Organization: Welder Training & Testing Institute Date: 11/11/2009

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded and tested in accordance with the requirements of section 4 of AWS D1.1 (2008) Structural Welding Code - Steel.

Contractor: n/a Authorized by: Date:

WTTI

WWW.WTTI.COM



WELDER TRAINING AND TESTING INSTITUTE

1144 N. GRAHAM ST. • ALLENTOWN, PA 18109 • TEL 610-820-9551 • FAX 610-820-0271

Radiographic Inspection Report

Customer: n/a

Date: 11/11/2009

Welder's Name: Albert Leonberger

Procedure No.: 1-SMAW

Material Type: A-36 With 1/4" Backing

Material Thickness: 1.00"

Weld Thickness: 1.00"

Reinforcement Thickness: 0"

Diameter / Length: n/a

Source to Film Distance: 56"

X-Ray KV: 280

MA: 8

Spot Size: 3.0

Exposure Time: 90 Seconds

Penetrameter: Source Side

Size: .020 / 2.0

Type: Wire / Hole IQI

Shim Material: None Used

Shim Thickness: n/a

Screens Front: 0.005"

Back: 0.005"

Geometric Unsharpness (UG) Less Than: .020"

Weld Identification	Accept	Reject	Porosity	Slag	Crack	Inc. Pen	Inc. Fusion	Concavity	Convexity	Undercut	Surface	Tungston	Oxidation	Burn Through	Artifact	Other	Remarks
20091131	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3G, SMAW

Acceptance Standard: AWS D1.1-2008

Inspector: Leonard J. Macikonycz Level II

Authorized By: _____

Date: _____

Welder Training & Testing Institute
Allentown, Pennsylvania
This Certifies That

Albert Leonberger

has satisfactorily completed a Course of Study prescribed for
Graduation from this school in
900 Hr. Welder Fitter



and is therefore awarded this

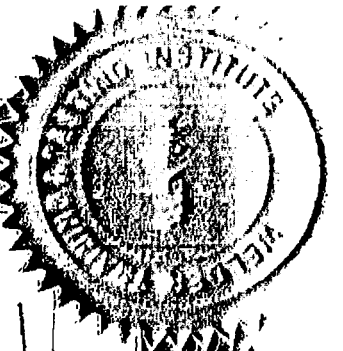
Diploma

Patrick J. Davis
Director

Tom C. [Signature]
Instructor

December 2nd, 2009

Date



NUCOR

LOT NO.
318259A

Post Office Box 6100
Saint Joe, Indiana 46785
Telephone 260/337-1600

FASTENER DIVISION

CUSTOMER NO/NAME
449 LE JEUNE BOLT NUCOR ORDER # 806759
TEST REPORT SERIAL# FB399919 CUST PART #
TEST REPORT ISSUE DATE 12/06/12
DATE SHIPPED 12/20/12 CUSTOMER P.O. # 1009663
NAME OF LAB SAMPLER: FRANKLIN A. NEAL, LAB TECHNICIAN
*****CERTIFIED MATERIAL TEST REPORT*****
NUCOR PART NO QUANTITY LOT NO. DESCRIPTION
167240 2250 318259A 1 1/8-7 X 4 A490 HVY HK
MANUFACTURE DATE 12/03/12 STRUC SCREW PLAIN



--CHEMISTRY MATERIAL GRADE -4135MLV
MATERIAL HEAT **CHEMISTRY COMPOSITION (WT% HEAT ANALYSIS) BY MATERIAL SUPPLIER
NUMBER NUMBER C MN P S SI CR MO V NUCOR STEEL - NEBRASKA
RM027783 NF12103227 .35 .93 .016 .014 .27 .92 .18 .030
MIN .30
MAX .48 .040 .040

--MECHANICAL PROPERTIES IN ACCORDANCE WITH ASTM A490-10a
SURFACE CORE PROOF LOAD TENSILE STRENGTH
HARDNESS HARDNESS 91550 LBS 6 DEG-WEDGE
(R30N) (RC) (LBS) STRESS (PSI)
N/A 36.3 PASS 129640 169908
N/A 36.6 PASS 128620 168571
N/A 35.6 PASS 130020 170406
N/A 35.9
AVERAGE VALUES FROM TESTS PRODUCTION LOT SIZE 6660 PCS
36.1 129427 169628

--VISUAL INSPECTION IN ACCORDANCE WITH ASTM F788/F788M-12
--WET MAGNETIC PARTICLE INSPECTION IN ACCORDANCE WITH ASTM A490-12 4 PCS. SAMPLED LOT PASSED

--MICROHARDNESS TEST RESULT IN ACCORDANCE WITH ASTM A490-12
POSITION 1. 385 2. 384 3. 379
CARBURIZATION/DECARBURIZATION TEST IN ACCORDANCE WITH A490-12 LOT PASSED
HEAT TREATMENT - AUSTENITIZED, OIL QUENCHED & TEMPERED (MIN 800 DEG F)

--DIMENSIONS PER ASME B18.2.6-2006
CHARACTERISTIC #SAMPLES TESTED MINIMUM MAXIMUM
Width Across Corners 8 2.0480 2.0520
Grip Length 8 1.9100 1.9600
Head Height 8 0.6750 0.6890
Threads 8 PASS PASS

ALL TESTS ARE IN ACCORDANCE WITH THE LATEST REVISIONS OF THE METHODS PRESCRIBED IN THE APPLICABLE SAE AND ASTM SPECIFICATIONS. THE SAMPLES TESTED CONFORM TO THE SPECIFICATIONS AS DESCRIBED/LISTED ABOVE AND WERE MANUFACTURED FREE OF MERCURY CONTAMINATION. NO HEATS TO WHICH BISMUTH, SELENIUM, TELLURIUM, OR LEAD WAS INTENTIONALLY ADDED HAVE BEEN USED TO PRODUCE THE BOLTS. THE STEEL WAS MELTED AND MANUFACTURED IN THE U.S.A. AND THE PRODUCT WAS MANUFACTURED AND TESTED IN THE U.S.A. PRODUCT COMPLIES WITH DFARS 252.225-7014. WE CERTIFY THAT THIS DATA IS A TRUE REPRESENTATION OF INFORMATION PROVIDED BY THE MATERIAL SUPPLIER AND OUR TESTING LABORATORY. THIS CERTIFIED MATERIAL TEST REPORT RELATES ONLY TO THE ITEMS LISTED ON THIS DOCUMENT AND MAY NOT BE REPRODUCED EXCEPT IN FULL.



NUCOR FASTENER
A DIVISION OF NUCOR CORPORATION

MECHANICAL FASTENER
CERTIFICATE NO. A2LA 0139.01
EXPIRATION DATE 12/31/13

John W. Ferguson
JOHN W. FERGUSON
QUALITY ASSURANCE SUPERVISOR

STATE OF INDIANA
COUNTY OF DEKALB

Christopher J. Jiles
NOTARY PUBLIC DATE OF EXPIRATION 1-18-25

NUCOR
NUCOR CORPORATION
NUCOR STEEL NEBRASKA

Mill Certification
 9/14/2012

27783
 2911 East Nucor Road
 NORFOLK, NE 68701
 (402) 644-0200
 Fax: (402) 644-0329

Sold To: NUCOR FASTENER INDIANA
 PO BOX 6100
 6730 COUNTY RD 60
 ST JOE, IN 46785-0000
 (260) 337-1800
 Fax: (435) 734-4581

Ship To: NUCOR FASTENER INDIANA
 COUNTY RD 60
 ST JOE, IN 46785-0000

Customer P.O.	133081	Sales Order	124031.5
Product Group	Special Bar Quality	Part Number	31B01140000S510
Grade	4135MLV	Lot #	NF1210322711
Size	1.1406-1 9/64 Round Coil	Heat #	NF12103227
Product	1.1406-1 9/64 Round Coil 4135MLV	B.L. Number	N1-236833
Description	4135MLV	Load Number	N1-183323
Customer Spec		Customer Part #	008018

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed above and that it satisfies those requirements.

C	Mn	V	Si	S	P	Cu	Cr	Ni	Mo	Al	Cb
0.35%	0.93%	0.03%	0.27%	0.014%	0.016%	0.13%	0.92%	0.06%	0.18%	0.003%	0.003%
Pb	Sn	Ca	B	Ti							
0.000%	0.005%	0.0005%	0.0002%	0.002%							

Austenitic fine grain by chemical analysis per the latest revision of ASTM A29

Reduction Ratio 43 :1

Specification Comments: Fine Grain 5 or finer per ASTM A29-05

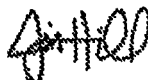
Selenium, Tellurium, Lead, Bismuth or Boron were not intentionally added to this heat.

- All manufacturing processes of the steel materials in this product, including melting, have been performed in the United States.
- All products produced are weld free.
- Mercury, in any form, has not been used in the production or testing of this material.
- Test conform to ASTM A29-11a, ASTM E4-15 and ASTM E1019-resulphurized grades or applicable customer requirements.
- All material melted at Nucor Steel Nebraska is produced in an Electric Arc Furnace
- Strand Cast
- L-A-B accreditation certificate is available upon request

Chemistry Verification Checks

Part# 8018 Heat# 27783

Checked By Date
 Receiving OK: 297 10-9-12
 Certifications OK: 375 10-9-12



Jim Hill
 Division Metallurgist

INSPECTION CERTIFICATE

UNYTITE, INC.
One Unytite Drive

815-224-2221 — FAX # 815-224-3434

SET LOT NO. **WM501**

ASTM F1852 Type 1	Size	Quantity
ASTM A563 Grade DH	1-1/8-7UNC X 3-1/2	1,049 pcs.
ASTM F436 Type 1		

Mechanical properties tested in accordance to ASTM F606/F606M, ASTM A370, ASTM E18

BOLT LOT NO. **WM501**

Date: **Nov. 30, '12**

Mechanical Property of Full Size Bolts				Chemical Composition %										
Tensile Strength	Proof Load (Length Method)	Hardness	Heat Treatment	IDENTIFICATION	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000
80100	± 0.0005 in.	34 MAX	941		30	15	60	40	50	-	-	-	-	-
104702	ALL PASS	28.4	1580	10117070	33	23	86	10	10	8	4	6	1	25

NUT LOT NO. **WL242**

Mechanical Property of Full Size Nuts				Chemical Composition %									
Hardness (HRC)	Proof Load (Lbf)	Hardness	Heat Treatment	IDENTIFICATION	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	
													Min.
24-38	133600	HRB 89	800		20	-	60	40	50	-	-	-	
28.7	ALL PASS	1562	1067	2M58403	44	24	74	17	20	7	16		

WASHER LOT NO. **C4692**

Mechanical Property of Washers				Chemical Composition %									
Hardness (HRC)	Proof Load (Lbf)	Hardness	Heat Treatment	IDENTIFICATION	C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	
													Min.
38-45	133600	HRB 89	800		20	-	60	40	50	-	-	-	
41.5	ALL PASS	1562	1067	0163508	43	17	72	11	6	-	-		

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unytite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Thread Accuracy	
Bolt	ASME B1.1 Class 2A
Nut	ANSI B1.1 Class 2B

REMARKS
 JEAN MARGHERO
 OFFICIAL SEAL
 NOTARY PUBLIC - STATE OF ILLINOIS
 MY COMMISSION EXPIRES: 10/18/13
 18-63-12

Chief of Quality Assurance Section



GERDAU SPECIAL STEEL NORTH AMERICA
 5591 MORRILL ROAD
 JACKSON, MICHIGAN 49201

CERTIFIED MATERIAL TEST REPORT

CUSTOMER ORDER NUMBER P003726-4	CUSTOMER PART NUMBER B1045SC13750	HEAT NUMBER 2M58403	WORK ORDER NUMBER 73156 102	DATE 9/14/12
---	---	-------------------------------	---------------------------------------	------------------------

REPORT TO

UNYTITE, INC.
 ONE UNYTITE DRIVE
 PERU , IL 61354-9710

SHIP TO

UNYTITE
 C/O UNIVERSAL METALS
 16655 S. CANAL ST
 SOUTH HOLLAND , IL 60473-2726

ORDERED

GRADE 1045	SIZE 1 3/8" RND	LENGTH 24' 10 1/2"
----------------------	---------------------------	------------------------------

CUSTOMER SPECIFICATIONS

SAE 1045; ASTM E381-01; RMS 021 DTD 9/28/06

CHEMICAL ANALYSIS

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.44	0.74	0.017	0.027	0.24	0.07	0.16	0.02	0.20	0.014	0.022
V	N									
0.004	0.0074									

GRAIN SIZE SPECIFICATION ASTM E112 FINE GRAIN 5-8

% OF GRAIN >=5 AVG

S 100 8.0

MICROCLEANLINESS SPECIFICATION ASTM E45 METH A

A		B		C		D	
T	H	T	H	T	H	T	H

MACROCLEANLINESS SPECIFICATION ASTM E381

PLATE I

PLATE II

AVERAGE	S	R	C	NONE
	1	1	1	

PAGE 1

We certify that these data are correct and in compliance with specified requirements.

Gerdau Jackson
 3100 Brooklyn Road
 Jackson, MI 49204

Heather M. Buckley
 Quality Assurance Representative

CONTINUED ON PAGE 2



GERDAU SPECIAL STEEL NORTH AMERICA
 5591 MORRILL ROAD
 JACKSON, MICHIGAN 49201

CERTIFIED MATERIAL TEST REPORT

CUSTOMER ORDER NUMBER P003726-4	CUSTOMER PART NUMBER B1045SC13750	HEAT NUMBER 2M58403	WORK ORDER NUMBER 73156 102	DATE 9/14/12
---	---	-------------------------------	---------------------------------------	------------------------

REPORT TO

SHIP TO

UNYTITE, INC.

UNYTITE

ONE UNYTITE DRIVE

C/O UNIVERSAL METALS
 16655 S. CANAL ST

PERU , IL 61354-9710

SOUTH HOLLAND , IL 60473-2726

ORDERED

GRADE 1045	SIZE 1 3/8" RND	LENGTH 24' 10 1/2"
----------------------	---------------------------	------------------------------

CUSTOMER SPECIFICATIONS
 SAE 1045; ASTM E381-01; RMS 021 DTD 9/28/06

DECARB SPECIFICATION ASTM E1077

F TOTAL= 0.004

REDUCTION RATIO SPECIFICATION 6:1

RATIO= 25.1 TO 1.0

RESIDUAL MAX SPECIFICATION RMS 021

Ni+Cr = 0.2300

** MATERIAL 100% MELTED AND MANUFACTURED IN THE U.S.A. BY THE ELECTRIC ARC FURNACE AND CONTINUOUS CASTING METHOD. THE PRODUCT HAS NOT BEEN REPAIRED BY WELDING AND THIS MATERIAL HAS NOT BEEN EXPOSED TO MERCURY OR TO ANY OTHER METAL ALLOY THAT IS LIQUID AT AMBIENT TEMPERATURES DURING PROCESSING OR WHILE IN OUR POSSESSION. GERDAU MONITORS ALL INCOMING SCRAP AND ALL HEATS OF STEEL TO ENSURE THAT PRODUCTS SHIPPED ARE FREE OF RADIOACTIVE MATERIAL.

PAGE 2 OF 2

We certify that these data are correct and in compliance with specified requirements.

Gerdau Jackson
 3100 Brooklyn Road
 Jackson, MI 49204


 Heather M. Buckley
 Quality Assurance Representative

INSPECTION CERTIFICATE



UNYRITE, INC.
One Unyrite Drive
Peru, Illinois 61354

815-224-2221 — FAX # 815-224-3434

SET LOT NO. WT041

Specification	Size	Quantity
ASTM F1852 Type 1 ASTM A563 Grade DH ASTM F436 Type 1	1-1/8-7UNC X 4-3/4	3,000 pcs.

Mechanical properties tested in accordance to ASTM F606/F606M, ASTM A370, ASTM E18.

BOLT LOT NO. WT041

Date: Feb. 27, '13

Mechanical Property of Full Size Bolts				Chemical Composition %													
Tensile Strength	Proof Load	Hardness		Heat Treatment		IDENTIFICATION		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100	Mo x 100	B x 10,000
		Position of fracture	HRC	Quench	Temper	Heat No.											
56450 lbf. (Length Method)	56450 lbf.	Min.	34 MAX	-	800	ASNT A325TC	30	15	60	40	50	-	-	-	-	-	-
Max. +/- 0.0005 in.	ALL PASS	Part of Screw	28.3	1580	923	Heat No.	52	30	84	9	10	9	6	8	2	28	
80100		Part of Screw					34	23									
Average							10230550										

NUT LOT NO. WS561

Mechanical Property of Full Size Nuts				Chemical Composition %										
Hardness (HRC)	Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	Heat Treatment		IDENTIFICATION		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100
			Quench	Temper	Quench	Temper								
24 - 38	HRB 89	1336.00	-	800	U DH	20	-	60	40	50	-	-	-	-
28.7	ALL PASS	ALL PASS	1562	1058	2M58403	44	24	74	17	27	20	7	16	

WASHER LOT NO. C5503

Mechanical Property of Full Size Washers				Chemical Composition %										
Hardness (HRC)	Hardness After 24 hr x 1000° F HRB	Proof Load (Lbf)	Heat Treatment		IDENTIFICATION		C x 100	Si x 100	Mn x 100	P x 1000	S x 1000	Cu x 100	Ni x 100	Cr x 100
			Quench	Temper	Quench	Temper								
38-45	HRB 85	1336.00	-	800	P F436	-	-	-	-	-	-	-	-	-
42.5	ALL PASS	ALL PASS	1562	1058	2M58403	56	19	69	11	4	-	-	-	

Material used for the bolt, nut and washer were melted & manufactured in the USA. The product was manufactured in the USA to ASTM specifications. The bolt and nut are manufactured by Unyrite. We hereby certify that the material described has been manufactured and inspected satisfactory with requirement of the above specification.

Thread Accuracy (Bolt & Nut)	Bolt Nut	ASME B1.1 Class 2A ANSI B1.1 Class 2B
---------------------------------	-------------	--

Fastener Tension	Spec. (lbf.)	59000
	Mean / 6 sets.	762.08
	Standard Deviation	3591

Fastener Tension	Spec. (lbf.)	59000
	Mean / 6 sets.	762.08
	Standard Deviation	3591

Fastener Tension	Spec. (lbf.)	59000
	Mean / 6 sets.	762.08
	Standard Deviation	3591

Fastener Tension	Spec. (lbf.)	59000
	Mean / 6 sets.	762.08
	Standard Deviation	3591

Chief of Quality Assurance Section

OFFICIAL SEAL
JEAN MARCO FERRO
COMMISSIONER OF PUBLIC SAFETY
STATE OF ILLINOIS
03-5503

Prestige
Stamping,
Inc.



23513 Grossbeck Highway
Warren, Michigan 48089
(586) 773-2700 * Fax (586) 773-2298
www.PrestigeStamping.com

PRODUCT CERTIFICATION

CERTIFICATION NUMBER

98527

THIS IS TO CERTIFY THE PRODUCT STATED BELOW WAS FABRICATED AND PROCESSED TO THE ORDER AS INDICATED AND CONFORMS TO THE APPLICABLE SPECIFICATIONS AND STANDARDS.

Customer: UNYTITE INNOVATIVE FASTENER
ACCTS PAYABLE DEPT
1 UNYTITE DR
PERU, IL 61354

Customer Part: 1-1/8" F436 PLN
Prestige Part: P2281H01
Part Name: 1-1/8" F436 STRUC
Purchase Order: P004220-1
Shipment BOL: B157523
Shipment ID: A0166967
Quantity: 67235
Manufacturers Marking: "P"

Steel Supplier: HORIZON STEEL CO.
Grade: CF436IGRADE STEEL
Lot: C5503
Heat: A62521
Carbon: .56 (.32 - .93)
Manganese: .69 (.6 - 1.6)
Phosphorous: .011 (.03 Max.)
Sulfur: .004 (.05 Max.)
Silicon: .19 (.15 - .3)

SPECIFICATIONS

HARDNESS: TEST METHOD: ASTM E18
HRC 38 - 45
ASTM F606

TEST RESULTS

HARDNESS:
HRC 40 - 43

Chemistry is as reported from raw material certification and does not fall under Prestige Stamping's accreditation.
This product was produced under an ISO/TS 16949 Quality Assurance System.
ISO/TS 16949 Certification No: 0062933.
Material was melted and manufactured in the U.S.A.
This product was manufactured in Warren, Michigan U.S.A.
This product conforms to all requirements for washers as produced according to A.S.T.M. F-436-10.
Sampling Plan per P.S.I W.I. # 6.4.18.015.
The test results only apply to the items tested.
This test report must not be reproduced except in full without prior written approval.
Materials used to manufacture these products are mercury, asbestos and radio activity free.
No weld repairs made to material.


FRANK SCHUBERT
Quality Assurance Manager

C5503

CERTIFIED TEST REPORT

*HORIZON STEEL
50390 UTICA DRIVE
SHELBY TWP., MICH. 48315
800-575-9914

5/31/12

TO: PRESTIGE STAMPING
23513 GROESBECK HWY.
WARREN, MI 48090

SHIP TO: PRESTIGE STAMPING, INC.
23513 GROESBECK HIGHWAY
WARREN, MI. 48090
586-773-2700

SIZE: .136 MIN X 4.39700 X COIL
GRADE: HRPO F436 GRADE
MELTED & MFG IN USA

B/L Date 5/31/12 Bill/Ladng# 108293 Sales Ordr: 803502 01
Cust. P/O#: 20110-1 Part No.: ZZ4397136 FOR PT# P2281IH00

Tag# 711185	01	Heat# A62521	MasterTag# 225780	01		
C : .560		Mn: .690	P : .011	S : .004	Al: .033	Si: .190
Ni: .040		Mo: .010	Cu: .090	Va: .001	Cr: .050	
Nb: .002		Sn: .005	Ca: .0007	N : .0089	B : .0001	Ti: .002
Rock: 91		Olsn: 330				

Tag# 711186	01	Heat# A62521	MasterTag# 225780	01		
C : .560		Mn: .690	P : .011	S : .004	Al: .033	Si: .190
Ni: .040		Mo: .010	Cu: .090	Va: .001	Cr: .050	
Nb: .002		Sn: .005	Ca: .0007	N : .0089	B : .0001	Ti: .002
Rock: 91		Olsn: 330				

Tag# 711188	01	Heat# A62521	MasterTag# 225780	01		
C : .560		Mn: .690	P : .011	S : .004	Al: .033	Si: .190
Ni: .040		Mo: .010	Cu: .090	Va: .001	Cr: .050	
Nb: .002		Sn: .005	Ca: .0007	N : .0089	B : .0001	Ti: .002
Rock: 91		Olsn: 330				

Tag# 711190	01	Heat# A62521	MasterTag# 225780	01		
C : .560		Mn: .690	P : .011	S : .004	Al: .033	Si: .190
Ni: .040		Mo: .010	Cu: .090	Va: .001	Cr: .050	
Nb: .002		Sn: .005	Ca: .0007	N : .0089	B : .0001	Ti: .002
Rock: 91		Olsn: 330				

Tag# 711191	01	Heat# A62521	MasterTag# 225780	01		
C : .560		Mn: .690	P : .011	S : .004	Al: .033	Si: .190
Ni: .040		Mo: .010	Cu: .090	Va: .001	Cr: .050	
Nb: .002		Sn: .005	Ca: .0007	N : .0089	B : .0001	Ti: .002
Rock: 91		Olsn: 330				

Tag# 711192	01	Heat# A62521	MasterTag# 225780	01		
C : .560		Mn: .690	P : .011	S : .004	Al: .033	Si: .190
Ni: .040		Mo: .010	Cu: .090	Va: .001	Cr: .050	
Nb: .002		Sn: .005	Ca: .0007	N : .0089	B : .0001	Ti: .002
Rock: 91		Olsn: 330				

Continued...

RECEIVED

MAY 31 2012

Time 11:30 AM AN

C5503



Gallatin Steel Company
4831 U.S. Highway 42 West
Ghent, KY, 41045-0704
Phone: 1(800)581-3853 Fax: (859)567-3165



METALLURGICAL TEST REPORT

Invoice To: Horizon Steel Co.
40390 Utica Drive
Shelby Township, MI 48315

Ship To: Horizon Steel Co.
Pick Up

Customer No: 14635
Mill Order No: 162808-2

Customer P.O. No: 038384
Customer Reference No: NA

Date: 04/23/12
Load No: 507312

This product was melted and manufactured in the USA to meet the requirements of:

Excess,
Excess HR Sheet Steel Bands

Ordered Size: Nom 0.143 (in.) X 51.57 (in.) X Coil

Coil Number(s): 1079461

CHEMICAL ANALYSIS (Weight %)

Heat No	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Al	Ca	Nb	V	B	Ti	N	Sn
A62521	0.56	0.69	0.011	0.004	0.19	0.09	0.04	0.05	0.01	0.033	0.0007	0.002	0.001	0.0001	0.002	0.0089	0.005

Hot rolled coils manufactured through Gallatin Steel do not contain welds or weld repairs at the time of shipment (for mill). Mercury was not added during production of this material. The material was produced using a fully killed fine grain practice.

Above tests performed in accordance to ASTM standards E8 (yield strength determined using 0.2% offset method and elongation determined using after fracture method) or JIS Z2241, E18, E416, and E1019 and are correct as contained in the records of the company.

The elongation original gage length is 2 inches for ASTM test method and 1.97 inches for JIS test method
Above test results were performed in accordance to EN 10204 3.1

This report shall not be reproduced, except in full, without written approval of the undersigned laboratory managers.
* This mechanical property has been tested at a subcontractor's laboratory.

Stephen S. Sipple
Chemical Laboratory

Mark Holtman
Mechanical Laboratory

Page 1 of 1

The information contained in this report may be confidential information intended only for the use of the individual or entity named above. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone and destroy the original message. Thank You.



TEST REPORT

Operations Center
 3281 West County Road 0 NS
 Frankfort, IN 46041-6966
 T. 765.654.0477
 F. 765.654.0857

Ship Date	10-19-12
Certification	325832*3*1
Report Date	10-19-12

Cust PO	Z09664
Lot Nbr	695514
Quantity	255
Mfg Date	05-25-12

Haydon Bolts, Inc.
 1181 Unity St.
 PHILADELPHIA, PA 19124

PART INFORMATION		
Part Number	AAAG113400	
Description	1 1/8-7 X 4 A325-1 HEAVY HEX STRUCTURAL DOUBLE MADE IN USA	
	Finish	HOT DIP ZINC PER ASTM A153 CLASS C
	Head Marking	A325 LE USA

RAW MATERIAL ANALYSIS							
Steel Heat Nbr	Steel Supplier	Steel Grade	Code	Element	Rqd Min Pct	Rqd Max Pct	Percent
CR10173540	Charter Steel	30CrMoB2	C	Carbon	0.30	0.33	0.31
			Mn	Manganese	0.95	1.10	1.01
			P	Phosphorus	0.000	0.020	0.013
			S	Sulfur	0.000	0.015	0.230
			Si	Silicon	0.150	0.250	0.230
			Ni	Nickel	0.00	0.10	0.04
			Cr	Chromium	0.40	0.50	0.43
			Mo	Molybdenum	0.10	0.15	0.11
			Cu	Copper	0.00	0.15	0.08
			Al	Aluminum	0.020	0.050	0.025
			B	Boron	0.0010	0.0030	0.0020
			Ti	Titanium	0.010	0.050	0.021

Certification test results include those reported by the following laboratories

Charter Steel, A2LA, 01-31-11
LEP Special Fasteners, Inc, ISO17025-A2LA Cert#0122.02, 05-31-12

MECHANICAL PROPERTIES						
Wedge Angle	6					
Proof Load	56462/74000 (lbs/Psi)					
Test Performed	Required	Hgh	Low	Average	Samples	
Tensile, PSI	105000 / 155000	150458	136000	142609	6	
Proof Load Elongation	0.0000 / 0.0005	0.0001	0.0000	0.0001	3	
Superficial R30N	39 / 50	49	45	48	3	
Core Hardness, HRC	19 / 30	27	25	27	6	



TEST REPORT

Operations Center
3281 West County Road 0 NS
Frankfort, IN 46041-8966
T. 765.654.0477
F. 765.654.0857

Ship Date	10-19-12
Certification	325832*3*1
Report Date	10-19-12

Cust PO	Z09884
Lot Nbr	695514
Quantity	255
Mfg Date	05-25-12

Haydon Bolts, Inc.
1181 Unity St.
PHILADELPHIA, PA 19124

Applicable Standards, Specifications, and Sampling Schemes.

Results reported in the mechanical properties section were determined in accordance with the following test methods: ASTM A370, E18, F606/M. Dimensional properties are compliant to ASTM B18.2.6. Product passed a surface discontinuity inspection following ASTM F788/M. The sampling plan is based off ASTM F1470 - Prevention. Product was not produced from heats in which Bismuth, Selenium, Tellurium, or Lead was intentionally added, nor were they exposed to Mercury or any other metal alloy that is liquid at ambient temperature during processing or while in our possession. Product was manufactured in the U.S.A. from domestic material. ASTM A490 Type 1 and Type 3 bolts passed *magnetic particle inspection for surface discontinuities per ASTM E709 and E1444. *Magnetic particle inspection is not included in our laboratory scope of accreditation.

The listed standards, specifications, and sampling schemes are of the revision in effect on the date of manufacture unless noted otherwise. Only those standards specifically noted under "test methods" or "additional test methods" are included on LE's scope of laboratory accreditation.

Additional Information

None

This lot has been found to conform to the requirements of the above standards and specifications

We certify: The product furnished by LEP Special Fasteners was manufactured, sampled, tested, and inspected in accordance with the standards and specifications listed above and with LEP Special Fasteners Quality Manual in effect as of the date of manufacture. The above data accurately represents values provided by LEP Special Fasteners suppliers and/or values generated in one of LEP Special Fasteners A2LA accredited laboratories. Statistical process control data is on file.

This test report relates only to the sample tested above. This document may only be reproduced unaltered and may not be used for any purpose other than the purpose of certifying the same or lesser quantity of the product specified herein. Reproduction, alteration or use of this document for any other purpose is prohibited, except as expressly provided in this certification. LEP Special Fasteners makes no (and disclaims all) representations, warranties and guarantees whatsoever, whether express, implied or statutory, including, without limitation, any warranty of merchantability or fitness for a particular purpose.

Lake Erie Products

Michael A. Schwark
Quality Manager



CERT #0122.02

"MECHANICAL FIELD OF TESTING"



CHARTER STEEL

EMAIL

1658 Cold Springs Road
Saukville, Wisconsin 53080
(262) 268-2400
1-800-437-8789
FAX (262) 268-2570

A Division of
Charter Manufacturing Company, Inc.

CHARTER STEEL TEST REPORT Reverse Has Text And Codes

LEP Special Fasteners Inc.
3595 West State Road 28
Jim Cull
Frankfort, IN-46041

Cust P.O.	90208
Customer Part #	955713254C1
Charter Sales Order	10058031
Heat #	10173540
Ship Lot #	4121512
Grade	LEBA2 R SK FG RHQ 1-9/32
Process	HRSA
Finish Size	1-9/32

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies these requirements.

Test Results of Heat Lot# 10173540

Lab Code: 7388

CHEM	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
%Wt	.31	1.01	.013	.008	.23	.04	.43	.11	.08	.008	.001
	AL	N	B	TI	NB						
	.025	.0060	.0020	.021	.002						

JOMINY(HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	JOM11	JOM12
	52	51	51	50	50	50	50	49	48	47	44	42
	JOM13	JOM14	JOM15	JOM16	JOM18	JOM20	JOM22	JOM24	JOM26	JOM28	JOM30	JOM32
	40	38	37	35	33	30	30	28	27	26	27	24

JOMINY SAMPLE TYPE ENGLISH = R JOMINY LAB = 0358-01 DI = 4.44
CHEM. DEVIATION EXT. - GREEN =

	# of Tests	Test Results of Rolling Lot# 1058354		Mean Value
ROD SIZE	8	Min Value	Max Value	1.280
ROD OUT OF ROUND	4	1.273	1.289	
REDUCTION RATIO = 23:1		.008	.010	.008

	# of Tests	Test Results of Processing Lot# 4121451,4121512			RB LAB = 0358-02
ROCKWELL B	2	Min Value	Max Value	Mean Value	
		76	78	77	

NUM DECARB = 2 FREE FERRITE DECARB = .000 FREE FERR & PARTIAL DECARB = .008
CP SPHERO % LAB = 0358-02 NUM SPHERO = 2 SPHERODIZATION = 80.0

Specifications: Manufactured per Charter Steel Quality Manual Rev 9,08-01-09
Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:
Customer Document = LE 1.1 Revision = 9 Dated = 27-NOV-07

Additional Comments: Grade 31CrMoB2

Charter Steel
Saukville, WI, USA



This MTR supersedes all previously dated MTRs for this order

Janice Barnard
Janice Barnard
Manager of Quality Assurance
02/07/2012

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled, and processed in the United States meeting DFAR's compliance.
2. Mercury was not used during the manufacture of this product, nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	CSSM	Charter Steel Melting Division	1653 Cold Springs Road, Saukville, WI 53080
0358-02	8171	CSSR/ CSSP	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	CSFP	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	CSCM/ CSCR	Charter Steel Cleveland	4300 E. 49th St., Cuyahoga Heights, OH 44125-1004
.	.	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Specification	CSSM	CSSR/CSSP	CSFP	CSCM/CSCR
Chemistry Analysis	ASTM E415; ASTM E1019	X			X
Macroetch	ASTM E381	X			X
Hardenability (Jominy)	ASTM A255; SAE J406; JIS G0561	X			X
Grain Size	ASTM E112	X	X	X	X
Tensile Test	ASTM E8; ASTM A370		X	X	X
Rockwell Hardness	ASTM E18; ASTM A370	X	X	X	X
Microstructure (spheroidization)	ASTM A892		X	X	
Inclusion Content (Methods A, E)	ASTM E45		X		X
Decarburization	ASTM E1077		X	X	X

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/13.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report subject to the following restrictions:
 - It may be distributed only to their customers
 - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgement (designated by our Sales Order number) to the customer's purchase order. Both order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



**ROGERS
BROTHERS
GALVANIZING**



HOT DIP GALVANIZING
1925 KISHWAUKEE STREET
ROCKFORD, IL 61104-5197
PHONE: 815/965-5132
FAX: 815/965-3765

ORDER NO. 82246
05/17/12
Page 1

TERMS:		SHIPPED VIA	COLLECT	PREPAID	CUSTOMER ORD. NO.	INVOICE DATE	INVOICE NO.
NET 30 DAYS			X				
SOLD TO LEP LEP SPECIAL FASTENERS 3595 WEST STATE ROAD 28 FRANKFORT, IN 46041-6708					SHIP TO LEP SPECIAL FASTENERS 3281 W COUNTY RD 0 NS FRANKFORT, IN 46041-6708		
QUANTITY	DESCRIPTION	WEIGHT	PRICE	AMOUNT			
			CWT / EA				
2154 2312	1"-8 X 3-3/4" A325 HVY HEX BOLT #S004155 LOT#00695425 WO#A32566 PO#93469 BLK WT 2567#	2 BINS	2578				
1	AVG. COATING WEIGHT: <u>541</u> MILS.						
1	BT#'S FOR THE ABOVE ITEM ARE: 949158 949132						
2712 2710	1-1/8"-7 X 5" A325 HVY HEX BOLT #S004192 LOT#00695670 WO#A31501 PO#93470 BLK WT 5224#	3 BINS	4874				
1	AVG. COATING WEIGHT: <u>465</u> MILS.						
1	BT#'S FOR THE ABOVE ITEM ARE: 950872 950878 950875						
2600 2390	1-1/8"-7 X 4" A325 HVY HEX BOLT #S004188 LOT#00695514 WO#A31497 PO#93471 BLK WT 4247#	2 BINS	3622				
1	AVG. COATING WEIGHT: <u>344</u> MILS.						
1	BT#'S FOR THE ABOVE ITEM ARE: 949807 949821						
3104 3098	1"-8 X 4" A325 HVY HEX BOLT #S004156 LOT#00695335 WO#A32916 PO#93472 BLK WT 3879#	2 BINS	3590				
1	AVG. COATING WEIGHT: <u>605</u> MILS(Continued)						
				4,754			

Seller represents that with respect to the production of the articles and/or the performance of the services covered by this Invoice, it has fully complied with Section 12 (a) of the Fair Labor Standards Act of 1938 as amended.

ALL AGREEMENTS CONTINGENT UPON STRIKES, ACCIDENTS OR OTHER CAUSES BEYOND OUR CONTROL.

NOTICE—CLAIMS FOR LOSS OR DAMAGE MUST BE MADE WITHIN FIVE DAYS.

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

DELIVERY RECEIPT

**ROGERS
BROTHERS
GALVANIZING**



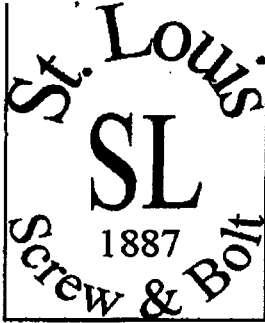
HOT DIP GALVANIZING
1925 KISHWAUKEE STREET
ROCKFORD, IL 61104-5197
PHONE: 815/965-5132
FAX: 815/965-3765

ORDER NO. 82246
05/17/12
Page 4

SOLD TO LEP LEP SPECIAL FASTENERS 3595 WEST STATE ROAD 28 FRANKFORT, IN 46041-6708		SHIP TO LEP SPECIAL FASTENERS 3281 W COUNTY RD O NS FRANKFORT, IN 46041-6708				
TERMS: NET 30 DAYS	SHIPPED VIA	COLLECT X	PREPAID	CUSTOMER ORD. NO.	INVOICE DATE	INVOICE NO.
QUANTITY	DESCRIPTION			WEIGHT	PRICE CWT/EA	AMOUNT
1	THE GALVANIZING PROCESS WAS CONDUCTED IN A TEMPERATURE RANGE OF 830F TO 850F					
1	THIS PRODUCT WAS GALVANIZED IN ROCKFORD, IL USA					
WE CERTIFY THAT THE ABOVE SIZES AND LOT NUMBERS THAT WERE GALVANIZED IN OUR PLANT MEET SPECS ASTM A153 CLASS <u>C</u> OR ASTM A123. ROHS COMPLIANT AS IT PERTAINS TO HDG. DATE: <u>05-23-12</u> Q. C. DEPT. <u>TC</u> Request Date: 05/31/12						

Seller represents that with respect to the production of the articles and/or the performance of the services covered by this invoice, it has fully complied with Section 12 (a) of the Fair Labor Standards Act of 1938 as amended.
 ALL AGREEMENTS CONTINGENT UPON STRIKES, ACCIDENTS OR OTHER CAUSES BEYOND OUR CONTROL.
 NOTICE—CLAIMS FOR LOSS OR DAMAGE MUST BE MADE WITHIN FIVE DAYS. ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

DELIVERY RECEIPT



SLSB GALVANIZING CERTIFICATION OF CONFORMANCE

SLSB Part#:	AAAG113450
Description:	1-1/8 X 4- 1/2 A325-1
Quantity:	230
Original Manufacturer's Lot#:	033906
Outside processing PO#:	SL27832
LOT/JOB#	G5110

The above parts were purchased or made by SLSB, and have been sent out to be galvanized to meet the following ASTM specification :

(CHECK ONE)

HOT DIP GALVANIZING F2329 Y

MECHANICAL GALVANIZING B695

DATE:

ALL GALVANIZING PROCEDURES OCCURRED IN THE USA

***Attached is a galvanizing certification from vendor and original bolt certification*

LOT #: 033906 pg. 1 of 1

TEST REPORT

SLSB, LLC dba St. Louis Screw & Bolt
 2000 Access Blvd.
 PO Box 260
 Madison, IL 62060

PH: 800-237-7059
 FAX: 314-389-7510

St. Louis
 Screw & Bolt
 1887

PRODUCTION INFORMATION:

PART #: AAA113450	SIZE: 1-1/8(7)UNC2AX4-1/2	LOT#: 033906	DESCRIPTION: HHS	ASTM SPEC: A325-1 11	MFG DATE: 4/24/12	FINISH: PLAIN
-------------------	---------------------------	--------------	------------------	----------------------	-------------------	---------------

CHEMISTRY FROM RAW MATERIAL SUPPLIER:

GRADE: 1045	HEAT NO: 20154410	ASTM SPEC: A-29	STEEL MILL SUPPLIER: BETA
-------------	-------------------	-----------------	---------------------------

CHEMICAL CONTENTS

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al	N
0.47	0.70	0.0110	0.0060	0.20	0.05	0.14	0.010	0.12	0.0040		

MECHANICAL PROPERTIES:

PRODUCTION QTY: 10,512	PCS SAMPLED: 5	ISSUE DATE: 4/30/12	SAMPLED BY: RC	TESTED BY: RC	ELT. POM: 1095458-01	TEST METHODS: ASTM F606	VISUAL INSPECTION PER ASTM F788: VISUAL	PCS SAMPLED: 5	LOT PASSED: PASSED
------------------------	----------------	---------------------	----------------	---------------	----------------------	-------------------------	---	----------------	--------------------

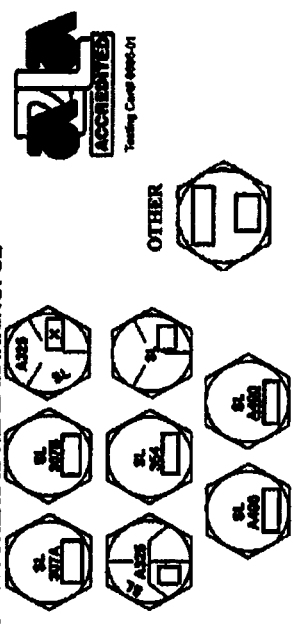
PROOF LOAD TEST

WEDGE 10 DEGREE	TENSILE STRENGTH LBS.	80,100	PROOF LOAD TEST LBS.	56,450	SURFACE 25-34	CORE N/A
-----------------	-----------------------	--------	----------------------	--------	---------------	----------

	SAMPLES						AVG.
	1	2	3	4	5	6	
TENSILE LOAD	109,355	110,315	108,615	106,765	108,885		108,738
PROOF LOAD ELONGATION	.0004	.0002	.0002	.0003	.0002		.0003
HRC-SURF	31.6	32.4	32.4	31.2	32.8		32.
HRC-CORE							

The SLSB LLC Laboratory has been accredited by the American Association for Laboratory Accreditation in the field of mechanical and laboratory testing for the tests listed above, certificate 00894-01. The sampling plan meets or exceeds F1470 Sample Size C or applicable specification. The steel was made and finished in the USA, and the product was tested by SLSB LLC, St. Louis, MO, USA, in accordance with the ASTM specification listed above, and the date is a true representation of the information provided by the material supplier and our testing laboratory. The test certificate relates only to the items listed on the document and may not be reported or distributed except as full. These fit and dimensional requirements are compliant to ANSI B19.2.6 specification.

MANUFACTURERS ID HEAD MARKING: SL



AMENDED **
 DATE: 5/01/12 INITIAL: [Signature]

Signed: [Signature]

*Heats of steel used have not had the following materials intentionally added: bismuth, selenium, tellurium, or lead.

** Indicates the amended item, when and by whom.



CHARTER STEEL

A Division of
Charter Manufacturing Company, Inc.

FILE

1658 Cold Springs Road
Saukville, Wisconsin 53080
(262) 268- 2400
1- 800- 437- 8789
FAX (262) 268- 2570

CHARTER STEEL TEST REPORT Reverse Has Text And Codes

Beta Steel
44225 Utica Rd.
Laurie Dalley
Utica, MI- 48318

Cust P.O.	266289
Customer Part #	561045M0100SC(SW1045M- B)
Charter Sales Order	30033387
Heat #	20154410
Ship Lot #	2017597
Grade	1045 M SK CG RHQ 1- 5/32
Process	HR
Finish Size	1- 5/32

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies these requirements.

Test Results of Heat Lot# 20154410

Lab Code: 125544	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
CHEM %Wt	.47	.70	.011	.006	.20	.05	.14	.01	.12	.008	.001
	AL	N	B	TI	CA	NB					
	.004	.0070	.0002	.001	.0005	.001					
JOMINY(HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10	
	60	55	45	33	28	25	24	23	22	21	

JOMINY SAMPLE TYPE ENGLISH = C
GRAIN SIZE LAB = 0358- 04
McQuaid- Ehn Grain Size Comparison = 3 - 4
CHEM. DEVIATION EXT.- GREEN =

Test Results of Rolling Lot# 2017597

	# of Tests	Test Results of Rolling Lot# 2017597		Mean Value
		Min Value	Max Value	
NUM DEARB = 1				
AVE DEARB = .004				
REDUCTION RATIO = 47:1				

Specifications: Manufactured per Charter Steel Quality Manual Rev 9,08- 01- 09
Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:
Customer Document = PS- 1 Revision = Dated = 11- MAR- 08

Additional Comments:

Charter Steel
Cuyahoga Heights, OH, USA



Page 1 of 1

This MTR supersedes all previously dated MTRs for this order

Janice Barnard
Janice Barnard
Manager of Quality Assurance
04/24/2012

Rem: Load1,Fax0,Mail0

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled, and processed in the United States meeting DFAR's compliance.
2. Mercury was not used during the manufacture of this product, nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	CSSM	Charter Steel Melting Division	1653 Cold Springs Road, Saukville, WI 53080
0358-02	8171	CSSR/ CSSP	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	CSFP	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	CSCM/ CSCR	Charter Steel Cleveland	4300 E. 49th St., Cuyahoga Heights, OH 44125-1004
*	*	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Specification	CSSM	CSSR/CSSP	CSFP	CSCM/CSCR
Chemistry Analysis	ASTM E415; ASTM E1019	X			X
Macroetch	ASTM E381	X			X
Hardenability (Jominy)	ASTM A255; SAE J406; JIS G0561	X			X
Grain Size	ASTM E112	X	X	X	X
Tensile Test	ASTM E8; ASTM A370		X	X	X
Rockwell Hardness	ASTM E18; ASTM A370	X	X	X	X
Microstructure (spheroidization)	ASTM A892		X	X	
Inclusion Content (Methods A, E)	ASTM E45		X		X
Decarburization	ASTM E1077		X	X	X

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/13.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report subject to the following restrictions:
 - It may be distributed only to their customers
 - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgement (designated by our Sales Order number) to the customer's purchase order. Both order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



CMI INTERNATIONAL	
Date: 08-30-12	Time: 14:10:07
Customer: <i>SLSB</i>	
Part No: <i>1/8x 4 1/2 A325-1</i>	
Batch No: <i>033906 - E5110</i>	
Inspector: <i>Matt Rudolph</i>	
<input checked="" type="radio"/> Accept / <input type="radio"/> Reject	
<i>PQ SL 27832</i>	

1 < 1 > Magnetic
Date: 08-30-12 Time: 14:10:07

- 1: 2.31 mil
- 2: 2.58 mil
- 3: 2.64 mil
- 4: 2.90 mil
- 5: 2.91 mil
- 6: 5.02 mil
- 7: 8.53 mil
- 8: 3.03 mil
- 9: 2.78 mil
- 10: 2.90 mil
- 11: 2.75 mil
- 12: 2.68 mil
- 13: 2.91 mil
- 14: 3.51 mil
- 15: 2.80 mil
- 16: 2.97 mil
- 17: 2.85 mil
- 18: 2.73 mil
- 19: 2.96 mil
- 20: 2.78 mil

A153/A123/F2329

F2329 Mils Minimum
Nutability
 YES NO

Appearance
 YES NO

CERTIFICATION OF COMPLIANCE
 YES NO

This will serve as certification that the above referenced purchase order for the above referenced parts, which were Hot Dip Galvanized in our Wright City, MO plant in the U. S. A. meets the ASTM-A153 specifications.

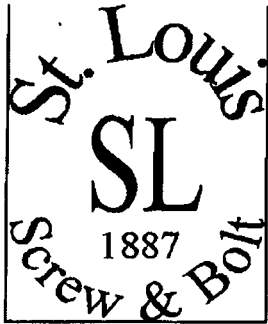


SESSION STATS

N = 20
Average = 3.23 mil
Standard deviation = 1.359 mil
Accuracy = 0.61 mil
Percent deviation = 42.1%
High = 8.53 mil
Low = 2.31 mil
Range = 6.22 mil

Matt Rudolph

QUALITY ASSURANCE MANAGER



SLSB GALVANIZING CERTIFICATION OF CONFORMANCE

SLSB Part#:

AAAG113550

Description:

1- 1/8 X 5- 1/2 A325-1

Quantity:

630

Original Manufacturer's Lot#:

034284

Outside processing PO#:

SL60349

LOT/JOB#

G5722

The above parts were purchased or made by SLSB, and have been sent out to be galvanized to meet the following ASTM specification :

(CHECK ONE)

HOT DIP GALVANIZING F2329

Y

MECHANICAL GALVANIZING B695

DATE:

04/22/13

ALL GALVANIZING PROCEDURES OCCURRED IN THE USA

***Attached is a galvanizing certification from vendor and original bolt certification*



CHARTER STEEL

A Division of
Charter Manufacturing Company, Inc.

FILE

1658 Cold Springs Road
Saukville, Wisconsin 53080
(262) 268-2400
1-800-437-8789
FAX (262) 268-2570

CHARTER STEEL TEST REPORT Reverse Has Text And Codes

Beta Steel
44225 Utica Rd.
Lauria Dailey
Utica, MI-48318

Cust P.O.	280914-01
Customer Part #	1045M0100SC(SW1045M-B)
Charter Sales Order #	30046478
Heat #	20198810
Ship Lot #	2030415
Grade	1045 M SK CG RHQ 1-5/32
Process	HR
Finish Size	1-5/32

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and on the reverse side, and that it satisfies these requirements.

Test Results of Heat Lot# 20198810

Lab Code: 125544

CHEM	C	MN	P	S	SI	NI	CR	MO	CU	SN	V
%WR	.48	.68	.008	.002	.21	.05	.13	.02	.12	.008	.001
	AL	N	B	TI	CA	NB					
	.002	.0070	.0004	.001	.0007	.001					

JOMINY(HRC)	JOM01	JOM02	JOM03	JOM04	JOM05	JOM06	JOM07	JOM08	JOM09	JOM10
	60	55	48	34	28	25	24	23	22	21

JOMINY SAMPLE TYPE ENGLISH = C
GRAIN SIZE LAB = 0358-04
McQuaid-Ehn Grain Size Comparison = 3 - 4
CHEM. DEVIATION EXT.-GREEN =

# of Tests	Test Results of Rolling Lot# 2030415		Mean Value
	Min Value	Max Value	

NUM DECARB = 1 AVE DECARB = .002
REDUCTION RATIO = 47:1

Specifications: Manufactured per Charter Steel Quality Manual Rev 8,08-01-09
Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:
Customer Document = PS-1 Revision = Dated = 11-MAR-08

Additional Comments:

Charter Steel
Cuyahoga Heights, OH, USA



Page 1 of 1

This MTR supersedes all previously dated MTRs for this order

Janice Barnard
Janice Barnard
Manager of Quality Assurance
06/22/2012

Rem: Load1,Fax0,Mail0

The following statements are applicable to the material described on the front of this Test Report:

1. Except as noted, the steel supplied for this order was melted, rolled, and processed in the United States meeting DFAR's compliance.
2. Mercury was not used during the manufacture of this product, nor was the steel contaminated with mercury during processing.
3. Unless directed by the customer, there are no welds in any of the coils produced for this order.
4. The laboratory that generated the analytical or test results can be identified by the following key:

Certificate Number	Lab Code	Laboratory		Address
0358-01	7388	CSSM	Charter Steel Melting Division	1653 Cold Springs Road, Saukville, WI 53080
0358-02	8171	CSSR/ CSSP	Charter Steel Rolling/ Processing Division	1658 Cold Springs Road, Saukville, WI 53080
0358-03	123633	CSFP	Charter Steel Ohio Processing Division	6255 US Highway 23, Risingsun, OH 43457
0358-04	125544	CSCM/ CSCR	Charter Steel Cleveland	4300 E. 49th St., Cuyahoga Heights, OH 44125-1004
.	.	--	Subcontracted test performed by laboratory not in Charter Steel system	

5. When run by a Charter Steel laboratory, the following tests were performed according to the latest revisions of the specifications listed below, as noted in the Charter Steel Laboratory Quality Manual:

Test	Specification	CSSM	CSSR/CSSP	CSFP	CSCM/CSCR
Chemistry Analysis	ASTM E415; ASTM E1019	X			X
Macroetch	ASTM E381	X			X
Hardenability (Jominy)	ASTM A255; SAE J406; JIS G0561	X			X
Grain Size	ASTM E112	X	X	X	X
Tensile Test	ASTM E8; ASTM A370		X	X	X
Rockwell Hardness	ASTM E18; ASTM A370	X	X	X	X
Microstructure (spheroidization)	ASTM A892		X	X	
Inclusion Content (Methods A, E)	ASTM E45		X		X
Decarburization	ASTM E1077		X	X	X

Charter Steel has been accredited to perform all of the above tests by the American Association for Laboratory Accreditation (A2LA). These accreditations expire 01/31/13.

All other test results associated with a Charter Steel laboratory that appear on the front of this report, if any, were performed according to documented procedures developed by Charter Steel and are not accredited by A2LA.

6. The test results on the front of this report are the true values measured on the samples taken from the production lot. They do not apply to any other sample.
7. This test report cannot be reproduced or distributed except in full without the written permission of Charter Steel. The primary customer whose name and address appear on the front of this form may reproduce this test report subject to the following restrictions:
 - It may be distributed only to their customers
 - Both sides of all pages must be reproduced in full
8. This certification is given subject to the terms and conditions of sale provided in Charter Steel's acknowledgement (designated by our Sales Order number) to the customer's purchase order. Both order numbers appear on the front page of this Report.
9. Where the customer has provided a specification, the results on the front of this test report conform to that specification unless otherwise noted on this test report.



Universal Galvanizing
510 E South 1st St.
Wright City, MO 63390

CMI INTERNATIONAL	
Date: 04-23-13	Time: 06:45:22
Customer: SLSB	
Part No: 1/8 x 5 1/2	
Batch No: 034284	
Inspector: Joe J.	
<input checked="" type="radio"/> Accept / <input type="radio"/> Reject	
SL 60349	

1 < 1 > Magnetic
Date: 04-23-13 Time: 06:45:23

- 1: 4.18 mil
- 2: 3.95 mil
- 3: 4.16 mil
- 4: 3.77 mil
- 5: 4.33 mil
- 6: 4.29 mil
- 7: 4.21 mil
- 8: 4.57 mil
- 9: 4.39 mil
- 10: 3.72 mil
- 11: 4.39 mil
- 12: 3.78 mil
- 13: 4.14 mil
- 14: 4.12 mil
- 15: 4.27 mil
- 16: 3.67 mil
- 17: 4.13 mil
- 18: 4.02 mil
- 19: 4.20 mil
- 20: 4.10 mil

A153/A123/F2329

F2329 Min Minimum

Notability

YES NO

Appearance

YES NO

CERTIFICATION OF COMPLIANCE

YES NO

This will serve as certification that the above referenced purchase order for the above referenced parts, which were Hot Dip Galvanized in our Wright City, MO plant in the U. S. A. meets the ASTM specifications.



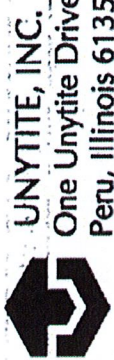
Joe Jokisch

SESSION STATS

N = 20
Average = 4.12 mil
Standard deviation = 0.241 mil
Accuracy = 0.11 mil
Percent deviation = 5.8%
High = 4.57 mil
Low = 3.67 mil
Range = 0.90 mil

QUALITY ASSURANCE MANAGER

INSPECTION CERTIFICATE



UNYTITE, INC.
 One Unytite Drive
 Peru, Illinois 61354
 815-224-2221 — FAX# 815-224-3434

Customer	Specification	Size	Lot No.	Date
ASTM A-563 GRADE DH HEAVY HEX NUT	H.D.G. 1-1/8-7 UNC 0.024" BLUE DYE	15633- M667326	Apr. 17, '13	

Mechanical properties tested in accordance to ASTM F606/F606M, ASTM A370, ASTM E18

Chemical Composition												
Mill Maker	Material Size	Heat No.	Spec.	C	Si	Mn	P	S	Cu	Ni	Cr	Mo
GERDAU AMER	CARBON			0.20 0.55	-	MIN. 0.60	MAX. 0.040	MAX. 0.050	-	-	-	-
ISTEEL (NO	STEEL	M667326		0.46	0.23	0.68	0.017	0.033	0.24	0.07	0.15	0.02

Mechanical Property Inspection			
Item	Proof Load	Cone stripping	Hardness
Spec.	114,450 lbf	-	24-38
	n	kN • kgf • lbf	HrC
	n	n	30.3 29.6 29.5 30.4 29.0

Item	After Heat Treatment Hardness	Absorbed Energy	Heat Treatment
	HrB • HB	j • kgfm • ftlb	T: MIN. 800 F
	5 Piece Average After Heat Treatment		Q: FORGING Q (W.Q.)
	Hardness Treatment		T: 1184 F/45M. (W.C.)
Results	Results	at °F(°C)	Q: Quenching T: Tempering ST: Solution Treatment
	GOOD		

Shape & Dimension	Inspection	Remarks:
ANSI B18.2.2	GOOD	" DH U"
Thread Precision	ANSI B1.1	Production Quantity
Inspection	CLASS 2B	28,350
Appearance	GOOD	
Inspection		

Material used for the nut was melted and manufactured in the USA. The nut was manufactured in the USA to the above specification. We hereby certify that the material described has been manufactured and inspected satisfactorily with the requirement of the above specification.

Chief of Quality Assurance Section

Chemical and Physical Test Report
MADE IN UNITED STATES

M-100867

GERDAU
ST PAUL STEEL MILL
1678 RED ROCK ROAD
ST PAUL, MN 55119 USA
(651) 731-5600

SHIP TO UNYTITE INC 1 UNYTITE DRIVE PERU, IL 61354	INVOICE TO UNYTITE INC 1 UNYTITE DRIVE PERU, IL 61354	SHIP DATE 09/20/11	CUST. ACCOUNT NO 70000042
---	--	-----------------------	------------------------------

PRODUCED IN: ST PAUL

SHAPE + SIZE	GRADE	SPECIFICATION	SALES ORDER	CUST P.O. NUMBER
R1 3/8S8Q	C1045M23F	ASTM A578-90B (2006) A29/A29M-05, E381-01(2006)	1031498-05	P003635-05
HEAT I.D.	C	Mn P S Si Cu Ni Cr Mo V Nb Sn Al Ti Ca Co		
M667326	.46 .68 .017 .033 .23 .24 .07 .15 .019 .024 .004 .011 .001 .00100 .00140 .006			

Macro Etch: S-1, R-1, C-1

Mechanical Test: Red R, 20.6
Cleanliness Test
Customer Requirements SOURCE: GA-STP CASTING: STRAND CAST
Comment melted and MFG in the USA
melt shop heat M112017, melt dtd 6/16/2011
Quality Program Manual Rev 3, implemented dtd 11/10/08
Steel not exposed to mercury, no weld repairment performed.

CUST ITEM NUMBER: B104SSC1.3750

Customer Notes

NO WELD REPAIRMENT PERFORMED. STEEL NOT EXPOSED TO MERCURY.
This material, including the billets, was melted and manufactured in the United States of America

Bhaskar
Bhaskar Yalamanchilli
Quality Director
Gerdau

g

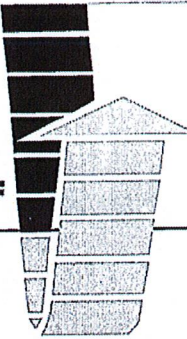
Metallurgical Services Manager
ST PAUL STEEL MILL

Debra Kariesch
DEBRA L. KARIESCH
Notary Public-Minnesota
My Commission Expires Jan 31, 2015

THE ABOVE FIGURES ARE CERTIFIED CHEMICAL AND PHYSICAL TEST RECORDS AS CONTAINED IN THE PERMANENT RECORDS OF COMPANY.

Seller warrants that all material furnished shall comply with specifications subject to standard published manufacturing variations. NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, ARE MADE BY THE SELLER, AND SPECIFICALLY EXCLUDED ARE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. In no event shall seller be liable for indirect, consequential or punitive damages arising out of or related to the materials furnished by seller. Any claim for damages for materials that do not conform to specifications must be made from buyer to seller immediately after delivery of same in order to allow the seller the opportunity to inspect the material in question.

ROGERS BROTHERS INC.



HOT DIP
GALVANIZING

April 16, 2013

Unytite, Inc.
Unytite Quality Department
One Unytite Drive
Peru, IL 61354

To Whom It May Concern:

This is to certify that the hot dip galvanizing of the following material on your Purchase Order number 4596 conforms to specification ASTM A-153. The following sizes and lot numbers comply with the coating, workmanship, finish, and appearance requirements of ASTM F2329 specifications. The hot dip galvanizing is ROHS compliant. The galvanizing process was conducted in a temperature range of 830F to 850F.

12,544 Pieces	1-1/8"-7 A563 DH HHN	Lot#15633-121638	4.55 Avg. Mils.
14,288 Pieces	1-1/8"-7 A563 DH HHN	Lot#15633-M48850	4.63 Avg. Mils.
28,599 Pieces	1-1/8"-7 A563 DH HHN	Lot#15633-M667326	4.57 Avg. Mils.

This certification in no way implies anything other than the quality of our hot dip galvanizing as it pertains to your order.

This product was galvanized in Rockford, IL USA

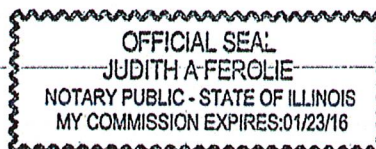
Yours very truly,

ROGERS BROTHERS INC.

Lorraine P. Shelburne
Vice President

LPS:pd

SUBSCRIBED AND SWORN
BEFORE ME THIS 16TH DAY
OF APRIL 2013, AD

NOTARY PUBLIC

Prestige
Stamping,
Inc.



23813 Grossbeck Highway
Warren, Michigan 48089
(586) 773-2700 * Fax (586) 773-2298
www.PrestigeStamping.com

PRODUCT CERTIFICATION

CERTIFICATION NUMBER

104256

THIS IS TO CERTIFY THE PRODUCT STATED BELOW WAS FABRICATED AND PROCESSED TO THE ORDER AS INDICATED AND CONFORMS TO THE APPLICABLE SPECIFICATIONS AND STANDARDS.

Customer: HAYDON BOLTS INC
ACCTS PAYABLE DEPT
1181 UNITY ST
PHILADELPHIA, PA 19124-3196

Customer Part: 1-1/8"F436 H/DIP
Prestige Part: P2281HP300
Part Name: 1-1/8"F436 H/DIP
Purchase Order: Z10200-1
Shipment BOL: B162027
Shipment ID: A0171833
Quantity: 1800
Manufacturers Marking: "P"

Steel Supplier: KENWAL STEEL
Grade: CF436 GRADE STEEL
Lot: C5875D
Heat: 4113078
Carbon: .30 (.21 - .93)
Manganese: 1.12 (.43 - 1.6)
Phosphorous: .008 (.03 Max.)
Sulfur: .004 (.05 Max.)
Silicon: .22

SPECIFICATIONS

HARDNESS: TEST METHOD: ASTM E18
HRC 38 - 45
CHECKED TO ASTM F606

PLATING: TEST METHOD: ASTM B499
0.0017" Min.
HOT DIP GALV TO ASTM F-2329

TEST RESULTS

HARDNESS:
HRC 43 - 44

PLATING:
0.0020" - 0.0030"

Chemistry is as reported from raw material certification and does not fall under Prestige Stamping's accreditation.
This product was produced under an ISO/TS 16949 Quality Assurance System.
ISO/TS 16949 Certification No: 0062933.
Material was melted and manufactured in the U.S.A.
This product was manufactured in Warren, Michigan U.S.A.
This product conforms to all requirements for washers as produced according to A.S.T.M. F-436-10.
Sampling Plan per P.S.I W.I. # 6.4.18.016.
The test results only apply to the items tested.
This test report must not be reproduced except in full without prior written approval.
Materials used to manufacture these products are mercury, asbestos and radio activity free.
No weld repairs made to material.


FRANK SCHUBERT
Quality Assurance Manager

C5875



Kenwal Steel Corp.
8223 West Warren Avenue
Dearborn, Michigan 48126
Phone: (313) 739-1000 Fax: (313) 739-1001

CERTIFICATION OF STEEL ANALYSIS

Sold To: **Prestige Stamping Inc**
23513 Groesbeck Hwy

Warren, MI 48089

Ship To: **Prestige Stamping Inc**
PO Box 1086
23513 Groesbeck Highway
Warren, MI 48090

Bill of Lading: 1162579
PO#: 20434 REL 01

Date: 8/27/12
Rel:

Order: 3026380-1
Alt PO:

Part: P2281H00
Alt Part:
0.1360Min X 4.4000" X Coil

HOT ROLLED PICKLED AND OILED F436 MELTED & MFG IN USA

Tag #	Pkg #	Heat	Weight						
838863-P11A	1549369	4113078	1722						
838863-P11B	1549369	4113078	1722						
838863-P11C	1549379	4113078	1722						
838863-P11D	1549379	4113078	1722						
838863-P11E	1549379	4113078	1722						
838863-P12B	1549805	4113078	1657						
838863-P12C	1549805	4113078	1657						
838891-P11A	1549243	4113078	1802						
838891-P11B	1549243	4113078	1802						
838891-P11C	1549243	4113078	1802						
838891-P11D	1549246	4113078	1802						
838891-P11E	1549246	4113078	1802						
838891-P12A	1549282	4113078	1578						
838891-P12B	1549282	4113078	1578						
838891-P12C	1549283	4113078	1578						
838891-P12D	1549283	4113078	1578						
838891-P12E	1549283	4113078	1578						
838893-P11A	1549294	4113078	1752						
838893-P11B	1549294	4113078	1752						
838893-P11C	1549298	4113078	1752						
838893-P11D	1549298	4113078	1752						
838893-P11E	1549298	4113078	1752						
838893-P12A	1549803	4113078	1639						
838893-P12B	1549803	4113078	1639						
838893-P12C	1549804	4113078	1639						
838893-P12D	1549804	4113078	1639						
838893-P12E	1549804	4113078	1639						
Heat	C	Mn	P	S	Al	Si	V	Nb	Ni
4113078	0.3000	1.1200	0.0080	0.0040	0.0520	0.2200	0.0010	0.0000	0.0100
	Cr	Cu	Mo	N	Ti	CB	SN	B	CO
	0.0300	0.0500	0.0100	0.0059	0.0040	0.0000	0.0100	0.0001	0.0000

We certify that the manufacturer of the material described above has supplied the chemical analysis stated herein.

David D. Smith
Kenwal Steel Corp.

RECEIVED

AUG 27 2012

Time 10:00AM D11

Aug. 24. 2012 3:35AM

1656837

No. 3162 P. 2/3

C5875

PRODUCT CERTIFICATION

WORK ORDER LOT NUMBER
FN7836 4113078

SALES ORDER / RLS
595805 / 1

ArcelorMittal Cleveland Inc.


ArcelorMittal

SOLD TO 000582-000

KENWAL - DOCK 2
8223 WEST WARREN
DOCK 2
DEARBORN, MI 48128
USA

Attn: Tim Gernuto

CUSTOMER P.O. 84181-8	CUSTOMER PART	QUANTITY 48,760 LBS	COK'S 1	LADING NO 01818800	SHIPMENT DATE 08/08/2012					
SPECIFICATION 0.1416 Nom -0.0080/+0.0000 X 62.0000 + 1.5000 ME(IN) ID 30.0/30.0 OD 0.072.7 (IN) CL WT 0/62000 (LBS) Hot Band Resp Carbon 9999 Resole UEXP										
CERTIFICATION REQUIREMENTS										
Chemical										
C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Bn	Al
0.3000	2.1200	0.0080	0.0040	0.2200	0.0800	0.0100	0.0300	0.0100	0.0100	0.0520
V	Co	N	B	Ti	Sb	Ca				
0.0010	0.0000	0.0089	0.0001	0.0040	0.0030	0.0030				
Origin - Made and Melted in USA										

I certify that the material listed herein has been inspected and tested in accordance with the methods prescribed in the governing specifications and based upon the results of such inspection and testing had been approved for conformance to the specifications.

Matthew Kremer
QA Manager

ROGERS BROTHERS INC.



HOT DIP
GALVANIZING

December 14, 2012

Frank Schubert
Prestige Stamping
23513 Groesbeck Highway
Warren, MI 48089

To Whom It May Concern:

This certifies that the following product that we have galvanized for your company meets the specifications of ASTM A153, Class C and the hot dip galvanizing requirements of ASTM F2329.

The hot dip galvanizing is RoHS compliant. The galvanizing process was conducted in a temperature range of 830F to 850F.

This certification in no way implies anything other than the quality of our hot dip galvanizing as it pertains to your order.

This product was galvanized in Rockford, IL USA

48,434 pieces	P1383HP300	5/8" F436 Structural Washer	Lot#C6110	4.35 Avg. Mills
63,499 pieces	P1383HP300	5/8" F436 Structural Washer	Lot#C6110	4.53 Avg. Mills
43,543 pieces	P1383HP300	5/8" F436 Structural Washer	Lot#C6110	5.02 Avg. Mills
21,469 pieces	P1900HP300	1" F436 Structural Washer	Lot#C6128	4.49 Avg. Mills
20,264 pieces	P1900HP300	1" F436 Structural Washer	Lot#C6128	4.75 Avg. Mills
20,312 pieces	P1900HP300	1" F436 Structural Washer	Lot#C3128	2.84 Avg. Mills
15,604 pieces	P1900HP300	1" F436 Structural Washer	Lot#C6128	4.14 Avg. Mills
19,966 pieces	P1900HP300	1" F436 Structural Washer	Lot#C3128	3.08 Avg. Mills
33,704 pieces	P1700HP300	7/8" F436 Structural Washer	Lot#C5966	6.02 Avg. Mills
21,196 pieces	P1900HP300	1" F436 Structural Washer	Lot#C6128	4.78 Avg. Mills
11,162 pieces	P1900HP300	1" F436 Structural Washer	Lot#C6128	2.67 Avg. Mills
16,865 pieces	P1900HP300	1" F436 Structural Washer	Lot#C3128	3.64 Avg. Mills
12,631 pieces	P2281HP300	1-1/8" F436 Structural Washer	Lot#C5875	4.82 Avg. Mills
8,029 pieces	S000P301	Guard Rail Washer	Lot#C6164	3.10 Avg. Mills
8,335 pieces	S000P301	Guard Rail Washer	Lot#C6164	3.40 Avg. Mills
8,229 pieces	S000P301	Guard Rail Washer	Lot#C6164	3.75 Avg. Mills
8,224 pieces	S000P301	Guard Rail Washer	Lot#C6164	3.41 Avg. Mills
4,471 pieces	S000P301	Guard Rail Washer	Lot#C6164	3.59 Avg. Mills
8,400 pieces	S000P301	Guard Rail Washer	Lot#C6164	2.94 Avg. Mills
41,075 pieces	P0836HP300	3/8" USS Flat Washer	Lot#C5968	6.48 Avg. Mills

Yours very truly,

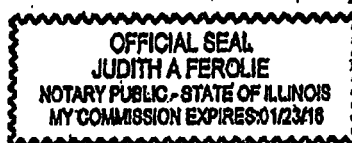
ROGERS BROTHERS INC.

Lorraine P. Shelburne

Lorraine P. Shelburne
Vice President

SUBSCRIBED AND SWORN
BEFORE ME THIS 14TH
DAY OF DECEMBER 2012, AD

Judith A. Ferolie
NOTARY PUBLIC



TEST CERTIFICATE

IIP TO:

ARCELORMITTAL PLATE LLC

PAGE NO: 01 OF 02
FILE NO: 4269-01-13
MILL ORDER NO: 17907-001
MELT NO: C7960
DATE: 08/01/13

SOLD TO:

SEND TO:

01-N

PLATE DIMENSIONS / DESCRIPTION

TOTAL QTY	GAUGE	WIDTH	LENGTH	DESCRIPTION	PIECE WEIGHT
3	1-1/2"	96"	240"	RECTANGLE	9801#

CUSTOMER INFORMATION

CUSTOMER PO: 40227-07

PART NO. 011

SPECIFICATION(S)

THIS MATERIAL HAS BEEN MANUFACTURED AND TESTED IN ACCORDANCE WITH PURCHASE ORDER REQUIREMENTS AND SPECIFICATION(S).

ASTM A709-GR50 YR 10 TYPE-2
SPEC MOD FOR PHYSICALS IMPACTS WAIVED ASTM A572 07
GR50 TYPE 2, CSA G40.21 04 GR50W
THE MANAGEMENT SYSTEMS FOR MANUFACTURE OF THIS PRODUCT ARE CERTIFIED TO ISO 9001:2008 (CERTIFICATE NO. 30130) AND ISO 14001 (CERTIFICATE NO. 009496).

CHEMICAL COMPOSITION

MELT	C	MN	P	S	CU	SI	NI	CR	MO
MELT:C7960	.16	1.14	.017	.004	.30	.24	.13	.16	.04
MELT:C7960	V	AL	CB						
	.042	.041	.001						

MANUFACTURE

FINE GRAIN PRACTICE

AFFIRMED AND SUBSCRIBED BEFORE ME
THIS DAY OF 08/01/13

Carol L. Slody
NOTARY PUBLIC

WE HEREBY CERTIFY THE ABOVE
INFORMATION IS CORRECT:

ARCELORMITTAL PLATE LLC
QUALITY ASSURANCE LABORATORY
139 MODENA ROAD
COATESVILLE, PA 19320

NOTARIAL SEAL
CAROL L. SLODY, NOTARY PUBLIC
COATESVILLE, CHESTER CO. PA
MY COMMISSION EXPIRES MAY 27, 2014

Elinore Zaplitny
SUPERVISOR - TEST REPORTING
ELINORE ZAPLITNY

TEST CERTIFICATE

PAGE NO: 02 OF 02
 FILE NO: 4269-01-13
 MILL ORDER NO: 17907-001
 MELT NO: C7960
 DATE: 08/01/13

TENSILE PROPERTIES

LOC	DIR	YIELD STRENGTH PSI X 100	TENSILE STRENGTH PSI X 100	ELONGATION GAGE LGTH %	
BOT.	TRANS.	561	823	2.00"	29.0
BOT.	TRANS.	570	809	2.00"	27.0

GENERAL INFORMATION

ALL STEEL HAS BEEN MELTED AND MANUFACTURED IN THE U.S.A.
 MERCURY OR MERCURY COMPOUNDS ARE NOT USED IN THE
 MANUFACTURE OF ARCELORMITTAL PLATE LLC PRODUCTS.
 ACID SOLUBLE ALUMINUM
 FOR MORE INFORMATION AND PROCESSING GUIDELINES, REFER TO
 WWW.ARCELORMITTAL.COM/PLATEINFORMATION

B/L #27557 YOURGA TRUCKING, INC. #27781 YOURGA TRUCKING, INC.

AFFIRMED AND SUBSCRIBED BEFORE ME
 THIS DAY OF 08/01/13

Carol L. Slody
 NOTARY PUBLIC

NOTARIAL SEAL
 CAROL L. SLODY, NOTARY PUBLIC
 COATESVILLE, CHESTER CO., PA
 MY COMMISSION EXPIRES MAY 27, 2014

WE HEREBY CERTIFY THE ABOVE
 INFORMATION IS CORRECT:

ARCELORMITTAL PLATE LLC
 QUALITY ASSURANCE LABORATORY
 139 MODENA ROAD
 COATESVILLE, PA 19320

Elinore Zaplitny
 SUPERVISOR - TEST REPORTING
 ELINORE ZAPLITNY

20140801



MATERIALS TESTING, INC.

55 LAURA STREET • NEW HAVEN, CONNECTICUT 06512 • (203)468-5216
42 BOSTON POST ROAD • WILLIMANTIC, CONNECTICUT 06226 • (860)423-1972
materialstestinginc.com

DATE: 11-14-13

REPORT NO: S-1000

CLIENT: Mayhew, Inc.
P.O. Box 64722
Souderton, PA 18964
Attn: Stacey Bvighouse

PAGE: 1 of 2

PROJECT: 370 Rockland Road Cell Tower
Guilford, CT

SUBJECT: FIELD REINFORCING BAR SPLICES @ 29.75' - FIELD



As requested, a site visit was made to inspect the three (3) full penetration reinforcing bar splices shown on project sheet S-5, revision #1, dated 04-15-13 and section 3/S.5 Alternate Splice Detail.

Three splices occur at 29.75' on tower flat face sides, numbered as flat #4, flat #10 and flat #16 clockwise from tower safety cable (see layout section at base on S-1).

Lower plate #4 joined to upper plate 5 as indicated on drawing S-1, revision 0, dated 01-30-13.

All welds completed prior to visit by Albert Leon Berger using .045" diameter ultracore flux core electrodes, E71 classification.

Note #1: Splice Detail 3/S.5 shows AWS joint designation as a B-u3b-GF (double V-groove butt joint).

Field changed to AWS B-u4a (single bevel groove butt joint) which uses tower face as backing to weld splice attaching to tower face.

Change subject to approval.

Ultrasonic results shown on attached UT-form locations of rejectable rating via ultrasonics marked on steel and reviewed with welder.



MATERIALS TESTING, INC.

55 LAURA STREET • NEW HAVEN, CONNECTICUT 06512 • (203)468-5216
42 BOSTON POST ROAD • WILLIMANTIC, CONNECTICUT 06226 • (860)423-1972
materialstestinginc.com

Client: Mayhew, Inc.

Date: 11-14-13

Report No: S-1000

Page: 2 of 2

Project: 370 Rockland Road Cell Tower
Guilford, CT

Subject: ULTRASONIC TESTING - FIELD

Inspector on Site to Perform Ultrasonic Inspection of Complete Penetration Welds in Accordance with the Guidelines of the American Welding Society D1.1 Structural Welding Code. The Results of Testing are as Follows:

Testing Parameters:

- 1. Connection Type: Moment Splice Other _____
- 2. Transducer Angle: 0/70°
- 3. Unit Type: KB-USN-50
- 4. From Face: A
- 5. Leg: 1-2
- 6. Reference Level (b): 40db

LOCATION (TF=TOP FLANGE/BF=BOTTOM FLANGE)	ELEVATION	DISCONTINUITY					INITIAL	REPAIR	EVALUATION ACCEPT/ REJECT
		a	c	d	LENGTH	DEPTH			
1) Flat bar, location #4	29.75'				*1	*1	✓		Accept
2) Flat bar, location #10	29.75	39	4	-5	2 1/2"	1 1/8"	✓		Reject *2
3) Flat bar, location #10	29.75	37	4	-7	2 1/4"	1 1/4"	✓		Reject *2
4) Flat bar, location #16	29.75	40	3	-3	2 1/2"	7/8" - 1"	✓		Reject *3

Location of Defect, if any, marked directly on member.

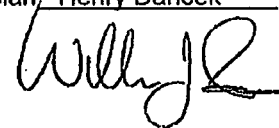
Material Parameters: Welding Process: FCAW Thickness: 1 1/2"
 Weld Joint: Field modified to B-u4a-GF Backing?: Cell tower as backing

Remarks: *1 numerous acceptable indications noted. *2 line 2 located on left side 2 1/2" and line 3 located on right side of 6 1/2" wide upper plate. Line 3 *3 area located on right 2 1/2" of plate face.

Note: all welds have some additional acceptable class C indications, only rejected locations marked on steel. Note that plate holes/bolts limit full scan from one direction of scanning. Code requires typical scanning from both directions.

a: Indication Level; c: Attenuation Factor; d: Indication Rating
Technician certified in accordance with Materials Testing, Inc. NDT Procedure WP-001.

Materials Testing, Inc. Technician: Henry Daricek Level: II


 William J. Soucy

1cc: Client
Attachments (2)

lgs



MATERIALS TESTING, INC.

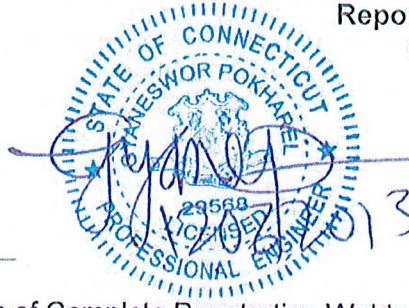
55 LAURA STREET • NEW HAVEN, CONNECTICUT 06512 • (203)468-5216
42 BOSTON POST ROAD • WILLIMANTIC, CONNECTICUT 06226 • (860)423-1972
materialstestinginc.com

Client: Mayhew, Inc.
P.O. Box 64722
Souderton, PA 18964
Attn: Stacy Bvighouse

Date: 12-02-13
Report No: S-1001
Page: 1 of 1

Project: 370 Rockland Road Cell Tower
Guilford, CT

Subject: ULTRASONIC TESTING - FIELD



Inspector on Site to Perform Ultrasonic Inspection of Complete Penetration Welds in Accordance with the Guidelines of the American Welding Society D1.1 Structural Welding Code. The Results of Testing are as Follows:

Testing Parameters:

- 1. Connection Type: Moment Splice Other _____
- 2. Transducer Angle: 0/70° 3. Unit Type KB-USN-50
- 4. From Face: A 5. Leg: 1-2 6. Reference Level (b): 40db

LOCATION (TF=TOP FLANGE/BF=BOTTOM FLANGE)	ELEVATION	DISCONTINUITY					INITIAL	REPAIR	EVALUATION ACCEPT/ REJECT
		a	c	d	LENGTH	DEPTH			
Reinspection of flat bars from report dated 11-14-13									
Flat bar, location #10	29.75				Broken	.9-1.1	11-14-13	R1	Accept *1
Flat bar, location #16	29.75						11-14-13	R1	Accept

Location of Defect, if any, marked directly on member.

Material Parameters: Welding Process: Unknown Thickness: 1 1/2"
Weld Joint: Field modified to B-u4a Backing? Yes - cell tower face

Remarks: *1 Indications, depth .9-1.1, class B and C per AWS D1.1., found acceptable to AWS D1.1 tolerance tables.

a: Indication Level; c: Attenuation Factor; d: Indication Rating
Technician certified in accordance with Materials Testing, Inc. NDT Procedure WP-001.

Materials Testing, Inc. Technician Henry Daricek Level: II

William J. Soucy

1cc: Client

lgs

PROJECT INFORMATION:

PRC
WEST HAVEN
/WOOLBROOK
CTA
 PROJECT
370 ROCKY HILL
GUILFORD
(NEW HAVEN)

LATITUDE N41° 23'
 LONGITUDE W72° 4'
 GROUND ELEVATION 372'

2-C CERTIFICATION

SITE CONSTRUCTION MANAGER:
 NAME SBA
 ADDRESS 5900
 CITY, STATE, ZIP BOCA RATON, FL 33433
 CONTACT DWAYNE
 PHONE (919) 487-1111

SITE APPLICANT:
 NAME SPRINGFIELD
 ADDRESS 6391 S
 CITY, STATE, ZIP OVERLAND PARK, MO 66205
 CONTACT MARK
 EMAIL Mark.k

SURVEYOR:
 NAME N/A
 ADDRESS N/A
 CITY, STATE, ZIP N/A
 CONTACT N/A
 PHONE N/A

CIVIL ENGINEER:
 NAME VERTI
 ADDRESS 2002 F
 CITY, STATE, ZIP APEX, NC 27502
 CONTACT MIKE
 PHONE (888) 4

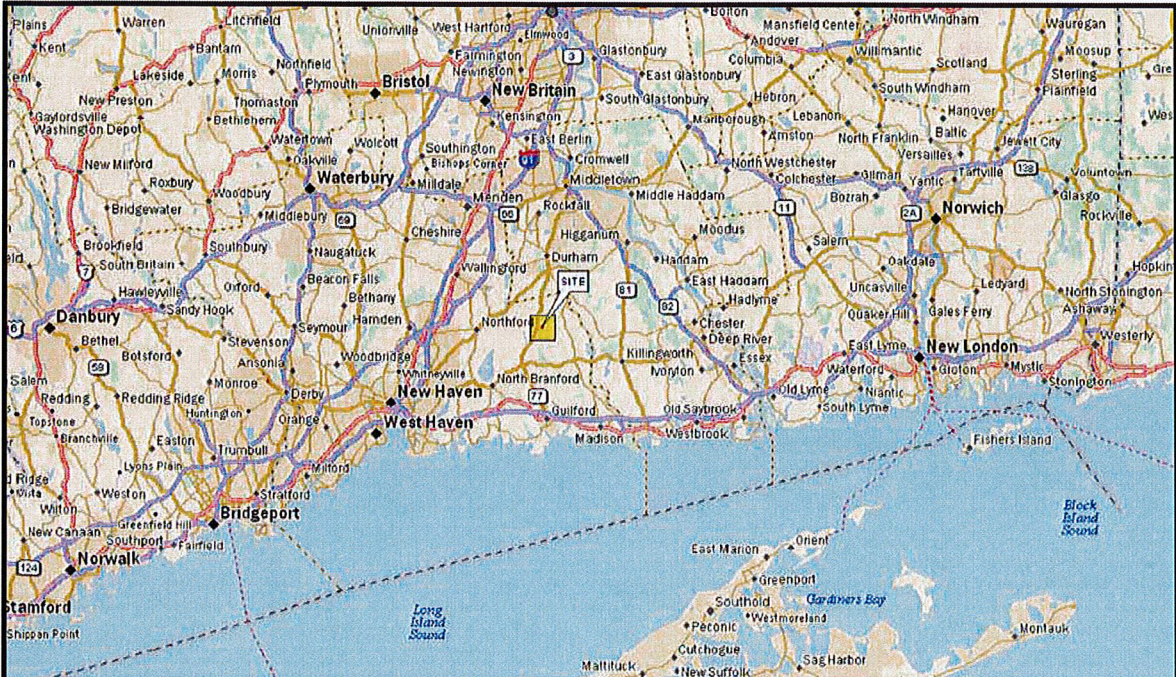
ELECTRICAL ENGINEER:
 NAME N/A
 ADDRESS N/A
 CITY, STATE, ZIP N/A
 CONTACT N/A
 PHONE N/A

PROPERTY INFORMATION:
 NAME WEST
 ADDRESS 370 ROCKY HILL
 CITY, STATE, ZIP GUILFORD, CT 06430
 CONTACT MICHAEL
 PHONE (412) 4

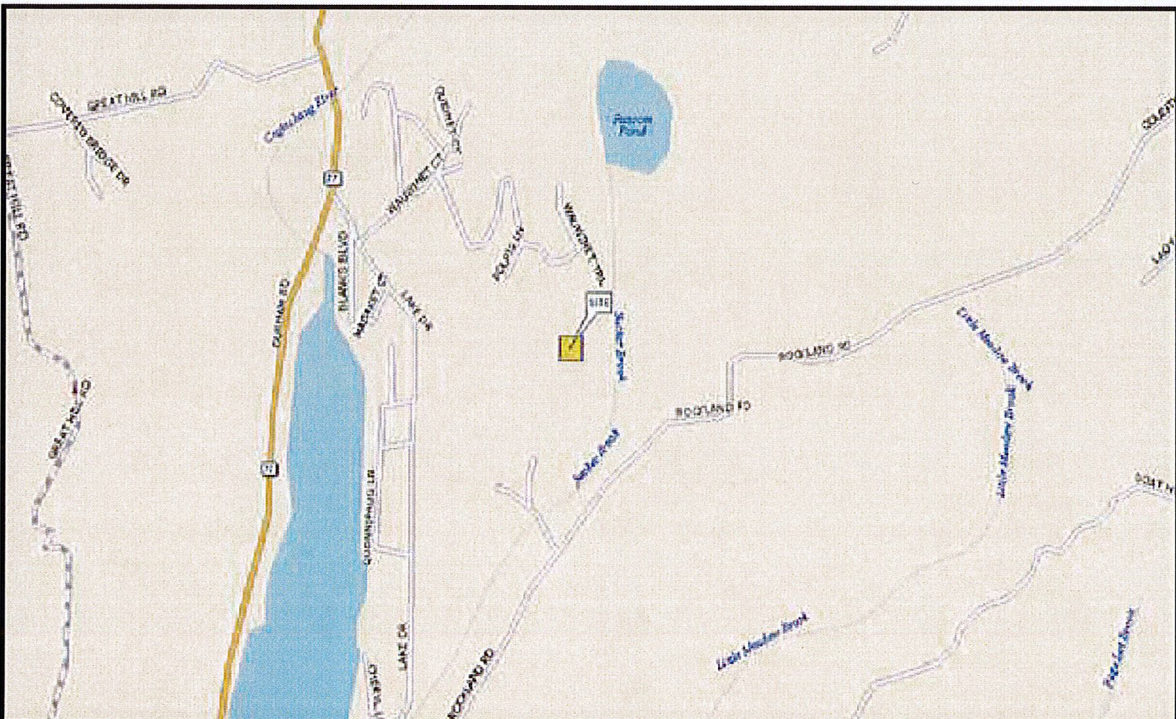
UTILITIES:
 POWER COMPANY N/A
 CONTACT N/A
 PHONE N/A

TELEPHONE COMPANY N/A
 CONTACT N/A
 PHONE N/A
 PHONE # NEAR SITE N/A

CONTACT INFO



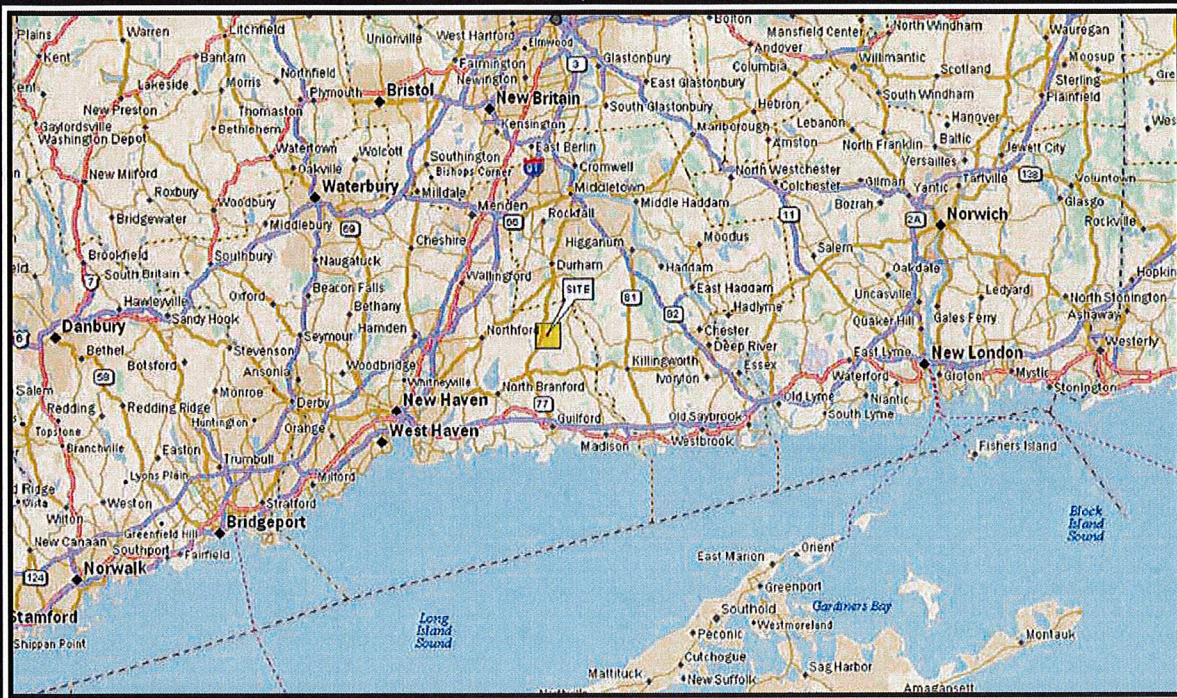
PROXIMITY MAP



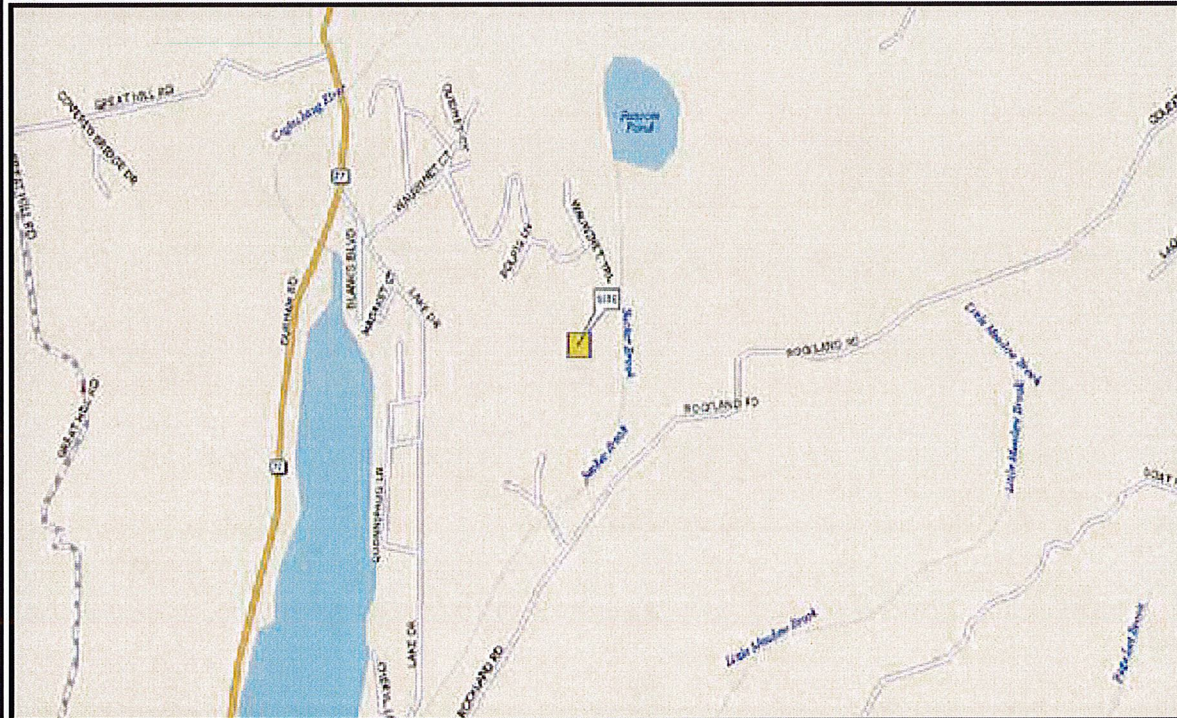
LOCATION MAP

START AT TWEED-NEW HAVEN AIRPORT. GO STRAIGHT (NNE) ON ACCESS RD. IN 0.12 MI KEEP RIGHT (WNW) ON TO <UNNAMED>. IN 0.01 MI TURN RIGHT (NNE) ON TO BURR ST. IN 0.13 MI TURN RIGHT (ESE) ON TO DODGE AVE. IN 0.61 MI TURN LEFT (NNE) ON TO THOMPSON AVE. IN 0.65 MI GO STRAIGHT (N) ON TO SR 100 (HIGH ST). IN 0.34 MI KEEP RIGHT (E) ON TO I-95 N (CONNECTICUT TPKE|GOVERNOR JOHN DAVIS LODGE TPKE) RAMP. IN 0.02 MI KEEP RIGHT (E) ON I-95 N (CONNECTICUT TPKE|GOVERNOR JOHN DAVIS LODGE TPKE) RAMP. IN 4.69 MI KEEP RIGHT (WSW) ON TO US 1 (E MAIN ST) RAMP 55. IN 0.36 MI GO STRAIGHT (N) ON US 1 (E MAIN ST) RAMP. IN 0.02 MI KEEP RIGHT (NE) ON TO US 1 (E MAIN ST). IN 0.27 MI KEEP LEFT (NNE) ON TO SR 139 (N BRANFORD RD). IN 2.39 MI KEEP RIGHT (ENE) ON TO SR 22 (SR 80|FOXON RD). IN 0.09 MI KEEP LEFT (NE) ON TO SR 80 (FOXON RD). IN 3.18 MI TURN LEFT (NNE) ON TO SR 77 (DURHAM RD). IN 3.70 MI TURN RIGHT (SSE) ON TO LAKE DR. IN 0.08 MI TURN LEFT (NE) ON TO MOHAWK TRL. IN 0.11 MI TURN RIGHT (ENE) ON TO WAUWINET CT. IN 0.07 MI TURN RIGHT (ESE) ON TO WAUWINET TRL. IN 0.43 MI FINISH AT SITE.

DRIVING DIRECTIONS



PROXIMITY MAP



LOCATION MAP

DRIVING DIRECTIONS

START AT TWEED-NEW HAVEN AIRPORT. GO STRAIGHT (NNE) ON ACCESS RD. IN 0.12 MI KEEP RIGHT (WNV) ON TO <UNNAMED>. IN 0.01 MI TURN RIGHT (NNE) ON TO BURR ST. IN 0.13 MI TURN RIGHT (ESE) ON TO DODGE AVE. IN 0.61 MI TURN LEFT (NNE) ON TO THOMPSON AVE. IN 0.65 MI GO STRAIGHT (N) ON TO SR 100 (HIGH ST). IN 0.34 MI KEEP RIGHT (E) ON TO I-95 N (CONNECTICUT TPKE|GOVERNOR JOHN DAVIS LODGE TPKE) RAMP. IN 0.02 MI KEEP RIGHT (E) ON I-95 N (CONNECTICUT TPKE|GOVERNOR JOHN DAVIS LODGE TPKE) RAMP. IN 4.69 MI KEEP RIGHT (WSW) ON TO US 1 (E MAIN ST) RAMP 55. IN 0.36 MI GO STRAIGHT (N) ON US 1 (E MAIN ST) RAMP. IN 0.02 MI KEEP RIGHT (NE) ON TO US 1 (E MAIN ST). IN 0.27 MI KEEP LEFT (NNE) ON TO SR 139 (N BRANFORD RD). IN 2.39 MI KEEP RIGHT (ENE) ON TO SR 22 (SR 80|FOXON RD). IN 0.09 MI KEEP LEFT (NE) ON TO SR 80 (FOXON RD). IN 3.18 MI TURN LEFT (NNE) ON TO SR 77 (DURHAM RD). IN 3.70 MI TURN RIGHT (SSE) ON TO LAKE DR. IN 0.08 MI TURN LEFT (NE) ON TO MOHAWK TRL. IN 0.11 MI TURN RIGHT (ENE) ON TO WAUWINET CT. IN 0.07 MI TURN RIGHT (ESE) ON TO WAUWINET TRL. IN 0.43 MI FINISH AT SITE.

DRIVING DIRECTIONS

PROJECT INFORMATION:

PROJECT NAME:
WEST HAVEN-RT15 / WOODBRIDGE
CT46139-A

PROJECT LOCATION:
370 ROCKLAND ROAD
GUILFORD, CT 06437
(NEW HAVEN COUNTY)

LATITUDE N41° 23' 48.60"
 LONGITUDE W72° 41' 19.70"
 GROUND ELEVATION 372'

2-C CERTIFICATION (REF: SBA)

SITE CONSTRUCTION MANAGER:
 NAME SBA COMMUNICATIONS CORPORATION
 ADDRESS 5900 BROKEN SOUND PARKWAY NW
 CITY, STATE, ZIP BOCA RATON, FL 33487-2797
 CONTACT DWAYNE LYERLY
 PHONE (919) 557-0555

SITE APPLICANT:
 NAME SPRINT
 ADDRESS 6391 SPRINT PKWY MAILSTOP
 CITY, STATE, ZIP OVERLAND, KS 66251
 CONTACT MARK KULIK
 EMAIL Mark.kulik@alcatel-lucent.com

SURVEYOR:
 NAME N/A
 ADDRESS N/A
 CITY, STATE, ZIP N/A
 CONTACT N/A
 PHONE N/A

CIVIL ENGINEER:
 NAME VERTICAL SOLUTIONS
 ADDRESS 2002 PRODUCTION DRIVE
 CITY, STATE, ZIP APEX, NC 27539
 CONTACT MIKE LASSITER
 PHONE (888) 321-6167

ELECTRICAL ENGINEER:
 NAME N/A
 ADDRESS N/A
 CITY, STATE, ZIP N/A
 CONTACT N/A
 PHONE N/A

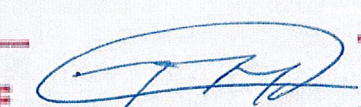
PROPERTY INFORMATION:
 NAME WEST HAVEN-RT15 / WOODBRIDGE
 ADDRESS 370 ROCKLAND ROAD
 CITY, STATE, ZIP GUILFORD, CT 06437
 CONTACT MICHAEL VILLA
 PHONE (412) 445-4325

UTILITIES:
 POWER COMPANY N/A
 CONTACT N/A
 PHONE N/A

TELEPHONE COMPANY N/A
 CONTACT N/A
 PHONE N/A
 PHONE # NEAR SITE N/A

CONTACT INFORMATION

AS-BUILT

DATE 

PROJECT INFORMATION



CONNECTICUT ONE CALL
 CALL BEFORE YOU DIG
 1-800-922-4455

ONE CALL

SHEET	DESCRIPTION	REV
T-1	TITLE SHEET	1
N-1	PROJECT NOTES	0
N-2	PROJECT NOTES	0
B-1	BILL OF MATERIALS	0
D-1	DEMOLITION DETAILS	0
S-1	TOWER ELEVATION AND MODIFICATION SCHEDULE	0
S-2	CONSTRUCTION DETAILS	1
S-3	CONSTRUCTION DETAILS	0
S-4	CONSTRUCTION DETAILS	0
S-5	CONSTRUCTION DETAILS	1
S-6	FABRICATION DETAILS	0
S-7	FABRICATION DETAILS	0
S-8	FABRICATION DETAILS	0
S-9	FABRICATION DETAILS	0

INDEX OF SHEETS

PLANS PREPARED FOR:



5900 BROKEN SOUND PARKWAY NW
 BOCA RATON, FL 33487-2797
 (919) 557-0555

PROJECT INFORMATION:

WEST HAVEN-RT15 / WOODBRIDGE
CT46139-A

370 ROCKLAND ROAD
 GUILFORD, CT 06437
 (NEW HAVEN COUNTY)

PLANS PREPARED BY:



2002 PRODUCTION DRIVE
 APEX, NC 27539
 OFFICE: (888) 321-6167
 www.verticalsolutions-inc.com

REV	DATE	ISSUED FOR:
1	04-15-13	CONSTRUCTION
0	01-30-13	CONSTRUCTION


DRAWN BY: MEA CHECKED BY: MER

SHEET TITLE:
TITLE SHEET

SHEET NUMBER:
T-1

REVISION:
1
 VSI #: 122449

SEAL:



APPLICABLE CODES AND STANDARDS

- ANSI/TIA STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES, 222-F-1996 EDITION.
- 2005 CONNECTICUT STATE BUILDING CODE.
- ACI 318: AMERICAN CONCRETE INSTITUTE, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, 318-05.
- CRSI: CONCRETE REINFORCING STEEL INSTITUTE, MANUAL OF STANDARD PRACTICE, LATEST EDITION.
- AISC: AMERICAN INSTITUTE OF STEEL CONSTRUCTION, MANUAL OF STEEL CONSTRUCTION, LATEST EDITION.
- AWS: AMERICAN WELDING SOCIETY D1.1, STRUCTURAL WELDING CODE, LATEST EDITION.

STRUCTURAL STEEL

- ALL DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AISC SPECIFICATIONS, LATEST EDITION.
- ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
- ALL U-BOLTS SHALL BE ASTM A307 OR EQUIVALENT, WITH LOCKING DEVICE, UNLESS NOTED OTHERWISE.

WELDING

- ALL WELDING SHALL BE PERFORMED BY WELDERS CURRENTLY STATE OR AWS CERTIFIED TO THE AWS D1.1 STRUCTURAL WELDING CODE, LATEST EDITION.
- ALL FIELD WELDING SHALL UTILIZE LOW HYDROGEN ELECTRODES.
- PRIOR TO FIELD WELDING, GRIND OFF GALVANIZING TO 1/2" BEYOND ALL FIELD WELD SURFACES.
- ALL FIELD CUT, FIELD WELDED, OR DAMAGED GALVANIZING SURFACES SHALL BE REPAIRED WITH ZINC RICH PAINT (95% ZINC CONTENT) PER ASTM A780.
- PRIOR TO FIELD WELDING, CONTRACTOR SHALL CLEAR THE INTERIOR OF MONOPOLE OF FLAMMABLE DEBRIS. COAXIAL CABLE SHALL BE SHIFTED AWAY FROM PROXIMITY OF THE WELD AND/OR COVERED WITH A HEAT RESISTANT BLANKET.

PAINT

- CLEAN AND PAINT PROPOSED STEEL ACCORDING TO FAA ADVISORY CIRCULAR AC 70/7460-1K.

REINFORCEMENT STEEL

- ALL REINFORCEMENT BARS ARE ASTM A572 GRADE 50, $F_y = 50$ ksi, $F_u = 65$ ksi.

FIELD WELDS

- ALL FIELD WELDS SHALL BE MADE WITH E70XX WELD RODS.

GENERAL NOTES:

- ALL METHODS, MATERIAL AND WORKMANSHIP SHALL FOLLOW THE DICTATES OF GOOD CONSTRUCTION PRACTICES.
- ALL WORK INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN TOWER AND FOUNDATION CONSTRUCTION.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IMMEDIATELY OF ANY INSTALLATION INTERFERENCES. ALL NEW WORK SHALL ACCOMMODATE EXISTING CONDITIONS. DETAILS NOT SPECIFICALLY SHOWN ON THE DRAWINGS SHALL FOLLOW SIMILAR DETAILS FOR THIS JOB.
- ANY SUBSTITUTIONS MUST CONFORM TO THE REQUIREMENTS OF THE NOTES AND SPECIFICATIONS AND SHOULD BE SIMILAR TO THOSE SHOWN. ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
- ANY MANUFACTURED DESIGN ELEMENTS MUST CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS AND SHOULD BE SIMILAR TO THOSE SHOWN. THESE DESIGN ELEMENTS MUST BE STAMPED BY AN ENGINEER PROFESSIONALLY REGISTERED IN THE STATE OF THE PROJECT, AND SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH LOCAL CODES AND OSHA SAFETY REGULATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL MISCELLANEOUS SHORING, BRACING, TEMPORARY SUPPORTS, ETC. NECESSARY TO PROVIDE A COMPLETE AND STABLE STRUCTURE AS SHOWN ON THESE DRAWINGS.
- ANY STEEL WHICH HAS BEEN FIELD CUT OR WELDED SHALL BE COLD GALVANIZED WITH 95% ZINC RICH PAINT PER ASTM A780.
- CONTRACTOR'S PROPOSED INSTALLATION SHALL NOT INTERFERE, NOR DENY ACCESS TO, ANY EXISTING OPERATIONAL AND SAFETY EQUIPMENT.

SPECIAL INSPECTION

- A QUALIFIED INDEPENDENT TESTING LABORATORY, EMPLOYED BY THE OWNER, SHALL PERFORM INSPECTION AND TESTING IN ACCORDANCE WITH CSBC 2005, SECTION 1704 AS REQUIRED BY PROJECT SPECIFICATIONS FOR THE FOLLOWING CONSTRUCTION WORK:
 - STRUCTURAL WELDING
 - HIGH STRENGTH BOLTS
- THE INSPECTION AGENCY SHALL SUBMIT INSPECTION AND TEST REPORTS TO THE BUILDING DEPARTMENT, THE ENGINEER OF RECORD, AND THE OWNER IN ACCORDANCE WITH CSBC 2005, SECTION 1704. UNLESS THE FABRICATOR IS APPROVED BY THE BUILDING OFFICIAL TO PERFORM SUCH WORK WITHOUT THE SPECIAL INSPECTIONS.

FIELD BOLTS

- ALL STITCH, SPLICE & TERMINATION BOLTS ARE 20 mm ONESIDE BOLTS BY AJAX.
 - BOLTS SHALL MEET AS 1252, PROPERTRY CLASS 8.8 (SIMILAR TO ASTM A325M)
 - $F_u = 120$ ksi
- EACH BOLT SHALL INCLUDE A 29 mm O.D. BY 20 mm I.D. SLEEVE ($F_u=120$ ksi)
- BOLT HOLES SHALL BE 31 mm MAXIMUM.

AS-BUILT

DATE _____

[Signature]

PLANS PREPARED FOR:



5900 BROKEN SOUND PARKWAY NW
BOCA RATON, FL 33487-2797
(919) 557-0555

PROJECT INFORMATION:

**WEST HAVEN-RT15
/WOODBRIDGE
CT46139-A**

370 ROCKLAND ROAD
GUILFORD, CT 06437
(NEW HAVEN COUNTY)

PLANS PREPARED BY:



2002 PRODUCTION DRIVE
APEX, NC 27539
OFFICE: (888) 321-6167
www.verticalsolutions-inc.com

0	01-30-13	CONSTRUCTION
REV	DATE	ISSUED FOR:

DRAWN BY: MEA | CHECKED BY: MER

SHEET TITLE:
PROJECT NOTES

SHEET NUMBER: N-2	REVISION: 0 VSI #: 122449
-----------------------------	--

SEAL:

January 30, 2013

BILL OF MATERIAL - MONOPOLE REINFORCEMENT

MARK NO.	DESCRIPTION	SIZE	QTY
RB-01	REINFORCING BAR 01	ASTM A572-50 ϕ 1 1/2" x 7 1/4" x 28'-9 1/4"	2
RB-01A	REINFORCING BAR 01A	ASTM A572-50 ϕ 1 1/2" x 7 1/4" x 7'-11 1/4"	2
RB-01B	REINFORCING BAR 01B	ASTM A572-50 ϕ 1 1/2" x 7 1/4" x 25'-7"	1
RB-02	REINFORCING BAR 02	ASTM A572-50 ϕ 1 1/2" x 6 1/2" x 23'-3"	3
RB-03	REINFORCING BAR 03	ASTM A572-50 ϕ 1 1/2" x 5" x 24'-6"	3
RB-VP	REINFORCING BAR VERTICAL PLATE	WELDED DESIGN USED	12
SPL-01	SPLICE PLATE 01	WELDED DESIGN USED	3
TSP	TRANSITION STIFFENER PLATE	ASTM A572-50 ϕ 1.5"	8
SP	STIFFENER PLATE	ASTM A572-50 ϕ 3/4"	32
SB	STITCH BOLT (AJAX)*	20-mm ϕ - STANDARD LENGTH ONESIDE W/ 30-mm ϕ SLEEVE	284
HSB-01	HIGH STRENGTH BOLT	ASTM A490-X 1 1/8" ϕ x 3 3/4" (2) FLAT WASHERS (1) SPLIT WASHER	97
HSB-02	HIGH STRENGTH BOLT	WELDED DESIGN USED	306
-	WELD ELECTRODE	E70XX	TBD

- NOTES:
 1. LABEL BARS WITH BAR #.
 2. BARS ARE TO BE ASTM A572 GRADE 50 STEEL & HOT-DIP GALVANIZED.
 3. HOLES IN BARS ARE 31mm ϕ & DIMENSIONED TO CENTERS.
 4. BOTTOM OF BARS ON LEFT AS SHOWN.
 5. SEE SLEEVE CHART FOR AJAX SLEEVE SIZE AND QUANTITY.

* = A325 1 1/8" ϕ MAY BE USED.

AS-BUILT

DATE: *[Signature]*

AJAX SLEEVE

SLEEVE SIZE	QTY
30-mm ϕ O.D. x 20-mm ϕ I.D. x 1.69"	158
30-mm ϕ O.D. x 20-mm ϕ I.D. x 2.005"	45
30-mm ϕ O.D. x 20-mm ϕ I.D. x 1.885"	30
30-mm ϕ O.D. x 20-mm ϕ I.D. x 1.57"	51

- NOTE:
 1. 45'-6" \pm TOTAL NEEDED.

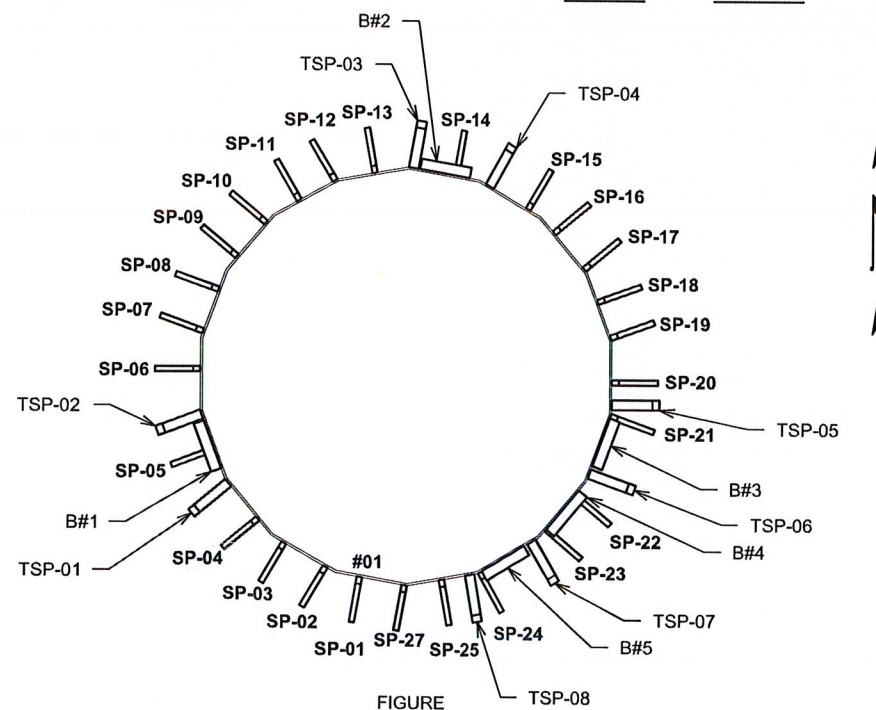
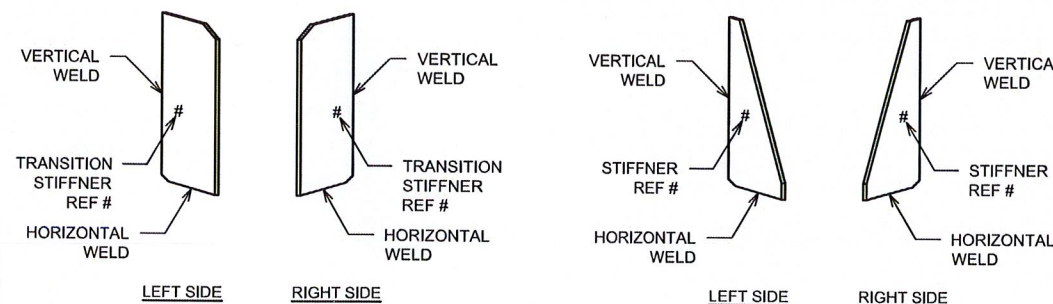
PHOTO CHECKLIST

1. CONTRACTOR SHALL SUBMIT THE FOLLOWING PHOTOS TO VERTICAL SOLUTIONS. IF PHOTOS DON'T MEET THE SATISFACTION OF OWNER OR ENGINEER OF RECORD, CONTRACTOR SHALL RETURN TO SITE AT HIS OWN EXPENSE TO OBTAIN ADDITIONAL PHOTOS. AS AN ALTERNATE, CONTRACTOR MAY RETAIN VERTICAL SOLUTIONS TO EXECUTE AN INSPECTION FOR A FEE. TOWERCO MAY ALSO ELECT TO RETAIN VERTICAL SOLUTIONS IF CONTRACTOR SCHEDULE DOES NOT MEET PROJECT TIMELINES. CONTACT inspection@verticalsolutions-inc.com FOR FEE AMOUNT AND / OR SCHEDULE.

BAR REINFORCEMENT - SELF SUPPORTING POLE STRUCTURE

COMPLETE (Y/N)	PHOTOGRAPH(S) DESCRIPTION
	BOTTOM OF RB#1 TO RB#5, INCLUDING ALL TERMINATION BOLTS. MAKE SURE RB'S ARE LABELED PER FIGURE BELOW.
	FULL ELEVATION OF RB#1 TO RB#5, INCLUDING FULL LENGTH OF BAR.
	TOP OF RB#1 TO RB#5, INCLUDING ALL TERMINATION BOLTS.
	LABEL AND PHOTO EACH TRANSITION STIFFENER PLATE EACH SIDE AFTER WELDING AND PRIOR TO COLD GALVANIZING.
	LABEL AND PHOTO EACH TRANSITION STIFFENER PLATE EACH SIDE AFTER COLD GALVANIZING.
	LABEL AND PHOTO EACH STIFFENER PLATE EACH SIDE AFTER WELDING AND PRIOR TO COLD GALVANIZING.
	LABEL AND PHOTO EACH STIFFENER PLATE EACH SIDE AFTER COLD GALVANIZING.

- NOTES:
 1. MAKE SURE ALL FASTENERS ARE CLEARLY MARKED AND TURNED PER "BOLT TIGHTENING PROCEDURE".



FIGURE

PLANS PREPARED FOR:



5900 BROKEN SOUND PARKWAY NW
 BOCA RATON, FL 33487-2797
 (919) 557-0555

PROJECT INFORMATION:

**WEST HAVEN-RT15
 /WOODBRIDGE
 CT46139-A**

370 ROCKLAND ROAD
 GUILFORD, CT 06437
 (NEW HAVEN COUNTY)

PLANS PREPARED BY:



2002 PRODUCTION DRIVE
 APEX, NC 27539
 OFFICE: (888) 321-6167
www.verticalsolutions-inc.com

REV	DATE	ISSUED FOR:
0	01-30-13	CONSTRUCTION

DRAWN BY: MEA CHECKED BY: MER

SHEET TITLE:

BILL OF MATERIALS

SHEET NUMBER:

B-1

REVISION:

0

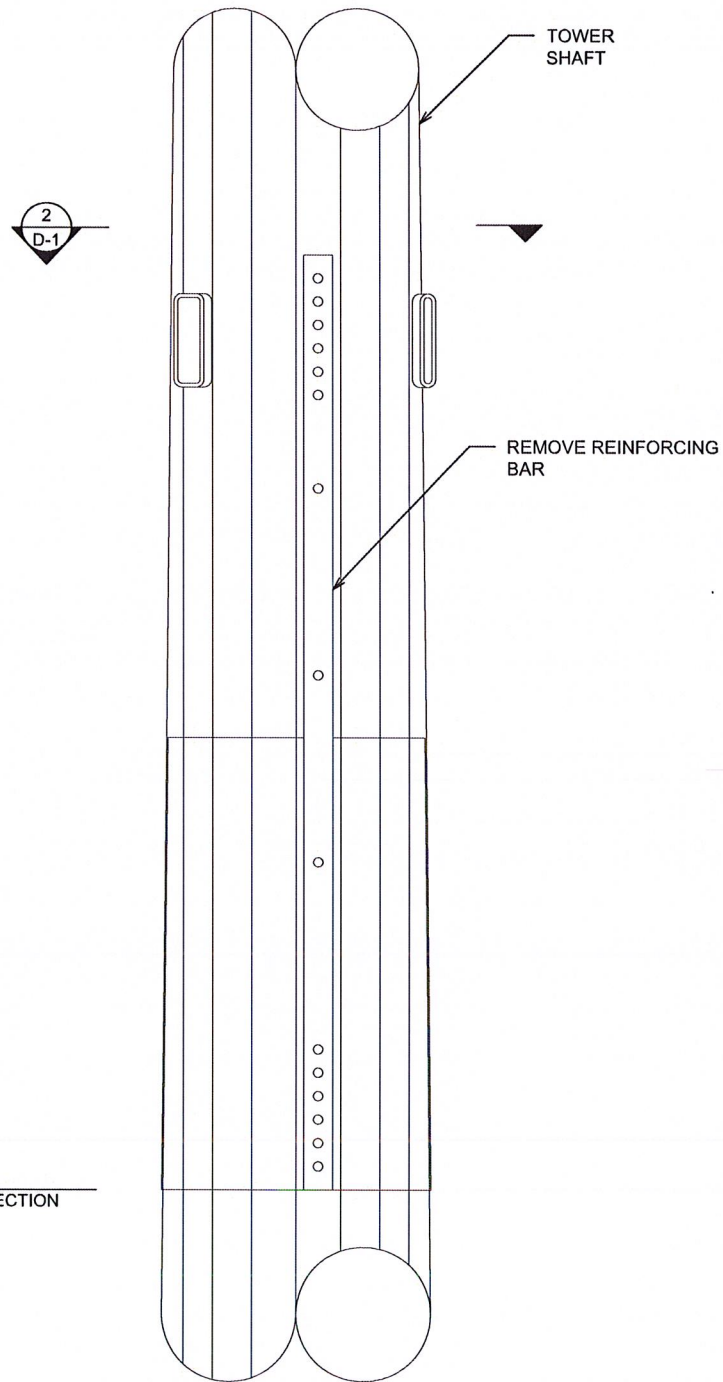
VSI #: 122449

SEAL:



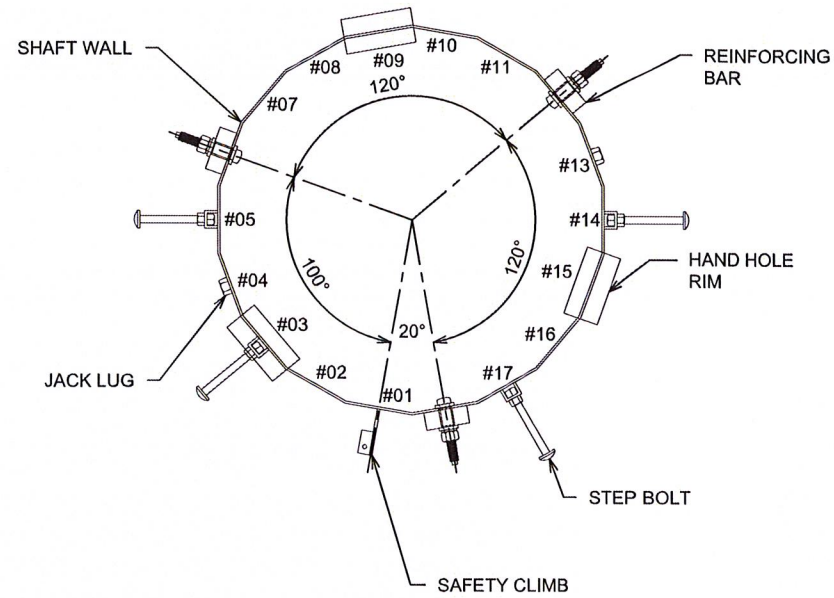
January 30, 2013

NOTE:
 1. TOWER SHOWN FROM FLAT 4.
 2. REMOVE (3) REINFORCING BARS.



1 SECTION ELEVATION
 D-1 SCALE: 1/2" = 1'-0"

NOTE:
 1. #XX DENOTES FLAT NUMBER.
 2. REMOVE (3) REINFORCING BARS.



2 SECTION ELEVATION
 S-2 SCALE: 3/4" = 1'-0"

AS-BUILT

DATE

[Signature]

PLANS PREPARED FOR:



5900 BROKEN SOUND PARKWAY NW
 BOCA RATON, FL 33487-2797
 (919) 557-0555

PROJECT INFORMATION:

**WEST HAVEN-RT15
 /WOODBRIDGE
 CT46139-A**

370 ROCKLAND ROAD
 GUILFORD, CT 06437
 (NEW HAVEN COUNTY)

PLANS PREPARED BY:



2002 PRODUCTION DRIVE
 APEX, NC 27539
 OFFICE: (888) 321-6167
 www.verticalsolutions-inc.com

0	01-30-13	CONSTRUCTION
REV	DATE	ISSUED FOR:

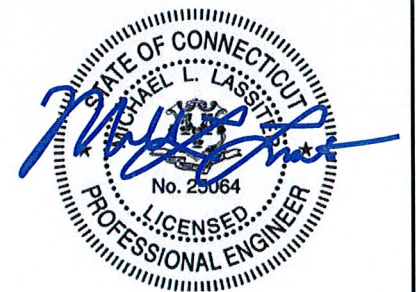
DRAWN BY: MEA CHECKED BY: MER

SHEET TITLE:

**DEMOLITION
 DETAILS**

SHEET NUMBER:	REVISION:
D-1	0
	VSI #: 122449

SEAL:



January 30, 2013

MODIFICATION DESIGN PROVISIONS

THIS MODIFICATION DESIGN IS BASED ON VERTICAL SOLUTIONS STRUCTURAL ANALYSIS REPORT, VSI JOB #122449 REV 00, DATED JANUARY 30, 2013. THIS REPORT IS BASED ON A SPECIFIC ANTENNA AND COAX CONFIGURATION, SEE THE REPORT FOR ANTENNA AND COAX LOADING. ANY OTHER ANTENNA CONFIGURATION REQUIRES REVIEW BY VERTICAL SOLUTIONS.

CONSTRUCTION INTERFERENCES

EXISTING AND PROPOSED ANTENNAS, MOUNTS, COAX, AND HAND-HOLE RIMS ARE NOT SHOWN FOR CLARITY. CONTRACTOR SHALL COORDINATE WITH THE TOWER OWNER WITH RESPECT TO INTERFERENCES TO REINFORCEMENT. CONTRACTOR SHALL FIELD VERIFY TOWER DIMENSION PRIOR TO FABRICATION.

FIELD VERIFICATION

PRE-MODIFICATION INSPECTION REPORT BY VERTICAL SOLUTIONS INC., JOB # 122499 DATED DECEMBER 27, 2012.

MODIFICATION SCHEDULE

NO.	MODIFICATION DESCRIPTION
1	REMOVE EXISTING BARS FROM 94.5± - 104.5±, SEE SHEET D-1.
2	INSTALL (32) STIFFENER PLATES, SEE SHEET S-2.
3	INSTALL (8) TRANSITION STIFFENERS, SEE SHEET S-2.
4	INSTALL (3) REINFORCING BARS, SEE SHEET S-2.
5	INSTALL (3) REINFORCING BARS, SEE SHEET S-2.
6	INSTALL (3) REINFORCING BARS, SEE SHEET S-2.
7	CONTRACTOR SHALL PROVIDE CONSTRUCTION PROGRESS PHOTOS, AS WELL AS PROJECT COMPLETION PHOTOS, ALONG WITH STEEL & CONCRETE CERTIFICATION FOR VERTICAL SOLUTIONS, INC. TO COMPLETE A POST MODIFICATION LETTER. SEE NOTES ON B-1.

PLANS PREPARED FOR:



5900 BROKEN SOUND PARKWAY NW
BOCA RATON, FL 33487-2797
(919) 557-0555

PROJECT INFORMATION:

**WEST HAVEN-RT15
WOODBRIDGE
CT46139-A**

370 ROCKLAND ROAD
GUILFORD, CT 06437
(NEW HAVEN COUNTY)

PLANS PREPARED BY:



2002 PRODUCTION DRIVE
APEX, NC 27539
OFFICE: (888) 321-6167
www.verticalsolutions-inc.com

REV	DATE	ISSUED FOR:
0	01-30-13	CONSTRUCTION

DRAWN BY: MEA CHECKED BY: MER

SHEET TITLE:
**TOWER ELEVATION
AND MODIFICATION
SCHEDULE**

SHEET NUMBER:	REVISION:
S-1	0
	VSI #: 122449

SEAL:



January 30, 2013

TOWER EXTENSION BY
VERTICAL SOLUTIONS, INC.
JOB # 090845.01, REV01
DATED JULY 13, 2009

TOWER BY
ENGINEERED ENDEAVORS INCORPORATED
JOB NO. 12806
DATED JULY 30, 2004

FOUNDATION BY
ENGINEERED ENDEAVORS INCORPORATED
PROJECT NO. 12806
DATED JULY 30, 2004

GEOTECHNICAL REPORT BY
JAWORSKI GEOTECH, INC.
PROJECT NO. 04197G
DATED MARCH 24, 2004

AS-BUILT
DATE: *[Signature]*

SECTION	LENGTH (FT)	# SIDES	THICK. (IN.)	LAP SPLICE (FT)	TOP DIA. (IN)	BOT DIA. (FT)
01	52.750	18	0.315	6.333	44.32	58.00
02	52.833	18	0.315	4.833	32.89	46.59
03	54.084	18	0.195	-	20.50	34.52
EXTENSION	10.000	ROUND	0.375	-	20.00	20.00

158.5 FT±
T/EXTENSION

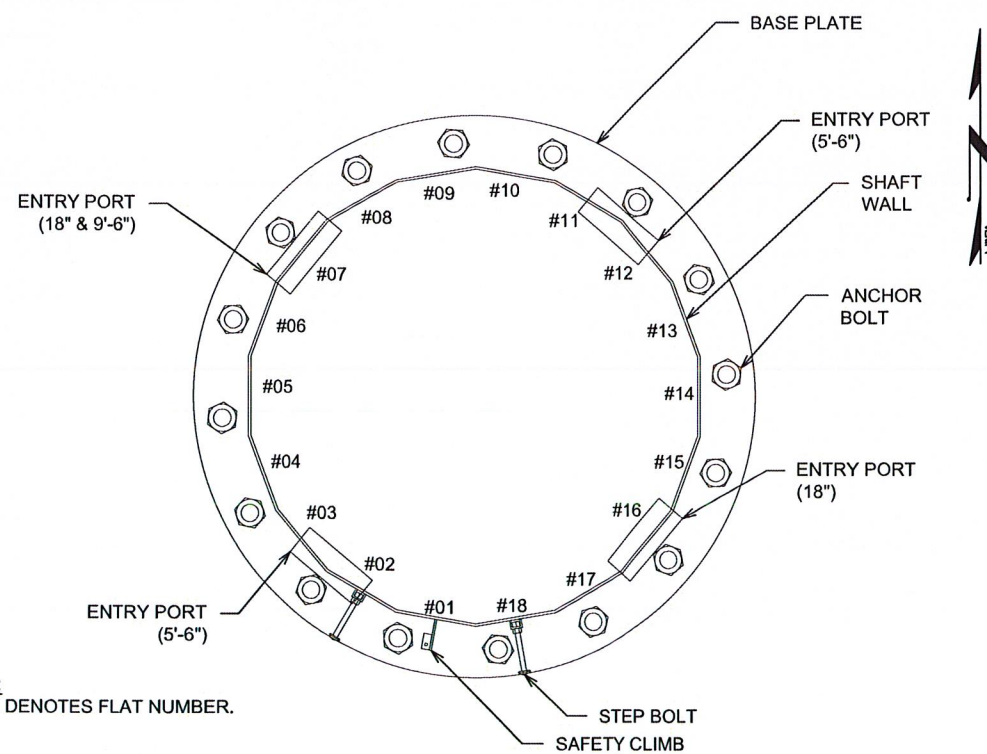
148.5 FT±
T/TOWER

94.5 FT±
B/ SECTION #03

46.6 FT±
B/ SECTION #02

0.0 FT
T/ BASE PL (REF)

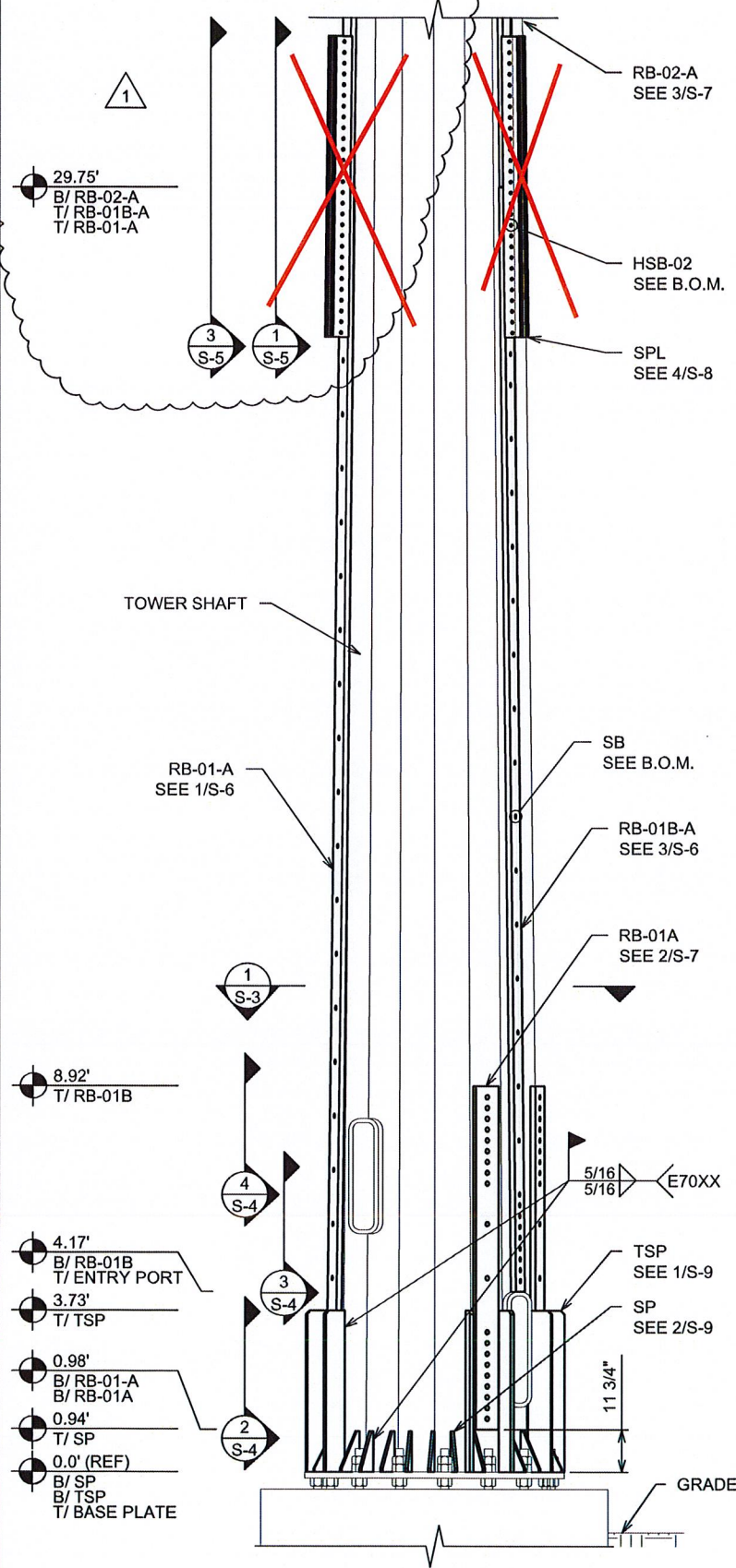
TOWER ELEVATION
SCALE: 1" = 20'



SECTION @ BASE 6.0'
SCALE: 1/2" = 1'-0"

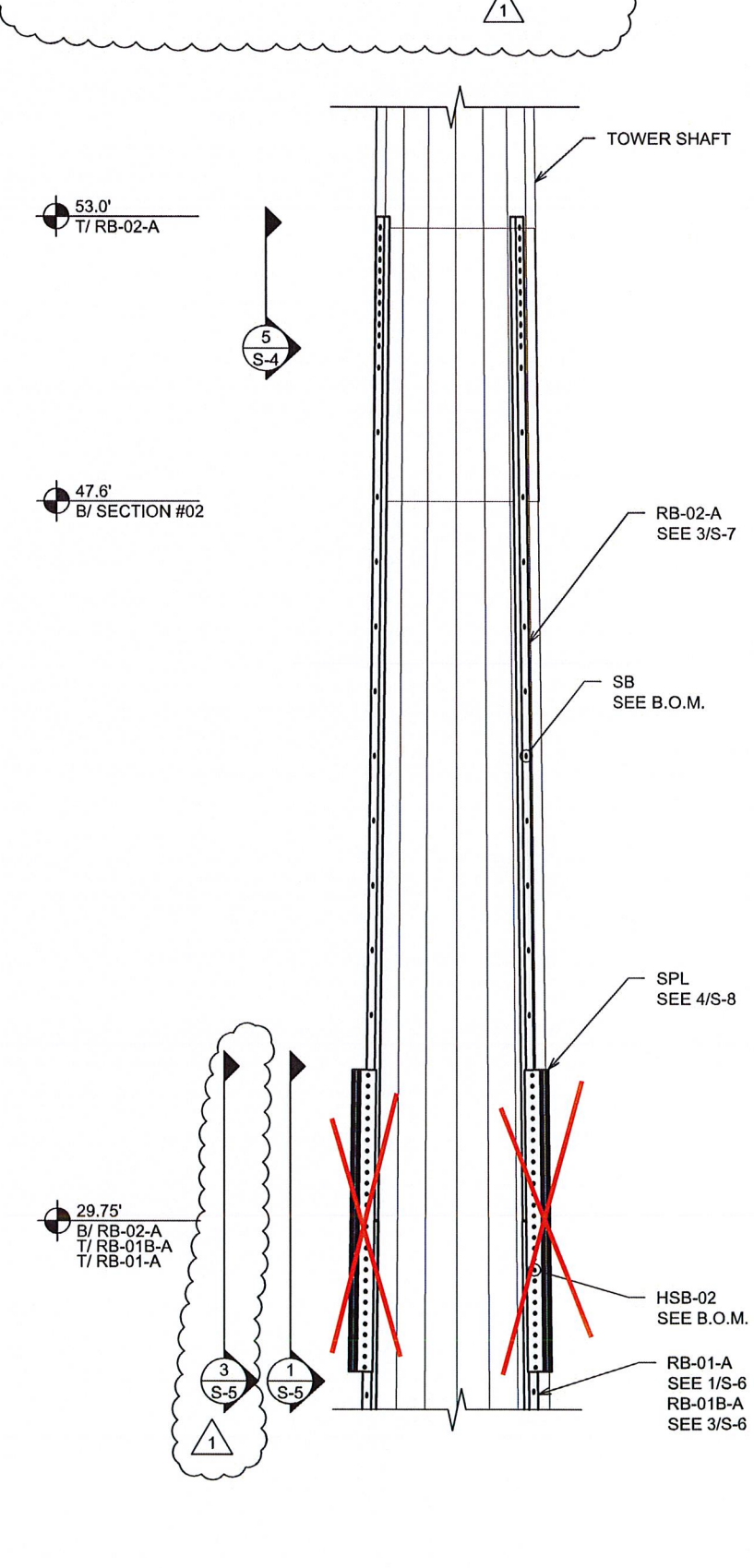
NOTE:
1. #XX DENOTES FLAT NUMBER.

NOTE:
1. SEE DETAIL 3/S-5 FOR ALTERNATE SPLICE DETAIL.



1 SECTION ELEVATION
S-2 SCALE: 1/4" = 1'-0"

NOTE:
1. SEE DETAIL 3/S-5 FOR ALTERNATE SPLICE DETAIL.

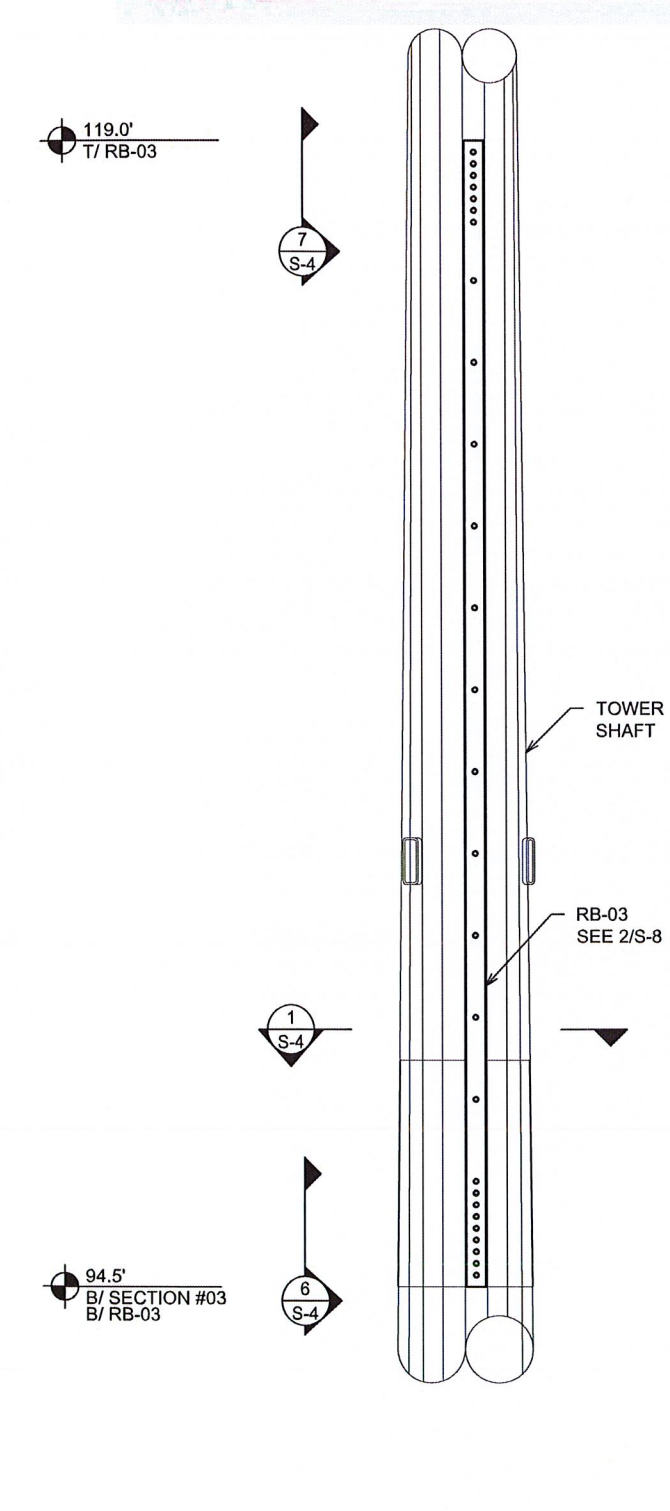


2 SECTION ELEVATION
S-2 SCALE: 1/4" = 1'-0"

NOTE:
1. REUSE

AS-BUILT

DATE *[Signature]*



3 SECTION ELEVATION
S-2 SCALE: 1/4" = 1'-0"

PLANS PREPARED FOR:
SBA
5900 BROKEN SOUND PARKWAY NW
BOCA RATON, FL 33487-2797
(919) 557-0555

PROJECT INFORMATION:
WEST HAVEN-RT15 /WOODBRIDGE
CT46139-A
370 ROCKLAND ROAD
GUILFORD, CT 06437
(NEW HAVEN COUNTY)

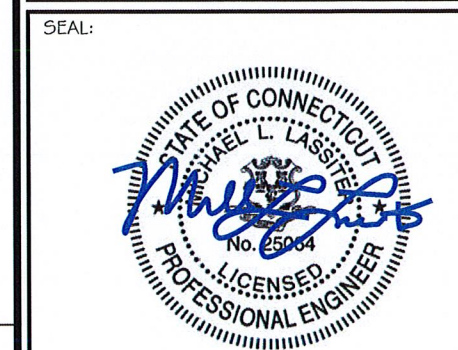
PLANS PREPARED BY:
vertical solutions
2002 PRODUCTION DRIVE
APEX, NC 27539
OFFICE: (888) 321-6167
www.verticalsolutions-inc.com

REV	DATE	ISSUED FOR:
1	04-15-13	CONSTRUCTION
0	01-30-13	CONSTRUCTION

DRAWN BY: MEA CHECKED BY: MER

SHEET TITLE:
CONSTRUCTION DETAILS

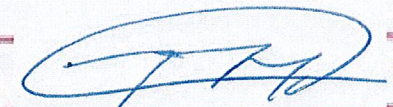
SHEET NUMBER: **S-2** REVISION: **1**
VSI #: 122449

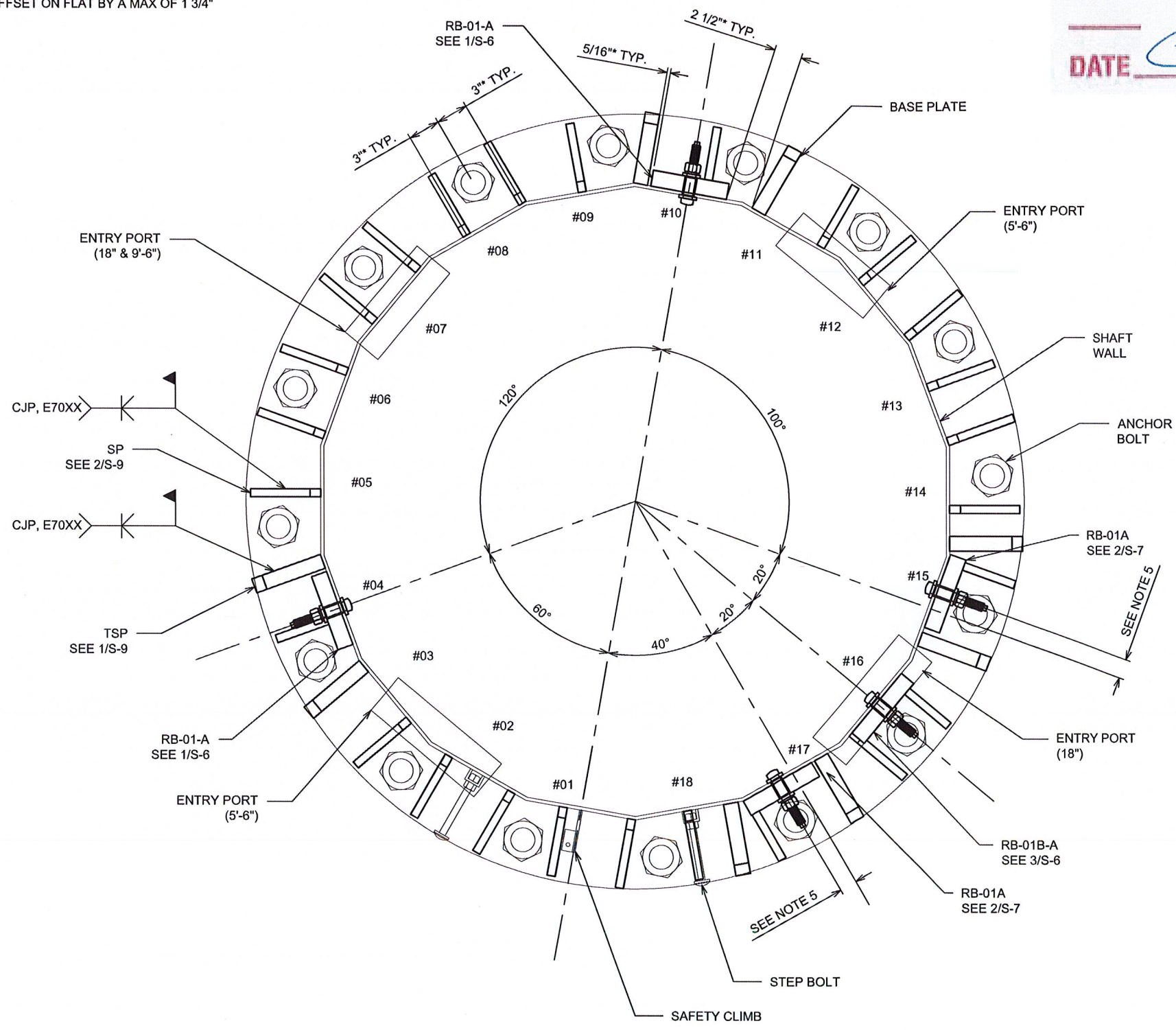


April 15, 2013

- NOTE:**
 1. #XX DENOTES FLAT NUMBER.
 2. TSP TO BE PERPENDICULAR TO SHAFT WALL.
 3. SP TO BE PERPENDICULAR TO SHAFT WALL.
 4. * DENOTES DIMENSION ALONG SHAFT WALL.
 5. RB-01A ON FLAT #15 & #17 TO BE OFFSET ON FLAT BY A MAX OF 1 3/4"

AS-BUILT

DATE 



PLANS PREPARED FOR:

 5900 BROKEN SOUND PARKWAY NW
 BOCA RATON, FL 33487-2797
 (919) 557-0555

PROJECT INFORMATION:
**WEST HAVEN-RT15
 WOODBRIDGE
 CT46139-A**
 370 ROCKLAND ROAD
 GUILFORD, CT 06437
 (NEW HAVEN COUNTY)

PLANS PREPARED BY:

 2002 PRODUCTION DRIVE
 APEX, NC 27539
 OFFICE: (888) 321-6167
 www.verticalsolutions-inc.com

0	01-30-13	CONSTRUCTION
REV	DATE	ISSUED FOR:

DRAWN BY: MEA CHECKED BY: MER

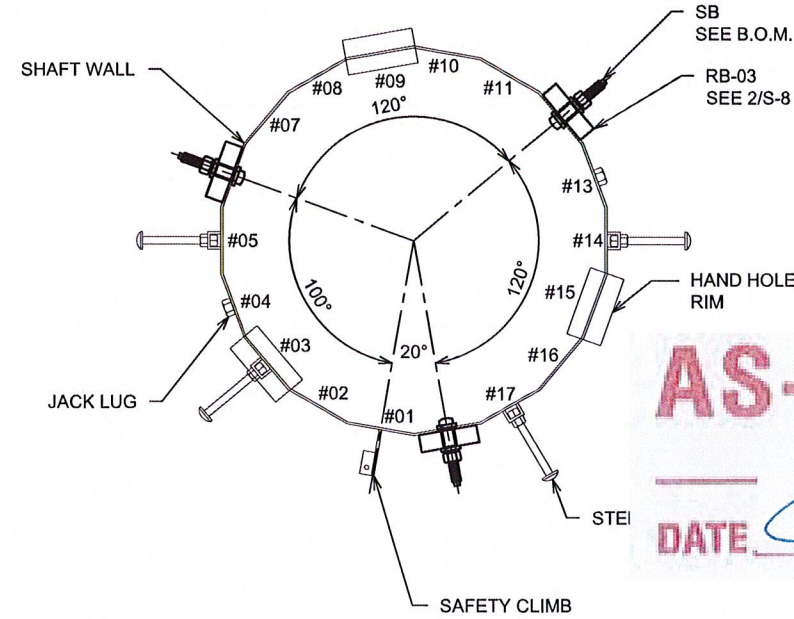
SHEET TITLE:
**CONSTRUCTION
 DETAILS**

SHEET NUMBER: **S-3** REVISION: **0**
 VSI #: 122449

SEAL:

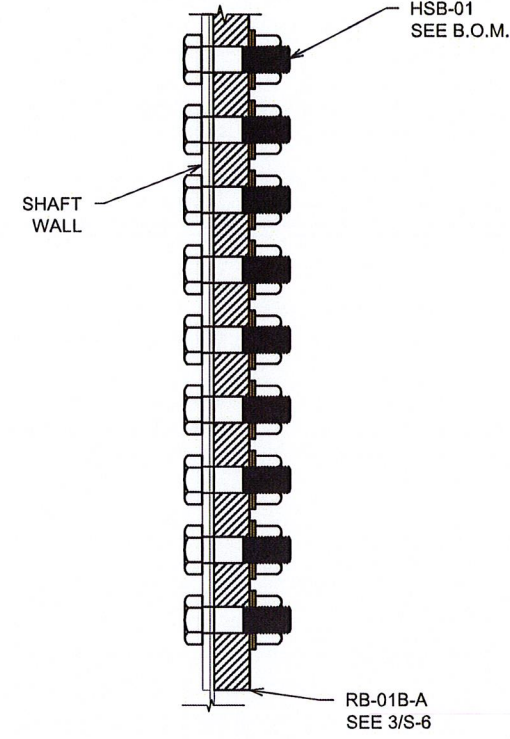
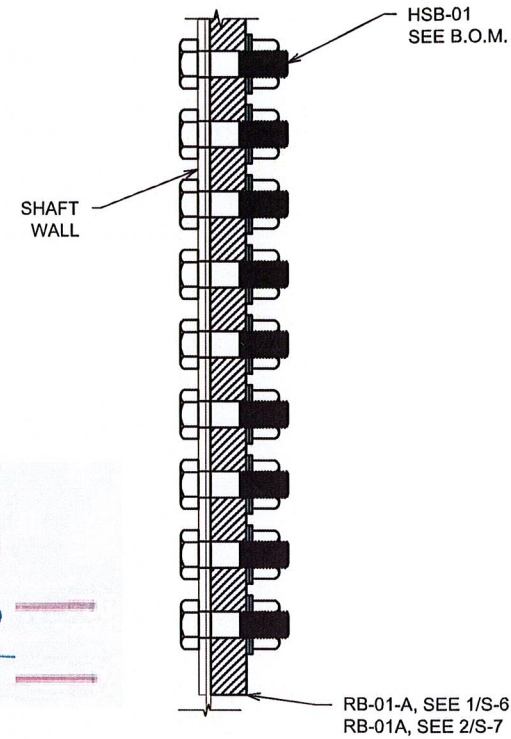
 January 30, 2013

NOTE:
 1. #XX DENOTES FLAT NUMBER.
 2. REUSE EXISTING TERMINATION HOLES IN TOWER TO MOUNT RB-03.



AS-BUILT

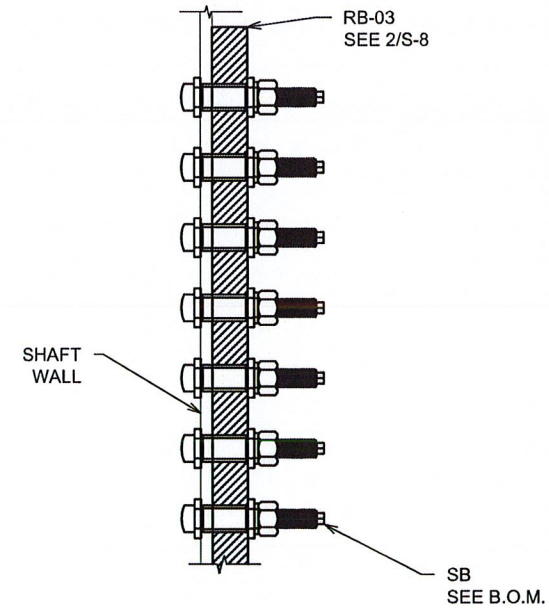
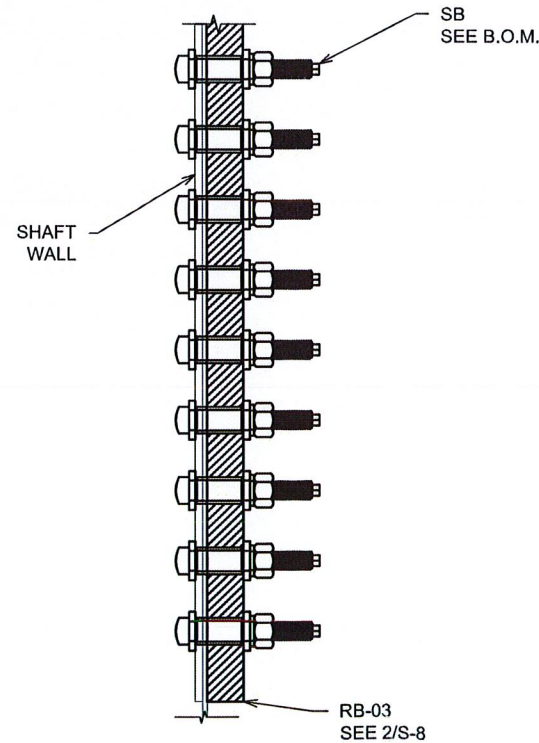
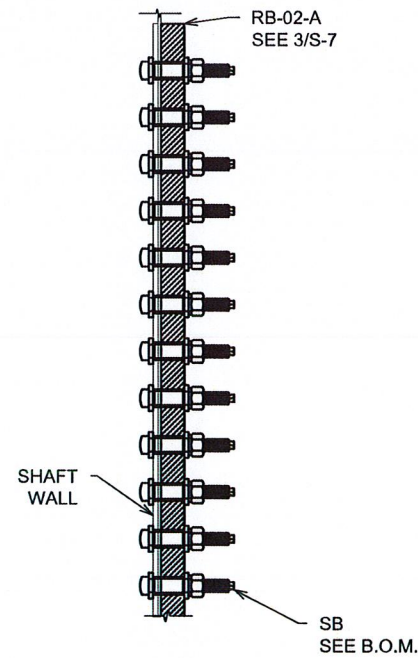
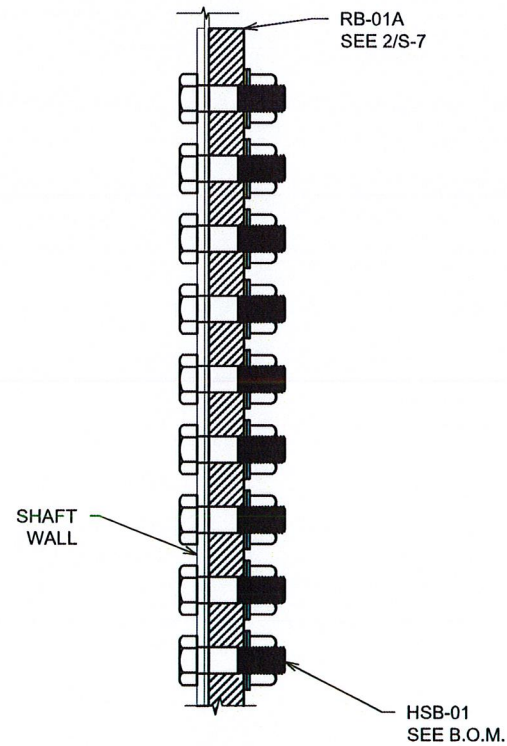
DATE:



1 TOWER PLAN
 S-4 SCALE: 1" = 1'-0"

2 RB-01A & RB-01-A BOT.
 S-4 SCALE: 1 1/2" = 1'-0"

3 RB-01B-A BOT TERM.
 S-4 SCALE: 1 1/2" = 1'-0"



4 RB-01A TOP TERM.
 S-4 SCALE: 1 1/2" = 1'-0"

5 RB-02-A TOP TERM.
 S-4 SCALE: 1" = 1'-0"

6 RB-03 BOTTOM TERM.
 S-4 SCALE: 1 1/2" = 1'-0"

7 RB-03 TOP TERMINATION
 S-4 SCALE: 1 1/2" = 1'-0"

PLANS PREPARED FOR:



5900 BROKEN SOUND PARKWAY NW
 BOCA RATON, FL 33487-2797
 (919) 557-0555

PROJECT INFORMATION:

**WEST HAVEN-RT15
 WOODBRIDGE
 CT46139-A**

370 ROCKLAND ROAD
 GUILFORD, CT 06437
 (NEW HAVEN COUNTY)

PLANS PREPARED BY:



2002 PRODUCTION DRIVE
 APEX, NC 27539
 OFFICE: (888) 321-6167
 www.verticalsolutions-inc.com


0	01-30-13	CONSTRUCTION
REV	DATE	ISSUED FOR:

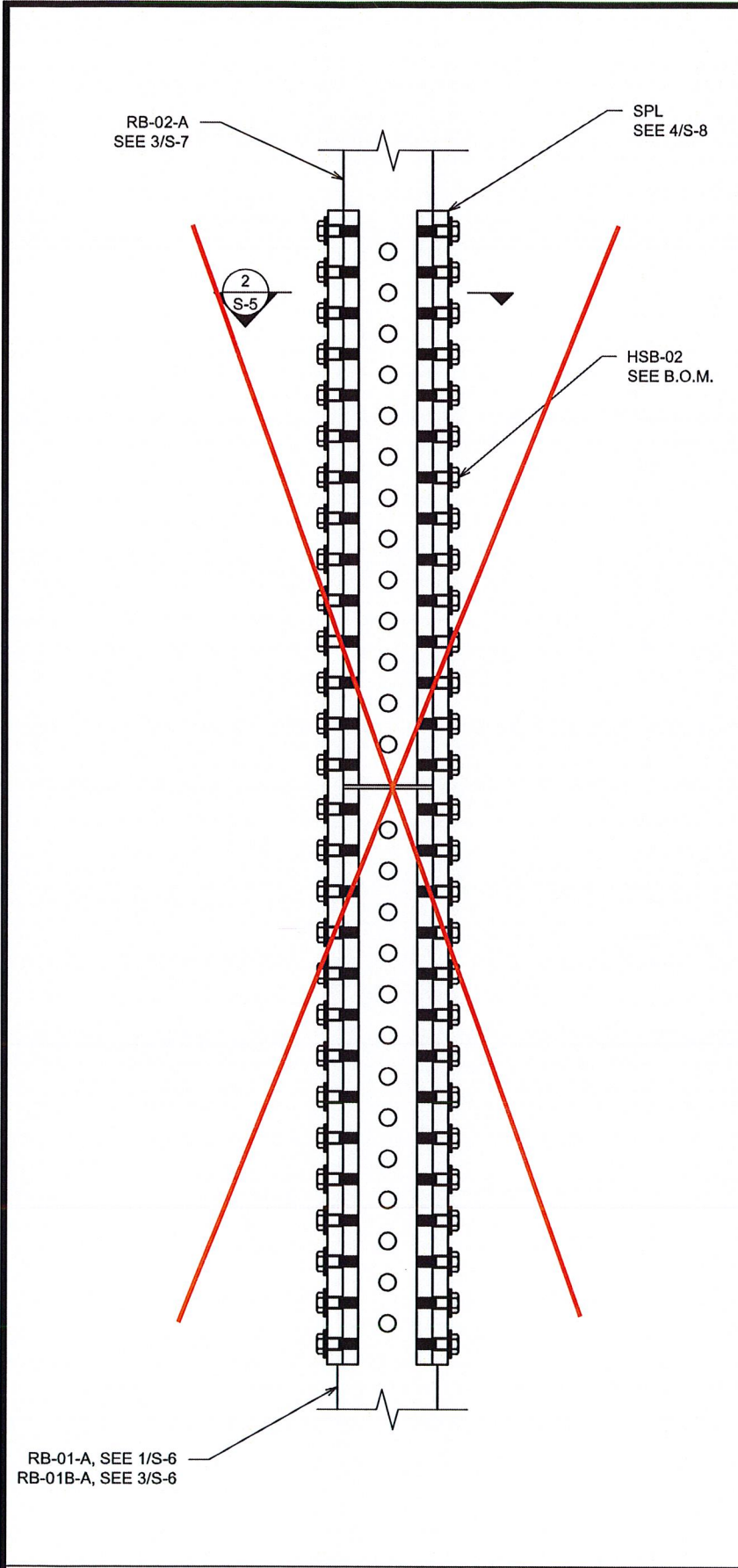
DRAWN BY: MEA CHECKED BY: MER

SHEET TITLE:
**CONSTRUCTION
 DETAILS**

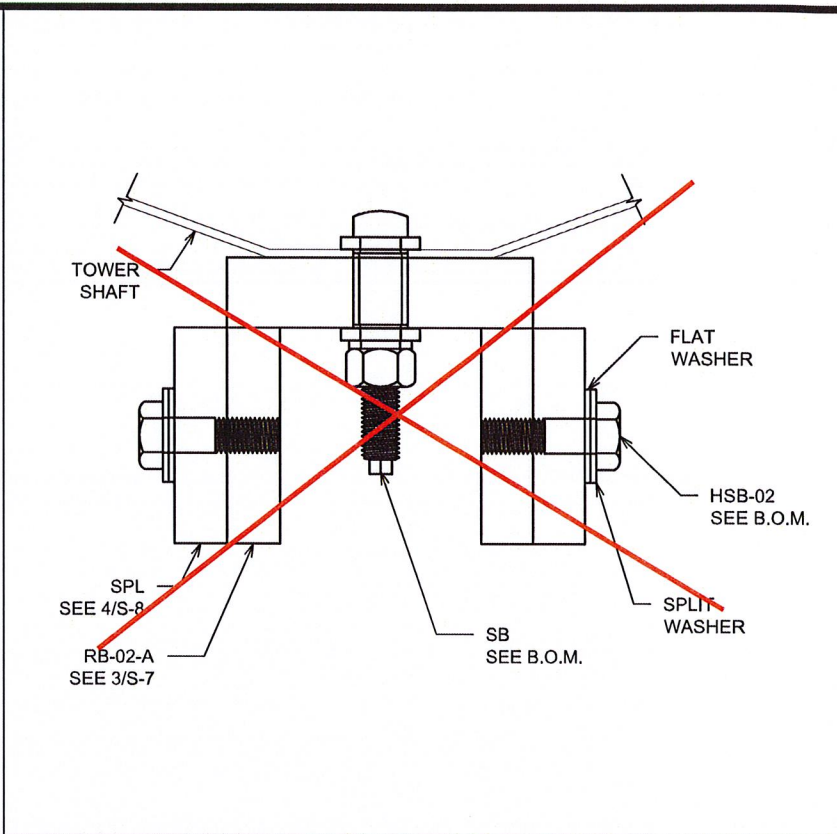
SHEET NUMBER: **S-4** REVISION: **0**
 VSI #: 122449

SEAL:





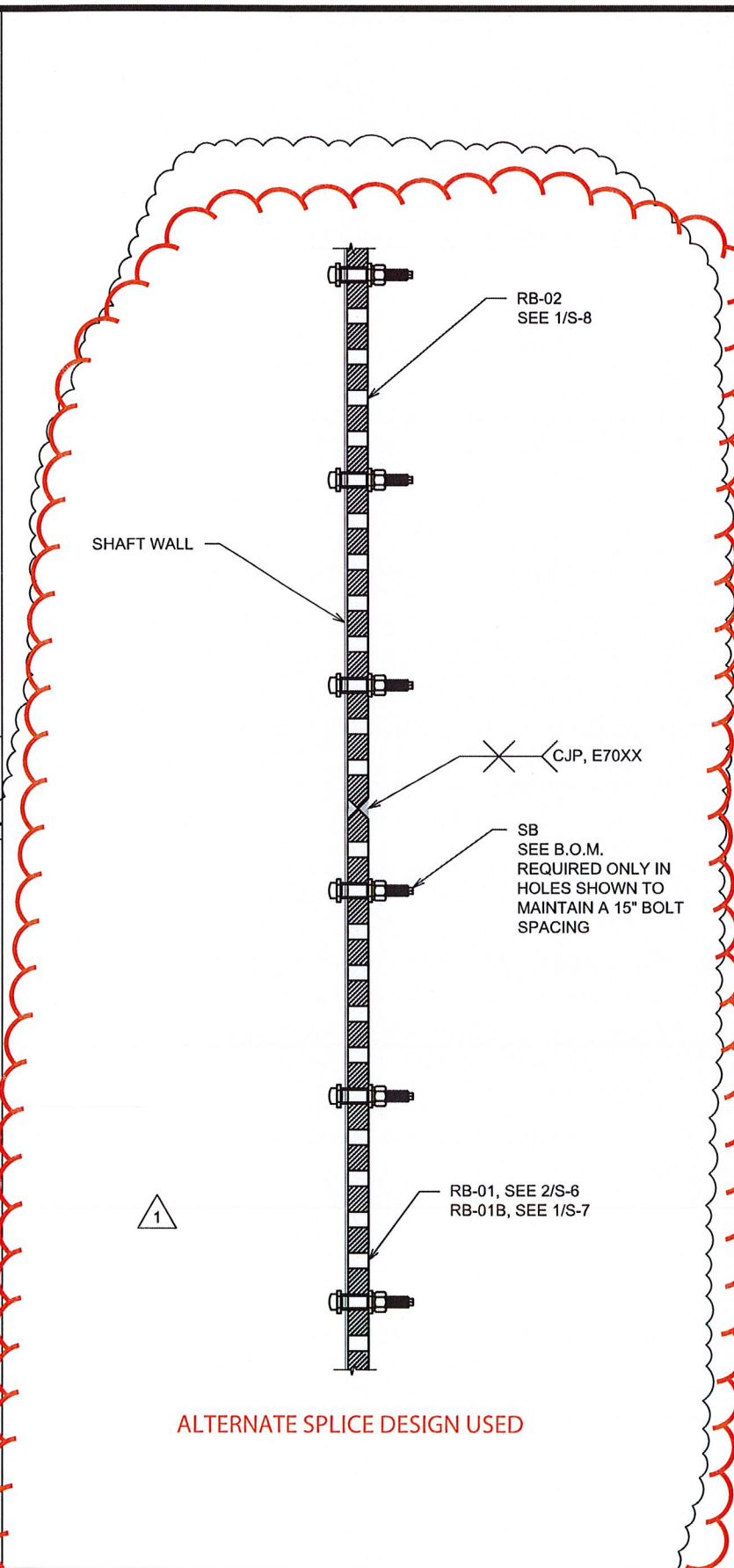
1 SPLICE CONNECTION - ELEVATION
 SCALE: 1" = 1'-0"



2 SPLICE CONNECTION - PLAN
 SCALE: 3" = 1'-0"

AS-BUILT

DATE *[Signature]*



3 ALTERNATE SPLICE DETAIL
 SCALE: 1" = 1'-0"

ALTERNATE SPLICE DESIGN USED

PLANS PREPARED FOR:
SBA
 5900 BROKEN SOUND PARKWAY NW
 BOCA RATON, FL 33487-2797
 (919) 557-0555

PROJECT INFORMATION:
WEST HAVEN-RT15 / WOODBRIDGE
CT46139-A
 370 ROCKLAND ROAD
 GUILFORD, CT 06437
 (NEW HAVEN COUNTY)

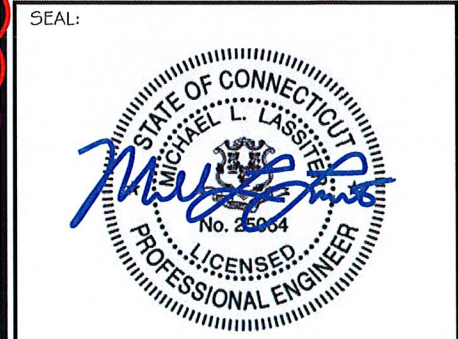
PLANS PREPARED BY:
vertical solutions
 2002 PRODUCTION DRIVE
 APEX, NC 27539
 OFFICE: (888) 321-6167
 www.verticalsolutions-inc.com

REV	DATE	ISSUED FOR:
1	04-15-13	CONSTRUCTION
0	01-30-13	CONSTRUCTION

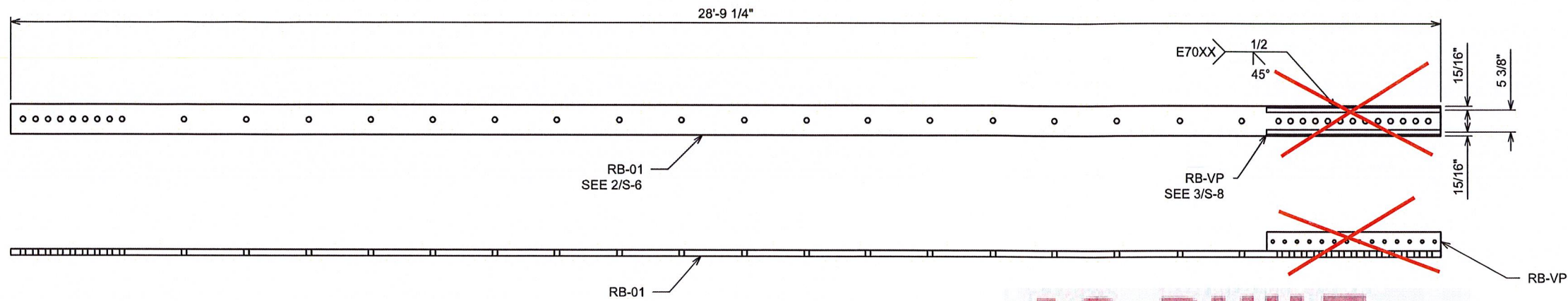
DRAWN BY: MEA | CHECKED BY: MER

SHEET TITLE:
CONSTRUCTION DETAILS

SHEET NUMBER: **S-5** | REVISION: **1**
 VSI #: 122449

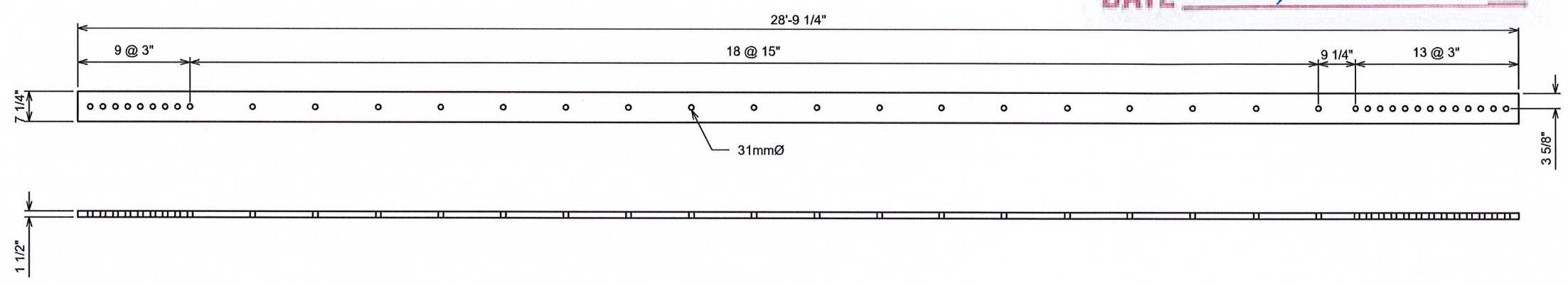


April 15, 2013

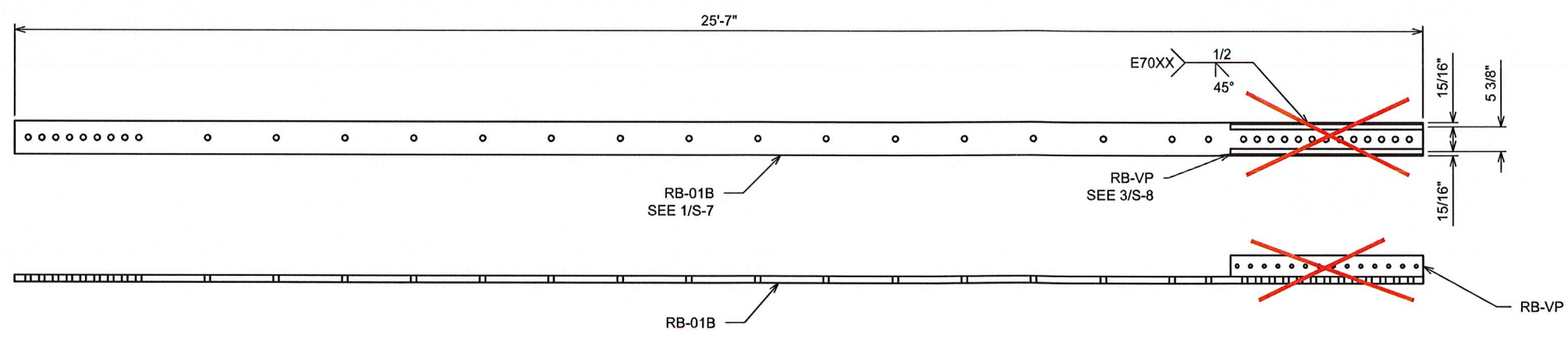


AS-BUILT
 DATE *[Signature]*

1 RB-01 ASSEMBLY
 S-6 SCALE: 3/8" = 1'-0"



2 RB-01 DETAIL
 S-6 SCALE: 3/8" = 1'-0"



3 RB-01B ASSEMBLY
 S-6 SCALE: 3/8" = 1'-0"

PLANS PREPARED FOR:

 5900 BROKEN SOUND PARKWAY NW
 BOCA RATON, FL 33487-2797
 (919) 557-0555

PROJECT INFORMATION:
**WEST HAVEN-RT15
 WOODBRIDGE
 CT46139-A**
 370 ROCKLAND ROAD
 GUILFORD, CT 06437
 (NEW HAVEN COUNTY)

PLANS PREPARED BY:

 2002 PRODUCTION DRIVE
 APEX, NC 27539
 OFFICE: (888) 321-6167
 www.verticalsolutions-inc.com

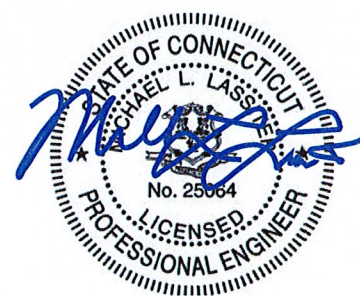
0	01-30-13	CONSTRUCTION
REV	DATE	ISSUED FOR:

DRAWN BY: MEA CHECKED BY: MER

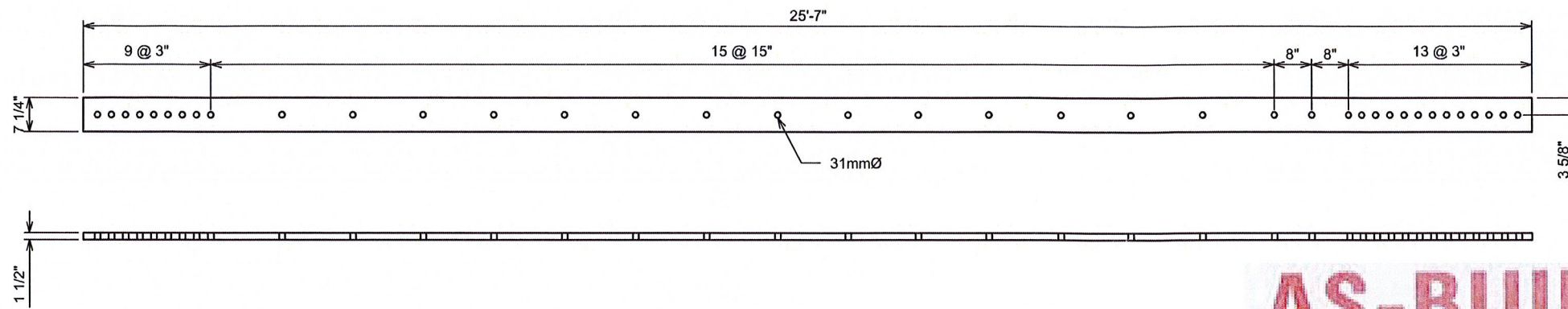
SHEET TITLE:
**FABRICATION
 DETAILS**

SHEET NUMBER:
S-6

REVISION:
0
 VSI #: 122449

SEAL:


January 30, 2013

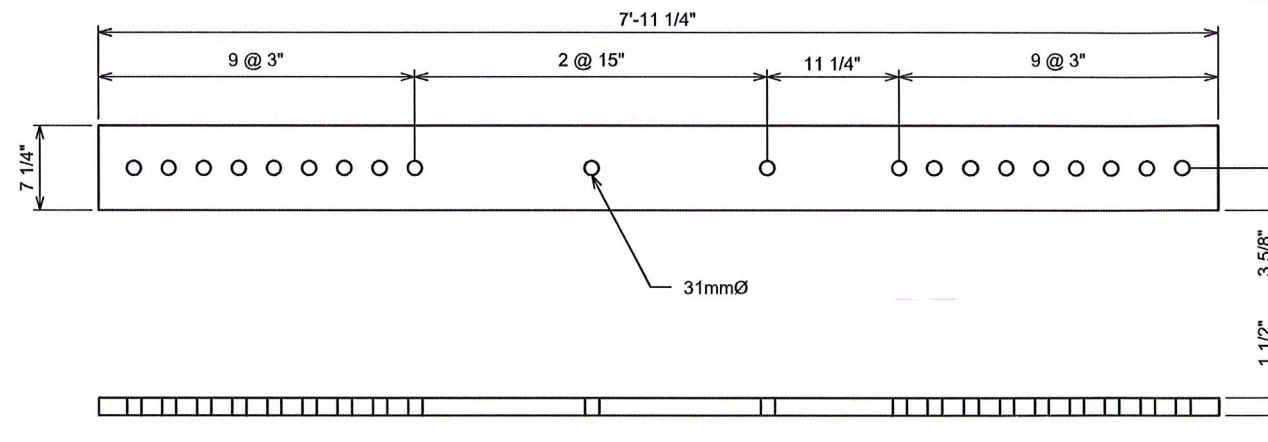


AS-BUILT

DATE: *[Signature]*

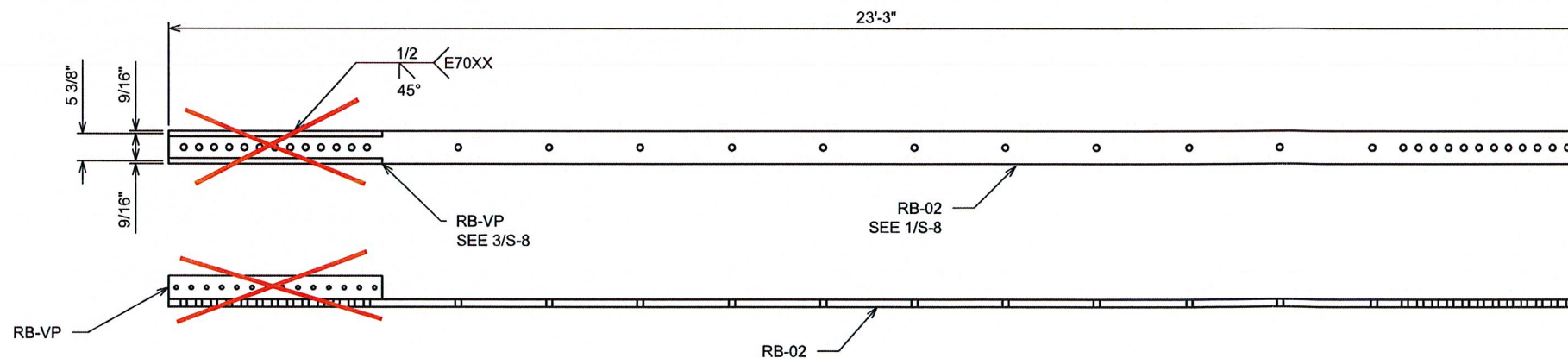
1 RB-01B DETAIL

S-7 SCALE: 3/8" = 1'-0"



2 RB-01A DETAIL

S-7 SCALE: 3/4" = 1'-0"



3 RB-02 ASSEMBLY

S-7 SCALE: 3/8" = 1'-0"

PLANS PREPARED FOR:



5900 BROKEN SOUND PARKWAY NW
BOCA RATON, FL 33487-2797
(919) 557-0555

PROJECT INFORMATION:

**WEST HAVEN-RT15
/WOODBRIDGE
CT46139-A**

370 ROCKLAND ROAD
GUILFORD, CT 06437
(NEW HAVEN COUNTY)

PLANS PREPARED BY:



2002 PRODUCTION DRIVE
APEX, NC 27539
OFFICE: (888) 321-6167
www.verticalsolutions-inc.com

0	01-30-13	CONSTRUCTION
REV	DATE	ISSUED FOR:

DRAWN BY: MEA CHECKED BY: MER

SHEET TITLE:

**FABRICATION
DETAILS**

SHEET NUMBER:

S-7

REVISION:

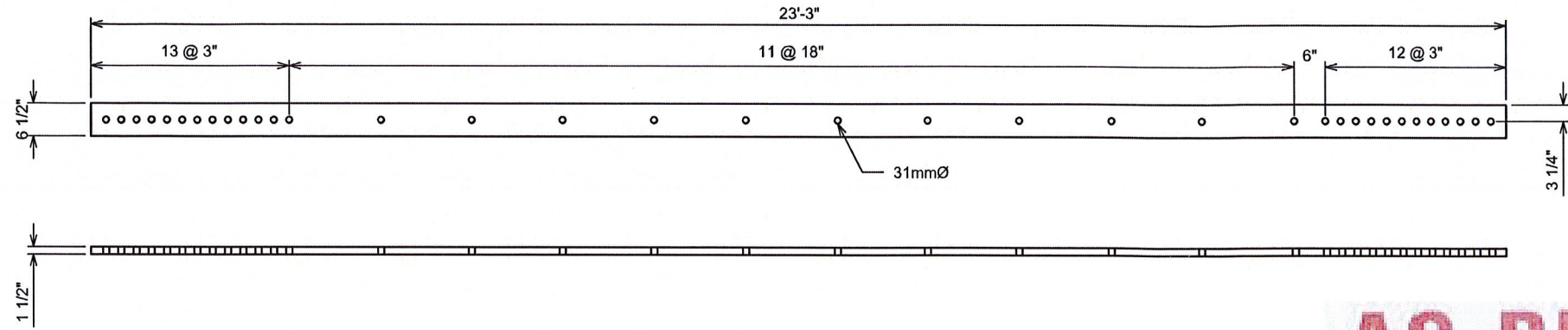
0

VSI #: 122449

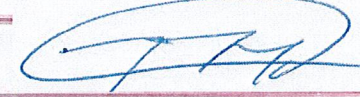
SEAL:



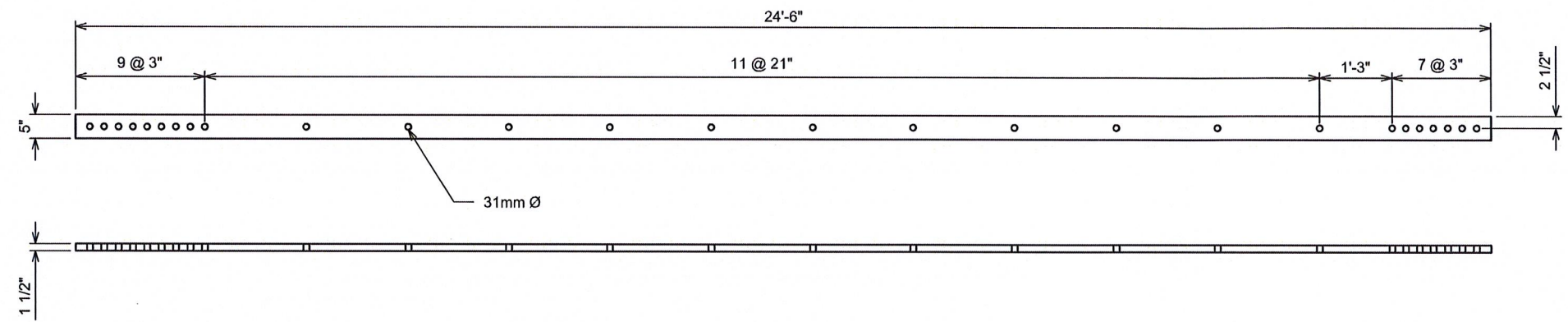
January 30, 2013



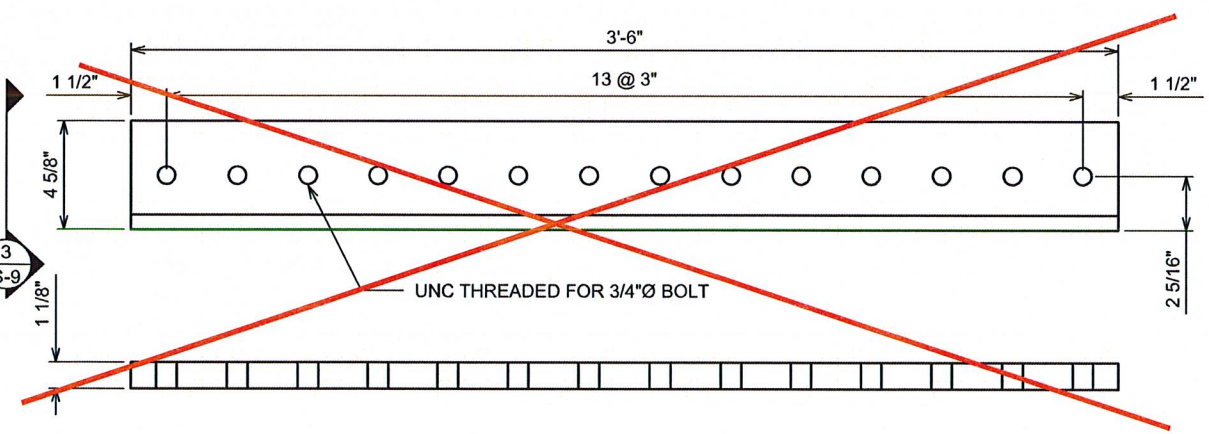
AS-BUILT

DATE 

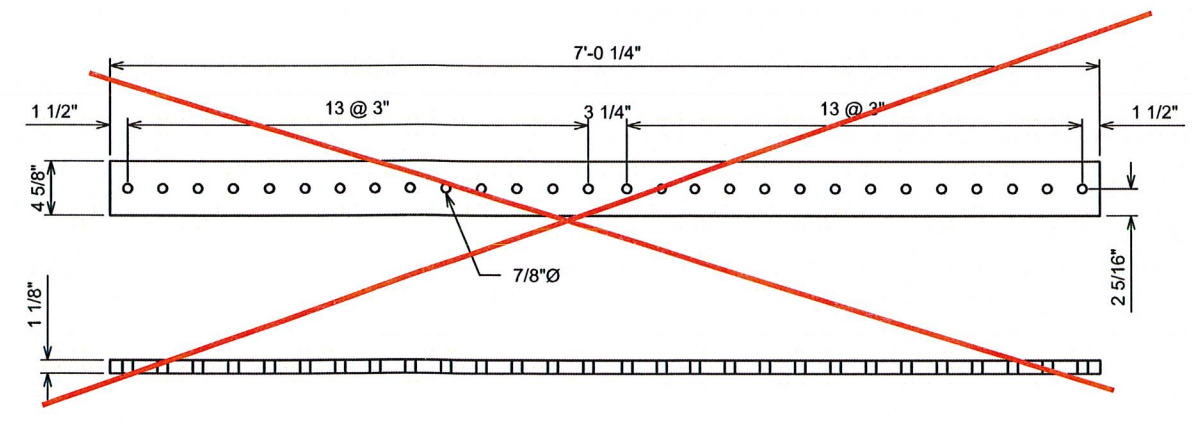
1 RB-02 DETAIL
S-8 SCALE: 3/8" = 1'-0"



2 RB-03 DETAIL
S-8 SCALE: 3/8" = 1'-0"



3 RB-VP DETAIL
S-8 SCALE: 1 1/2" = 1'-0"



4 SPL DETAIL
S-8 SCALE: 3/4" = 1'-0"

PLANS PREPARED FOR:



5900 BROKEN SOUND PARKWAY NW
BOCA RATON, FL 33487-2797
(919) 557-0555

PROJECT INFORMATION:

**WEST HAVEN-RT15
WOODBRIDGE
CT46139-A**

370 ROCKLAND ROAD
GUILFORD, CT 06437
(NEW HAVEN COUNTY)

PLANS PREPARED BY:



2002 PRODUCTION DRIVE
APEX, NC 27539
OFFICE: (888) 321-6167
www.verticalsolutions-inc.com

0	01-30-13	CONSTRUCTION
REV	DATE	ISSUED FOR:

DRAWN BY: MEA CHECKED BY: MER

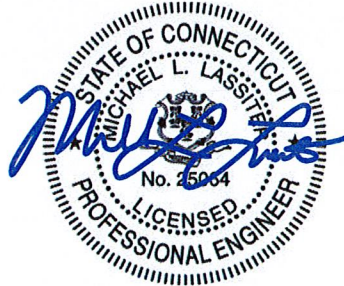
SHEET TITLE:
**FABRICATION
DETAILS**

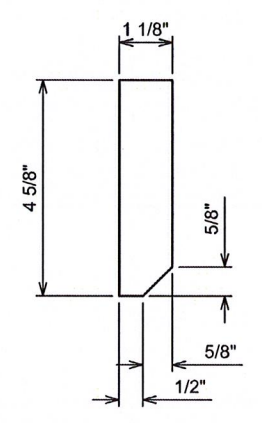
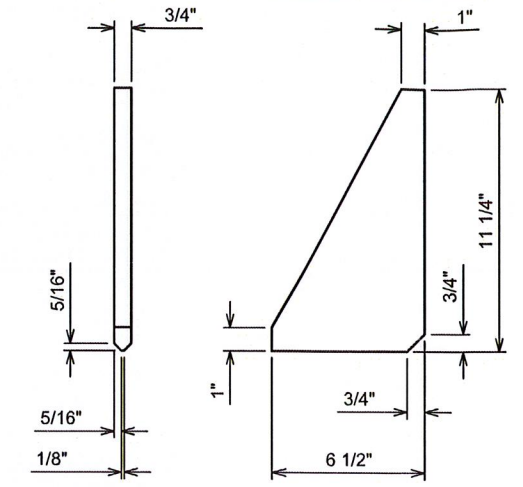
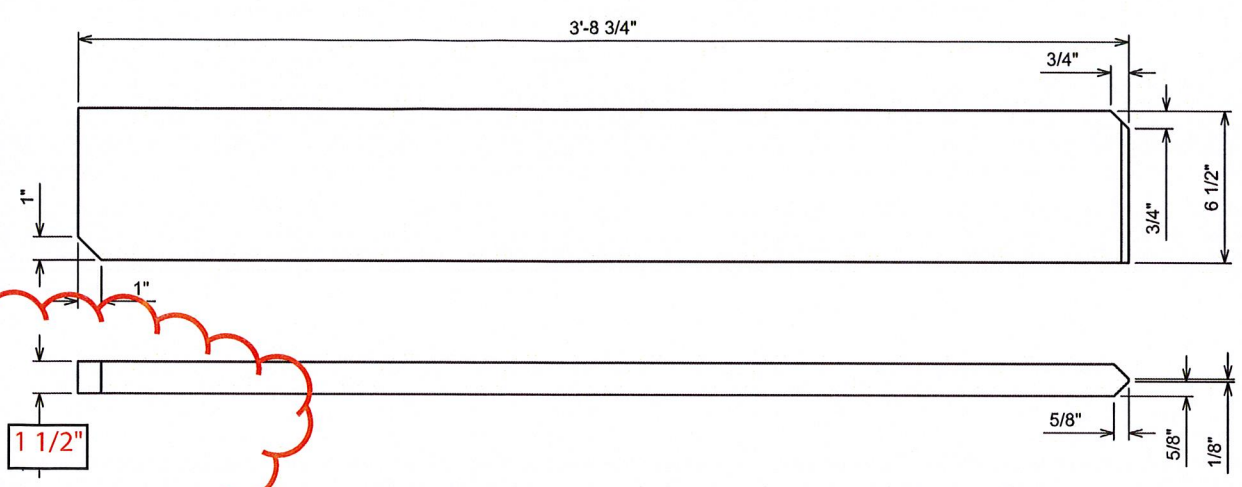
SHEET NUMBER:
S-8

REVISION:
0

VSI #: 122449

SEAL:





1 TSP DETAIL
S-9 SCALE: 1 1/2" = 1'-0"

2 SP DETAIL
S-9 SCALE: 1 1/2" = 1'-0"

3 RB-VP SECTION
S-9 SCALE: 3" = 1'-0"

AS-BUILT
DATE: *[Signature]*

PLANS PREPARED FOR:
SBA
5900 BROKEN SOUND PARKWAY NW
BOCA RATON, FL 33487-2797
(919) 557-0555

PROJECT INFORMATION:
**WEST HAVEN-RT15
/WOODBRIDGE
CT46139-A**
370 ROCKLAND ROAD
GUILFORD, CT 06437
(NEW HAVEN COUNTY)

PLANS PREPARED BY:
vertical solutions
2002 PRODUCTION DRIVE
APEX, NC 27539
OFFICE: (888) 321-6167
www.verticalsolutions-inc.com

0	01-30-13	CONSTRUCTION
REV	DATE	ISSUED FOR:

DRAWN BY: MEA CHECKED BY: MER

SHEET TITLE:
**FABRICATION
DETAILS**

SHEET NUMBER: **S-9** REVISION: **0**
VSI #: 122449

SEAL: